

Task:

Set up the [JavaScript Video QuickStart](#) on your laptop. Start by [forking the Quickstart repo](#) into your own GH repo. Then [clone the GH repo](#) to your laptop.

Once you launch localhost:3000 click on More Examples in the Upper Left-hand Corner. Open the Javascript Console.

Take Note of the Room SID and Create a screenshot of every "Example" you explore in the Quickstart, be sure to smile when on camera!

Complete all Examples with the Javascript Console open and toggle all the options and dropdowns, connect, disconnect, etc. as the example guides you.

Upload the screenshots into GH and create a file in GH that has descriptions for the screenshot file names and their respective SIDs.

Now you are going to make changes to the actual Quickstart by implementing the code from the Examples.

Once all the examples have been written and tested on your local Quickstart repo, merge the changes into your repo on GH and share with the Supportability Engineer.

Bandwidth Constraints

This app demonstrates the Bandwidth Constraints API, which can be used to control the send-side bandwidth of the media that is published to the Room.

Room SID: RMef2324fcb1f0e0665fa6d16f0a8f7d6b

Bandwidth Constraints

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given bandwidth constraints.
 * @param {string} token - Token for joining the room
 * @param {string} roomName - Room name
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 * @returns {CancelablePromise<Room>}
 */
function connectWithBandwidthConstraints(token, {
  maxAudioBitrate,
  maxVideoBitrate
}) {
  /**
   * Update the bandwidth constraints of a Room.
   * @param {Room} room - The Room whose bandwidth constraints are being updated
   * @param {number} maxAudioBitrate - Max audio bitrate
   * @param {number} maxVideoBitrate - Max video bitrate
   */
  function updateBandwidthConstraints(room, maxAudioBitrate, maxVideoBitrate) {
    room.localParticipant.setParameters({
      maxAudioBitrate,
      maxVideoBitrate
    });
  }
}

exports.connectWithBandwidthConstraints = connectWithBandwidthConstraints;
exports.updateBandwidthConstraints = updateBandwidthConstraints;
```

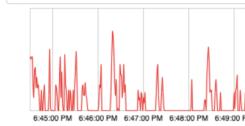
Participant's Media



Select Bandwidth Constraints

Max Audio Bitrate (bps)

No limit

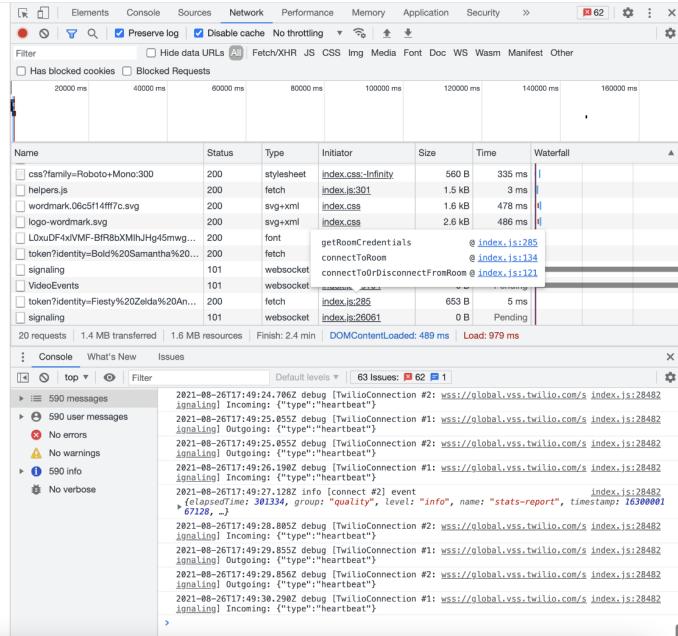


Max Video Bitrate (bps)

No limit



Disconnect from Room



Bandwidth Constraints

```

use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given bandwidth constraints
 * @param {string} token - Token for joining the room
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 * @returns {CancelablePromise<Room>}
 */
function connectWithBandwidthConstraints(token, {
  return Video.connect(token, {
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate,
    name: roomName
  });
}

/**
 * Update the bandwidth constraints of a Room
 * @param {Room} room - The Room whose bandwidth constraints you want to update
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 */
function updateBandwidthConstraints(room, maxAudioBitrate, maxVideoBitrate) {
  room.localParticipant.setParameters({
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate
  });
}

exports.connectWithBandwidthConstraints = connectWithBandwidthConstraints;
exports.updateBandwidthConstraints = updateBandwidthConstraints;

```

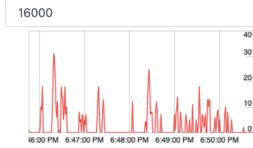
Participant's Media



Select Bandwidth Constraints

Max Audio Bitrate (bps)

16000



Max Video Bitrate (bps)

64000



Disconnect from Room

Network tab in browser developer tools showing network requests and logs:

- Network requests table (partial):

Name	Status	Type	Initiator	Size	Time	Waterfall
css?family=Roboto+Mono:300	200	stylesheet	index.css:-Infinity	560 B	335 ms	
helpers.js	200	fetch	index.js:301	1.5 kB	3 ms	
wordmark.06c5f14ff7c.svg	200	svg+xml	index.css	1.6 kB	478 ms	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	486 ms	
LoxdDF4xVMF-BR8BXmJHg45mw...	200	font	css?family=Roboto...	15.6 kB	227 ms	
tokenIdentity-Bold%20Samantha%20...	200	fetch	index.js:285	652 B	4 ms	
signaling	101	websocket	index.js:26061	0 B	Pending	
VideoEvents	101	websocket	index.js:28104	0 B	Pending	
tokenIdentity=Fiesty%20Zelda%20An...	200	fetch	index.js:285	653 B	5 ms	
signaling	101	websocket	index.js:26061	0 B	Pending	
- Console log (partial):


```

2021-08-26T17:59:41.868Z debug [TwilioConnection #1: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Outgoing: {"type": "heartbeat"
2021-08-26T17:59:41.868Z debug [TwilioConnection #2: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Outgoing: {"type": "heartbeat"
2021-08-26T17:59:41.868Z debug [TwilioConnection #2: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Incoming: {"type": "heartbeat"
2021-08-26T17:59:43.889Z debug [TwilioConnection #1: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Incoming: {"type": "heartbeat"
2021-08-26T17:59:46.466Z debug [TwilioConnection #2: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Incoming: {"type": "heartbeat"
2021-08-26T17:59:46.498Z debug [TwilioVideoTrack #3: MTe6f08e831a62e8d1303e114888fc] Dimensions changed: > {width: 320, height: 240}
  "index.js:28482
2021-08-26T17:59:46.678Z debug [TwilioConnection #1: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Outgoing: {"type": "heartbeat"
2021-08-26T17:59:46.678Z debug [TwilioConnection #2: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Outgoing: {"type": "heartbeat"
2021-08-26T17:59:47.128Z info [connect #2] event
  "index.js:28482
  > {elapsedTime: 381334, group: "quality", level: "info", name: "stats-report", timestamp: 16300002
  > 47128, ...}
  
```

Bandwidth Constraints

```

use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given bandwidth constraints
 * @param {string} token - Token for joining the room
 * @param {number} roomName - Room name
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 * @returns {CancelablePromise<Room>}
 */
function connectWithBandwidthConstraints(token, {
  return Video.connect(token, {
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate,
    name: roomName
  });
}

/**
 * Update the bandwidth constraints of a Room
 * @param {Room} room - The Room whose bandwidth constraints you want to update
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 */
function updateBandwidthConstraints(room, maxAudioBitrate, maxVideoBitrate) {
  room.localParticipant.setParameters({
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate
  });
}

exports.connectWithBandwidthConstraints = connectWithBandwidthConstraints;
exports.updateBandwidthConstraints = updateBandwidthConstraints;

```

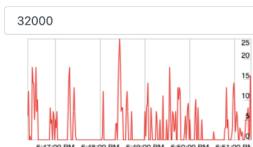
Participant's Media



Select Bandwidth Constraints

Max Audio Bitrate (bps)

32000



Max Video Bitrate (bps)

128000



Disconnect from Room

Network tab in browser developer tools showing network requests and logs:

- Network requests table (partial):

Name	Status	Type	Initiator	Size	Time	Waterfall
css?family=Roboto+Mono:300	200	stylesheet	index.css:-Infinity	560 B	335 ms	
helpers.js	200	fetch	index.js:301	1.5 kB	3 ms	
wordmark.06c5f14ff7c.svg	200	svg+xml	index.css	1.6 kB	478 ms	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	486 ms	
LoxdDF4xVMF-BR8BXmJHg45mw...	200	font	css?family=Roboto...	15.6 kB	227 ms	
tokenIdentity-Bold%20Samantha%20...	200	fetch	index.js:285	652 B	4 ms	
signaling	101	websocket	index.js:26061	0 B	Pending	
VideoEvents	101	websocket	index.js:28104	0 B	Pending	
tokenIdentity=Fiesty%20Zelda%20An...	200	fetch	index.js:285	653 B	5 ms	
signaling	101	websocket	index.js:26061	0 B	Pending	
- Console log (partial):


```

2021-08-26T17:51:17.128Z info [connect #2] event
  "index.js:28482
  > {elapsedTime: 411334, group: "quality", level: "info", name: "stats-report", timestamp: 16300002
  > 77128, ...}
2021-08-26T17:51:17.128Z info [connect #2] event
  "index.js:28482
  > {elapsedTime: 411334, group: "quality", level: "info", name: "active-ice-candidate-pair", timestamp: 16300002
  > 77128, ...}
2021-08-26T17:51:19.107Z debug [TwilioConnection #2: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Incoming: {"type": "heartbeat"
2021-08-26T17:51:20.276Z debug [TwilioConnection #2: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Outgoing: {"type": "heartbeat"
2021-08-26T17:51:20.277Z debug [TwilioConnection #2: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Outgoing: {"type": "heartbeat"
2021-08-26T17:51:20.590Z debug [TwilioConnection #1: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Incoming: {"type": "heartbeat"
2021-08-26T17:51:20.859Z info [connect #1] event
  "index.js:28482
  > {elapsedTime: 561005, group: "quality", level: "info", name: "stats-report", timestamp: 16300002
  > 58859, ...}
2021-08-26T17:51:23.107Z debug [TwilioConnection #2: wss://global.vss.twilio.com/s index.js:28482
  "jwaling"] Incoming: {"type": "heartbeat"
  
```

Bandwidth Constraints

```

use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given bandwidth constraint
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 * @returns {CancelablePromise<Room>}
 */
function connectWithBandwidthConstraints(token, roomName) {
  return Video.connect(token, {
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate,
    name: roomName
  });
}

/**
 * Update the bandwidth constraints of a Room.
 * @param {Room} room - The Room whose bandwidth constraints will be updated
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 */
function updateBandwidthConstraints(room, maxAudioBitrate, maxVideoBitrate) {
  room.localParticipant.setParameters({
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate
  });
}

exports.connectWithBandwidthConstraints = connectWithBandwidthConstraints;
exports.updateBandwidthConstraints = updateBandwidthConstraints;

```

Participant's Media

Select Bandwidth Constraints

Max Audio Bitrate (bps)

64000

Max Video Bitrate (bps)

256000

Disconnect from Room

Network Traffic (Chrome DevTools Network tab)

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:301	1.5 kB	3 ms	
wordmark.06c5f14fffc.svg	200	svg+xml	index.css	1.6 kB	478 ms	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	486 ms	
L0xuDFxvMF-BFrBbXMH...	200	font	css?family=R...	15.6 kB	227 ms	
token?identity=Bold%20Z...	200	fetch	index.js:285	652 B	4 ms	
signaling	101	websocket	index.js:26061	0 B	Pending	
VideoEvents	101	websocket	index.js:28104	0 B	Pending	
token?identity=Fiesty%20Z...	200	fetch	index.js:285	653 B	5 ms	
signaling	101	websocket	index.js:26061	0 B	Pending	

20 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.4 min | DOMContentLoaded: 489 ms | Load: 979 ms

Console (Chrome DevTools Console tab)

```

797 messages
797 user messages
0 errors
0 warnings
1 797 info
0 verbose

```

Selected log entries:

- 2021-08-26T17:52:13.486Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
- 2021-08-26T17:52:13.590Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
- 2021-08-26T17:52:16.107Z debug [TwilioConnection #2: ws index.js:28482 \$://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
- 2021-08-26T17:52:17.138Z info [connect #2] event: "connect", index.js:28482 {elapsedTime: 471336, group: "quality", level: "info", name: "active-report", timestamp: 1630000337130, ...}
- 2021-08-26T17:52:17.138Z info [connect #2] event: "connect", index.js:28482 {elapsedTime: 471336, group: "quality", level: "info", name: "active-report", timestamp: 1630000337130, ...}
- 2021-08-26T17:52:17.491Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
- 2021-08-26T17:52:17.884Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
- 2021-08-26T17:52:17.885Z debug [TwilioConnection #2: ws index.js:28482 \$://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}

Bandwidth Constraints

```

use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given bandwidth constraint
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 * @returns {CancelablePromise<Room>}
 */
function connectWithBandwidthConstraints(token, roomName) {
  return Video.connect(token, {
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate,
    name: roomName
  });
}

/**
 * Update the bandwidth constraints of a Room.
 * @param {Room} room - The Room whose bandwidth constraints will be updated
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 */
function updateBandwidthConstraints(room, maxAudioBitrate, maxVideoBitrate) {
  room.localParticipant.setParameters({
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate
  });
}

exports.connectWithBandwidthConstraints = connectWithBandwidthConstraints;
exports.updateBandwidthConstraints = updateBandwidthConstraints;

```

Participant's Media

Select Bandwidth Constraints

Max Audio Bitrate (bps)

64000

Max Video Bitrate (bps)

512000

Disconnect from Room

Network Traffic (Chrome DevTools Network tab)

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:301	1.5 kB	3 ms	
wordmark.06c5f14fffc.svg	200	svg+xml	index.css	1.6 kB	478 ms	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	486 ms	
L0xuDFxvMF-BFrBbXMH...	200	font	css?family=R...	15.6 kB	227 ms	
token?identity=Bold%20Z...	200	fetch	index.js:285	652 B	4 ms	
signaling	101	websocket	index.js:26061	0 B	Pending	
VideoEvents	101	websocket	index.js:28104	0 B	Pending	
token?identity=Fiesty%20Z...	200	fetch	index.js:285	653 B	5 ms	
signaling	101	websocket	index.js:26061	0 B	Pending	

20 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.4 min | DOMContentLoaded: 489 ms | Load: 979 ms

Console (Chrome DevTools Console tab)

```

856 messages
856 user messages
0 errors
0 warnings
1 856 info
0 verbose

```

Selected log entries:

- 2021-08-26T17:53:01.090Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
- 2021-08-26T17:53:01.091Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
- 2021-08-26T17:53:01.106Z debug [TwilioConnection #2: ws index.js:28482 \$://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
- 2021-08-26T17:53:02.693Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
- 2021-08-26T17:53:09.148Z debug [TwilioConnection #2: ws index.js:28482 \$://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
- 2021-08-26T17:53:05.891Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
- 2021-08-26T17:53:05.892Z debug [TwilioConnection #2: ws index.js:28482 \$://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
- 2021-08-26T17:53:06.792Z debug [TwilioConnection #1: ws index.js:28482 \$://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
- 2021-08-26T17:53:07.138Z info [connect #2] event: "connect", index.js:28482 {elapsedTime: 521336, group: "quality", level: "info", name: "active-report", timestamp: 1630000387130, ...}

Bandwidth Constraints

```
'use strict';

var Video = require('twilio-video');

/***
 * Connect to a Room with the given bandwidth constraint
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 * @returns {CancelablePromise<Room>}
 */
function connectWithBandwidthConstraints(token, roomName) {
  return Video.connect(token, {
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate,
    name: roomName
  });
}

/***
 * Update the bandwidth constraints of a Room.
 * @param {Room} room - The Room whose bandwidth constraints
 * @param {number} maxAudioBitrate - Max audio bitrate
 * @param {number} maxVideoBitrate - Max video bitrate
 */
function updateBandwidthConstraints(room, maxAudioBitrate, maxVideoBitrate) {
  room.localParticipant.setParameters({
    maxAudioBitrate: maxAudioBitrate,
    maxVideoBitrate: maxVideoBitrate
  });
}

exports.connectWithBandwidthConstraints = connectWithBandwidthConstraints;
exports.updateBandwidthConstraints = updateBandwidthConstraints;

```

Participant's Media

Select Bandwidth Constraints

Max Audio Bitrate (bps)

Max Video Bitrate (bps)

Disconnect from Room

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:301	1.5 kB	3 ms	
wordmark.06c5f14ff7c.svg	200	svg+xml	index.css	1.6 kB	478 ms	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	486 ms	
L0xuDF4xVMP-BfR8bXMu...	200	font	css?family=Robo...	15.6 kB	227 ms	
token?identity=Bold%20Sa...	200	fetch	index.js:285	652 B	4 ms	
signaling	101	webso...	index.js:26061	0 B	Pending	
VideoEvents	101	webso...	index.js:28104	0 B	Pending	
token?identity=Fiesty%20Z...	200	fetch	index.js:285	653 B	5 ms	
signaling	101	webso...	index.js:26061	0 B	Pending	

20 requests 1.4 MB transferred 1.6 MB resources Finish: 2.4 min DOMContentLoaded: 489 ms Load: 979 ms

Console What's New Issues

63 issues: 62 1

Network

920 messages

- No errors
- No warnings
- 920 info
- No verbose

s://global.vss.twilio.com/signalring Outgoing: {"type": "heartbeat"}
2021-08-26T17:53:53.901Z debug [TwilioConnection #2: ws index.js:28482 s://global.vss.twilio.com/signalring Incoming: {"type": "heartbeat"}
2021-08-26T17:53:54.007Z debug [TwilioConnection #2: ws index.js:28482 s://global.vss.twilio.com/signalring Incoming: {"type": "heartbeat"}
2021-08-26T17:53:55.893Z debug [TwilioConnection #1: ws index.js:28482 s://global.vss.twilio.com/signalring Incoming: {"type": "heartbeat"}
2021-08-26T17:53:57.131Z info [connect #2] event index.js:28482 {elapsedTime: 571337, group: "quality", level: "info", name: "stats-report"}
2021-08-26T17:53:57.132Z info [connect #2] event index.js:28482 {elapsedTime: 571338, group: "quality", level: "info", name: "active-ice-candidate-pair", timestamp: 16300047132, ...}
2021-08-26T17:53:58.108Z debug [TwilioConnection #2: ws index.js:28482 s://global.vss.twilio.com/signalring Outgoing: {"type": "offer"}
2021-08-26T17:53:58.700Z debug [TwilioConnection #1: ws index.js:28482 s://global.vss.twilio.com/signalring Outgoing: {"type": "heartbeat"}
2021-08-26T17:53:58.703Z debug [TwilioConnection #2: ws index.js:28482 s://global.vss.twilio.com/signalring Outgoing: {"type": "heartbeat"}
2021-08-26T17:53:58.703Z debug [TwilioConnection #2: ws index.js:28482 s://global.vss.twilio.com/signalring Outgoing: {"type": "heartbeat"}

Local Video Snapshot

This app demonstrates a way to capture a snapshot of the LocalVideoTrack using the HTMLCanvasElement.
RM085b3cac65caa8582b4d05df77749243

Local Video Snapshot

```
'use strict';

var Video = require('twilio-video');

/***
 * Display local video in the given HTMLVideoElement.
 * @param {HTMLVideoElement} video
 * @returns {Promise<void>}
 */
function displayLocalVideo(video) {
  return Video.createLocalVideoTrack().then(function(localTrack) {
    attach(video, localTrack);
    return localTrack;
  });
}

/***
 * Take snapshot of the local video from the HTMLVideoElement
 * in the HTMLCanvasElement.
 * @param {HTMLVideoElement} video
 * @param {LocalVideoTrack} localVideoTrack
 * @param {HTMLCanvasElement|HTMLImageElement} snapshot
 */
function takeLocalVideoSnapshot(video, localVideoTrack, if (window.ImageCapture) {
  const imageCapture = new ImageCapture(localVideoTrack);
  imageCapture.takePhoto().then(function(blob) {
    snapshot.src = URL.createObjectURL(blob);
  });
} else {
  snapshot.getContext('2d').drawImage(video, 0, 0);
}

module.exports.displayLocalVideo = displayLocalVideo;
module.exports.takeLocalVideoSnapshot = takeLocalVideoSnapshot;
```

Local Video

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
query-3.4.1.slim.min.js	200	script	index.js	24.6 kB	146 ms	
popper.min.js	200	script	index.js	8.2 kB	81 ms	
bootstrap.min.js	200	script	index.js	17.1 kB	58 ms	
css?family=Roboto+Mono:...	200	styles...	index.css:ln...	560 B	219 ms	
helpers.js	200	fetch	index.js:101	1.4 kB	2 ms	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	153 ms	
L0xuDF4xVMP-BfR8bXMu...	200	font	css?family=Robo...	15.6 kB	112 ms	
blob:http://localhost:3000/...	200	jpeg	Other	0 B	1 ms	
blob:http://localhost:3000/...	200	jpeg	Other	0 B	1 ms	

15 requests 1.3 MB transferred 1.7 MB resources Finish: 20.99 s DOMContentLoaded: 399 ms Load: 1.17 s

Console What's New Issues

22 issues: 21 1

Network

5 messages

- No errors
- No warnings
- 5 info
- No verbose

2021-08-26T17:59:17.678Z info [createLocalTracks #1] index.js:27365 Call to getUserMedia successful; got MediaStreamTracks:
> [MediaStreamTrack]
2021-08-26T17:59:17.679Z debug [LocalVideoTrack #1] index.js:27365 under construction
2021-08-26T17:59:17.698Z debug [LocalVideoTrack #1] index.js:27365 2BeF78ad-cf04-41ca-8aee-a9358ae0ad5f Attempting to attach to element:
> [video id="videoInputPreview"] autoplay playsinline=<video>
2021-08-26T17:59:18.378Z debug [LocalVideoTrack #1] index.js:27365 2BeF78ad-cf04-41ca-8aee-a9358ae0ad5f Dimensions:
> [width: 400, height: 400]
2021-08-26T17:59:18.378Z debug [LocalVideoTrack #1] index.js:27365 2BeF78ad-cf04-41ca-8aee-a9358ae0ad5f Started

Codec Preferences

This app demonstrates the [Codec Preferences API](#), which can be used to specify the send-side audio and video codec preferences while connecting to a Room.

RM1bd427e4001a97aad9dba70b547099f6

Codec Preferences

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<VideoCodecName>} preferredAudioCodecs -
 * @param {Array<VideoCodecName>} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferredAudioCodecs, preferredVideoCodecs) {
    return Video.connect(token, {
        preferredAudioCodecs: preferredAudioCodecs,
        preferredVideoCodecs: preferredVideoCodecs,
        name: roomName
    });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;
```

Participant's Media



Select Codec Preferences

Preferred Audio Codec: ISAC

Preferred Video Codec: H264

[Disconnect from Room](#)

Network Performance Monitor (DevTools Network tab):

Name	Status	Type	Initiator	Size	Time	Waterfall
index.js:294	200	fetch	index.js:294	1.1 kB	4 ms	
index.css	200	svg+xml	index.css	1.8 kB	154 ms	
index.js:278	200	fetch	index.js:278	2.6 kB	161 ms	
index.js:2305	200	font	css?family=...index.css	15.6 kB	104 ms	
index.js:2748	200	webc...	index.js:2748	0 B	Pending	
index.js:278	200	fetch	index.js:278	652 B	3 ms	
index.js:2305	200	font	css?family=...index.css	15.6 kB	104 ms	
index.js:2748	200	webc...	index.js:2748	0 B	Pending	
index.js:278	200	fetch	index.js:278	654 B	2 ms	
index.js:2305	200	font	css?family=...index.css	15.6 kB	104 ms	

Console:

```
ccc4ff05262c{"state":"ready"}1,"revision":13,"state":"connected"},participants:[{"id":"5Ae1b728ed0b7219e585bc8d78026af","identity":"Holly Quincy", "label": "Holly Quincy", "type": "audio", "volume": 100}, {"id": "141 user messages", "label": "141 user messages", "type": "text", "volume": 100}], "enabled": true, "revision": 12, "is_recording": true}, "subscribed_tracks": [{"track_id": "MT1980da139886dc1418e9ac1a1a97", "kind": "audio", "priority": "standard", "id": "08649dfa-aaa-e061-9c4e-b0013ab31196", "enabled": true, "label": "Holly Quincy", "volume": 100}, {"track_id": "MTc614af8491f3745ba65eb07fe1544f", "kind": "video", "priority": "standard", "id": "08108e6b-5565-410b-a37a-5883b6416e", "enabled": true, "label": "Holly Quincy", "volume": 100}], "token": "ccc4ff05262c{"state":"ready"}1,"type":"msg"}]
```

What's New:

```
2021-08-26T18:02:17.818Z debug [RemoteVideoTrack #4: index.js:27726 MTc614af8491f3745ba65eb07fe1544f] Dimensions: > (width: 640, height: 480)
```

Issues:

```
2021-08-26T18:02:17.818Z debug [RemoteVideoTrack #4: index.js:27726 MTc614af8491f3745ba65eb07fe1544f] Started
```

2021-08-26T18:02:19.341Z debug [TwilioConnection #1: index.js:27726 ws://localhost:8000/twilio.com/signaling] Incoming: {"type": "heartbeat"}

Codec Preferences

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<VideoCodecName>} preferredAudioCodecs -
 * @param {Array<VideoCodecName>} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferredAudioCodecs, preferredVideoCodecs) {
    return Video.connect(token, {
        preferredAudioCodecs: preferredAudioCodecs,
        preferredVideoCodecs: preferredVideoCodecs,
        name: roomName
    });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;
```

Participant's Media



Select Codec Preferences

Preferred Audio Codec: Opus

Selected Audio Codec: opus

Preferred Video Codec: H264

Selected Video Codec: H264

[Disconnect from Room](#)

Network Performance Monitor (DevTools Network tab):

Name	Status	Type	Initiator	Size	Time	Waterfall
index.js:278	200	fetch	index.js:278	652 B	3 ms	
index.css	200	font	css?family=...index.css	15.6 kB	104 ms	
index.js:2305	200	font	css?family=...index.css	15.6 kB	104 ms	
index.js:2748	200	webc...	index.js:2748	0 B	Pending	
index.js:278	200	fetch	index.js:278	654 B	2 ms	
index.js:2305	200	font	css?family=...index.css	15.6 kB	104 ms	
index.js:2748	200	webc...	index.js:2748	0 B	Pending	
index.js:278	200	fetch	index.js:278	660 B	4 ms	
index.js:2305	200	font	css?family=...index.css	15.6 kB	104 ms	

Console:

```
2021-08-26T18:03:19.827Z debug [RemoteVideoTrack #8: index.js:27726 MT41dc38429c90f79e0bf28cbdd4d53] Dimensions: > (width: 640, height: 480)
```

What's New:

```
2021-08-26T18:03:19.827Z debug [RemoteVideoTrack #8: index.js:27726 MT41dc38429c90f79e0bf28cbdd4d53] Started
```

Issues:

```
2021-08-26T18:03:20.539Z debug [TwilioConnection #1: index.js:27726 ws://localhost:8000/twilio.com/signaling] Incoming: {"type": "connect", "id": "163000101621", "name": "Holly Quincy", "group": "quality", "level": "info", "event": "connect", "timestamp": 163000101620, "J} 2021-08-26T18:03:21.621Z info [connect #1] event <--> [connect #1] event timestamp: 163000101621, J} 2021-08-26T18:03:21.621Z info [connect #1] event <--> [connect #1] event timestamp: 163000101621, J} 2021-08-26T18:03:22.085Z group ["quality"] level: "info", name: "active" 2021-08-26T18:03:23.292Z debug [TwilioConnection #1: index.js:27726 ws://localhost:8000/twilio.com/signaling] Incoming: {"type": "heartbeat"} 2021-08-26T18:03:23.292Z debug [TwilioConnection #1: index.js:27726 ws://localhost:8000/twilio.com/signaling] Outgoing: {"type": "heartbeat"} 2021-08-26T18:03:23.382Z debug [TwilioConnection #1: index.js:27726 ws://localhost:8000/twilio.com/signaling] Outgoing: {"type": "heartbeat"}
```

Codec Preferences

```

use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {Array} preferredAudioCodecs -
 * @param {Array} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, pref) {
  return Video.connect(token, {
    preferredAudioCodecs: preferredAudioCodecs,
    preferredVideoCodecs: preferredVideoCodecs,
    name: roomName
  });
}

exports.connectWithPreferredCodecs = connectWithPreferred

```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: PCMA
Selected Audio Codec: opus

Preferred Video Codec: H264
Selected Video Codec: H264

Disconnect from Room

Network (Developer Tools Network tab)

Name	Status	Type	Initiator	Size	Time	Waterfall
token?identity=Holy%20Q...	200	fetch	index.js:278	652 B	3 ms	
L0xUf4xIVMF-BfRbXML...	200	font	cast@mobile...	15.6 kB	104 ms	
signaling	101	webs...	index.js:2505	0 B	Pending	
VideoEvents	101	webs...	index.js:27348	0 B	Pending	
token?identity=Precise%2...	200	fetch	index.js:278	654 B	2 ms	
signaling	101	webs...	index.js:2505	0 B	57.49 s	
VideoEvents	101	webs...	index.js:27348	0 B	56.73 s	
token?identity=Ignominio...	200	fetch	index.js:278	660 B	4 ms	
signaling	101	webs...	index.js:2505	0 B	Pending	

23 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 1.1 min | DOMContentLoaded: 372 ms | Load: 543 ms

Console (Developer Tools Console tab)

```

2021-08-26T18:01:58.445Z info [connect #3] event {"index.js:27726": "fadedTime: 41866, group: 1, quality: 100", "level": "info", "name": "stats", "report": "timestamp: 1630001038445, _"}
2021-08-26T18:01:59.019Z debug [TwilioConnection #3: index.js:27726 wss://global.vts.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:01:59.134Z debug [TwilioConnection #1: index.js:27726 wss://global.vts.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:01:59.162Z info [connect #1] event {"index.js:27726": "fadedTime: 111056, group: 1, quality: 100", "level": "info", "name": "stats", "report": "timestamp: 1630001041622, _"}
2021-08-26T18:01:59.623Z info [connect #1] event {"index.js:27726": "fadedTime: 111057, group: 1, quality: 100", "level": "info", "name": "stats", "report": "timestamp: 1630001041623, _"}
2021-08-26T18:01:59.785Z debug [TwilioConnection #1: index.js:27726 wss://global.vts.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:01:59.789Z debug [TwilioConnection #3: index.js:27726 wss://global.vts.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:01:59.822Z debug [TwilioConnection #3: index.js:27726 wss://global.vts.twilio.com/signaling] Incoming: {"type": "heartbeat"}

```

65 issues | 64 | 1

Codec Preferences

```

use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {Array} preferredAudioCodecs -
 * @param {Array} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, pref) {
  return Video.connect(token, {
    preferredAudioCodecs: preferredAudioCodecs,
    preferredVideoCodecs: preferredVideoCodecs,
    name: roomName
  });
}

exports.connectWithPreferredCodecs = connectWithPreferred

```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: PCMU
Selected Audio Codec: PCMU

Preferred Video Codec: H264
Selected Video Codec: H264

Disconnect from Room

Network (Developer Tools Network tab)

Name	Status	Type	Initiator	Size	Time	Waterfall
VideoEvents	101	webs...	index.js:27348	0 B	Pending	
token?identity=Precise%2...	200	fetch	index.js:278	654 B	2 ms	
signaling	101	webs...	index.js:2505	0 B	57.49 s	
VideoEvents	101	webs...	index.js:27348	0 B	56.73 s	
token?identity=Ignominio...	200	fetch	index.js:278	660 B	4 ms	
signaling	101	webs...	index.js:2505	0 B	Pending	

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.3 min | DOMContentLoaded: 372 ms | Load: 543 ms

Console (Developer Tools Console tab)

```

2021-08-26T18:04:01.623Z info [connect #1] event {"index.js:27726": "fadedTime: 111057, group: 1, quality: 100", "level": "info", "name": "stats", "report": "timestamp: 1630001041622, _"}
2021-08-26T18:04:01.785Z debug [TwilioConnection #1: index.js:27726 wss://global.vts.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:04:01.789Z debug [TwilioConnection #3: index.js:27726 wss://global.vts.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:04:01.822Z debug [TwilioConnection #3: index.js:27726 wss://global.vts.twilio.com/signaling] Incoming: {"type": "heartbeat"}

```

535 messages | 535 user messages | 535 info

65 issues | 64 | 1

Codec Preferences

```

'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<AudioCodecName>} preferredAudioCodecs
 * @param {Array<VideoCodecName>} preferredVideoCodecs
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferences) {
  return Video.connect(token, {
    preferredAudioCodecs: preferredAudioCodecs,
    preferredVideoCodecs: preferredVideoCodecs,
    name: roomName
  });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;

```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: ISAC
Selected Audio Codec: PCMU

Preferred Video Codec: VP8
Selected Video Codec: H264

Disconnect from Room

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
videoEvents	101	web...	index.js:27348	0 B	Pending	
tokenIdentity=Precise%2...	200	fetch	index.js:278	654 B	2 ms	
signaling	101	web...	index.js:25305	0 B	57.49 s	
videoEvents	101	web...	index.js:27348	0 B	56.73 s	
tokenIdentity=Ignominious...	200	fetch	index.js:278	660 B	4 ms	
signaling	101	web...	index.js:25305	0 B	1.1 min	
videoEvents	101	web...	index.js:27348	0 B	1.1 min	
tokenIdentity=Oaken%20%	200	fetch	index.js:278	645 B	4 ms	
signaling	101	web...	index.js:25305	0 B	Pending	

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.3 min | DOMContentLoaded: 372 ms | Load: 543 ms

Console What's New Issues Default levels ▾ [65 issues: 64] 1 Filter

```

2021-08-26T18:05:17.383Z info [connect #1] event index.js:27726
  > [elapsedTime: 38053, group: "quality", level: "info", name: "active"
  > e-ice-candidate-pair", timestamp: 1630001097383, ...]
2021-08-26T18:05:19.639Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:05:19.738Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:05:20.042Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:05:20.125Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:05:20.624Z info [connect #1] event index.js:27726
  > [elapsedTime: 171059, group: "quality", level: "info", name: "stats"
  > report", timestamp: 163000108624, ...]
2021-08-26T18:05:20.624Z info [connect #1] event index.js:27726
  > [elapsedTime: 171059, group: "quality", level: "info", name: "active"
  > e-ice-candidate-pair", timestamp: 163000108624, ...]
2021-08-26T18:05:20.738Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}

```

Codec Preferences

```

'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<AudioCodecName>} preferredAudioCodecs
 * @param {Array<VideoCodecName>} preferredVideoCodecs
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferences) {
  return Video.connect(token, {
    preferredAudioCodecs: preferredAudioCodecs,
    preferredVideoCodecs: preferredVideoCodecs,
    name: roomName
  });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;

```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: ISAC
Selected Audio Codec: PCMU

Preferred Video Codec: VP9
Selected Video Codec: H264

Disconnect from Room

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
videoEvents	101	web...	index.js:27348	0 B	Pending	
tokenIdentity=Precise%2...	200	fetch	index.js:278	654 B	2 ms	
signaling	101	web...	index.js:25305	0 B	57.49 s	
videoEvents	101	web...	index.js:27348	0 B	56.73 s	
tokenIdentity=Ignominious...	200	fetch	index.js:278	660 B	4 ms	
signaling	101	web...	index.js:25305	0 B	1.1 min	
videoEvents	101	web...	index.js:27348	0 B	1.1 min	
tokenIdentity=Oaken%20%	200	fetch	index.js:278	645 B	4 ms	
signaling	101	web...	index.js:25305	0 B	Pending	

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.3 min | DOMContentLoaded: 372 ms | Load: 543 ms

Console What's New Issues Default levels ▾ [65 issues: 64] 1 Filter

```

2021-08-26T18:05:29.651Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:05:29.939Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:05:31.441Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:05:31.623Z info [connect #1] event index.js:27726
  > [elapsedTime: 131623, group: "quality", level: "info", name: "stats"
  > report", timestamp: 1630001131623, ...]
2021-08-26T18:05:32.328Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:05:34.652Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:05:34.792Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:05:35.542Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:05:36.428Z debug [TwilioConnection #1: index.js:27726
  wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}

```

Codec Preferences

```
'use strict';

var Video = require('twilio-video');

/***
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<AudioCodecName>} preferredAudioCodecs -
 * @param {Array<VideoCodecName>} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferredAudioCodecs, preferredVideoCodecs) {
    return Video.connect(token, {
        preferredAudioCodecs: preferredAudioCodecs,
        preferredVideoCodecs: preferredVideoCodecs,
        name: roomName
    });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;
```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: Opus

Selected Audio Codec: PCMU

Preferred Video Codec: H264

Selected Video Codec: H264

Disconnect from Room

Network Performance Monitor

Network tab showing traffic details:

Name	Status	Type	Initiator	Size	Time	Waterfall
VideoEvents	101	webs...	index.js:27348	0 B	Pending	[Waterfall]
token?identity=Precise%2...	200	fetch	index.js:278	654 B	2 ms	[Waterfall]
signaling	101	webs...	index.js:25305	0 B	57.49 s	[Waterfall]
VideoEvents	101	webs...	index.js:27348	0 B	56.73 s	[Waterfall]
token?identity=Ignominiou...	200	fetch	index.js:278	660 B	4 ms	[Waterfall]
signaling	101	webs...	index.js:25305	0 B	1.1 min	[Waterfall]
VideoEvents	101	webs...	index.js:27348	0 B	1.1 min	[Waterfall]
token?identity=Oaken%20...	200	fetch	index.js:278	645 B	4 ms	[Waterfall]
signaling	101	webs...	index.js:25305	0 B	Pending	[Waterfall]

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.3 min | DOMContentLoaded: 372 ms | Load: 543 ms

Codec Preferences

```
'use strict';

var Video = require('twilio-video');

/***
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<AudioCodecName>} preferredAudioCodecs -
 * @param {Array<VideoCodecName>} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferredAudioCodecs, preferredVideoCodecs) {
    return Video.connect(token, {
        preferredAudioCodecs: preferredAudioCodecs,
        preferredVideoCodecs: preferredVideoCodecs,
        name: roomName
    });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;
```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: Opus

Selected Audio Codec: PCMU

Preferred Video Codec: VP8

Selected Video Codec: H264

Disconnect from Room

Network Performance Monitor

Network tab showing traffic details:

Name	Status	Type	Initiator	Size	Time	Waterfall
VideoEvents	101	webs...	index.js:27348	0 B	Pending	[Waterfall]
token?identity=Precise%2...	200	fetch	index.js:278	654 B	2 ms	[Waterfall]
signaling	101	webs...	index.js:25305	0 B	57.49 s	[Waterfall]
VideoEvents	101	webs...	index.js:27348	0 B	56.73 s	[Waterfall]
token?identity=Ignominiou...	200	fetch	index.js:278	660 B	4 ms	[Waterfall]
signaling	101	webs...	index.js:25305	0 B	1.1 min	[Waterfall]
VideoEvents	101	webs...	index.js:27348	0 B	1.1 min	[Waterfall]
token?identity=Oaken%20...	200	fetch	index.js:278	645 B	4 ms	[Waterfall]
signaling	101	webs...	index.js:25305	0 B	Pending	[Waterfall]

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.3 min | DOMContentLoaded: 372 ms | Load: 543 ms

Codec Preferences

```

'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<AudioCodecName>} preferredAudioCodecs -
 * @param {Array<VideoCodecName>} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferredAudioCodecs, preferredVideoCodecs) {
  return Video.connect(token, {
    preferredAudioCodecs: preferredAudioCodecs,
    preferredVideoCodecs: preferredVideoCodecs,
    name: roomName
  });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;

```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: Opus

Selected Audio Codec: PCMU

Preferred Video Codec: VP9

Selected Video Codec: H264

Disconnect from Room

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
VideoEvents	101	webs...	index.js:27348	0 B	Pending	
token?identity=Precise%2...	200	fetch	index.js:278	654 B	2 ms	
signaling	101	webs...	index.js:25305	0 B	57.49 s	
VideoEvents	101	webs...	index.js:27348	0 B	56.73 s	
token?identity=Ignominiou...	200	fetch	index.js:278	660 B	4 ms	
signaling	101	webs...	index.js:25305	0 B	1.1 min	
VideoEvents	101	webs...	index.js:27348	0 B	1.1 min	
token?identity=Oaken%20%	200	fetch	index.js:278	645 B	4 ms	
signaling	101	webs...	index.js:25305	0 B	Pending	

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.3 min | DOMContentLoaded: 372 ms | Load: 543 ms

Console What's New Issues Default levels ▾ [65 issues: 64 1]

wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:11:15.453Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:11:15.471Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:11:15.532Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:11:17.328Z info [connect #4] event index.js:27726
 > (elapsedTime: 410798, group: "quality", level: "info", name: "stats
 > -report") timestamp: 1630001477328, _}
2021-08-26T18:11:17.782Z info [connect #4] event index.js:27726
 > (elapsedTime: 410798, group: "quality", level: "info", name: "activ
 > e-ice-candidate-pair") timestamp: 1630001477328, _}
2021-08-26T18:11:18.784Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:11:19.578Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:11:20.234Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
 >

Codec Preferences

```

'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<AudioCodecName>} preferredAudioCodecs -
 * @param {Array<VideoCodecName>} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferredAudioCodecs, preferredVideoCodecs) {
  return Video.connect(token, {
    preferredAudioCodecs: preferredAudioCodecs,
    preferredVideoCodecs: preferredVideoCodecs,
    name: roomName
  });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;

```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: PCMA

Selected Audio Codec: PCMU

Preferred Video Codec: VP8

Selected Video Codec: H264

Disconnect from Room

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
VideoEvents	101	webs...	index.js:27348	0 B	Pending	
token?identity=Precise%2...	200	fetch	index.js:278	654 B	2 ms	
signaling	101	webs...	index.js:25305	0 B	57.49 s	
VideoEvents	101	webs...	index.js:27348	0 B	56.73 s	
token?identity=Ignominiou...	200	fetch	index.js:278	660 B	4 ms	
signaling	101	webs...	index.js:25305	0 B	1.1 min	
VideoEvents	101	webs...	index.js:27348	0 B	1.1 min	
token?identity=Oaken%20%	200	fetch	index.js:278	645 B	4 ms	
signaling	101	webs...	index.js:25305	0 B	Pending	

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.3 min | DOMContentLoaded: 372 ms | Load: 543 ms

Console What's New Issues Default levels ▾ [65 issues: 64 1]

wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:11:53.489Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:11:53.493Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:11:55.483Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:11:56.473Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:11:57.328Z info [connect #4] event index.js:27726
 > (elapsedTime: 459798, group: "quality", level: "info", name: "stats
 > -report") timestamp: 1630001517328, _}
2021-08-26T18:11:57.328Z info [connect #4] event index.js:27726
 > (elapsedTime: 459798, group: "quality", level: "info", name: "activ
 > e-ice-candidate-pair") timestamp: 1630001517328, _}
2021-08-26T18:11:58.661Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:11:58.740Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
 >

Codec Preferences

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the given codec preferences.
 * @param {string} token - Token for joining the Room
 * @param {string} roomName - Room name
 * @param {Array<AudioCodecName>} preferredAudioCodecs -
 * @param {Array<VideoCodecName>} preferredVideoCodecs -
 * @returns {CancelablePromise<Room>}
 */
function connectWithPreferredCodecs(token, roomName, preferredAudioCodecs, preferredVideoCodecs) {
  return Video.connect(token, {
    preferredAudioCodecs: preferredAudioCodecs,
    preferredVideoCodecs: preferredVideoCodecs,
    name: roomName
  });
}

exports.connectWithPreferredCodecs = connectWithPreferredCodecs;
```

Participant's Media

Select Codec Preferences

Preferred Audio Codec: PCMU
Selected Audio Codec: PCMU

Preferred Video Codec: VP9
Selected Video Codec: H264

Disconnect from Room

Network

Name	Status	Type	Initiator	Size	Time	Waterfall
VideoEvents	101	web... token?identity=Precise%20...	index.js:27348	0 B	Pending	
token?identity=Precise%20...	200	fetch index.js:278	654 B	2 ms		
signaling	101	web... index.js:25305	0 B	57.49 s		
VideoEvents	101	web... index.js:27348	0 B	56.73 s		
token?identity=Ignominious...	200	fetch index.js:278	660 B	4 ms		
signaling	101	web... index.js:25305	0 B	1.1 min		
VideoEvents	101	web... index.js:27348	0 B	1.1 min		
token?identity=Oaken%20%	200	fetch index.js:278	645 B	4 ms		
signaling	101	web... index.js:25305	0 B	Pending		

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 2.3 min | DOMContentLoaded: 372 ms | Load: 543 ms

Console What's New Issues Default levels ▾ | 65 issues 64 1

wss://global.vss.twilio.com/signaling Outgoing: {"type": "heartbeat"}
2021-08-26T18:12:20.182Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:12:21.707Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:12:21.569Z info [connect #1] event index.js:27726
» { "type": "report", "timestamp": 1629001541568, "level": "info", "name": "stats"
» }
2021-08-26T18:12:21.569Z info [connect #1] event index.js:27726
» { "elapsedTime": 611003, "group": "quality", "level": "info", "name": "active"
» }
2021-08-26T18:12:22.065Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:12:22.744Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:12:24.282Z debug [TwilioConnection #1: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:12:25.078Z debug [TwilioConnection #4: index.js:27726
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
,

Dominant Speaker

This app demonstrates the [Dominant Speaker API](#) for Group or Small Group Rooms. In order to run this example, please go to the [Programmable Video Settings](#) in the Twilio Console and select the Room Type as Group or Group-Small.

RM4218a5265307cf59cdcb473604ec2921

Dominant Speaker Detection

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with the Dominant Speaker API enabled
 * This API is available only in Small Group or Group Room
 * @param {string} token - Token for joining the Room
 * @returns {CancelablePromise<Room>}
 */
function connectToRoomWithDominantSpeaker(token) {
  return Video.connect(token, {
    dominantSpeaker: true
  });
}

/**
 * Listen to changes in the dominant speaker and update your room
 * @param {Room} room - The Room you just joined
 * @param {function} updateDominantSpeaker - Updates the room
 * @returns {void}
 */
function setupDominantSpeakerUpdates(room, updateDominantSpeaker) {
  room.on('dominantSpeakerChanged', function(participant) {
    console.log(`A new RemoteParticipant is now the dominant speaker: ${participant}`);
    updateDominantSpeaker(participant);
  });
}

exports.connectToRoomWithDominantSpeaker = connectToRoomWithDominantSpeaker;
exports.setupDominantSpeakerUpdates = setupDominantSpeakerUpdates;
```

Join room: RM4218a5265307cf59cdcb473604ec2921

Please join the above Room using the [QuickStart App](#) or connect the below Participants to the Room and unmute only one of them.

Alice Mak
 Disconnect Connect

Bob
 Disconnect Mute

Charlie
 Connect

Network

Name	Status	Type	Initiator	Size	Time	Waterfall
token?identity=Bob	200	fetch index.js:259		628 B	4 ms	
token?identity=Charlie	200	fetch index.js:259		633 B	5 ms	
token?identity=Mak	200	fetch index.js:259		628 B	6 ms	
VideoEvents	101	web... index.js:27161		0 B	Pending	
signaling	101	web... index.js:25118		0 B	Pending	
VideoEvents	101	web... index.js:27161		0 B	Pending	
signaling	101	web... index.js:25118		0 B	3.06 s	
VideoEvents	101	web... index.js:27161		0 B	2.33 s	
signaling	101	web... index.js:25118		0 B	Pending	

26 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 52.53 s | DOMContentLoaded: 347 ms | Load: 357 ms

Console What's New Issues Default levels ▾ | 1 issue: 1

wss://global.vss.twilio.com/signaling Outgoing: {"type": "heartbeat"}
2021-08-26T18:14:28.741Z debug [TwilioConnection #2: index.js:27539
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:14:28.744Z debug [TwilioConnection #4: index.js:27539
wss://global.vss.twilio.com/signaling] Outgoing: {"type": "heartbeat"}
A new RemoteParticipant is now the dominant speaker: index.js:26
» RemoteParticipant {id:0,track:Map(1),dataTracks:Map(0),...}
2021-08-26T18:14:29.062Z info [connect #2] event index.js:27539
» { "type": "report", "timestamp": 1629001698868, "level": "info", "name": "stats"
» }
2021-08-26T18:14:29.860Z info [connect #2] event index.js:27539
» { "elapsedTime": 30832, "group": "quality", "level": "info", "name": "active"
» }
2021-08-26T18:14:31.578Z debug [TwilioConnection #1: index.js:27539
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:14:32.466Z debug [TwilioConnection #2: index.js:27539
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:14:32.635Z debug [TwilioConnection #4: index.js:27539
wss://global.vss.twilio.com/signaling] Incoming: {"type": "heartbeat"}
,

Network Quality

This app demonstrates the [Network Quality API](#) for Group or Small Group Rooms. In order to run this example, please go to the [Programmable Video Settings](#) in the Twilio Console and select the Room Type as Group or Group-Small.

RM9db70c6a82b56c33aee15d0994107fa4

```

room.on('participantConnected', function(participant)
  setupNetworkQualityUpdatesForParticipant(participant
));
}

/**
 * Change the local and remote Network Quality verbosity
 * @param {Room} room - The Room you just joined
 * @param [number] localVerbosity - Verbosity level of NQ
 *   for the localParticipant [1 - 3]
 * @param [number] remoteVerbosity - Verbosity level of NQ
 *   for the RemoteParticipant(s) [0 - 3]
 * @return {void}
 */
function setNetworkQualityConfiguration(room, localVerbosity) {
  room.localParticipant.setNetworkQualityConfiguration({
    local: localVerbosity,
    remote: remoteVerbosity
  });
}

exports.connectToRoomWithNetworkQuality = connectToRoomWithNetworkQuality;
exports.setupNetworkQualityUpdates = setupNetworkQualityUpdates;
exports.setNetworkQualityConfiguration = setNetworkQualityConfiguration;

```

NQ Level (Alice): 3

NQ Level (Charlie): 2

NQ Level (Bob): 2

Remote Participant Reconnection

This app demonstrates the [RemoteParticipant Reconnection States and Events](#) which can be used to update your application when somebody else is reconnecting to the Room.

RMd66e040467dcb1a4959e61f1557fcc4a

Remote Participant Reconnection States

```
use strict';

/**
 * Listen to RemoteParticipant reconnection events and update the UI
 * @param {Room} room - The Room you have joined
 * @param {function} updateRoomState - Updates the app UI
 * @returns {void}
 */
function handleRemoteParticipantReconnectionUpdates(room, updateParticipantState) {
    room.on('participantReconnecting', function(participant) {
        updateParticipantState(participant.state);
    });

    room.on('participantReconnected', function(participant) {
        updateParticipantState(participant.state);
    });
}

/**
 * Listen to LocalParticipant reconnection events and update the UI
 * @param {Room} room - The Room you have joined
 * @param {function} updateRoomState - Updates the app UI
 * @returns {void}
 */
function handleLocalParticipantReconnectionUpdates(room, updateRoomState) {
    const localParticipant = room.localParticipant;

    localParticipant.on('reconnecting', function() {
        updateParticipantState(localParticipant.state);
    });

    localParticipant.on('reconnected', function() {
        updateParticipantState(localParticipant.state);
    });
}

exports.handleLocalParticipantReconnectionUpdates = handleLocalParticipantReconnectionUpdates;
exports.handleRemoteParticipantReconnectionUpdates = handleRemoteParticipantReconnectionUpdates;
```

Local View

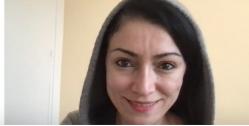


Simulate Reconnection

Connected

Reconnecting

Remote View



Network

Fetch/XHR JS CSS Img Media Font Doc WS Wasm Manifest Other

Blocked Requests

Name	Status	Type	Initiator	Size	Time	Waterfall
css?family=Roboto+Mono...	200	styles...	index.js<in...	560 B	425 ms	
helpers.js	200	fetch	index.js:201	1.7 kB	4 ms	
token?identity=Natural%2...	200	fetch	index.js:185	661 B	2 ms	
token?identity=Zesty%20V...	200	fetch	index.js:185	649 B	4 ms	
ltxudF4xVMF-Bfr8bXMX...	200	font	css?family=...	15.6 kB	442 ms	
signaling	101	webs...	index.js:25044	0 B	Pending	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	1.53 s	
signaling	101	webs...	index.js:25044	0 B	Pending	
VideoEvents	101	webs...	index.js:27087	0 B	Pending	

19 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 6.93 s | DOMContentLoaded: 679 ms | Load: 1.55 s

Console What's New Issues

Default levels: 21 | 1

171 messages

171 user messages

No errors

No warnings

171 info

No verbose

01533200-4ab0-4700-9302 debug [TwilioConnection #2: index.js:27465 wss://aul.vss.twilio.com/ignaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:18:26.398Z debug [TwilioConnection #2: index.js:27465 wss://aul.vss.twilio.com/ignaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:18:26.879Z debug [TwilioConnection #1: index.js:27465 wss://aul.vss.twilio.com/ignaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:18:29.136Z debug [TwilioConnection #1: index.js:27465 wss://aul.vss.twilio.com/ignaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:18:29.419Z debug [TwilioConnection #2: index.js:27465 wss://aul.vss.twilio.com/ignaling] Outgoing: {"type": "heartbeat"}
2021-08-26T18:18:30.492Z debug [TwilioConnection #2: index.js:27465 wss://aul.vss.twilio.com/ignaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:18:30.884Z debug [TwilioConnection #1: index.js:27465 wss://aul.vss.twilio.com/ignaling] Incoming: {"type": "heartbeat"}
2021-08-26T18:18:31.065Z info [connect #1 event: index.js:27465 timestamp: 1630001911865, level: "info", name: "stats-report"]
2021-08-26T18:18:31.065Z info [connect #1 event: index.js:27465 timestamp: 1630001911865, group: "quality", level: "info", name: "active-ice-candidate-pair", timestamp: 1630001911865, ...]

```

    * @param {function} updateRoomState - Updates the app UI
    * @returns {void}
   */
  function handleRemoteParticipantReconnectionUpdates(room,
    room.on('participantReconnecting', function(participant,
      updateParticipantState(participant.state),
    ));

    room.on('participantReconnected', function(participant,
      updateParticipantState(participant.state),
    ));

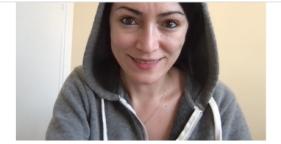
  /**
   * Listen to LocalParticipant reconnection events and update
   * @param {Room} room - The Room you have joined
   * @param {function} updateRoomState - Updates the app UI
   * @returns {void}
   */
  function handleLocalParticipantReconnectionUpdates(room,
    const localParticipant = room.localParticipant;

    localParticipant.on('reconnecting', Function() {
      updateParticipantState(localParticipant.state);
    });

    localParticipant.on('reconnected', function() {
      updateParticipantState(localParticipant.state);
    });

  exports.handleLocalParticipantReconnectionUpdates = handleLocalParticipantReconnectionUpdates;
  exports.handleRemoteParticipantReconnectionUpdates = handleRemoteParticipantReconnectionUpdates;

```



Simulate Reconnection

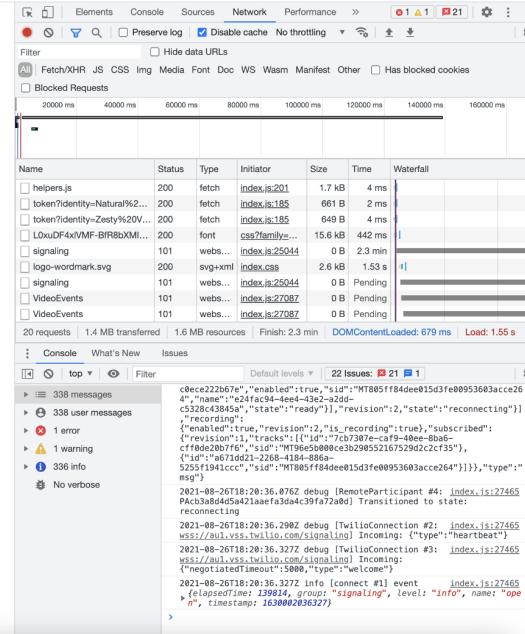
State

Connected
Reconnecting

Remote View



Simulate Reconnection



```

    updateParticipantState(participant.state),
  });

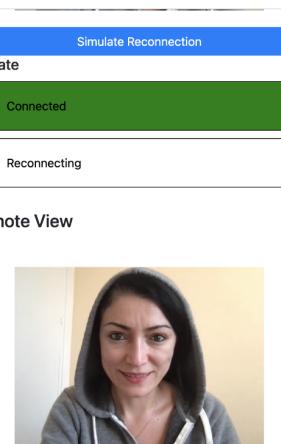
  /**
   * Listen to LocalParticipant reconnection events and update
   * @param {Room} room - The Room you have joined
   * @param {function} updateRoomState - Updates the app UI
   * @returns {void}
   */
  function handleLocalParticipantReconnectionUpdates(room,
    const localParticipant = room.localParticipant;

    localParticipant.on('reconnecting', function() {
      updateParticipantState(localParticipant.state);
    });

    localParticipant.on('reconnected', function() {
      updateParticipantState(localParticipant.state);
    });

  exports.handleLocalParticipantReconnectionUpdates = handleLocalParticipantReconnectionUpdates;
  exports.handleRemoteParticipantReconnectionUpdates = handleRemoteParticipantReconnectionUpdates;

```

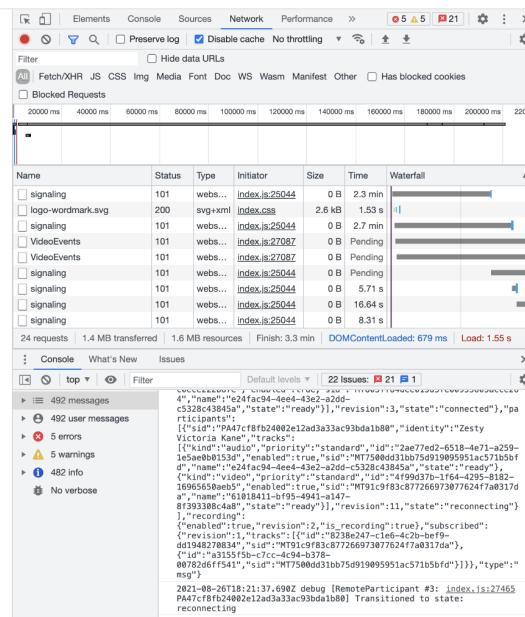


Simulate Reconnection

State

Connected
Reconnecting

Remote View



Video Track Manual Controls

This app demonstrates the manual modes of the `clientTrackSwitchOffControl` and `contentPreferencesMode` features. Which can be used to efficiently utilize CPU and bandwidth.

Issue created: <https://github.com/twilio/video-quickstart-js/issues/197>

RM521e2e32628de93d806db2ac859ec476

Video Track Manual Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'manual' mode. The default mode is 'auto'.
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'manual',
        clientTrackSwitchOffControl: 'manual'
      }
    }
  });
}

/**
 * Switch on the RemoteVideoTrack.
 * @param {RemoteVideoTrack} track - The RemoteVideoTrack
 * @returns {RemoteVideoTrack}
 */
function switchOn(track) {
  return track.switchOn();
}

/**
 * Switch off the RemoteVideoTrack.
 * @param {RemoteVideoTrack} track - The RemoteVideoTrack
 * @returns {RemoteVideoTrack}
 */
function switchOff(track) {
  return track.switchOff();
}

/**
 * Set the render dimensions of the RemoteVideoTrack.
 */


```

Remote Video Controls

Switch Off Control: [Switch On](#) [Switch Off](#)

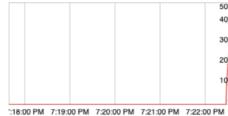
Content Preferences: [Render Dimensions](#)

Remote Video Track



On

Video Bitrate



Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
bootstrap.min.js	200	script	(index)	17.1 kB	57 ms	
css?family=Roboto+Mono...	200	stylesheet	index.css-1...	560 B	219 ms	
helpers.js	200	fetch	index.js:235	1.8 kB	3 ms	
token?identity=Eccentric...	200	fetch	index.js:219	662 B	4 ms	
LoxudF4xvIMF-BfR8bXMy...	200	font	css?family=...	15.6 kB	112 ms	
token?identity=Tall%20Uy...	200	fetch	index.js:219	650 B	2 ms	
signaling	101	websocket	index.js:25827	0 B	Pending	
signaling	101	websocket	index.js:25827	0 B	Pending	
VideoEvents	101	websocket	index.js:27870	0 B	Pending	

Console

What's New

Issues

Default levels

1 Issue: 1

No messages

No user messages

No errors

No warnings

No info

No verbose

Video Track Manual Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'manual' mode. The default mode
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'manual',
        clientTrackSwitchOffControl: 'manual'
      }
    }
  });
}

/**
 * Switch on the RemoteVideoTrack.
 * @param {RemoteVideoTrack} track - The RemoteVideoTrack
 * @returns {RemoteVideoTrack}
 */
function switchOn(track) {
  return track.switchOn();
}

/**
 * Switch off the RemoteVideoTrack.
 * @param {RemoteVideoTrack} track - The RemoteVideoTrack
 * @returns {RemoteVideoTrack}
 */
function switchOff(track) {
  return track.switchOff();
}

/* Set the render dimensions of the RemoteVideoTrack.
 */

```

Remote Video Controls

Switch Off Control: Switch On Switch Off

Content Preferences: Render Dimensions

Remote Video Track

Video Bitrate

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
bootstrap.min.js	200	script	(index)	17.1 kB	57 ms	
css?family=Roboto+Mono...	200	stylesheet	(index.css->In...	560 B	219 ms	
helpers.js	200	fetch	index.js:235	1.8 kB	3 ms	
token?identity=Eccentric...	200	fetch	index.js:219	662 B	4 ms	
L0xdF4xVM-BfRBbX...ML...	200	font	css?family=...	15.6 kB	112 ms	
token?identity=Tall%20Ju...ly...	200	fetch	index.js:219	650 B	2 ms	
signaling	101	websocket	index.js:25827	0 B	Pending	
signaling	101	websocket	index.js:25827	0 B	Pending	
videoEvents	101	websocket	index.js:27870	0 B	Pending	

19 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 531 ms | DOMContentLoaded: 384 ms | Load: 400 ms

Console What's New Issues

- 1 message
 - No user messages
- 1 error
 - Uncaught TypeError: Cannot read property 'switchOn' of null
at switchOn (index.js:129)
at HTMLButtonElement.switchOnBtn.onclick (index.js:142)
- No warnings
- No info
- No verbose

Video Track Manual Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'manual' mode. The default mode
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'manual',
        clientTrackSwitchOffControl: 'manual'
      }
    }
  });
}

/**
 * Switch on the RemoteVideoTrack.
 * @param {RemoteVideoTrack} track - The RemoteVideoTrack
 * @returns {RemoteVideoTrack}
 */
function switchOn(track) {
  return track.switchOn();
}

/**
 * Switch off the RemoteVideoTrack.
 * @param {RemoteVideoTrack} track - The RemoteVideoTrack
 * @returns {RemoteVideoTrack}
 */
function switchOff(track) {
  return track.switchOff();
}

/* Set the render dimensions of the RemoteVideoTrack.
 */

```

Remote Video Controls

Switch Off Control: Switch On Switch Off

Content Preferences: 1280x720

Remote Video Track

Video Bitrate

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
bootstrap.min.js	200	script	(index)	17.1 kB	57 ms	
css?family=Roboto+Mono...	200	stylesheet	(index.css->In...	560 B	219 ms	
helpers.js	200	fetch	index.js:235	1.8 kB	3 ms	
token?identity=Eccentric...	200	fetch	index.js:219	662 B	4 ms	
L0xdF4xVM-BfRBbX...ML...	200	font	css?family=...	15.6 kB	112 ms	
token?identity=Tall%20Ju...ly...	200	fetch	index.js:219	650 B	2 ms	
signaling	101	websocket	index.js:25827	0 B	Pending	
signaling	101	websocket	index.js:25827	0 B	Pending	
videoEvents	101	websocket	index.js:27870	0 B	Pending	

19 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 531 ms | DOMContentLoaded: 384 ms | Load: 400 ms

Console What's New Issues

- 2 messages
 - No user messages
- 2 errors
 - Uncaught TypeError: Cannot read property 'switchOn' of null
at switchOn (index.js:129)
at HTMLButtonElement.switchOnBtn.onclick (index.js:142)
 - Uncaught TypeError: Cannot read property 'setContentPreferences' of null
at setRenderDimensions (index.js:48)
at HTMLSelectElement.<anonymous> (index.js:164)
- No warnings
- No info
- No verbose

Video Track Manual Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'manual' mode. The default mode
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'manual',
        clientTrackSwitchOffControl: 'manual'
      }
    }
  });
}

/**
 * Switch on the RemoteVideoTrack.
 * @param {RemoteVideoTrack} track - The RemoteVideoTrack
 * @returns {RemoteVideoTrack}
 */
function switchOn(track) {
  return track.switchOn();
}

/**
 * Switch off the RemoteVideoTrack.
 * @param {RemoteVideoTrack} track - The RemoteVideoTrack
 * @returns {RemoteVideoTrack}
 */
function switchOff(track) {
  return track.switchOff();
}

/**
 * Set the render dimensions of the RemoteVideoTrack.
 */

```

Remote Video Controls

Switch Off Control: Switch On Switch Off

Content Preferences: 176x144

Remote Video Track

Video Bitrate

Network Performance

Request	Status	Type	Initiator	Size	Time	Waterfall
bootstrap.min.js	200	script	[index]	17.1 kB	57 ms	
css?family=Roboto+Mono:200	200	styles...	[index.css:ln...]	560 B	219 ms	
helpers.js	200	fetch	[index.js:235]	1.8 kB	3 ms	
tokenIdentity=Eccentric...	200	fetch	[index.js:219]	662 B	4 ms	
L0xuDF4v\IMF-BR8btXML...	200	font	[css?family=...]	15.6 kB	112 ms	
tokenIdentity=Tal%20Ju...	200	fetch	[index.js:219]	650 B	2 ms	
signaling	101	webs...	[index.js:25827]	0 B	Pending	
signaling	101	webs...	[index.js:25827]	0 B	Pending	
VideoEvents	101	webs...	[index.js:27870]	0 B	Pending	

19 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 531 ms | DOMContentLoaded: 384 ms | Load: 400 ms

Console What's New Issues

Default levels: 1 Issue: 1

- 5 messages
- No user messages
- 5 errors
- No warnings
- No info
- No verbose

Uncaught TypeError: Cannot read property 'switchOn' of null
at switchOn ([index.js:129])
at HTMLButtonElement.onclick ([index.js:147])

Uncaught TypeError: Cannot read property 'setContentPreferences' of null
at setContentPreferences ([index.js:48])
at HTMLSelectElement.<anonymous> ([index.js:164])

Uncaught TypeError: Cannot read property 'switchOff' of null
at switchOff ([index.js:38])
at HTMLButtonElement.switchOffBtn.onclick ([index.js:152])

Local Video Filter

This app demonstrates a way to apply filters to the LocalVideoTrack. The filtered LocalVideoTrack can then be used to connect to a Room.

Issue created: <https://github.com/twilio/video-quickstart-js/issues/196>

RM521e2e32628de93d806db2ac859ec476

Local Video Filter

```
use strict';

var Video = require('twilio-video');

/**
 * Apply a filter to the frames of a LocalVideoTrack.
 * @param {number} width - Width in pixels of the video frame
 * @param {number} height - Height in pixels of the video frame
 * @param {string} filterCSS - Filter CSS string
 */
constructor(width, height, filterCSS) {
    this._outputFrame = new OffscreenCanvas(width, height);
    this._outputContext = this._outputFrame.getContext('2d');
    this._outputContext.filter = filterCSS;
}

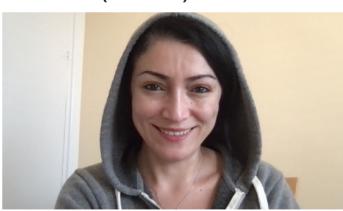
/**
 * Process a frame of the LocalVideoTrack.
 * @param {OffscreenCanvas} inputFrame
 * @returns {OffscreenCanvas}
 */
FilterVideoProcessor.prototype.processFrame = function() {
    this._outputContext.drawImage(inputFrame, 0, 0);
    return this._outputFrame;
};

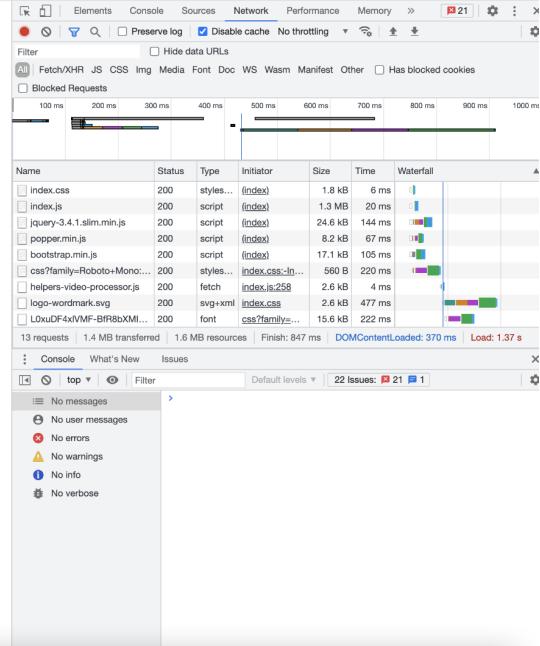
/**
 * Display local video in the given HTMLVideoElement.
 * @param {HTMLVideoElement} video
 * @returns {Promise<void>}
 */
function displayLocalVideo(video) {
    return Video.createLocalVideoTrack({
        width: 640,
        height: 360
    }).then(function(localTrack) {
        localTrack.attach(video);
    });
}
```

Local Video (raw)



Local Video (with filter)





.local Video Filter

```
'use strict';

var Video = require('twilio-video');

/**
 * Apply a filter to the frames of a LocalVideoTrack.
 * @param {number} width - Width in pixels of the video frame
 * @param {number} height - Height in pixels of the video frame
 * @param {string} filterCSS - Filter CSS string
 * @constructor
 */
function FilterVideoProcessor(width, height, filterCSS) {
  this._outputFrame = new OffscreenCanvas(width, height);
  this._outputContext = this._outputFrame.getContext('2d');
  this._outputContext.filter = filterCSS;
}

/**
 * Process a frame of the LocalVideoTrack.
 * @param {OffscreenCanvas} inputFrame
 * @returns {OffscreenCanvas}
 */
FilterVideoProcessor.prototype.processFrame = function() {
  this._outputContext.drawImage(inputFrame, 0, 0);
  return this._outputFrame;
};

/**
 * Display local video in the given HTMLVideoElement.
 * @param {HTMLVideoElement} video
 * @returns {Promise<void>}
 */
function displayLocalVideo(video) {
  return Video.createLocalVideoTrack({
    width: 640,
    height: 360
  }).then(function(localTrack) {
    localTrack.attach(video);
  });
}

```

Local Video (raw)

Local Video (with filter)

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
index.css	200	styles...	[index]	1.8 kB	6 ms	
index.js	200	script	[index]	1.3 MB	20 ms	
jquery-3.4.1.slim.min.js	200	script	[index]	24.6 kB	144 ms	
popper.min.js	200	script	[index]	8.2 kB	67 ms	
bootstrap.min.js	200	script	[index]	17.1 kB	105 ms	
css?family=Roboto+Mono:...	200	styles...	[index.css:ln...]	560 B	220 ms	
helpers-video-processor.js	200	fetch	[index.js:258]	2.6 kB	4 ms	
logo-wordmark.svg	200	svg+xml	[index.css]	2.6 kB	477 ms	
L0xuDf4xVMF-BR8bXML...	200	font	[csafamily:...]	15.6 kB	222 ms	

13 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 847 ms | DOMContentLoaded: 370 ms | Load: 1.37 s

Console

- No messages
- No user messages
- No errors
- No warnings
- No info
- No verbose

Local Video Filter

```
'use strict';

var Video = require('twilio-video');

/**
 * Apply a filter to the frames of a LocalVideoTrack.
 * @param {number} width - Width in pixels of the video frame
 * @param {number} height - Height in pixels of the video frame
 * @param {string} filterCSS - Filter CSS string
 * @constructor
 */
function FilterVideoProcessor(width, height, filterCSS) {
  this._outputFrame = new OffscreenCanvas(width, height);
  this._outputContext = this._outputFrame.getContext('2d');
  this._outputContext.filter = filterCSS;
}

/**
 * Process a frame of the LocalVideoTrack.
 * @param {OffscreenCanvas} inputFrame
 * @returns {OffscreenCanvas}
 */
FilterVideoProcessor.prototype.processFrame = function() {
  this._outputContext.drawImage(inputFrame, 0, 0);
  return this._outputFrame;
};

/**
 * Display local video in the given HTMLVideoElement.
 * @param {HTMLVideoElement} video
 * @returns {Promise<void>}
 */
function displayLocalVideo(video) {
  return Video.createLocalVideoTrack({
    width: 640,
    height: 360
  }).then(function(localTrack) {
    localTrack.attach(video);
  });
}

```

Local Video (raw)

Local Video (with filter)

Network Performance

Name	Status	Type	Initiator	Size	Time	Waterfall
index.css	200	styles...	[index]	1.8 kB	6 ms	
index.js	200	script	[index]	1.3 MB	20 ms	
jquery-3.4.1.slim.min.js	200	script	[index]	24.6 kB	144 ms	
popper.min.js	200	script	[index]	8.2 kB	67 ms	
bootstrap.min.js	200	script	[index]	17.1 kB	105 ms	
css?family=Roboto+Mono:...	200	styles...	[index.css:ln...]	560 B	220 ms	
helpers-video-processor.js	200	fetch	[index.js:258]	2.6 kB	4 ms	
logo-wordmark.svg	200	svg+xml	[index.css]	2.6 kB	477 ms	
L0xuDf4xVMF-BR8bXML...	200	font	[csafamily:...]	15.6 kB	222 ms	

13 requests | 1.4 MB transferred | 1.6 MB resources | Finish: 847 ms | DOMContentLoaded: 370 ms | Load: 1.37 s

Console

- No messages
- No user messages
- No errors
- No warnings
- No info
- No verbose

Room SID RM68114aa49a511037954e47281a2e2477

Local Video Filter

```
'use strict';

var Video = require('twilio-video');

/**
 * Apply a filter to the frames of a LocalVideoTrack.
 * @param {number} width - Width in pixels of the video frame
 * @param {number} height - Height in pixels of the video frame
 * @param {string} filterCSS - Filter CSS string
 */
constructor(filterCSS) {
    this._outputFrame = new OffscreenCanvas(width, height);
    this._outputContext = this._outputFrame.getContext('2d');
    this._outputContext.filter = filterCSS;
}

FilterVideoProcessor.prototype.processFrame = function(pr) {
    this._outputContext.drawImage(inputFrame, 0, 0);
    return this._outputFrame;
};

/**
 * Display local video in the given HTMLVideoElement.
 * @param {HTMLVideoElement} video
 * @returns {Promise<void>}
 */
function displayLocalVideo(video) {
    return Video.createLocalVideoTrack({
        width: 640,
        height: 360
    }).then(function(localTrack) {
        localTrack.attach(video);
    });
}

```

Local Video (raw)



Local Video (with filter)



Network tab in browser developer tools showing resource loading and network traffic.

Name	Status	Type	Initiator	Size	Time	Waterfall
index.css	200	styles...	(index)	1.8 kB	5 ms	
index.js	200	script	(index)	1.3 MB	19 ms	
jquery-3.4.1.slim.min.js	200	script	(index)	24.5 kB	46 ms	
popper.min.js	200	script	(index)	8.2 kB	87 ms	
bootstrap.min.js	200	script	(index)	17.1 kB	101 ms	
css?family=Roboto+Mono... css?family=Open Sans:400,700	200	styles...	index.css:ln...	560 B	215 ms	
helpers-video-processor.js	200	fetch	index.js:258	2.6 kB	2 ms	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	154 ms	
!L0xuDF4xvMF-BfR8bXMI... !L0xuDF4xvMF-BfR8bXMI...	200	font	css?family=...	15.6 kB	107 ms	

Console tab in browser developer tools showing log messages.

```
2021-08-27T10:09:59.893Z debug [LocalVideoTrack #2: index.js:28159  
4b8c5fe-0b20-4e1d-ba19-69ac57fe4b25] VideoProcessor::add  
(captureHeight: 360, captureWidth: 640, inputFrameRate: 30.00003051  
> 7578125, isRemoteVideoTrack: "false", name: "VideoProcessor")  
2021-08-27T10:09:59.893Z debug [LocalVideoTrack #2:  
index.js:28159  
4b8c5fe-0b20-4e1d-ba19-69ac57fe4b25] Reattaching all elements to  
update mediaStreamTrack  
2021-08-27T10:09:59.894Z debug [LocalVideoTrack #2:  
index.js:28159  
4b8c5fe-0b20-4e1d-ba19-69ac57fe4b25] VideoProcessor::start  
(captureHeight: 360, captureWidth: 640, inputFrameRate: 30.00003051  
> 7578125, isRemoteVideoTrack: "false", name: "VideoProcessor")  
2021-08-27T10:09:59.894Z debug [LocalVideoTrack #2:  
index.js:28159  
4b8c5fe-0b20-4e1d-ba19-69ac57fe4b25] Start capturing frame  
2021-08-27T10:09:59.894Z debug [LocalVideoTrack #2:  
index.js:28159  
4b8c5fe-0b20-4e1d-ba19-69ac57fe4b25] Updating LocalVideoTrack's  
MediaStreamTrack with the processed MediaStreamTrack  
CanvasCaptureMediaStreamTrack {canvas: canvas, kind: "video", id:  
"1d273a7a-8645-40fc-992c-8d73b9b121c6", label: "Y0gPc4xfhmqr0fJNU  
V223fFefJUfJ0f3m0W7w063A/T/n8l0zpttc2NP5gcwC2Y4b07y1zKgs0JXmg  
--", enabled: true, }  
>
```

Media Device Selection

This app demonstrates a way to select the media devices to be used for capturing local media.

RMd0d0080d6fb73cb34e2aec95ef8ef06

The screenshot shows the Media Device Selection application running in a browser. On the left, the source code for the application is displayed. The code uses Twilio-video to handle media device selection. It includes functions for getting device info, applying device selection, and handling audio and video inputs and outputs. In the center, a preview window shows a woman's face from a video feed. Below the preview is a "Select Media Devices" section with dropdown menus for Audio Input (set to "MacBook Pro Microphone (Built-in)"), Video Input (set to "FaceTime HD Camera (Built-in) (05ac:8514)"), and Audio Output (set to "MacBook Pro Speakers (Built-in)"). A "Connect" button is present. On the right, the browser's developer tools Network tab is open, showing a timeline and a table of network requests. The timeline shows several requests, with a red bar indicating a slow network intervention. The table lists requests like index.js, jquery-3.4.1.slim.min.js, and various CSS and font files. The developer tools also show 1 message and 65 issues.

The screenshot shows the Media Device Selection application running in a browser. The layout is identical to the first screenshot: source code on the left, preview media in the center, and developer tools on the right. The preview window shows the same woman's face. The "Select Media Devices" section has the same settings: Audio Input (MacBook Pro Microphone), Video Input (FaceTime HD Camera), and Audio Output (MacBook Pro Speakers). A "Disconnect" button is now visible instead of "Connect". Below the preview, there is a "Join room:" field containing the room ID "RMd0d0080d6fb73cb34e2aec95ef8ef06". The developer tools Network tab shows a similar timeline and request table, with a note about a slow network intervention and 6 messages, 5 user messages, and 6 info entries in the logs.

Code snippet showing device selection logic:

```

    /**
     * Apply the selected input device.
     * @param {string} deviceId
     * @param {?LocalTrack} localTrack - LocalAudioTrack or LocalVideoTrack
     * @param {'audio' | 'video'} kind
     * @returns {Promise<LocalTrack>} - The created or restored track
     */
    function applyInputDeviceSelection(deviceId, localTrack, constraints) {
      var constraints = [{ deviceId: { exact: deviceId } }];
      if (localTrack) {
        return localTrack.restart(constraints).then(function() {
          return localTrack;
        });
      }
      return kind === 'audio'
        ? Video.createLocalAudioTrack(constraints)
        : Video.createLocalVideoTrack(constraints);
    }

    /**
     * Ensure that media permissions are obtained.
     * @returns {Promise<void>}
     */
    function ensureMediaPermissions() {
      return navigator.mediaDevices.enumerateDevices().then(function() {
        return devices.every(function(device) {
          return (device.deviceId && device.label);
        });
      }).then(function() {
        if (!shouldAskForMediaPermissions) {
          return navigator.mediaDevices.getUserMedia({ audio: true });
        }
        return mediaStream.getTracks().forEach(function(track) {
          track.stop();
        });
      });
    }
  }

  /**
   * Get the list of available media devices.
   * @returns {Promise<DeviceSelectionOptions>}
   * @typedef {object} DeviceSelectionOptions
   * @property {Array<MediaDeviceInfo>} audioinput
   */

```

Screenshot of the browser developer tools Network tab showing network activity during a video call. The tab title is "Audio Output" and the selected device is "MacBook Pro Speakers (Built-in)". The "Waterfall" section shows requests for various resources like "popper.min.js", "bootstrap.min.js", and "helpers.js". The "Issues" panel shows several log messages related to the video call, such as "Participant 'nese' joined the room" and "Track was of kind video was published:false".

Screenshot of the "Video Quick Start" application interface. It shows a video feed of a person wearing a hoodie. On the left, there's a small thumbnail of the same person labeled "Wonderful Gracie Vail". The browser developer tools Network tab is open, showing a list of 164 messages. One message from "index.js:25478" indicates a "render hints" update. The Issues panel shows a single message: "Recording network activity... Perform a request or hit ⌘ R to record the reload.".

Media Device Selection

```

/* eslint-disable no-console */
'use strict';

var Video = require('twilio-video');

/**
 * Get the list of available media devices of the given kind
 * @param {Array<MediaDeviceInfo>} deviceInfos
 * @param {string} kind - One of 'audioinput', 'audiooutput'
 * @returns {Array<MediaDeviceInfo>} - Only those media devices
 */
function getDeviceOfKind(deviceInfos, kind) {
  return deviceInfos.filter(function(deviceInfo) {
    return deviceInfo.kind === kind;
  });
}

/**
 * Apply the selected audio output device.
 * @param {string} deviceId
 * @param {HTMLAudioElement} audio
 * @returns {Promise<void>}
 */
function applyAudioOutputDeviceSelection(deviceId, audio) {
  return typeof audio.setSinkId === 'function'
    ? audio.setSinkId(deviceId)
    : Promise.reject('This browser does not support setting the audio output device');
}

/**
 * Apply the selected input device.
 * @param {string} deviceId
 * @param {HTMLAudioElement} audio
 * @returns {Promise<void>}
 */
function applyInputDeviceSelection(deviceId, localTrack, constraints) {
  var constraints = { deviceId: { exact: deviceId } };
  if (localTrack) {
    return localTrack.restart(constraints).then(function() {
      return localTrack;
    });
  }

  function applyInputDeviceSelection(deviceId, localTrack, constraints) {
    var constraints = { deviceId: { exact: deviceId } };
    if (localTrack) {
      return localTrack.restart(constraints).then(function() {
        return localTrack;
      });
    }

    return kind === 'audio'
      ? Video.createLocalAudioTrack(constraints)
      : Video.createLocalVideoTrack(constraints);
  }
}

/**
 * Ensure that media permissions are obtained.
 * @returns {Promise<void>}
 */
function ensureMediaPermissions() {
  return navigator.mediaDevices.enumerateDevices().then(function() {
    return devices.every(function(device) {
      return !(device.deviceId && device.label);
    });
  }).then(function() {
    if (!shouldAskForMediaPermissions) {
      return navigator.mediaDevices.getUserMedia({ audio: true });
    }

    mediaStream.getTracks().forEach(function(track) {
      track.stop();
    });
  });
}

```

Preview Media

Select Media Devices

Audio Input
Default - MacBook Pro Microphone (Built-in)
Apply

Video Input
FaceTime HD Camera (Built-in) (05ac:8514)
Apply

Audio Output
ZoomAudioDevice (Virtual)
Apply

Disconnect

Join room:
RMd0d0080d6fb73cb34e2ae...
Please join the above Room from another device/browser using QuickStart App to see media input device changes taking effect.

Network tab in developer tools showing network requests and a list of messages:

- [Intervention] Slow network is detected. See <https://www.chromestatus.com/feature/5636954674692096> for more details.
- Fallback font will be used while loading: <https://fonts.gstatic.com/s/robotomono/v13/1.8xu0f4x1VMF-BFRBxM1Hh45mwGEFl0.gPw> ROM-Aj185JQ_Lwoff
- Participant 'nese' joined the room
- Track was of kind video was published:false
- Track was of kind audio was published:false
- Subscribed to audio track
- Subscribed to video track

Media Device Selection

```

/* @param {string} deviceId
 * @param {HTMLAudioElement} audio
 * @returns {Promise<void>}
 */
function applyAudioOutputDeviceSelection(deviceId, audio) {
  return typeof audio.setSinkId === 'function'
    ? audio.setSinkId(deviceId)
    : Promise.reject('This browser does not support setting the audio output device');
}

/**
 * Apply the selected input device.
 * @param {string} deviceId
 * @param {HTMLAudioElement} audio
 * @returns {Promise<void>}
 */
function applyInputDeviceSelection(deviceId, localTrack, constraints) {
  var constraints = { deviceId: { exact: deviceId } };
  if (localTrack) {
    return localTrack.restart(constraints).then(function() {
      return localTrack;
    });
  }

  function applyInputDeviceSelection(deviceId, localTrack, constraints) {
    var constraints = { deviceId: { exact: deviceId } };
    if (localTrack) {
      return localTrack.restart(constraints).then(function() {
        return localTrack;
      });
    }

    return kind === 'audio'
      ? Video.createLocalAudioTrack(constraints)
      : Video.createLocalVideoTrack(constraints);
  }
}

/**
 * Ensure that media permissions are obtained.
 * @returns {Promise<void>}
 */
function ensureMediaPermissions() {
  return navigator.mediaDevices.enumerateDevices().then(function() {
    return devices.every(function(device) {
      return !(device.deviceId && device.label);
    });
  }).then(function() {
    if (!shouldAskForMediaPermissions) {
      return navigator.mediaDevices.getUserMedia({ audio: true });
    }

    mediaStream.getTracks().forEach(function(track) {
      track.stop();
    });
  });
}

```

Preview Media

Select Media Devices

Audio Input
Default - MacBook Pro Microphone (Built-in)
Apply

Video Input
FaceTime HD Camera (Built-in) (05ac:8514)
Apply

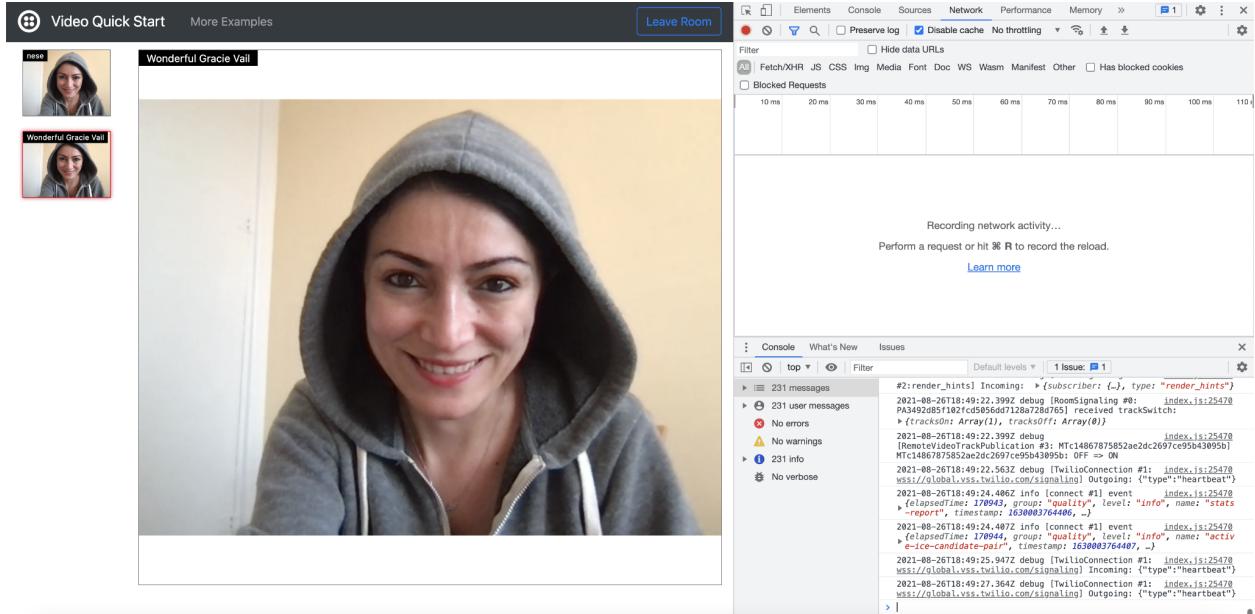
Audio Output
ZoomAudioDevice (Virtual)
Apply

Disconnect

Join room:
RMd0d0080d6fb73cb34e2ae...
Please join the above Room from another device/browser using QuickStart App to see media input device changes taking effect.

Network tab in developer tools showing network requests and a list of messages:

- [Intervention] Slow network is detected. See <https://www.chromestatus.com/feature/5636954674692096> for more details.
- Fallback font will be used while loading: <https://fonts.gstatic.com/s/robotomono/v13/1.8xu0f4x1VMF-BFRBxM1Hh45mwGEFl0.gPw> ROM-Aj185JQ_Lwoff
- Participant 'nese' joined the room
- Track was of kind video was published:false
- Track was of kind audio was published:false
- Subscribed to audio track
- Subscribed to video track



Share Your Screen

This app demonstrates how to [capture your screen](#) so that you can share it with other Participants in the Room. This example requires that the browser support the [getDisplayMedia API](#).

RM3e75a43f3bc79e083a3e96ea07a2863e

The screenshot shows a browser window with the following components:

- Left Panel:** A code editor displaying the source code for creating a local video track using the Twilio Video API.
- Middle Panel:** Two tabs:
 - Local Screen:** Shows a video feed from a local camera.
 - Remote Screen:** Shows a video feed from another participant's screen.
- Right Panel:** Developer tools:
 - Network Tab:** Shows network activity and blocked requests.
 - Issues Tab:** Shows no messages, errors, or warnings.

Reconnection States and Events

This app demonstrates the Room's [Reconnection States and Events](#) which can be used to notify the user when Twilio Video SDK is reconnecting to the Room, probably due to network interruptions or handoffs.

RM304e296bddd66bcc65d73280e24e07a5

Reconnection States and Events

```
'use strict';

/**
 * Listen to Room reconnection events and update the UI
 * @param {Room} room - The Room you have joined
 * @param {function} updateRoomState - Updates the app UI
 * @returns {void}
 */
function setupReconnectionUpdates(room, updateRoomState) {
  room.on('disconnected', (room_error) => {
    if (error_code === 20104) {
      console.log(`Signaling reconnection failed due to ${error_code}`);
    } else if (error_code === 53080) {
      console.log(`Signaling reconnection attempts exhausted`);
    } else if (error_code === 53284) {
      console.log(`Signaling reconnection took too long!`);
    }
    updateRoomState(room.state);
  });

  room.on('reconnected', () => {
    console.log(`Reconnected to the Room!`);
    updateRoomState(room.state);
  });

  room.on('reconnecting', (error) => {
    if (error.code === 53080) {
      console.log(`Reconnecting your signaling connection!`);
    } else if (error.code === 53485) {
      console.log(`Reconnecting your media connection!`);
    }
    updateRoomState(room.state);
  });
}

exports.setupReconnectionUpdates = setupReconnectionUpdates;
```

Room state is:

Connected

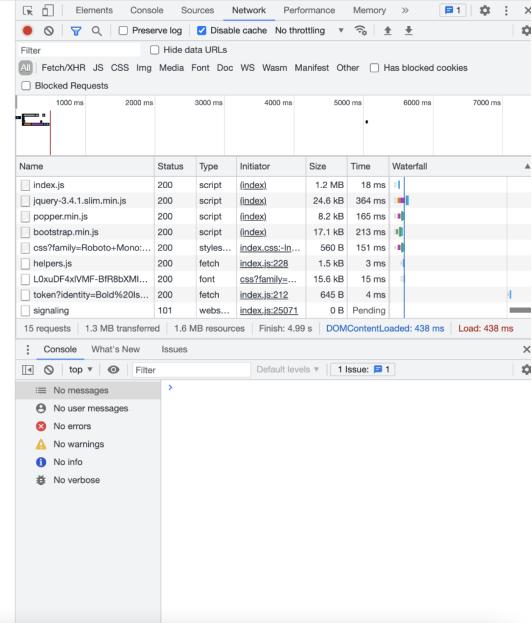
Disconnected

Reconnecting

[Create Room](#)

After you have created the Room, please either turn off your internet network for a little while and then turn it back on, or switch between networks. The Twilio Video SDK will try to re-establish connection to the Room, which will transition to the "connecting" state. Once reconnection is complete, the Room will transition back to the "connected" state. You can join other user to the room using button below.

[Join Room](#)



Reconnection States and Events

```
'use strict';

/**
 * Listen to Room reconnection events and update the UI
 * @param {Room} room - The Room you have joined
 * @param {function} updateRoomState - Updates the app UI
 * @returns {void}
 */
function setupReconnectionUpdates(room, updateRoomState) {
  room.on('disconnected', (room, error) => {
    if (error.code === 20104) {
      console.log('Signaling reconnection failed due to error');
    } else if (error.code === 53000) {
      console.log('Signaling reconnection attempts exhausted');
    } else if (error.code === 53204) {
      console.log('Signaling reconnection took too long');
    }
    updateRoomState(room.state);
  });

  room.on('reconnected', function() {
    console.log('Reconnected to the Room!');
    updateRoomState(room.state);
  });

  room.on('reconnecting', function(error) {
    if (error.code === 53001) {
      console.log('Reconnecting your signaling connection');
    } else if (error.code === 53485) {
      console.log('Reconnecting your media connection!');
    }
    updateRoomState(room.state);
  });
}

exports.setupReconnectionUpdates = setupReconnectionUpdates;
```

Room state is:

Connected

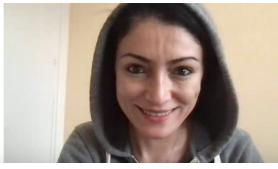
Disconnected

Reconnecting

Create Room

After you have created the Room, please either turn off your internet network for a little while and then turn it back on, or switch between networks. The Twilio Video SDK will try to re-establish connection to the Room, which will transition to the "connecting" state. Once reconnection is complete, the Room will transition back to the "connected" state. You can join other user to the room using button below.

Leave Room



Network Activity (Developer Tools Network Tab)

Name	Status	Type	Initiator	Size	Time	Waterfall
bootstrap.min.js	200	script	(index)	17.1 kB	213 ms	
css?family=Roboto+Mono...	200	styles...	index.css:in...	560 B	151 ms	
helpers.js	200	fetch	index.js:228	1.5 kB	3 ms	
LoxUdf4xVMF-BfR8bXML...	200	font	css?family=...	15.6 kB	15 ms	
token?identity=Bold%20ls...	200	fetch	index.js:212	645 B	4 ms	
signaling	101	webso...	index.js:25071	0 B	Pending	
VideoEvents	101	webso...	index.js:27114	0 B	Pending	
token?identity=Eccentric...	200	fetch	index.js:212	658 B	3 ms	
signaling	101	webso...	index.js:25071	0 B	Pending	

18 requests | 1.3 MB transferred | 1.6 MB resources | Finish: 55.43 s | DOMContentLoaded: 438 ms | Load: 438 ms

Console What's New Issues Default levels ▾ 1 Issue: 1

Reconnection States and Events

```
'use strict';

/**
 * Listen to Room reconnection events and update the UI
 * @param {Room} room - The Room you have joined
 * @param {function} updateRoomState - Updates the app UI
 * @returns {void}
 */
function setupReconnectionUpdates(room, updateRoomState) {
  room.on('disconnected', (room, error) => {
    if (error.code === 20104) {
      console.log('Signaling reconnection failed due to error');
    } else if (error.code === 53000) {
      console.log('Signaling reconnection attempts exhausted');
    } else if (error.code === 53204) {
      console.log('Signaling reconnection took too long');
    }
    updateRoomState(room.state);
  });

  room.on('reconnected', function() {
    console.log('Reconnected to the Room!');
    updateRoomState(room.state);
  });

  room.on('reconnecting', function(error) {
    if (error.code === 53001) {
      console.log('Reconnecting your signaling connection');
    } else if (error.code === 53485) {
      console.log('Reconnecting your media connection!');
    }
    updateRoomState(room.state);
  });
}

exports.setupReconnectionUpdates = setupReconnectionUpdates;
```

Room state is:

Connected

Disconnected

Reconnecting

Create Room

After you have created the Room, please either turn off your internet network for a little while and then turn it back on, or switch between networks. The Twilio Video SDK will try to re-establish connection to the Room, which will transition to the "connecting" state. Once reconnection is complete, the Room will transition back to the "connected" state. You can join other user to the room using button below.

Leave Room



Network Activity (Developer Tools Network Tab)

Name	Status	Type	Initiator	Size	Time	Waterfall
bootstrap.min.js	200	script	(index)	17.1 kB	213 ms	
css?family=Roboto+Mono...	200	styles...	index.css:in...	560 B	151 ms	
helpers.js	200	fetch	index.js:228	1.5 kB	3 ms	
LoxUdf4xVMF-BfR8bXML...	200	font	css?family=...	15.6 kB	15 ms	
token?identity=Bold%20ls...	200	fetch	index.js:212	645 B	4 ms	
signaling	101	webso...	index.js:25071	0 B	Pending	
VideoEvents	101	webso...	index.js:27114	0 B	Pending	
token?identity=Eccentric...	200	fetch	index.js:212	658 B	3 ms	
signaling	101	webso...	index.js:25071	0 B	Pending	

18 requests | 1.3 MB transferred | 1.6 MB resources | Finish: 55.43 s | DOMContentLoaded: 438 ms | Load: 438 ms

Console What's New Issues Default levels ▾ 1 Issue: 1

Reconnecting your media connection! Media connection failed or Media activity ceased index.js:31

1 message 1 user message No errors No warnings 1 info No verbose

Reconnection States and Events

```
'use strict';

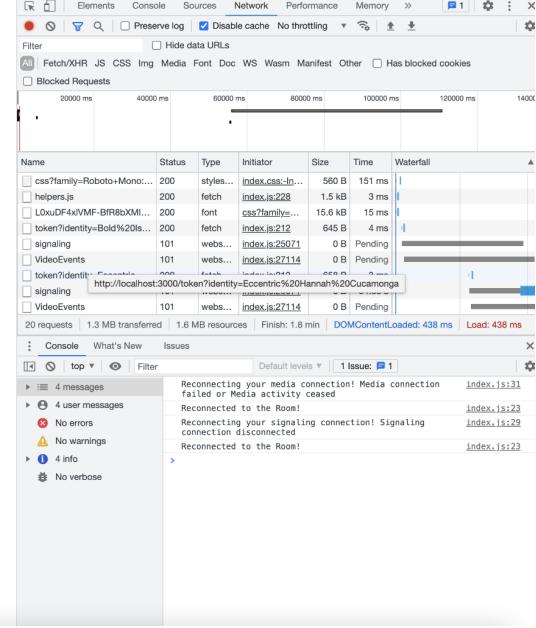
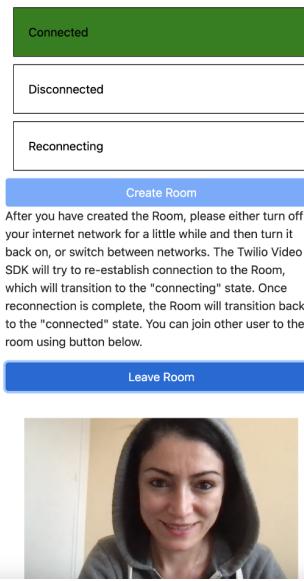
/**
 * Listen to Room reconnection events and update the UI
 * @param {Room} room - The Room you have joined
 * @param {function} updateRoomState - Updates the app UI
 * @returns {void}
 */
function setupReconnectionUpdates(room, updateRoomState) {
  room.on('disconnected', (room, error) => {
    if (error.code === 20104) {
      console.log('Signaling reconnection failed due to a network issue');
    } else if (error.code === 53000) {
      console.log('Signaling reconnection attempts exhausted');
    } else if (error.code === 53204) {
      console.log('Signaling reconnection took too long');
    }
    updateRoomState(room.state);
  });

  room.on('reconnected', function() {
    console.log('Reconnected to the Room!');
    updateRoomState(room.state);
  });

  room.on('reconnecting', function(error) {
    if (error.code === 53001) {
      console.log('Reconnecting your signaling connection');
    } else if (error.code === 53405) {
      console.log('Reconnecting your media connection!');
    }
    updateRoomState(room.state);
  });
}

exports.setupReconnectionUpdates = setupReconnectionUpdates;
```

Room state is:



Enabling Disabling Tracks

This app demonstrates how to enable/disable your LocalTracks and handle the events on the remote side.

RMe48f78466040a9366d4a2bb2c5d0f65a

Enabling and Disabling Tracks

```
'use strict';

/**
 * Mute/unmute your media in a Room.
 * @param {Room} room - The Room you have joined
 * @param {audio|video} kind - The type of media you
 * @param {mute|unmute} action - Whether you want to
 */
function muteOrUnmuteYourMedia(room, kind, action) {
    const publications = kind === 'audio'
        ? room.localParticipant.audioTracks
        : room.localParticipant.videoTracks;

    publications.forEach(function(publication) {
        if (action === 'mute') {
            publication.track.disable();
        } else {
            publication.track.enable();
        }
    });
}

/**
 * Mute your audio in a Room.
 * @param {Room} room - The Room you have joined
 * @returns {void}
 */
function muteYourAudio(room) {
    muteOrUnmuteYourMedia(room, 'audio', 'mute');
}

/**
 * Mute your video in a Room.
 * @param {Room} room - The Room you have joined
 * @returns {void}
 */
function muteYourVideo(room) {
    muteOrUnmuteYourMedia(room, 'video', 'mute');
}
```

Local Media Controls

Disable Audio Disable Video

RemoteParticipant View

Network Performance Memory

Elements Console Sources Network **Performance** Memory

Preserve log Disable cache No throttling

Filter Hide data URLs

Fetch/XHR JS CSS Img Media Font Doc WS Wasm Manifest Other Has blocked cookies

Blocked Requests

Name	Status	Type	Initiator	Size	Time	Waterfall
fa-solid-900.woff2	200	font	all.css	81.1 kB	111 ms	
helpers.js	200	fetch	index.js:252	2.6 kB	4 ms	
token?identity=Precise%20B...	200	fetch	index.js:236	658 B	2 ms	
token?identity=Solid%20B...	200	fetch	index.js:236	654 B	2 ms	
LOxuD4xvIMF-BfRbbXMI...	200	font	css?family=...	15.6 kB	15 ms	
signaling	101	web...	index.js:25095	0 B	Pending	
signaling	101	web...	index.js:25095	0 B	Pending	
VideoEvents	101	web...	index.js:27138	0 B	Pending	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	629 ms	

21 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 2.96 s | DOMContentLoaded: 316 ms | Load: 367 ms

Console What's New Issues

No messages

- No user messages
- No errors
- No warnings
- No info
- No verbose

Default levels 21 Issues: 20

Enabling and Disabling Tracks

```
'use strict';

/**
 * Mute/unmute your media in a Room.
 * @param {Room} room - The Room you have joined
 * @param {'audio'|'video'} kind - The type of media you
 * @param {'mute'|'unmute'} action - Whether you want to
 */
function muteOrUnmuteYourMedia(room, kind, action) {
  const publications = kind === 'audio'
    ? room.localParticipant.audioTracks
    : room.localParticipant.videoTracks;

  publications.forEach(function(publication) {
    if (action === 'mute') {
      publication.track.disable();
    } else {
      publication.track.enable();
    }
  });
}

/**
 * Mute your audio in a Room.
 * @param {Room} room - The Room you have joined
 * @returns {void}
 */
function muteYourAudio(room) {
  muteOrUnmuteYourMedia(room, 'audio', 'mute');
}

/**
 * Mute your video in a Room.
 * @param {Room} room - The Room you have joined
 * @returns {void}
 */
function muteYourVideo(room) {
  muteOrUnmuteYourMedia(room, 'video', 'mute');
}

/**
```

Local Media Controls

RemoteParticipant View

Network

Console

Enabling and Disabling Tracks

```
'use strict';

/**
 * Mute/unmute your media in a Room.
 * @param {Room} room - The Room you have joined
 * @param {'audio'|'video'} kind - The type of media you
 * @param {'mute'|'unmute'} action - Whether you want to
 */
function muteOrUnmuteYourMedia(room, kind, action) {
  const publications = kind === 'audio'
    ? room.localParticipant.audioTracks
    : room.localParticipant.videoTracks;

  publications.forEach(function(publication) {
    if (action === 'mute') {
      publication.track.disable();
    } else {
      publication.track.enable();
    }
  });
}

/**
 * Mute your audio in a Room.
 * @param {Room} room - The Room you have joined
 * @returns {void}
 */
function muteYourAudio(room) {
  muteOrUnmuteYourMedia(room, 'audio', 'mute');
}

/**
 * Mute your video in a Room.
 * @param {Room} room - The Room you have joined
 * @returns {void}
 */
function muteYourVideo(room) {
  muteOrUnmuteYourMedia(room, 'video', 'mute');
}

/**
```

Local Media Controls

RemoteParticipant View

Network

Console

Enabling and Disabling Tracks

```
'use strict';

/**
 * Mute/unmute your media in a Room.
 * @param {Room} room - The Room you have joined
 * @param {'audio'|'video'} kind - The type of media you
 * @param {boolean} mute - Whether you want to
 */
function muteOrUnmuteYourMedia(room, kind, action) {
    const publications = kind === 'audio'
        ? room.localParticipant.audioTracks
        : room.localParticipant.videoTracks;

    publications.forEach(function(publication) {
        if (action === 'mute') {
            publication.track.disable();
        } else {
            publication.track.enable();
        }
    });
}

/**
 * Mute your audio in a Room.
 * @param {Room} room - The Room you have joined
 * @returns {void}
 */
function muteYourAudio(room) {
    muteOrUnmuteYourMedia(room, 'audio', 'mute');
}

/**
 * Mute your video in a Room.
 * @param {Room} room - The Room you have joined
 * @returns {void}
 */
function muteYourVideo(room) {
    muteOrUnmuteYourMedia(room, 'video', 'mute');
}

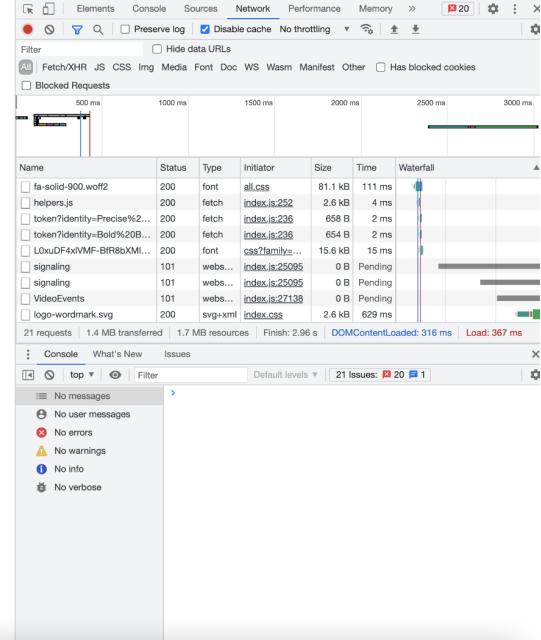
/**
```

Local Media Controls

Disable Audio

Enable Video

RemoteParticipant View



Data Tracks

This app demonstrates the [DataTracks API](#) which can be used to send low latency messages to subscribers. It can also be used to create "whiteboarding" sessions as demonstrated in [Draw With Twilio](#).

RMe456417adfe581750541294c7a23f1c8

The screenshot shows a browser window with two tabs labeled P1 and P2. Both tabs have a "Disconnect from Room" button. Below the buttons, there is a message input field and a "Submit" button. In the P1 tab, the message input field contains "Message" and the "Submit" button is blue. In the P2 tab, the message input field contains "Message" and the "Submit" button is blue. To the left of the tabs, there is a code editor snippet:

```
'use strict';

var Video = require('twilio-video');

/***
 * Connect to the given Room with a LocalDataTrack.
 * @param {string} token - AccessToken for joining the Room
 * @returns {CancelablePromise<Room>}
 */
async function connectToRoomWithDataTrack(token, roomName) {
  const localDataTrack = new Video.LocalDataTrack({
    name: 'chat',
  });

  const room = await Video.connect(token, {
    name: roomName,
    tracks: [localDataTrack],
  });

  return room;
}

/***
 * Send a chat message using the given LocalDataTrack.
 * @param {LocalDataTrack} dataTrack - The {@link LocalDataTrack}
 * @param {string} message - The message to be sent
 */
function sendChatMessage(dataTrack, message) {
  dataTrack.send(message);
}

/***
 * Receive chat messages from RemoteParticipants in the room
 * @param {Room} room - The Room you are currently in
 * @param {Function} onMessageReceived - Updates UI when a message is received
 */
function receiveChatMessages(room, onMessageReceived) {
  room.participants.forEach(function(participant) {
    participant.dataTracks.forEach(function(publication) {
      if (publication.isSubscribed && publication.trackName === 'chat') {
        publication.track.on('message', function(msg) {
          onMessageReceived(msg);
        });
      }
    });
  });
}
```

To the right of the tabs, there is a Network tab showing a timeline of requests. The requests include bootstrap.min.js, css?family=Roboto+Mono, helpers.js, and various fetch requests for signaling and video events. The Waterfall section shows the details of these requests. Below the Network tab, there is a Console tab showing no messages, errors, or warnings.

The screenshot shows a browser window with two tabs labeled P1 and P2. Both tabs have a "Disconnect from Room" button. Below the buttons, there is a message input field and a "Submit" button. In the P1 tab, the message input field contains "Message" and the "Submit" button is blue. In the P2 tab, the message input field contains "Message" and the "Submit" button is blue. To the left of the tabs, there is a code editor snippet:

```
'use strict';

var Video = require('twilio-video');

/***
 * Connect to the given Room with a LocalDataTrack.
 * @param {string} token - AccessToken for joining the Room
 * @returns {CancelablePromise<Room>}
 */
async function connectToRoomWithDataTrack(token, roomName) {
  const localDataTrack = new Video.LocalDataTrack({
    name: 'chat',
  });

  const room = await Video.connect(token, {
    name: roomName,
    tracks: [localDataTrack],
  });

  return room;
}

/***
 * Send a chat message using the given LocalDataTrack.
 * @param {LocalDataTrack} dataTrack - The {@link LocalDataTrack}
 * @param {string} message - The message to be sent
 */
function sendChatMessage(dataTrack, message) {
  dataTrack.send(message);
}

/***
 * Receive chat messages from RemoteParticipants in the room
 * @param {Room} room - The Room you are currently in
 * @param {Function} onMessageReceived - Updates UI when a message is received
 */
function receiveChatMessages(room, onMessageReceived) {
  room.participants.forEach(function(participant) {
    participant.dataTracks.forEach(function(publication) {
      if (publication.isSubscribed && publication.trackName === 'chat') {
        publication.track.on('message', function(msg) {
          onMessageReceived(msg);
        });
      }
    });
  });
}
```

To the right of the tabs, there is a Network tab showing a timeline of requests. The requests include bootstrap.min.js, css?family=Roboto+Mono, helpers.js, and various fetch requests for signaling and video events. The Waterfall section shows the details of these requests. Below the Network tab, there is a Console tab showing no messages, errors, or warnings.

Video Track Automatic Controls

This app demonstrates the default (automatic) modes of the [clientTrackSwitchOffControl](#) and [contentPreferencesMode](#) features. Which can be used to efficiently utilize CPU and bandwidth.

RM137b9d716cdf68f0dee54b0758ffbe38

Video Track Automatic Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * #param (string) token - AccessToken for joining the Room
 * #returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;
```

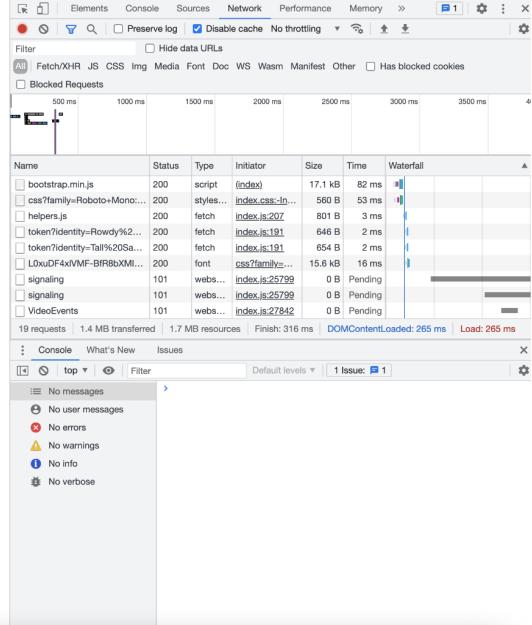
Remote Video Controls

Toggle Visibility: Show Hide

Video Size: Render Dimensions

Remote Video Track

Video Bitrate



The screenshot shows the Network tab of the Chrome DevTools Performance panel. It displays a timeline from 500 ms to 3500 ms. Below the timeline is a table of network requests:

Name	Status	Type	Initiator	Size	Time	Waterfall
bootstrap.min.js	200	script	(index)	17.1 kB	82 ms	
css?family=Roboto+Mono...	200	stylesheet	index.css:lo...	560 B	53 ms	
helpers.js	200	fetch	index.js:207	801 B	3 ms	
token7Identity-Rwdy%2...	200	fetch	index.js:191	646 B	2 ms	
token7Identity-Tal%205...	200	fetch	index.js:191	654 B	2 ms	
L0xDf4xVMF-BfR8bXMi...	200	font	css?family=...	15.6 kB	16 ms	
signaling	101	websocket	index.js:25799	0 B	Pending	
signaling	101	websocket	index.js:25799	0 B	Pending	
VideoEvents	101	websocket	index.js:27842	0 B	Pending	

19 requests 1.4 MB transferred 1.7 MB resources Finish: 316 ms DOMContentLoaded: 265 ms Load: 265 ms

Console What's New Issues

No messages
No user messages
No errors
No warnings
No info
No verbose

Video Track Automatic Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;
```

Remote Video Controls

Toggle Visibility: [Show](#) [Hide](#)

Video Size: [960x540](#)

Remote Video Track

Video Bitrate

Network Performance

Elements Console Sources Network Performance Memory

Fetch/XHR JS CSS Img Media Font Doc WS Wasm Manifest Other Has blocked cookies

Blocked Requests

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:207	801 B	3 ms	
token?identity=Rowdy%2... token?identity=Tall%20Sa...	200	fetch	index.js:191	646 B	2 ms	
token?identity=Tall%20Sa...	200	fetch	index.js:191	654 B	2 ms	
L0xuDF4xvMF-BfR8bXMi...	200	font	css?family=... index.js:25799	15.6 kB	16 ms	
signaling	101	web... index.js:25799	0 B	Pending		
signaling	101	web... index.js:25799	0 B	Pending		
VideoEvents	101	web... index.js:27842	0 B	Pending		
VideoEvents	101	web... index.js:27842	0 B	Pending		
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	459 ms	

20 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 1.4 min | DOMContentLoaded: 265 ms | Load: 265 ms

Console What's New Issues Default levels 21 Issues: 20 1

No messages

- No user messages
- No errors
- No warnings
- No info
- No verbose

Video Track Automatic Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;
```

Remote Video Controls

Toggle Visibility: [Show](#) [Hide](#)

Video Size: [640x480](#)

Remote Video Track

Video Bitrate

Network Performance

Elements Console Sources Network Performance Memory

Fetch/XHR JS CSS Img Media Font Doc WS Wasm Manifest Other Has blocked cookies

Blocked Requests

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:207	801 B	3 ms	
token?identity=Rowdy%2... token?identity=Tall%20Sa...	200	fetch	index.js:191	646 B	2 ms	
token?identity=Tall%20Sa...	200	fetch	index.js:191	654 B	2 ms	
L0xuDF4xvMF-BfR8bXMi...	200	font	css?family=... index.js:25799	15.6 kB	16 ms	
signaling	101	web... index.js:25799	0 B	Pending		
signaling	101	web... index.js:25799	0 B	Pending		
VideoEvents	101	web... index.js:27842	0 B	Pending		
VideoEvents	101	web... index.js:27842	0 B	Pending		
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	459 ms	

20 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 1.4 min | DOMContentLoaded: 265 ms | Load: 265 ms

Console What's New Issues Default levels 21 Issues: 20 1

No messages

- No user messages
- No errors
- No warnings
- No info
- No verbose

Video Track Automatic Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;
```

Remote Video Controls

Toggle Visibility: Show Hide

Video Size:

Remote Video Track

Video Bitrate

Network
Performance
Memory

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:207	801 B	3 ms	
token?identity=Rowdy%2... token?identity=Tall%20Sa...	200	fetch	index.js:191	646 B	2 ms	
token?identity=Tall%20Sa...	200	fetch	index.js:191	654 B	2 ms	
L0xuDF4xVMF-BfR8xMl...	200	font	css?family=... cast7family:...	15.6 kB	16 ms	
signaling	101	web... signaling	index.js:25799	0 B	Pending	
signaling	101	web... signaling	index.js:25799	0 B	Pending	
VideoEvents	101	web... VideoEvents	index.js:27842	0 B	Pending	
VideoEvents	101	web... VideoEvents	index.js:27842	0 B	Pending	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	459 ms	

20 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 1.4 min | DOMContentLoaded: 265 ms | Load: 265 ms

Console
What's New
Issues

No messages

- ⊕ No user messages
- ✖ No errors
- ⚠ No warnings
- ℹ No info
- ⚙️ No verbose

Video Track Automatic Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;
```

Remote Video Controls

Toggle Visibility: Show Hide

Video Size:

Remote Video Track

Video Bitrate

Network
Performance
Memory

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:207	801 B	3 ms	
token?identity=Rowdy%2... token?identity=Tall%20Sa...	200	fetch	index.js:191	646 B	2 ms	
token?identity=Tall%20Sa...	200	fetch	index.js:191	654 B	2 ms	
L0xuDF4xVMF-BfR8xMl...	200	font	css?family=... cast7family:...	15.6 kB	16 ms	
signaling	101	web... signaling	index.js:25799	0 B	Pending	
signaling	101	web... signaling	index.js:25799	0 B	Pending	
VideoEvents	101	web... VideoEvents	index.js:27842	0 B	Pending	
VideoEvents	101	web... VideoEvents	index.js:27842	0 B	Pending	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	459 ms	

20 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 1.4 min | DOMContentLoaded: 265 ms | Load: 265 ms

Console
What's New
Issues

No messages

- ⊕ No user messages
- ✖ No errors
- ⚠ No warnings
- ℹ No info
- ⚙️ No verbose

Video Track Automatic Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;
```

Remote Video Controls

Toggle Visibility: [Show](#) [Hide](#)

Video Size: 176x144

Remote Video Track

Video Bitrate

Network

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:207	801 B	3 ms	
token?identity=Rowdy%2... token?identity=Tall%20Sta... L0xuDF4xVMF-BR8bXML... signaling	200	fetch	index.js:191 index.js:191 index.js:25799 index.js:25799	646 B 654 B 15.6 kB 0 B	2 ms 2 ms 16 ms Pending	
signaling	101	web... index.js:27842	index.js:27842	0 B	Pending	
VideoEvents	101	web... index.js:27842	index.js:27842	0 B	Pending	
VideoEvents	101	web... index.css	index.css	2.6 kB	459 ms	

20 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 1.4 min | DOMContentLoaded: 265 ms | Load: 265 ms

Console What's New Issues

No messages
No user messages
No errors
No warnings
No info
No verbose

Video Track Automatic Control

New

RM22ae21ab13ceb90b8285613b6b9aae8f

Video Track Automatic Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;
```

Remote Video Controls

Toggle Visibility: [Show](#) [Hide](#)

Video Size: [Render Dimensions](#)

Remote Video Track

Video Bitrate

Network

Name	Status	Type	Initiator	Size	Time	Waterfall	
bootstrap.min.js	200	script	(index)	17.1 kB	97 ms		
css?family=Roboto+Mono... helpers.js token?identity=Unique%2... L0xuDF4xVMF-BR8bXML... token?identity=Quiet%20K... signaling signaling VideoEvents	200	style... fetch fetch font fetch web... index.js:25821 index.js:25821 index.js:27864	index.css:1... index.js:207 index.js:191 index.js:191 index.js:191 index.js:25799 index.js:25799 index.js:27842	563 B 801 B 657 B 15.6 kB 650 B 0 B 0 B 0 B	35 ms 3 ms 3 ms 20 ms 2 ms Pending Pending Pending		

18 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 300 ms | DOMContentLoaded: 246 ms | Load: 261 ms

Console What's New Issues

No messages
No user messages
No errors
No warnings
No info
No verbose

Video Track Automatic Controls

```

'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;

```

Remote Video Controls

Toggle Visibility: Show Hide

Video Size: 640x480

Remote Video Track

Video Bitrate

Video Track Automatic Controls

```

'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;

```

Remote Video Controls

Toggle Visibility: Show Hide

Video Size: 176x144

Remote Video Track

Video Bitrate

Video Track Automatic Controls

```
'use strict';

var Video = require('twilio-video');

/**
 * Connect to a Room with 'auto' mode. This is the default
 * @param {string} token - AccessToken for joining the Room
 * @returns {Room}
 */
function joinRoom(token) {
  return Video.connect(token, {
    name: 'my-cool-room',
    bandwidthProfile: {
      video: {
        contentPreferencesMode: 'auto',
        clientTrackSwitchOffControl: 'auto'
      }
    }
  });
}

module.exports.joinRoom = joinRoom;
```

Remote Video Controls

Toggle Visibility: Show Hide

Video Size: 176x144

Remote Video Track

Off

twilio

Video Bitrate

1:32:00 AM 11:33:00 AM 11:34:00 AM 11:35:00 AM 11:36:00 AM

Network Performance Monitor

Name	Status	Type	Initiator	Size	Time	Waterfall
helpers.js	200	fetch	index.js:207	801 B	3 ms	
tokenIdentity=Unique%2...	200	fetch	index.js:191	659 B	3 ms	
LoxuDF4xVMF-BR8BxMl...	200	font	css?family=...	15.6 kB	20 ms	
tokenIdentity=Quiet%20K...	200	fetch	index.js:191	659 B	2 ms	
signaling	101	web...	index.js:25821	0 B	Pending	
signaling	101	web...	index.js:25821	0 B	Pending	
videoEvents	101	web...	index.js:27864	0 B	Pending	
videoEvents	101	web...	index.js:27864	0 B	Pending	
logo-wordmark.svg	200	svg+xml	index.css	2.6 kB	467 ms	

19 requests | 1.4 MB transferred | 1.7 MB resources | Finish: 3.5 min | DOMContentLoaded: 246 ms | Load: 261 ms

Console What's New Issues

No messages

- No user messages
- No errors
- No warnings
- No info
- No verbose

Default levels ▾ | 21 issues: 20 1 |

ManualRenderHint On/Off and Local Video Filter examples do not work.

Issues were created, they can be found here: <https://github.com/twilio/video-quickstart-js/issues>

Quickstart Changes

