



Real-Time Streaming API Reference

# Amazon IVS



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# Amazon IVS: Real-Time Streaming API Reference

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# Table of Contents

<b>Welcome</b> .....	<b>1</b>
<b>Actions</b> .....	<b>3</b>
CreateEncoderConfiguration .....	5
Request Syntax .....	5
URI Request Parameters .....	5
Request Body .....	5
Response Syntax .....	6
Response Elements .....	7
Errors .....	7
See Also .....	8
CreateParticipantToken .....	9
Request Syntax .....	9
URI Request Parameters .....	9
Request Body .....	9
Response Syntax .....	11
Response Elements .....	11
Errors .....	11
See Also .....	12
CreateStage .....	13
Request Syntax .....	13
URI Request Parameters .....	13
Request Body .....	13
Response Syntax .....	14
Response Elements .....	15
Errors .....	16
See Also .....	16
CreateStorageConfiguration .....	18
Request Syntax .....	18
URI Request Parameters .....	18
Request Body .....	18
Response Syntax .....	19
Response Elements .....	20
Errors .....	20
See Also .....	21

DeleteEncoderConfiguration .....	22
Request Syntax .....	22
URI Request Parameters .....	22
Request Body .....	22
Response Syntax .....	22
Response Elements .....	22
Errors .....	23
See Also .....	23
DeletePublicKey .....	25
Request Syntax .....	25
URI Request Parameters .....	25
Request Body .....	25
Response Syntax .....	25
Response Elements .....	25
Errors .....	26
See Also .....	26
DeleteStage .....	28
Request Syntax .....	28
URI Request Parameters .....	28
Request Body .....	28
Response Syntax .....	28
Response Elements .....	28
Errors .....	29
See Also .....	29
DeleteStorageConfiguration .....	31
Request Syntax .....	31
URI Request Parameters .....	31
Request Body .....	31
Response Syntax .....	31
Response Elements .....	32
Errors .....	32
See Also .....	32
DisconnectParticipant .....	34
Request Syntax .....	34
URI Request Parameters .....	34
Request Body .....	34

Response Syntax .....	35
Response Elements .....	35
Errors .....	35
See Also .....	36
<b>GetComposition</b> .....	<b>37</b>
Request Syntax .....	37
URI Request Parameters .....	37
Request Body .....	37
Response Syntax .....	37
Response Elements .....	39
Errors .....	39
See Also .....	40
<b>GetEncoderConfiguration</b> .....	<b>41</b>
Request Syntax .....	41
URI Request Parameters .....	41
Request Body .....	41
Response Syntax .....	41
Response Elements .....	42
Errors .....	42
See Also .....	43
<b>GetParticipant</b> .....	<b>44</b>
Request Syntax .....	44
URI Request Parameters .....	44
Request Body .....	44
Response Syntax .....	45
Response Elements .....	46
Errors .....	46
See Also .....	46
<b>GetPublicKey</b> .....	<b>48</b>
Request Syntax .....	48
URI Request Parameters .....	48
Request Body .....	48
Response Syntax .....	48
Response Elements .....	49
Errors .....	49
See Also .....	49

---

GetStage .....	51
Request Syntax .....	51
URI Request Parameters .....	51
Request Body .....	51
Response Syntax .....	51
Response Elements .....	52
Errors .....	52
See Also .....	53
GetStageSession .....	54
Request Syntax .....	54
URI Request Parameters .....	54
Request Body .....	54
Response Syntax .....	55
Response Elements .....	55
Errors .....	55
See Also .....	56
GetStorageConfiguration .....	57
Request Syntax .....	57
URI Request Parameters .....	57
Request Body .....	57
Response Syntax .....	57
Response Elements .....	58
Errors .....	58
See Also .....	59
ImportPublicKey .....	60
Request Syntax .....	60
URI Request Parameters .....	60
Request Body .....	60
Response Syntax .....	61
Response Elements .....	61
Errors .....	62
See Also .....	62
ListCompositions .....	64
Request Syntax .....	64
URI Request Parameters .....	64
Request Body .....	64

---

Response Syntax .....	65
Response Elements .....	66
Errors .....	66
See Also .....	67
ListEncoderConfigurations .....	68
Request Syntax .....	68
URI Request Parameters .....	68
Request Body .....	68
Response Syntax .....	69
Response Elements .....	69
Errors .....	70
See Also .....	70
ListParticipantEvents .....	72
Request Syntax .....	72
URI Request Parameters .....	72
Request Body .....	72
Response Syntax .....	73
Response Elements .....	74
Errors .....	74
See Also .....	75
ListParticipants .....	76
Request Syntax .....	76
URI Request Parameters .....	76
Request Body .....	76
Response Syntax .....	78
Response Elements .....	79
Errors .....	79
See Also .....	80
ListPublicKeys .....	81
Request Syntax .....	81
URI Request Parameters .....	81
Request Body .....	81
Response Syntax .....	82
Response Elements .....	82
Errors .....	83
See Also .....	83

ListStages .....	84
Request Syntax .....	84
URI Request Parameters .....	84
Request Body .....	84
Response Syntax .....	85
Response Elements .....	85
Errors .....	86
See Also .....	86
ListStageSessions .....	87
Request Syntax .....	87
URI Request Parameters .....	87
Request Body .....	87
Response Syntax .....	88
Response Elements .....	88
Errors .....	89
See Also .....	89
ListStorageConfigurations .....	91
Request Syntax .....	91
URI Request Parameters .....	91
Request Body .....	91
Response Syntax .....	92
Response Elements .....	92
Errors .....	93
See Also .....	93
ListTagsForResource .....	95
Request Syntax .....	95
URI Request Parameters .....	95
Request Body .....	95
Response Syntax .....	95
Response Elements .....	95
Errors .....	96
See Also .....	96
StartComposition .....	98
Request Syntax .....	98
URI Request Parameters .....	99
Request Body .....	99



---

Response Syntax .....	101
Response Elements .....	102
Errors .....	102
See Also .....	103
StopComposition .....	105
Request Syntax .....	105
URI Request Parameters .....	105
Request Body .....	105
Response Syntax .....	105
Response Elements .....	105
Errors .....	106
See Also .....	106
TagResource .....	108
Request Syntax .....	108
URI Request Parameters .....	108
Request Body .....	108
Response Syntax .....	109
Response Elements .....	109
Errors .....	109
See Also .....	109
UntagResource .....	111
Request Syntax .....	111
URI Request Parameters .....	111
Request Body .....	111
Response Syntax .....	111
Response Elements .....	112
Errors .....	112
See Also .....	112
UpdateStage .....	113
Request Syntax .....	113
URI Request Parameters .....	113
Request Body .....	113
Response Syntax .....	114
Response Elements .....	114
Errors .....	115
See Also .....	115

<b>Data Types</b> .....	<b>117</b>
AutoParticipantRecordingConfiguration .....	119
Contents .....	119
See Also .....	119
ChannelDestinationConfiguration .....	121
Contents .....	121
See Also .....	121
Composition .....	122
Contents .....	122
See Also .....	124
CompositionSummary .....	125
Contents .....	125
See Also .....	126
Destination .....	128
Contents .....	128
See Also .....	129
DestinationConfiguration .....	130
Contents .....	130
See Also .....	130
DestinationDetail .....	132
Contents .....	132
See Also .....	132
DestinationSummary .....	133
Contents .....	133
See Also .....	134
EncoderConfiguration .....	135
Contents .....	135
See Also .....	136
EncoderConfigurationSummary .....	137
Contents .....	137
See Also .....	138
Event .....	139
Contents .....	139
See Also .....	140
GridConfiguration .....	141
Contents .....	141

---

See Also .....	142
LayoutConfiguration .....	143
Contents .....	143
See Also .....	143
Participant .....	144
Contents .....	144
See Also .....	147
ParticipantSummary .....	149
Contents .....	149
See Also .....	150
ParticipantToken .....	151
Contents .....	151
See Also .....	152
ParticipantTokenConfiguration .....	153
Contents .....	153
See Also .....	154
PipConfiguration .....	155
Contents .....	155
See Also .....	157
PublicKey .....	158
Contents .....	158
See Also .....	159
PublicKeySummary .....	160
Contents .....	160
See Also .....	161
RecordingConfiguration .....	162
Contents .....	162
See Also .....	162
S3DestinationConfiguration .....	163
Contents .....	163
See Also .....	164
S3Detail .....	165
Contents .....	165
See Also .....	165
S3StorageConfiguration .....	166
Contents .....	166

---

See Also .....	166
Stage .....	167
Contents .....	167
See Also .....	168
StageEndpoints .....	169
Contents .....	169
See Also .....	169
StageSession .....	170
Contents .....	170
See Also .....	170
StageSessionSummary .....	172
Contents .....	172
See Also .....	172
StageSummary .....	174
Contents .....	174
See Also .....	175
StorageConfiguration .....	176
Contents .....	176
See Also .....	177
StorageConfigurationSummary .....	178
Contents .....	178
See Also .....	179
Video .....	180
Contents .....	180
See Also .....	181
<b>Common Parameters .....</b>	<b>182</b>
<b>Common Errors .....</b>	<b>185</b>

# Welcome

The Amazon Interactive Video Service (IVS) real-time API is REST compatible, using a standard HTTP API and an AWS EventBridge event stream for responses. JSON is used for both requests and responses, including errors.

## Key Concepts

- **Stage** — A virtual space where participants can exchange video in real time.
- **Participant token** — A token that authenticates a participant when they join a stage.
- **Participant object** — Represents participants (people) in the stage and contains information about them. When a token is created, it includes a participant ID; when a participant uses that token to join a stage, the participant is associated with that participant ID. There is a 1:1 mapping between participant tokens and participants.

For server-side composition:

- **Composition process** — Composites participants of a stage into a single video and forwards it to a set of outputs (e.g., IVS channels). Composition endpoints support this process.
- **Composition** — Controls the look of the outputs, including how participants are positioned in the video.

For more information about your IVS live stream, also see [Getting Started with Amazon IVS Real-Time Streaming](#).

## Tagging

A *tag* is a metadata label that you assign to an AWS resource. A tag comprises a *key* and a *value*, both set by you. For example, you might set a tag as `topic:nature` to label a particular video category. See [Tagging AWS Resources](#) for more information, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS stages has no service-specific constraints beyond what is documented there.

Tags can help you identify and organize your AWS resources. For example, you can use the same tag for different resources to indicate that they are related. You can also use tags to manage access (see [Access Tags](#)).

The Amazon IVS real-time API has these tag-related endpoints: [TagResource](#), [UntagResource](#), and [ListTagsForResource](#). The following resource supports tagging: Stage.

At most 50 tags can be applied to a resource.

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# Actions

The following actions are supported:

- [CreateEncoderConfiguration](#)
- [CreateParticipantToken](#)
- [CreateStage](#)
- [CreateStorageConfiguration](#)
- [DeleteEncoderConfiguration](#)
- [DeletePublicKey](#)
- [DeleteStage](#)
- [DeleteStorageConfiguration](#)
- [DisconnectParticipant](#)
- [GetComposition](#)
- [GetEncoderConfiguration](#)
- [GetParticipant](#)
- [GetPublicKey](#)
- [GetStage](#)
- [GetStageSession](#)
- [GetStorageConfiguration](#)
- [ImportPublicKey](#)
- [ListCompositions](#)
- [ListEncoderConfigurations](#)
- [ListParticipantEvents](#)
- [ListParticipants](#)
- [ListPublicKeys](#)
- [ListStages](#)
- [ListStageSessions](#)
- [ListStorageConfigurations](#)
- [ListTagsForResource](#)
- [StartComposition](#)

- [StopComposition](#)
- [TagResource](#)
- [UntagResource](#)
- [UpdateStage](#)



# CreateEncoderConfiguration

Creates an EncoderConfiguration object.

## Request Syntax

```
POST /CreateEncoderConfiguration HTTP/1.1
Content-type: application/json
```

```
{
  "name": "string",
  "tags": {
    "string" : "string"
  },
  "video": {
    "bitrate": number,
    "framerate": number,
    "height": number,
    "width": number
  }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### name

Optional name to identify the resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_\*]

Required: No

## tags

Tags attached to the resource. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## video

Video configuration. Default: video resolution 1280x720, bitrate 2500 kbps, 30 fps.

Type: [Video](#) object

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "encoderConfiguration": {
    "arn": "string",
    "name": "string",
    "tags": {
      "string" : "string"
    },
    "video": {
      "bitrate": number,
      "framerate": number,
      "height": number,
      "width": number
    }
  }
}
```

```
}  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [encoderConfiguration](#)

The EncoderConfiguration that was created.

Type: [EncoderConfiguration](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **InternalServerErrorException**

HTTP Status Code: 500

### **PendingVerification**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ServiceQuotaExceededException**

HTTP Status Code: 402

## ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# CreateParticipantToken

Creates an additional token for a specified stage. This can be done after stage creation or when tokens expire. Tokens always are scoped to the stage for which they are created.

Encryption keys are owned by Amazon IVS and never used directly by your application.

## Request Syntax

```
POST /CreateParticipantToken HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "attributes": {
    "string" : "string"
  },
  "capabilities": [ "string" ],
  "duration": number,
  "stageArn": "string",
  "userId": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### attributes

Application-provided attributes to encode into the token and attach to a stage. Map keys and values can contain UTF-8 encoded text. The maximum length of this field is 1 KB total. *This field is exposed to all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String to string map

Required: No

## capabilities

Set of capabilities that the user is allowed to perform in the stage. Default: PUBLISH, SUBSCRIBE.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: PUBLISH | SUBSCRIBE

Required: No

## duration

Duration (in minutes), after which the token expires. Default: 720 (12 hours).

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 20160.

Required: No

## stageArn

ARN of the stage to which this token is scoped.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+

Required: Yes

## userId

Name that can be specified to help identify the token. This can be any UTF-8 encoded text. *This field is exposed to all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "participantToken": {
    "attributes": {
      "string" : "string"
    },
    "capabilities": [ "string" ],
    "duration": number,
    "expirationTime": "string",
    "participantId": "string",
    "token": "string",
    "userId": "string"
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### participantToken

The participant token that was created.

Type: [ParticipantToken](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### AccessDeniedException

HTTP Status Code: 403

### PendingVerification

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# CreateStage

Creates a new stage (and optionally participant tokens).

## Request Syntax

```
POST /CreateStage HTTP/1.1
Content-type: application/json

{
  "autoParticipantRecordingConfiguration": {
    "mediaTypes": [ "string" ],
    "storageConfigurationArn": "string"
  },
  "name": "string",
  "participantTokenConfigurations": [
    {
      "attributes": {
        "string": "string"
      },
      "capabilities": [ "string" ],
      "duration": number,
      "userId": "string"
    }
  ],
  "tags": {
    "string": "string"
  }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### autoParticipantRecordingConfiguration

Configuration object for individual participant recording, to attach to the new stage.

Type: [AutoParticipantRecordingConfiguration](#) object

Required: No

### name

Optional name that can be specified for the stage being created.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_\*]

Required: No

### participantTokenConfigurations

Array of participant token configuration objects to attach to the new stage.

Type: Array of [ParticipantTokenConfiguration](#) objects

Array Members: Minimum number of 0 items. Maximum number of 12 items.

Required: No

### tags

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
  "participantTokens": [
    {
      "attributes": {
        "string" : "string"
      },
      "capabilities": [ "string" ],
      "duration": number,
      "expirationTime": "string",
      "participantId": "string",
      "token": "string",
      "userId": "string"
    }
  ],
  "stage": {
    "activeSessionId": "string",
    "arn": "string",
    "autoParticipantRecordingConfiguration": {
      "mediaTypes": [ "string" ],
      "storageConfigurationArn": "string"
    },
    "endpoints": {
      "events": "string",
      "whip": "string"
    },
    "name": "string",
    "tags": {
      "string" : "string"
    }
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### participantTokens

Participant tokens attached to the stage. These correspond to the participants in the request.

Type: Array of [ParticipantToken](#) objects

### stage

The stage that was created.

Type: [Stage](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **PendingVerification**

HTTP Status Code: 403

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# CreateStorageConfiguration

Creates a new storage configuration, used to enable recording to Amazon S3. When a StorageConfiguration is created, IVS will modify the S3 bucketPolicy of the provided bucket. This will ensure that IVS has sufficient permissions to write content to the provided bucket.

## Request Syntax

```
POST /CreateStorageConfiguration HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "name": "string",
  "s3": {
    "bucketName": "string"
  },
  "tags": {
    "string" : "string"
  }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### name

Storage configuration name. The value does not need to be unique.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_\*]

Required: No

## s3

A complex type that contains a storage configuration for where recorded video will be stored.

Type: [S3StorageConfiguration](#) object

Required: Yes

## tags

Tags attached to the resource. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
  "storageConfiguration": {
    "arn": "string",
    "name": "string",
    "s3": {
      "bucketName": "string"
    },
    "tags": {
      "string": "string"
    }
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### storageConfiguration

The StorageConfiguration that was created.

Type: [StorageConfiguration](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **InternalServerErrorException**

HTTP Status Code: 500

### **PendingVerification**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**



HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DeleteEncoderConfiguration

Deletes an EncoderConfiguration resource. Ensures that no Compositions are using this template; otherwise, returns an error.

## Request Syntax

```
POST /DeleteEncoderConfiguration HTTP/1.1
Content-type: application/json

{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the EncoderConfiguration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:encoder-configuration/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **InternalServerErrorException**

HTTP Status Code: 500

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DeletePublicKey

Deletes the specified public key used to sign stage participant tokens. This invalidates future participant tokens generated using the key pair's private key.

### Request Syntax

```
POST /DeletePublicKey HTTP/1.1
Content-type: application/json

{
  "arn": "string"
}
```

### URI Request Parameters

The request does not use any URI parameters.

### Request Body

The request accepts the following data in JSON format.

#### arn

ARN of the public key to be deleted.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:public-key/[a-zA-Z0-9-]+`

Required: Yes

### Response Syntax

```
HTTP/1.1 200
```

### Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **PendingVerification**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)

# DeleteStage

Shuts down and deletes the specified stage (disconnecting all participants).

## Request Syntax

```
POST /DeleteStage HTTP/1.1
Content-type: application/json
```

```
{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the stage to be deleted.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.



## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **PendingVerification**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)

# DeleteStorageConfiguration

Deletes the storage configuration for the specified ARN.

If you try to delete a storage configuration that is used by a Composition, you will get an error (409 ConflictException). To avoid this, for all Compositions that reference the storage configuration, first use [StopComposition](#) and wait for it to complete, then use DeleteStorageConfiguration.

## Request Syntax

```
POST /DeleteStorageConfiguration HTTP/1.1
Content-type: application/json

{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### [arn](#)

ARN of the storage configuration to be deleted.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:storage-configuration/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### AccessDeniedException

HTTP Status Code: 403

### ConflictException

HTTP Status Code: 409

### InternalServerErrorException

HTTP Status Code: 500

### ResourceNotFoundException

HTTP Status Code: 404

### ServiceQuotaExceededException

HTTP Status Code: 402

### ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# DisconnectParticipant

Disconnects a specified participant and revokes the participant permanently from a specified stage.

## Request Syntax

```
POST /DisconnectParticipant HTTP/1.1
Content-type: application/json
```

```
{
  "participantId": "string",
  "reason": "string",
  "stageArn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### participantId

Identifier of the participant to be disconnected. This is assigned by IVS and returned by [CreateParticipantToken](#).

Type: String

Required: Yes

### reason

Description of why this participant is being disconnected.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Required: No

## stageArn

ARN of the stage to which the participant is attached.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **PendingVerification**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# GetComposition

Get information about the specified Composition resource.

## Request Syntax

```
POST /GetComposition HTTP/1.1
Content-type: application/json
```

```
{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the Composition resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:composition/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
  "composition": {
    "arn": "string",
    "destinations": [
```

```

{
  "configuration": {
    "channel": {
      "channelArn": "string",
      "encoderConfigurationArn": "string"
    },
    "name": "string",
    "s3": {
      "encoderConfigurationArns": [ "string" ],
      "recordingConfiguration": {
        "format": "string"
      },
      "storageConfigurationArn": "string"
    }
  },
  "detail": {
    "s3": {
      "recordingPrefix": "string"
    }
  },
  "endTime": "string",
  "id": "string",
  "startTime": "string",
  "state": "string"
}
],
"endTime": "string",
"layout": {
  "grid": {
    "featuredParticipantAttribute": "string",
    "gridGap": number,
    "omitStoppedVideo": boolean,
    "videoAspectRatio": "string",
    "videoFillMode": "string"
  },
  "pip": {
    "featuredParticipantAttribute": "string",
    "gridGap": number,
    "omitStoppedVideo": boolean,
    "pipBehavior": "string",
    "pipHeight": number,
    "pipOffset": number,
    "pipParticipantAttribute": "string",
    "pipPosition": "string",

```

```
        "pipWidth": number,
        "videoFillMode": "string"
    }
},
"stageArn": "string",
"startTime": "string",
"state": "string",
"tags": {
    "string" : "string"
}
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### composition

The Composition that was returned.

Type: [Composition](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **InternalServerError**

HTTP Status Code: 500

## ResourceNotFoundException

HTTP Status Code: 404

## ServiceQuotaExceededException

HTTP Status Code: 402

## ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetEncoderConfiguration

Gets information about the specified EncoderConfiguration resource.

## Request Syntax

```
POST /GetEncoderConfiguration HTTP/1.1
Content-type: application/json

{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the EncoderConfiguration resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:encoder-configuration/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "encoderConfiguration": {
```

```
"arn": "string",
"name": "string",
"tags": {
  "string" : "string"
},
"video": {
  "bitrate": number,
  "framerate": number,
  "height": number,
  "width": number
}
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### encoderConfiguration

The EncoderConfiguration that was returned.

Type: [EncoderConfiguration](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **InternalServerErrorException**

HTTP Status Code: 500

## ResourceNotFoundException

HTTP Status Code: 404

## ServiceQuotaExceededException

HTTP Status Code: 402

## ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetParticipant

Gets information about the specified participant token.

## Request Syntax

```
POST /GetParticipant HTTP/1.1
Content-type: application/json

{
  "participantId": "string",
  "sessionId": "string",
  "stageArn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### participantId

Unique identifier for the participant. This is assigned by IVS and returned by [CreateParticipantToken](#).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Pattern: [a-zA-Z0-9-]\*

Required: Yes

### sessionId

ID of a session within the stage.

Type: String



Length Constraints: Fixed length of 16.

Pattern: `st-[a-zA-Z0-9]+`

Required: Yes

### stageArn

Stage ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json
```

```
{
  "participant": {
    "attributes": {
      "string": "string"
    },
    "browserName": "string",
    "browserVersion": "string",
    "firstJoinTime": "string",
    "ispName": "string",
    "osName": "string",
    "osVersion": "string",
    "participantId": "string",
    "published": boolean,
    "recordingS3BucketName": "string",
    "recordingS3Prefix": "string",
    "recordingState": "string",
    "sdkVersion": "string",
    "state": "string",
    "userId": "string"
  }
}
```

```
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### participant

The participant that is returned.

Type: [Participant](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)

- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetPublicKey

Gets information for the specified public key.

## Request Syntax

```
POST /GetPublicKey HTTP/1.1
Content-type: application/json
```

```
{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the public key for which the information is to be retrieved.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:public-key/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
  "publicKey": {
    "arn": "string",
```

```
"fingerprint": "string",  
"name": "string",  
"publicKeyMaterial": "string",  
"tags": {  
    "string" : "string"  
}  
}  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### publicKey

The public key that is returned.

Type: [PublicKey](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetStage

Gets information for the specified stage.

## Request Syntax

```
POST /GetStage HTTP/1.1
Content-type: application/json
```

```
{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the stage for which the information is to be retrieved.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
  "stage": {
    "activeSessionId": "string",
```

```
"arn": "string",
"autoParticipantRecordingConfiguration": {
  "mediaTypes": [ "string" ],
  "storageConfigurationArn": "string"
},
"endpoints": {
  "events": "string",
  "whip": "string"
},
"name": "string",
"tags": {
  "string" : "string"
}
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### stage

The stage that is returned.

Type: [Stage](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ValidationException**



HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetStageSession

Gets information for the specified stage session.

## Request Syntax

```
POST /GetStageSession HTTP/1.1
Content-type: application/json
```

```
{
  "sessionId": "string",
  "stageArn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### sessionId

ID of a session within the stage.

Type: String

Length Constraints: Fixed length of 16.

Pattern: `st-[a-zA-Z0-9]+`

Required: Yes

### stageArn

ARN of the stage for which the information is to be retrieved.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "stageSession": {
    "endTime": "string",
    "sessionId": "string",
    "startTime": "string"
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### stageSession

The stage session that is returned.

Type: [StageSession](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# GetStorageConfiguration

Gets the storage configuration for the specified ARN.

## Request Syntax

```
POST /GetStorageConfiguration HTTP/1.1
Content-type: application/json

{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the storage configuration to be retrieved.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:storage-configuration/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "storageConfiguration": {
```

```
"arn": "string",
"name": "string",
"s3": {
  "bucketName": "string"
},
"tags": {
  "string" : "string"
}
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### storageConfiguration

The StorageConfiguration that was returned.

Type: [StorageConfiguration](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **InternalServerError**

HTTP Status Code: 500

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ImportPublicKey

Import a public key to be used for signing stage participant tokens.

## Request Syntax

```
POST /ImportPublicKey HTTP/1.1
Content-type: application/json

{
  "name": "string",
  "publicKeyMaterial": "string",
  "tags": {
    "string" : "string"
  }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### name

Name of the public key to be imported.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_\*]

Required: No

### publicKeyMaterial

The content of the public key to be imported.

Type: String



Pattern: `. *-----BEGIN PUBLIC KEY-----\r?\n([a-zA-Z0-9+/\=\r\n])+\r?\n-----  
END PUBLIC KEY-----(\r?\n)?.*`

Required: Yes

## tags

Tags attached to the resource. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "publicKey": {
    "arn": "string",
    "fingerprint": "string",
    "name": "string",
    "publicKeyMaterial": "string",
    "tags": {
      "string" : "string"
    }
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [publicKey](#)

The public key that was imported.

Type: [PublicKey](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **PendingVerification**

HTTP Status Code: 403

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListCompositions

Gets summary information about all Compositions in your account, in the AWS region where the API request is processed.

## Request Syntax

```
POST /ListCompositions HTTP/1.1
Content-type: application/json

{
  "filterByEncoderConfigurationArn": "string",
  "filterByStageArn": "string",
  "maxResults": number,
  "nextToken": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### [filterByEncoderConfigurationArn](#)

Filters the Composition list to match the specified EncoderConfiguration attached to at least one of its output.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:encoder-configuration/[a-zA-Z0-9-]+`

Required: No

### [filterByStageArn](#)

Filters the Composition list to match the specified Stage ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: No

### maxResults

Maximum number of results to return. Default: 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### nextToken

The first Composition to retrieve. This is used for pagination; see the `nextToken` response field.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `[a-zA-Z0-9+/_=-]*`

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "compositions": [
    {
      "arn": "string",
      "destinations": [
        {
          "endTime": "string",
          "id": "string",
```

```

        "startTime": "string",
        "state": "string"
    }
],
"endTime": "string",
"stageArn": "string",
"startTime": "string",
"state": "string",
"tags": {
    "string" : "string"
}
}
],
"nextToken": "string"
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### compositions

List of the matching Compositions (summary information only).

Type: Array of [CompositionSummary](#) objects

### nextToken

If there are more compositions than `maxResults`, use `nextToken` in the request to get the next set.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `[a-zA-Z0-9+/_=-]*`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

## **AccessDeniedException**

HTTP Status Code: 403

## **ConflictException**

HTTP Status Code: 409

## **InternalServerErrorException**

HTTP Status Code: 500

## **ServiceQuotaExceededException**

HTTP Status Code: 402

## **ValidationException**

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListEncoderConfigurations

Gets summary information about all EncoderConfigurations in your account, in the AWS region where the API request is processed.

## Request Syntax

```
POST /ListEncoderConfigurations HTTP/1.1
Content-type: application/json
```

```
{
  "maxResults": number,
  "nextToken": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### maxResults

Maximum number of results to return. Default: 100.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### nextToken

The first encoder configuration to retrieve. This is used for pagination; see the nextToken response field.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.



Pattern: [a-zA-Z0-9+/\_=-]\*

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "encoderConfigurations": [
    {
      "arn": "string",
      "name": "string",
      "tags": {
        "string" : "string"
      }
    }
  ],
  "nextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### encoderConfigurations

List of the matching EncoderConfigurations (summary information only).

Type: Array of [EncoderConfigurationSummary](#) objects

### nextToken

If there are more encoder configurations than `maxResults`, use `nextToken` in the request to get the next set.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: [a-zA-Z0-9+/\_=-]\*

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### AccessDeniedException

HTTP Status Code: 403

### ConflictException

HTTP Status Code: 409

### InternalServerError

HTTP Status Code: 500

### ServiceQuotaExceededException

HTTP Status Code: 402

### ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListParticipantEvents

Lists events for a specified participant that occurred during a specified stage session.

## Request Syntax

```
POST /ListParticipantEvents HTTP/1.1
Content-type: application/json
```

```
{
  "maxResults": number,
  "nextToken": "string",
  "participantId": "string",
  "sessionId": "string",
  "stageArn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### maxResults

Maximum number of results to return. Default: 50.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### nextToken

The first participant event to retrieve. This is used for pagination; see the nextToken response field.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `[a-zA-Z0-9+/_-]*`

Required: No

### participantId

Unique identifier for this participant. This is assigned by IVS and returned by [CreateParticipantToken](#).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Pattern: `[a-zA-Z0-9-]*`

Required: Yes

### sessionId

ID of a session within the stage.

Type: String

Length Constraints: Fixed length of 16.

Pattern: `st-[a-zA-Z0-9]+`

Required: Yes

### stageArn

Stage ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
  "events": [
    {
      "errorCode": "string",
      "eventTime": "string",
      "name": "string",
      "participantId": "string",
      "remoteParticipantId": "string"
    }
  ],
  "nextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### events

List of the matching events.

Type: Array of [Event](#) objects

### nextToken

If there are more events than `maxResults`, use `nextToken` in the request to get the next set.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `[a-zA-Z0-9+/_=-]*`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### AccessDeniedException

HTTP Status Code: 403

## ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListParticipants

Lists all participants in a specified stage session.

## Request Syntax

```
POST /ListParticipants HTTP/1.1
Content-type: application/json

{
  "filterByPublished": boolean,
  "filterByRecordingState": "string",
  "filterByState": "string",
  "filterByUserId": "string",
  "maxResults": number,
  "nextToken": "string",
  "sessionId": "string",
  "stageArn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### filterByPublished

Filters the response list to only show participants who published during the stage session. Only one of `filterByUserId`, `filterByPublished`, `filterByState`, or `filterByRecordingState` can be provided per request.

Type: Boolean

Required: No

### filterByRecordingState

Filters the response list to only show participants with the specified recording state. Only one of `filterByUserId`, `filterByPublished`, `filterByState`, or `filterByRecordingState` can be provided per request.



Type: String

Valid Values: STARTING | ACTIVE | STOPPING | STOPPED | FAILED

Required: No

### filterByState

Filters the response list to only show participants in the specified state. Only one of `filterByUserId`, `filterByPublished`, `filterByState`, or `filterByRecordingState` can be provided per request.

Type: String

Valid Values: CONNECTED | DISCONNECTED

Required: No

### filterByUserId

Filters the response list to match the specified user ID. Only one of `filterByUserId`, `filterByPublished`, `filterByState`, or `filterByRecordingState` can be provided per request. A `userId` is a customer-assigned name to help identify the token; this can be used to link a participant to a user in the customer's own systems.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Required: No

### maxResults

Maximum number of results to return. Default: 50.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### nextToken

The first participant to retrieve. This is used for pagination; see the `nextToken` response field.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: [a-zA-Z0-9+/\_-]\*

Required: No

### sessionId

ID of the session within the stage.

Type: String

Length Constraints: Fixed length of 16.

Pattern: st-[a-zA-Z0-9]+

Required: Yes

### stageArn

Stage ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "nextToken": "string",
  "participants": [
    {
      "firstJoinTime": "string",
      "participantId": "string",
      "published": boolean,
```

```
    "recordingState": "string",
    "state": "string",
    "userId": "string"
  }
]
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### nextToken

If there are more participants than `maxResults`, use `nextToken` in the request to get the next set.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `[a-zA-Z0-9+/_=-]*`

### participants

List of the matching participants (summary information only).

Type: Array of [ParticipantSummary](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListPublicKeys

Gets summary information about all public keys in your account, in the AWS region where the API request is processed.

## Request Syntax

```
POST /ListPublicKeys HTTP/1.1
Content-type: application/json

{
  "maxResults": number,
  "nextToken": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### maxResults

Maximum number of results to return. Default: 50.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### nextToken

The first public key to retrieve. This is used for pagination; see the nextToken response field.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: [a-zA-Z0-9+/\_=-]\*

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "nextToken": "string",
  "publicKeys": [
    {
      "arn": "string",
      "name": "string",
      "tags": {
        "string" : "string"
      }
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### nextToken

If there are more public keys than `maxResults`, use `nextToken` in the request to get the next set.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `[a-zA-Z0-9+/_=-]*`

### publicKeys

List of the matching public keys (summary information only).

Type: Array of [PublicKeySummary](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### AccessDeniedException

HTTP Status Code: 403

### ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListStages

Gets summary information about all stages in your account, in the AWS region where the API request is processed.

## Request Syntax

```
POST /ListStages HTTP/1.1
Content-type: application/json

{
  "maxResults": number,
  "nextToken": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### maxResults

Maximum number of results to return. Default: 50.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### nextToken

The first stage to retrieve. This is used for pagination; see the nextToken response field.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: [a-zA-Z0-9+/\_=-]\*



Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "nextToken": "string",
  "stages": [
    {
      "activeSessionId": "string",
      "arn": "string",
      "name": "string",
      "tags": {
        "string" : "string"
      }
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### nextToken

If there are more stages than `maxResults`, use `nextToken` in the request to get the next set.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `[a-zA-Z0-9+/_=-]*`

### stages

List of the matching stages (summary information only).

Type: Array of [StageSummary](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### AccessDeniedException

HTTP Status Code: 403

### ConflictException

HTTP Status Code: 409

### ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListStageSessions

Gets all sessions for a specified stage.

## Request Syntax

```
POST /ListStageSessions HTTP/1.1
Content-type: application/json
```

```
{
  "maxResults": number,
  "nextToken": "string",
  "stageArn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### maxResults

Maximum number of results to return. Default: 50.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### nextToken

The first stage session to retrieve. This is used for pagination; see the nextToken response field.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `[a-zA-Z0-9+/_-]*`

Required: No

### [stageArn](#)

Stage ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
  "nextToken": "string",
  "stageSessions": [
    {
      "endTime": "string",
      "sessionId": "string",
      "startTime": "string"
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [nextToken](#)

If there are more stage sessions than `maxResults`, use `nextToken` in the request to get the next set.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: [a-zA-Z0-9+/\_=-]\*

### stageSessions

List of matching stage sessions.

Type: Array of [StageSessionSummary](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### AccessDeniedException

HTTP Status Code: 403

### ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# ListStorageConfigurations

Gets summary information about all storage configurations in your account, in the AWS region where the API request is processed.

## Request Syntax

```
POST /ListStorageConfigurations HTTP/1.1
Content-type: application/json

{
  "maxResults": number,
  "nextToken": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### maxResults

Maximum number of storage configurations to return. Default: your service quota or 100, whichever is smaller.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

### nextToken

The first storage configuration to retrieve. This is used for pagination; see the nextToken response field.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: [a-zA-Z0-9+/\_-]\*

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "nextToken": "string",
  "storageConfigurations": [
    {
      "arn": "string",
      "name": "string",
      "s3": {
        "bucketName": "string"
      },
      "tags": {
        "string" : "string"
      }
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### nextToken

If there are more storage configurations than `maxResults`, use `nextToken` in the request to get the next set.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: [a-zA-Z0-9+/\_-]\*



## [storageConfigurations](#)

List of the matching storage configurations.

Type: Array of [StorageConfigurationSummary](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **InternalServerErrorException**

HTTP Status Code: 500

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# ListTagsForResource

Gets information about AWS tags for the specified ARN.

## Request Syntax

```
GET /tags/resourceArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### resourceArn

The ARN of the resource to be retrieved. The ARN must be URL-encoded.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:[a-z-]/[a-zA-Z0-9-]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "tags": {
    "string" : "string"
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### tags

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`).

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **InternalServerErrorException**

HTTP Status Code: 500

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)

- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# StartComposition

Starts a Composition from a stage based on the configuration provided in the request.

A Composition is an ephemeral resource that exists after this endpoint returns successfully. Composition stops and the resource is deleted:

- When [StopComposition](#) is called.
- After a 1-minute timeout, when all participants are disconnected from the stage.
- After a 1-minute timeout, if there are no participants in the stage when StartComposition is called.
- When broadcasting to the IVS channel fails and all retries are exhausted.
- When broadcasting is disconnected and all attempts to reconnect are exhausted.

## Request Syntax

```
POST /StartComposition HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "destinations": [
    {
      "channel": {
        "channelArn": "string",
        "encoderConfigurationArn": "string"
      },
      "name": "string",
      "s3": {
        "encoderConfigurationArns": [ "string" ],
        "recordingConfiguration": {
          "format": "string"
        },
        "storageConfigurationArn": "string"
      }
    }
  ],
  "idempotencyToken": "string",
  "layout": {
    "grid": {
```

```
    "featuredParticipantAttribute": "string",
    "gridGap": number,
    "omitStoppedVideo": boolean,
    "videoAspectRatio": "string",
    "videoFillMode": "string"
  },
  "pip": {
    "featuredParticipantAttribute": "string",
    "gridGap": number,
    "omitStoppedVideo": boolean,
    "pipBehavior": "string",
    "pipHeight": number,
    "pipOffset": number,
    "pipParticipantAttribute": "string",
    "pipPosition": "string",
    "pipWidth": number,
    "videoFillMode": "string"
  }
},
"stageArn": "string",
"tags": {
  "string" : "string"
}
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### destinations

Array of destination configuration.

Type: Array of [DestinationConfiguration](#) objects

Array Members: Minimum number of 1 item. Maximum number of 2 items.

Required: Yes

## idempotencyToken

Idempotency token.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [a-zA-Z0-9-]\*

Required: No

## layout

Layout object to configure composition parameters.

Type: [LayoutConfiguration](#) object

Required: No

## stageArn

ARN of the stage to be used for compositing.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+

Required: Yes

## tags

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.



Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## Response Syntax

HTTP/1.1 200

Content-type: application/json

```
{
  "composition": {
    "arn": "string",
    "destinations": [
      {
        "configuration": {
          "channel": {
            "channelArn": "string",
            "encoderConfigurationArn": "string"
          },
          "name": "string",
          "s3": {
            "encoderConfigurationArns": [ "string" ],
            "recordingConfiguration": {
              "format": "string"
            },
            "storageConfigurationArn": "string"
          }
        },
        "detail": {
          "s3": {
            "recordingPrefix": "string"
          }
        },
        "endTime": "string",
        "id": "string",
        "startTime": "string",
        "state": "string"
      }
    ],
    "endTime": "string",
    "layout": {
      "grid": {
        "featuredParticipantAttribute": "string",
```

```

    "gridGap": number,
    "omitStoppedVideo": boolean,
    "videoAspectRatio": "string",
    "videoFillMode": "string"
  },
  "pip": {
    "featuredParticipantAttribute": "string",
    "gridGap": number,
    "omitStoppedVideo": boolean,
    "pipBehavior": "string",
    "pipHeight": number,
    "pipOffset": number,
    "pipParticipantAttribute": "string",
    "pipPosition": "string",
    "pipWidth": number,
    "videoFillMode": "string"
  }
},
"stageArn": "string",
"startTime": "string",
"state": "string",
"tags": {
  "string" : "string"
}
}
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### composition

The Composition that was created.

Type: [Composition](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

## **AccessDeniedException**

HTTP Status Code: 403

## **ConflictException**

HTTP Status Code: 409

## **InternalServerErrorException**

HTTP Status Code: 500

## **PendingVerification**

HTTP Status Code: 403

## **ResourceNotFoundException**

HTTP Status Code: 404

## **ServiceQuotaExceededException**

HTTP Status Code: 402

## **ValidationException**

HTTP Status Code: 400

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# StopComposition

Stops and deletes a Composition resource. Any broadcast from the Composition resource is stopped.

## Request Syntax

```
POST /StopComposition HTTP/1.1
Content-type: application/json

{
  "arn": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the Composition.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:composition/[a-zA-Z0-9-]+`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **InternalServerErrorException**

HTTP Status Code: 500

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# TagResource

Adds or updates tags for the AWS resource with the specified ARN.

## Request Syntax

```
POST /tags/resourceArn HTTP/1.1
Content-type: application/json
```

```
{
  "tags": {
    "string" : "string"
  }
}
```

## URI Request Parameters

The request uses the following URI parameters.

### resourceArn

The ARN of the resource to be tagged. The ARN must be URL-encoded.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:[a-z-]/[a-zA-Z0-9-]+`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### tags

Array of tags to be added or updated. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints beyond what is documented there.

Type: String to string map



Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerErrorException

HTTP Status Code: 500

### ResourceNotFoundException

HTTP Status Code: 404

### ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# UntagResource

Removes tags from the resource with the specified ARN.

## Request Syntax

```
DELETE /tags/resourceArn?tagKeys=tagKeys HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### resourceArn

The ARN of the resource to be untagged. The ARN must be URL-encoded.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:[a-z-]/[a-zA-Z0-9-]+`

Required: Yes

### tagKeys

Array of tags to be removed. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints beyond what is documented there.

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Length Constraints: Minimum length of 1. Maximum length of 128.

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### InternalServerError

HTTP Status Code: 500

### ResourceNotFoundException

HTTP Status Code: 404

### ValidationException

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# UpdateStage

Updates a stage's configuration.

## Request Syntax

```
POST /UpdateStage HTTP/1.1
Content-type: application/json

{
  "arn": "string",
  "autoParticipantRecordingConfiguration": {
    "mediaTypes": [ "string" ],
    "storageConfigurationArn": "string"
  },
  "name": "string"
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### arn

ARN of the stage to be updated.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

### autoParticipantRecordingConfiguration

Configuration object for individual participant recording, to attach to the stage. Note that this cannot be updated while recording is active.

Type: [AutoParticipantRecordingConfiguration](#) object

Required: No

### name

Name of the stage to be updated.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-]\*

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "stage": {
    "activeSessionId": "string",
    "arn": "string",
    "autoParticipantRecordingConfiguration": {
      "mediaTypes": [ "string" ],
      "storageConfigurationArn": "string"
    },
    "endpoints": {
      "events": "string",
      "whip": "string"
    },
    "name": "string",
    "tags": {
      "string" : "string"
    }
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### stage

The updated stage.

Type: [Stage](#) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#).

### **AccessDeniedException**

HTTP Status Code: 403

### **ConflictException**

HTTP Status Code: 409

### **PendingVerification**

HTTP Status Code: 403

### **ResourceNotFoundException**

HTTP Status Code: 404

### **ServiceQuotaExceededException**

HTTP Status Code: 402

### **ValidationException**

HTTP Status Code: 400

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)



# Data Types

The Amazon Interactive Video Service RealTime API contains several data types that various actions use. This section describes each data type in detail.

## Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [AutoParticipantRecordingConfiguration](#)
- [ChannelDestinationConfiguration](#)
- [Composition](#)
- [CompositionSummary](#)
- [Destination](#)
- [DestinationConfiguration](#)
- [DestinationDetail](#)
- [DestinationSummary](#)
- [EncoderConfiguration](#)
- [EncoderConfigurationSummary](#)
- [Event](#)
- [GridConfiguration](#)
- [LayoutConfiguration](#)
- [Participant](#)
- [ParticipantSummary](#)
- [ParticipantToken](#)
- [ParticipantTokenConfiguration](#)
- [PipConfiguration](#)
- [PublicKey](#)
- [PublicKeySummary](#)

- [RecordingConfiguration](#)
- [S3DestinationConfiguration](#)
- [S3Detail](#)
- [S3StorageConfiguration](#)
- [Stage](#)
- [StageEndpoints](#)
- [StageSession](#)
- [StageSessionSummary](#)
- [StageSummary](#)
- [StorageConfiguration](#)
- [StorageConfigurationSummary](#)
- [Video](#)

# AutoParticipantRecordingConfiguration

Object specifying a configuration for individual participant recording.

## Contents

### storageConfigurationArn

ARN of the [StorageConfiguration](#) resource to use for individual participant recording. Default: "" (empty string, no storage configuration is specified). Individual participant recording cannot be started unless a storage configuration is specified, when a [Stage](#) is created or updated.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `^$|^arn:aws:ivs:[a-z0-9-]+:[0-9]+:storage-configuration/[a-zA-Z0-9-]+`

Required: Yes

### mediaTypes

Types of media to be recorded. Default: AUDIO\_VIDEO.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: AUDIO\_VIDEO | AUDIO\_ONLY

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



# ChannelDestinationConfiguration

Object specifying a channel as a destination.

## Contents

### channelArn

ARN of the channel to use for broadcasting. The channel and stage resources must be in the same AWS account and region. The channel must be offline (not broadcasting).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:channel/[a-zA-Z0-9-]+`

Required: Yes

### encoderConfigurationArn

ARN of the [EncoderConfiguration](#) resource. The encoder configuration and stage resources must be in the same AWS account and region.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:encoder-configuration/[a-zA-Z0-9-]+`

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Composition

Object specifying a Composition resource.

## Contents

### arn

ARN of the Composition resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:composition/[a-zA-Z0-9-]+`

Required: Yes

### destinations

Array of Destination objects. A Composition can contain either one destination (channel or s3) or two (one channel and one s3).

Type: Array of [Destination](#) objects

Array Members: Minimum number of 1 item. Maximum number of 2 items.

Required: Yes

### layout

Layout object to configure composition parameters.

Type: [LayoutConfiguration](#) object

Required: Yes

### stageArn

ARN of the stage used as input

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

### **state**

State of the Composition.

Type: String

Valid Values: STARTING | ACTIVE | STOPPING | FAILED | STOPPED

Required: Yes

### **endTime**

UTC time of the Composition end. This is an ISO 8601 timestamp; *note that this is returned as a string.*

Type: Timestamp

Required: No

### **startTime**

UTC time of the Composition start. This is an ISO 8601 timestamp; *note that this is returned as a string.*

Type: Timestamp

Required: No

### **tags**

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



# CompositionSummary

Summary information about a Composition.

## Contents

### arn

ARN of the Composition resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:composition/[a-zA-Z0-9-]+`

Required: Yes

### destinations

Array of Destination objects.

Type: Array of [DestinationSummary](#) objects

Array Members: Minimum number of 1 item. Maximum number of 2 items.

Required: Yes

### stageArn

ARN of the attached stage.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

### state

State of the Composition resource.

Type: String

Valid Values: STARTING | ACTIVE | STOPPING | FAILED | STOPPED

Required: Yes

### **endTime**

UTC time of the Composition end. This is an ISO 8601 timestamp; *note that this is returned as a string.*

Type: Timestamp

Required: No

### **startTime**

UTC time of the Composition start. This is an ISO 8601 timestamp; *note that this is returned as a string.*

Type: Timestamp

Required: No

### **tags**

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Destination

Object specifying the status of a Destination.

## Contents

### configuration

Configuration used to create this destination.

Type: [DestinationConfiguration](#) object

Required: Yes

### id

Unique identifier for this destination, assigned by IVS.

Type: String

Required: Yes

### state

State of the Composition Destination.

Type: String

Valid Values: STARTING | ACTIVE | STOPPING | RECONNECTING | FAILED | STOPPED

Required: Yes

### detail

Optional details regarding the status of the destination.

Type: [DestinationDetail](#) object

Required: No

### endTime

UTC time of the destination end. This is an ISO 8601 timestamp; *note that this is returned as a string.*

Type: Timestamp

Required: No

### **startTime**

UTC time of the destination start. This is an ISO 8601 timestamp; *note that this is returned as a string.*

Type: Timestamp

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# DestinationConfiguration

Complex data type that defines destination-configuration objects.

## Contents

### channel

An IVS channel to be used for broadcasting, for server-side composition. Either a `channel` or an `s3` must be specified.

Type: [ChannelDestinationConfiguration](#) object

Required: No

### name

Name that can be specified to help identify the destination.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_*]`

Required: No

### s3

An S3 storage configuration to be used for recording video data. Either a `channel` or an `s3` must be specified.

Type: [S3DestinationConfiguration](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# DestinationDetail

Complex data type that defines destination-detail objects.

## Contents

### s3

An S3 detail object to return information about the S3 destination.

Type: [S3Detail](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



# DestinationSummary

Summary information about a Destination.

## Contents

### id

Unique identifier for this destination, assigned by IVS.

Type: String

Required: Yes

### state

State of the Composition Destination.

Type: String

Valid Values: STARTING | ACTIVE | STOPPING | RECONNECTING | FAILED | STOPPED

Required: Yes

### endTime

UTC time of the destination end. This is an ISO 8601 timestamp; *note that this is returned as a string.*

Type: Timestamp

Required: No

### startTime

UTC time of the destination start. This is an ISO 8601 timestamp; *note that this is returned as a string.*

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EncoderConfiguration

Settings for transcoding.

## Contents

### arn

ARN of the EncoderConfiguration resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:encoder-configuration/[a-zA-Z0-9-]+`

Required: Yes

### name

Optional name to identify the resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-]*`

Required: No

### tags

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## **video**

Video configuration. Default: video resolution 1280x720, bitrate 2500 kbps, 30 fps

Type: [Video](#) object

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EncoderConfigurationSummary

Summary information about an EncoderConfiguration.

## Contents

### arn

ARN of the EncoderConfiguration resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:encoder-configuration/[a-zA-Z0-9-]+`

Required: Yes

### name

Optional name to identify the resource.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_]*`

Required: No

### tags

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Event

An occurrence during a stage session.

## Contents

### errorCode

If the event is an error event, the error code is provided to give insight into the specific error that occurred. If the event is not an error event, this field is null.

INSUFFICIENT\_CAPABILITIES indicates that the participant tried to take an action that the participant's token is not allowed to do. For more information about participant capabilities, see the `capabilities` field in [CreateParticipantToken](#). QUOTA\_EXCEEDED indicates that the number of participants who want to publish/subscribe to a stage exceeds the quota; for more information, see [Service Quotas](#). PUBLISHER\_NOT\_FOUND indicates that the participant tried to subscribe to a publisher that doesn't exist.

Type: String

Valid Values: INSUFFICIENT\_CAPABILITIES | QUOTA\_EXCEEDED | PUBLISHER\_NOT\_FOUND

Required: No

### eventTime

ISO 8601 timestamp (returned as a string) for when the event occurred.

Type: Timestamp

Required: No

### name

The name of the event.

Type: String

Valid Values: JOINED | LEFT | PUBLISH\_STARTED | PUBLISH\_STOPPED | SUBSCRIBE\_STARTED | SUBSCRIBE\_STOPPED | PUBLISH\_ERROR | SUBSCRIBE\_ERROR | JOIN\_ERROR

Required: No

## participantId

Unique identifier for the participant who triggered the event. This is assigned by IVS.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Pattern: [a-zA-Z0-9-]\*

Required: No

## remoteParticipantId

Unique identifier for the remote participant. For a subscribe event, this is the publisher. For a publish or join event, this is null. This is assigned by IVS.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Pattern: [a-zA-Z0-9-]\*

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



# GridConfiguration

Configuration information specific to Grid layout, for server-side composition. See "Layouts" in [Server-Side Composition](#).

## Contents

### featuredParticipantAttribute

This attribute name identifies the featured slot. A participant with this attribute set to "true" (as a string value) in [ParticipantTokenConfiguration](#) is placed in the featured slot. Default: "" (no featured participant).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_\*]

Required: No

### gridGap

Specifies the spacing between participant tiles in pixels. Default: 2.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

### omitStoppedVideo

Determines whether to omit participants with stopped video in the composition. Default: false.

Type: Boolean

Required: No

### videoAspectRatio

Sets the non-featured participant display mode, to control the aspect ratio of video tiles. VIDEO is 16:9, SQUARE is 1:1, and PORTRAIT is 3:4. Default: VIDEO.

Type: String

Valid Values: AUTO | VIDEO | SQUARE | PORTRAIT

Required: No

### **videoFillMode**

Defines how video content fits within the participant tile: FILL (stretched), COVER (cropped), or CONTAIN (letterboxed). When not set, `videoFillMode` defaults to COVER fill mode for participants in the grid and to CONTAIN fill mode for featured participants.

Type: String

Valid Values: FILL | COVER | CONTAIN

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# LayoutConfiguration

Configuration information of supported layouts for server-side composition.

## Contents

### grid

Configuration related to grid layout. Default: Grid layout.

Type: [GridConfiguration](#) object

Required: No

### pip

Configuration related to PiP layout.

Type: [PipConfiguration](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Participant

Object describing a participant that has joined a stage.

## Contents

### attributes

Application-provided attributes to encode into the token and attach to a stage. Map keys and values can contain UTF-8 encoded text. The maximum length of this field is 1 KB total. *This field is exposed to all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String to string map

Required: No

### browserName

The participant's browser.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_. , ; \s]*`

Required: No

### browserVersion

The participant's browser version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_. , ; \s]*`

Required: No

### firstJoinTime

ISO 8601 timestamp (returned as a string) when the participant first joined the stage session.

Type: Timestamp

Required: No

### **ispName**

The participant's Internet Service Provider.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_. , ; \s]\*

Required: No

### **osName**

The participant's operating system.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_. , ; \s]\*

Required: No

### **osVersion**

The participant's operating system version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_. , ; \s]\*

Required: No

### **participantId**

Unique identifier for this participant, assigned by IVS.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Pattern: [a-zA-Z0-9-]\*

Required: No

### **published**

Whether the participant ever published to the stage session.

Type: Boolean

Required: No

### **recordingS3BucketName**

Name of the S3 bucket to where the participant is being recorded, if individual participant recording is enabled, or "" (empty string), if recording is not enabled.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 63.

Pattern: [a-z0-9- .]\*

Required: No

### **recordingS3Prefix**

S3 prefix of the S3 bucket where the participant is being recorded, if individual participant recording is enabled, or "" (empty string), if recording is not enabled.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: [a-zA-Z0-9-]\*

Required: No

### **recordingState**

The participant's recording state.

Type: String

Valid Values: STARTING | ACTIVE | STOPPING | STOPPED | FAILED | DISABLED

Required: No

### **sdkVersion**

The participant's SDK version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_. , ; \s]*`

Required: No

### **state**

Whether the participant is connected to or disconnected from the stage.

Type: String

Valid Values: CONNECTED | DISCONNECTED

Required: No

### **userId**

Customer-assigned name to help identify the token; this can be used to link a participant to a user in the customer's own systems. This can be any UTF-8 encoded text. *This field is exposed to all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)



# ParticipantSummary

Summary object describing a participant that has joined a stage.

## Contents

### **firstJoinTime**

ISO 8601 timestamp (returned as a string) when the participant first joined the stage session.

Type: Timestamp

Required: No

### **participantId**

Unique identifier for this participant, assigned by IVS.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 64.

Pattern: [a-zA-Z0-9-]\*

Required: No

### **published**

Whether the participant ever published to the stage session.

Type: Boolean

Required: No

### **recordingState**

The participant's recording state.

Type: String

Valid Values: STARTING | ACTIVE | STOPPING | STOPPED | FAILED | DISABLED

Required: No

### **state**

Whether the participant is connected to or disconnected from the stage.

Type: String

Valid Values: CONNECTED | DISCONNECTED

Required: No

## **userId**

Customer-assigned name to help identify the token; this can be used to link a participant to a user in the customer's own systems. This can be any UTF-8 encoded text. *This field is exposed to all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ParticipantToken

Object specifying a participant token in a stage.

**Important:** Treat tokens as opaque; i.e., do not build functionality based on token contents. The format of tokens could change in the future.

## Contents

### attributes

Application-provided attributes to encode into the token and attach to a stage. *This field is exposed to all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String to string map

Required: No

### capabilities

Set of capabilities that the user is allowed to perform in the stage.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: PUBLISH | SUBSCRIBE

Required: No

### duration

Duration (in minutes), after which the participant token expires. Default: 720 (12 hours).

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 20160.

Required: No

### expirationTime

ISO 8601 timestamp (returned as a string) for when this token expires.

Type: Timestamp

Required: No

### **participantId**

Unique identifier for this participant token, assigned by IVS.

Type: String

Required: No

### **token**

The issued client token, encrypted.

Type: String

Required: No

### **userId**

Customer-assigned name to help identify the token; this can be used to link a participant to a user in the customer's own systems. This can be any UTF-8 encoded text. *This field is exposed to all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ParticipantTokenConfiguration

Object specifying a participant token configuration in a stage.

## Contents

### attributes

Application-provided attributes to encode into the corresponding participant token and attach to a stage. Map keys and values can contain UTF-8 encoded text. The maximum length of this field is 1 KB total. *This field is exposed to all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String to string map

Required: No

### capabilities

Set of capabilities that the user is allowed to perform in the stage.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: PUBLISH | SUBSCRIBE

Required: No

### duration

Duration (in minutes), after which the corresponding participant token expires. Default: 720 (12 hours).

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 20160.

Required: No

### userId

Customer-assigned name to help identify the token; this can be used to link a participant to a user in the customer's own systems. This can be any UTF-8 encoded text. *This field is exposed to*

*all stage participants and should not be used for personally identifying, confidential, or sensitive information.*

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# PipConfiguration

Configuration information specific to Picture-in-Picture (PiP) layout, for [server-side composition](#).

## Contents

### featuredParticipantAttribute

This attribute name identifies the featured slot. A participant with this attribute set to "true" (as a string value) in [ParticipantTokenConfiguration](#) is placed in the featured slot. Default: "" (no featured participant).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_\*]

Required: No

### gridGap

Specifies the spacing between participant tiles in pixels. Default: 0.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

### omitStoppedVideo

Determines whether to omit participants with stopped video in the composition. Default: false.

Type: Boolean

Required: No

### pipBehavior

Defines PiP behavior when all participants have left: STATIC (maintains original position/size) or DYNAMIC (expands to full composition). Default: STATIC.

Type: String

Valid Values: STATIC | DYNAMIC

Required: No

### **pipHeight**

Specifies the height of the PiP window in pixels. When this is not set explicitly, `pipHeight`'s value will be based on the size of the composition and the aspect ratio of the participant's video.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **pipOffset**

Sets the PiP window's offset position in pixels from the closest edges determined by `PipPosition`. Default: 0.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

### **pipParticipantAttribute**

Specifies the participant for the PiP window. A participant with this attribute set to "true" (as a string value) in [ParticipantTokenConfiguration](#) is placed in the PiP slot. Default: "" (no PiP participant).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: [a-zA-Z0-9-\_\*]

Required: No

### **pipPosition**

Determines the corner position of the PiP window. Default: BOTTOM\_RIGHT.



Type: String

Valid Values: TOP\_LEFT | TOP\_RIGHT | BOTTOM\_LEFT | BOTTOM\_RIGHT

Required: No

### **pipWidth**

Specifies the width of the PiP window in pixels. When this is not set explicitly, `pipWidth`'s value will be based on the size of the composition and the aspect ratio of the participant's video.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **videoFillMode**

Defines how video content fits within the participant tile: `FILL` (stretched), `COVER` (cropped), or `CONTAIN` (letterboxed). Default: `COVER`.

Type: String

Valid Values: FILL | COVER | CONTAIN

Required: No

## **See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# PublicKey

Object specifying a public key used to sign stage participant tokens.

## Contents

### arn

Public key ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:public-key/[a-zA-Z0-9-]+`

Required: No

### fingerprint

The public key fingerprint, a short string used to identify or verify the full public key.

Type: String

Required: No

### name

Public key name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_*]`

Required: No

### publicKeyMaterial

Public key material.

Type: String

Pattern: `.*-----BEGIN PUBLIC KEY-----\r?\n([a-zA-Z0-9+/\=\r\n])+\r?\n-----  
END PUBLIC KEY-----(\r?\n)?.*`

Required: No

## tags

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# PublicKeySummary

Summary information about a public key.

## Contents

### arn

Public key ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:public-key/[a-zA-Z0-9-]+`

Required: No

### name

Public key name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-]*`

Required: No

### tags

Tags attached to the resource. Array of maps, each of the form `string:string` (`key:value`). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# RecordingConfiguration

An object representing a configuration to record a stage stream.

## Contents

### format

The recording format for storing a recording in Amazon S3.

Type: String

Valid Values: HLS

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# S3DestinationConfiguration

A complex type that describes an S3 location where recorded videos will be stored.

## Contents

### encoderConfigurationArns

ARNs of the [EncoderConfiguration](#) resource. The encoder configuration and stage resources must be in the same AWS account and region.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:encoder-configuration/[a-zA-Z0-9-]+`

Required: Yes

### storageConfigurationArn

ARN of the [StorageConfiguration](#) where recorded videos will be stored.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:storage-configuration/[a-zA-Z0-9-]+`

Required: Yes

### recordingConfiguration

Array of maps, each of the form `string:string` (key:value). This is an optional customer specification, currently used only to specify the recording format for storing a recording in Amazon S3.

Type: [RecordingConfiguration](#) object

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)



# S3Detail

Complex data type that defines S3Detail objects.

## Contents

### recordingPrefix

The S3 bucket prefix under which the recording is stored.

Type: String

Required: Yes

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# S3StorageConfiguration

A complex type that describes an S3 location where recorded videos will be stored.

## Contents

### bucketName

Location (S3 bucket name) where recorded videos will be stored. Note that the StorageConfiguration and S3 bucket must be in the same region as the Composition.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: [a-z0-9-. ]+

Required: Yes

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Stage

Object specifying a stage.

## Contents

### **arn**

Stage ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

### **activeSessionId**

ID of the active session within the stage.

Type: String

Length Constraints: Fixed length of 16.

Pattern: `st-[a-zA-Z0-9]+`

Required: No

### **autoParticipantRecordingConfiguration**

Configuration object for individual participant recording, attached to the stage.

Type: [AutoParticipantRecordingConfiguration](#) object

Required: No

### **endpoints**

Summary information about various endpoints for a stage.

Type: [StageEndpoints](#) object

Required: No

**name**

Stage name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_*]`

Required: No

**tags**

Tags attached to the resource. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

**See Also**

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# StageEndpoints

Summary information about various endpoints for a stage.

## Contents

### events

Events endpoint.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

Required: No

### whip

WHIP endpoint.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# StageSession

A stage session begins when the first participant joins a stage and ends after the last participant leaves the stage. A stage session helps with debugging stages by grouping events and participants into shorter periods of time (i.e., a session), which is helpful when stages are used over long periods of time.

## Contents

### endTime

ISO 8601 timestamp (returned as a string) when the stage session ended. This is null if the stage is active.

Type: Timestamp

Required: No

### sessionId

ID of the session within the stage.

Type: String

Length Constraints: Fixed length of 16.

Pattern: `st-[a-zA-Z0-9]+`

Required: No

### startTime

ISO 8601 timestamp (returned as a string) when this stage session began.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# StageSessionSummary

Summary information about a stage session.

## Contents

### endTime

ISO 8601 timestamp (returned as a string) when the stage session ended. This is null if the stage is active.

Type: Timestamp

Required: No

### sessionId

ID of the session within the stage.

Type: String

Length Constraints: Fixed length of 16.

Pattern: `st-[a-zA-Z0-9]+`

Required: No

### startTime

ISO 8601 timestamp (returned as a string) when this stage session began.

Type: Timestamp

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)



- [AWS SDK for Ruby V3](#)

# StageSummary

Summary information about a stage.

## Contents

### arn

Stage ARN.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:stage/[a-zA-Z0-9-]+`

Required: Yes

### activeSessionId

ID of the active session within the stage.

Type: String

Length Constraints: Fixed length of 16.

Pattern: `st-[a-zA-Z0-9-]+`

Required: No

### name

Stage name.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-]*`

Required: No

### tags

Tags attached to the resource. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags

and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# StorageConfiguration

A complex type that describes a location where recorded videos will be stored.

## Contents

### arn

ARN of the storage configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:storage-configuration/[a-zA-Z0-9-]+`

Required: Yes

### name

Name of the storage configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_*]`

Required: No

### s3

An S3 destination configuration where recorded videos will be stored.

Type: [S3StorageConfiguration](#) object

Required: No

### tags

Tags attached to the resource. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# StorageConfigurationSummary

Summary information about a storage configuration.

## Contents

### arn

ARN of the storage configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:aws:ivs:[a-z0-9-]+:[0-9]+:storage-configuration/[a-zA-Z0-9-]+`

Required: Yes

### name

Name of the storage configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-Z0-9-_*]`

Required: No

### s3

An S3 destination configuration where recorded videos will be stored.

Type: [S3StorageConfiguration](#) object

Required: No

### tags

Tags attached to the resource. Array of maps, each of the form `string:string` (key:value). See [Tagging AWS Resources](#) for details, including restrictions that apply to tags and "Tag naming limits and requirements"; Amazon IVS has no constraints on tags beyond what is documented there.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Video

Settings for video.

## Contents

### bitrate

Bitrate for generated output, in bps. Default: 2500000.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 8500000.

Required: No

### framerate

Video frame rate, in fps. Default: 30.

Type: Float

Valid Range: Minimum value of 1. Maximum value of 60.

Required: No

### height

Video-resolution height. Note that the maximum value is determined by width times height, such that the maximum total pixels is 2073600 (1920x1080 or 1080x1920). Default: 720.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1920.

Required: No

### width

Video-resolution width. Note that the maximum value is determined by width times height, such that the maximum total pixels is 2073600 (1920x1080 or 1080x1920). Default: 1280.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1920.



Required: No

## See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signing AWS API requests](#) in the *IAM User Guide*.

## Action

The action to be performed.

Type: string

Required: Yes

## Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

## X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

## X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4\_request"). The value is expressed in the following format: *access\_key/YYYYMMDD/region/service/aws4\_request*.

For more information, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

### **X-Amz-Date**

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [Elements of an AWS API request signature](#) in the *IAM User Guide*.

Type: string

Required: Conditional

### **X-Amz-Security-Token**

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

### **X-Amz-Signature**

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

### **X-Amz-SignedHeaders**

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

## Common Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

### **AccessDeniedException**

You do not have sufficient access to perform this action.

HTTP Status Code: 403

### **ExpiredTokenException**

The security token included in the request is expired

HTTP Status Code: 403

### **IncompleteSignature**

The request signature does not conform to AWS standards.

HTTP Status Code: 403

### **InternalFailure**

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

### **MalformedHttpRequestException**

Problems with the request at the HTTP level, e.g. we can't decompress the body according to the decompression algorithm specified by the content-encoding.

HTTP Status Code: 400

### **NotAuthorized**

You do not have permission to perform this action.

HTTP Status Code: 401

### **OptInRequired**

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

### **RequestAbortedException**

Convenient exception that can be used when a request is aborted before a reply is sent back (e.g. client closed connection).

HTTP Status Code: 400

### **RequestEntityTooLargeException**

Problems with the request at the HTTP level. The request entity is too large.

HTTP Status Code: 413

### **RequestExpired**

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

### **RequestTimeoutException**

Problems with the request at the HTTP level. Reading the Request timed out.

HTTP Status Code: 408

### **ServiceUnavailable**

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

### **ThrottlingException**

The request was denied due to request throttling.

HTTP Status Code: 400

### **UnrecognizedClientException**

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

## **UnknownOperationException**

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 404

## **ValidationError**

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400