aws

API Reference

Amazon GameLift Streams

API Version 2018-05-10

Amazon GameLift Streams: API Reference

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Welcome

Amazon GameLift Streams provides a global cloud solution for content streaming experiences. Use Amazon GameLift Streams tools to upload and configure content for streaming, deploy and scale computing resources to host streams, and manage stream session placement to meet customer demand.

This Reference Guide describes the Amazon GameLift Streams service API. You can use the API through the AWS SDK, the AWS Command Line Interface (AWS CLI), or by making direct REST calls through HTTPS.

See the *Amazon GameLift Streams Developer Guide* for more information on how Amazon GameLift Streams works and how to work with it.

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Actions

The following actions are supported:

- AddStreamGroupLocations
- AssociateApplications
- CreateApplication
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AddStreamGroupLocations

Add locations that can host stream sessions. To add a location, the stream group must be in `ACTIVE` status. You configure locations and their corresponding capacity for each stream group. Creating a stream group in a location that's nearest to your end users can help minimize latency and improve quality.

This operation provisions stream capacity at the specified locations. By default, all locations have 1 or 2 capacity, depending on the stream class option: 2 for 'High' and 1 for 'Ultra' and 'Win2022'. This operation also copies the content files of all associated applications to an internal S3 bucket at each location. This allows Amazon GameLift Streams to host performant stream sessions.

Request Syntax

```
POST /streamgroups/Identifier/locations HTTP/1.1
Content-type: application/json

{
   "LocationConfigurations": [
      {
         "AlwaysOnCapacity": number,
         "LocationName": "string",
         "MaximumCapacity": number,
         "OnDemandCapacity": number,
         "TargetIdleCapacity": number,
         "VpcTransitConfiguration": {
            "Ipv4CidrBlocks": [ "string" ],
            "VpcId": "string"
         }
      }
   ]
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

A stream group to add the specified locations to.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

LocationConfigurations

A set of one or more locations and the streaming capacity for each location.

Type: Array of LocationConfiguration objects

Array Members: Minimum number of 1 item. Maximum number of 100 items.

Required: Yes

Response Syntax

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

{
   "Identifier": "string",
   "Locations": [
      {
         "AllocatedCapacity": number,
         "AlwaysOnCapacity": number,
         "IdleCapacity": number,
         "InternalVpcIpv4CidrBlock": "string",
         "LocationName": "string",
         "MaximumCapacity": number,
         "OnDemandCapacity": number,
         "RequestedCapacity": number,
```

```
         "Status": "string",
         "TargetIdleCapacity": number,
         "VpcTransitConfiguration": {
            "Ipv4CidrBlocks": [ "string" ],
            "TransitGatewayId": "string",
            "TransitGatewayResourceShareArn": "string",
            "VpcId": "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.

Identifier

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Locations

This value is set of locations, including their name, current status, and capacities.

A location can be in one of the following states:

- `ACTIVATING`: Amazon GameLift Streams is preparing the location. You cannot stream from, scale the capacity of, or remove this location yet.
- `ACTIVE`: The location is provisioned with initial capacity. You can now stream from, scale the capacity of, or remove this location.
- `ERROR`: Amazon GameLift Streams failed to set up this location. The `StatusReason` field describes the error. You can remove this location and try to add it again.

- `REMOVING`: Amazon GameLift Streams is working to remove this location. This will release all provisioned capacity for this location in this stream group.

Type: Array of LocationState objects

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ServiceQuotaExceededException

The request would cause the resource to exceed an allowed service quota. Resolve the issue before you try again.

Message

Description of the error.

HTTP Status Code: 402

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to add multiple locations to the stream group.

Sample Request

```
aws gameliftstreams add-stream-group-locations \
    --identifier arn:aws:gameliftstreams:us-west-2:123456789012:streamgroup/
sg-1AB2C3De4 \
    --location-configurations '[{"LocationName": "us-east-1", "AlwaysOnCapacity": 2,
 "MaximumCapacity": 4, "TargetIdleCapacity": 1}]'
```

See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

AssociateApplications

When you associate, or link, an application with a stream group, then Amazon GameLift Streams can launch the application using the stream group's allocated compute resources. The stream group must be in `ACTIVE` status. You can reverse this action by using DisassociateApplications.

If a stream group does not already have a linked application, Amazon GameLift Streams will automatically assign the first application provided in `ApplicationIdentifiers` as the default.

Request Syntax

```
POST /streamgroups/Identifier/associations HTTP/1.1
Content-type: application/json

{
   "ApplicationIdentifiers": [ "string" ]
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

A stream group to associate to the applications.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

ApplicationIdentifiers

A set of applications to associate with the stream group.

This value is a set of either Amazon Resource Names (ARN) or IDs that uniquely identify application resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`. Example ID: `a-9ZY8X7Wv6`.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Response Syntax

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

{
   "ApplicationArns": [ "string" ],
   "Arn": "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.

ApplicationArns

A set of applications that are associated to the stream group.

This value is a set of Amazon Resource Names (ARNs) that uniquely identify application resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: Array of strings

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Arn

A stream group that is associated to the applications.

This value is an Amazon Resource Name (ARN) that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ServiceQuotaExceededException

The request would cause the resource to exceed an allowed service quota. Resolve the issue before you try again.

Message

Description of the error.

HTTP Status Code: 402

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to associate multiple applications to a stream group.

Sample Request

```
aws gameliftstreams associate-applications \
    --identifier sg-1AB2C3De4 \
    --application-identifiers a-9ZY8X7Wv6 a-1Z78C7Wv6
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateApplication

Creates an application resource in Amazon GameLift Streams, which specifies the application content you want to stream, such as a game build or other software, and configures the settings to run it.

Before you create an application, upload your application content files to an Amazon Simple Storage Service (Amazon S3) bucket. For more information, see **Getting Started** in the Amazon GameLift Streams Developer Guide.

Important

Make sure that your files in the Amazon S3 bucket are the correct version you want to use. If you change the files at a later time, you will need to create a new Amazon GameLift Streams application.

Note

Creating an application is the only time Amazon GameLift Streams accesses your Amazon S3 bucket. After the application reaches `READY` status, you can delete the original files from your Amazon S3 bucket without affecting the application.

If the request is successful, Amazon GameLift Streams begins to create an application and sets the status to `INITIALIZED`. When an application reaches `READY` status, you can use the application to set up stream groups and start streams. To track application status, call GetApplication.

Request Syntax

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

{
   "ApplicationLogOutputUri": "string",
   "ApplicationLogPaths": [ "string" ],
   "ApplicationSourceUri": "string",
   "ClientToken": "string",
   "Description": "string",
```

```
   "ExecutablePath": "string",
   "RuntimeEnvironment": {
      "Type": "string",
      "Version": "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.

ApplicationSourceUri

The location of the content that you want to stream. Enter an Amazon S3 URI to a bucket that contains your game or other application. The location can have a multi-level prefix structure, but it must include all the files needed to run the content. Amazon GameLift Streams copies everything under the specified location.

This value is immutable. To designate a different content location, create a new application.

> **Note**
>
> The Amazon S3 bucket and the Amazon GameLift Streams application must be in the same AWS Region.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: Yes

Description

A human-readable label for the application. You can update this value later.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

Required: Yes

ExecutablePath

The relative path and file name of the executable file that Amazon GameLift Streams will stream. Specify a path relative to the location set in `ApplicationSourceUri`. The file must be contained within the application's root folder. For Windows applications, the file must be a valid Windows executable or batch file with a filename ending in .exe, .cmd, or .bat. For Linux applications, the file must be a valid Linux binary executable or a script that contains an initial interpreter line starting with a shebang ('`#!`').

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: Yes

RuntimeEnvironment

Configuration settings that identify the operating system for an application resource. This can also include a compatibility layer and other drivers.

A runtime environment can be one of the following:

- For Linux applications
  - Ubuntu 22.04 LTS (`Type=UBUNTU, Version=22_04_LTS`)
- For Windows applications
  - Microsoft Windows Server 2022 Base (`Type=WINDOWS, Version=2022`)
  - Proton 10.0-4 (`Type=PROTON, Version=20260204`)
  - Proton 9.0-2 (`Type=PROTON, Version=20250516`)
  - Proton 8.0-5 (`Type=PROTON, Version=20241007`)
  - Proton 8.0-2c (`Type=PROTON, Version=20230704`)

Type: RuntimeEnvironment object

Required: Yes

ApplicationLogOutputUri

An Amazon S3 URI to a bucket where you would like Amazon GameLift Streams to save application logs. Required if you specify one or more `ApplicationLogPaths`.

> **Note**
>
> The log bucket must have permissions that give Amazon GameLift Streams access to write the log files. For more information, see Application log bucket permission policy in the *Amazon GameLift Streams Developer Guide*.

Type: String

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

Pattern: `$|^s3://([a-zA-Z0-9][a-zA-Z0-9._-]{1,61}[a-zA-Z0-9])(/[a-zA-Z0-9._-]+)*/?`

Required: No

ApplicationLogPaths

Locations of log files that your content generates during a stream session. Enter path values that are relative to the `ApplicationSourceUri` location, or relative to the user's home directory when using a supported path variable. You can specify up to 10 log paths. Each individual log file cannot exceed 50 MB in size.

Each path can be a directory or an exact file path. When you specify a directory, Amazon GameLift Streams collects only files with the following extensions: `.txt`, `.log`, and `.utrace`. To collect files with other extensions, specify the exact file path. The copy operation is not performed recursively in subfolders.

The following path variables are recognized when they appear as the first component of a path: `%USERPROFILE%` (Windows and Proton), `$HOME` or ~ (Linux). Use a path variable when your application writes logs outside of the application directory.

Amazon GameLift Streams uploads designated log files to the Amazon S3 bucket that you specify in `ApplicationLogOutputUri` at the end of a stream session. To retrieve stored log files, call GetStreamSession and get the `LogFileLocationUri`.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

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

Required: No

ClientToken

A unique identifier that represents a client request. The request is idempotent, which ensures that an API request completes only once. When users send a request, Amazon GameLift Streams automatically populates this field.

Type: String

Length Constraints: Minimum length of 32. Maximum length of 128.

Pattern: `[\x21-\x7E]+`

Required: No

Tags

A list of labels to assign to the new application resource. Tags are developer-defined key-value pairs. Tagging AWS resources is useful for resource management, access management and cost allocation. See Tagging AWS Resources in the *AWS General Reference*. You can use TagResource to add tags, UntagResource to remove tags, and ListTagsForResource to view tags on existing resources.

Type: String to string map

Map Entries: 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/1.1 201
Content-type: application/json
```

```
{
   "ApplicationLogOutputUri": "string",
   "ApplicationLogPaths": [ "string" ],
   "ApplicationSourceUri": "string",
   "Arn": "string",
   "AssociatedStreamGroups": [ "string" ],
   "CreatedAt": number,
   "Description": "string",
   "ExecutablePath": "string",
   "Id": "string",
   "LastUpdatedAt": number,
   "ReplicationStatuses": [
      {
         "Location": "string",
         "Status": "string"
      }
   ],
   "RuntimeEnvironment": {
      "Type": "string",
      "Version": "string"
   },
   "Status": "string",
   "StatusReason": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

Arn

The Amazon Resource Name (ARN) that's assigned to an application resource and uniquely identifies it across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:application/[resource ID]`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

ApplicationLogOutputUri

An Amazon S3 URI to a bucket where you would like Amazon GameLift Streams to save application logs. Required if you specify one or more `ApplicationLogPaths`.

Type: String

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

Pattern: `$|^s3://([a-zA-Z0-9][a-zA-Z0-9._-]{1,61}[a-zA-Z0-9])(/[a-zA-Z0-9._-]+)*/?`

ApplicationLogPaths

Locations of log files that your content generates during a stream session. Amazon GameLift Streams uploads log files to the Amazon S3 bucket that you specify in `ApplicationLogOutputUri` at the end of a stream session. To retrieve stored log files, call GetStreamSession and get the `LogFileLocationUri`.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

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

ApplicationSourceUri

The original Amazon S3 location of uploaded stream content for the application.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

AssociatedStreamGroups

A newly created application is not associated to any stream groups. This value is empty.

Type: Array of strings

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Description

A human-readable label for the application. You can edit this value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

ExecutablePath

The relative path and file name of the executable file that launches the content for streaming.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Id

A unique ID value that is assigned to the resource when it's created. Format example: `a-9ZY8X7Wv6`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

ReplicationStatuses

A set of replication statuses for each location.

Type: Array of ReplicationStatus objects

RuntimeEnvironment

Configuration settings that identify the operating system for an application resource. This can also include a compatibility layer and other drivers.

A runtime environment can be one of the following:

- For Linux applications
  - Ubuntu 22.04 LTS (`Type=UBUNTU, Version=22_04_LTS`)
- For Windows applications
  - Microsoft Windows Server 2022 Base (`Type=WINDOWS, Version=2022`)
  - Proton 10.0-4 (`Type=PROTON, Version=20260204`)
  - Proton 9.0-2 (`Type=PROTON, Version=20250516`)
  - Proton 8.0-5 (`Type=PROTON, Version=20241007`)
  - Proton 8.0-2c (`Type=PROTON, Version=20230704`)

Type: RuntimeEnvironment object

Status

The current status of the application resource. Possible statuses include the following:

- `INITIALIZED`: Amazon GameLift Streams has received the request and is initiating the work flow to create an application.
- `PROCESSING`: The create application work flow is in process. Amazon GameLift Streams is copying the content and caching for future deployment in a stream group.
- `READY`: The application is ready to deploy in a stream group.
- `ERROR`: An error occurred when setting up the application. See `StatusReason` for more information.
- `DELETING`: Amazon GameLift Streams is in the process of deleting the application.

Type: String

Valid Values: `INITIALIZED | PROCESSING | READY | DELETING | ERROR`

StatusReason

A short description of the status reason when the application is in `ERROR` status.

Type: String

Valid Values: `internalError | accessDenied | sourceModified`

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

ConflictException

The requested operation would cause a conflict with the current state of a service resource associated with the request. Resolve the conflict before retrying this request.

Message

Description of the error.

HTTP Status Code: 409

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ServiceQuotaExceededException

The request would cause the resource to exceed an allowed service quota. Resolve the issue before you try again.

Message

Description of the error.

HTTP Status Code: 402

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to create a Amazon GameLift Streams application.

Sample Request

```
aws gameliftstreams create-application \
  --description "MyGame v1" \
  --runtime-environment '{"Type":"PROTON", "Version":"20241007"}' \
  --executable-path "launcher.exe" \
  --application-source-uri "s3://amzn-s3-demo-bucket/example-game" \
  --application-log-paths '[".\\logs"]' \
  --application-log-output-uri "s3://amzn-s3-demo-logging-bucket/example-game/logs"
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateStreamGroup

Stream groups manage how Amazon GameLift Streams allocates resources and handles concurrent streams, allowing you to effectively manage capacity and costs. Within a stream group, you specify an application to stream, streaming locations and their capacity, and the stream class you want to use when streaming applications to your end-users. A stream class defines the hardware configuration of the compute resources that Amazon GameLift Streams will use when streaming, such as the CPU, GPU, and memory.

Stream capacity represents the number of concurrent streams that can be active at a time. You set stream capacity per location, per stream group. The following capacity settings are available:

- **Always-on capacity**: This setting, if non-zero, indicates minimum streaming capacity which is allocated to you and is never released back to the service. You pay for this base level of capacity at all times, whether used or idle.
- **Maximum capacity**: This indicates the maximum capacity that the service can allocate for you. Newly created streams may take a few minutes to start. Capacity is released back to the service when idle. You pay for capacity that is allocated to you until it is released.
- **Target-idle capacity**: This indicates idle capacity which the service pre-allocates and holds for you in anticipation of future activity. This helps to insulate your users from capacity-allocation delays. You pay for capacity which is held in this intentional idle state.

Values for capacity must be whole number multiples of the tenancy value of the stream group's stream class.

To adjust the capacity of any `ACTIVE` stream group, call UpdateStreamGroup.

If the `CreateStreamGroup` request is successful, Amazon GameLift Streams assigns a unique ID to the stream group resource and sets the status to `ACTIVATING`. It can take a few minutes for Amazon GameLift Streams to finish creating the stream group while it searches for unallocated compute resources and provisions them. When complete, the stream group status will be `ACTIVE` and you can start stream sessions by using StartStreamSession. To check the stream group's status, call GetStreamGroup.

Stream groups should be recreated every 3-4 weeks to pick up important service updates and fixes. Stream groups that are older than 180 days can no longer be updated with new application associations. Stream groups expire when they are 365 days old, at which point they can no longer stream sessions. The exact expiration date is indicated by the date value in the `ExpiresAt` field.

Request Syntax

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

{
   "ClientToken": "string",
   "DefaultApplicationIdentifier": "string",
   "Description": "string",
   "LocationConfigurations": [
      {
         "AlwaysOnCapacity": number,
         "LocationName": "string",
         "MaximumCapacity": number,
         "OnDemandCapacity": number,
         "TargetIdleCapacity": number,
         "VpcTransitConfiguration": {
            "Ipv4CidrBlocks": [ "string" ],
            "VpcId": "string"
         }
      }
   ],
   "StreamClass": "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.

Description

A descriptive label for the stream group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

Required: Yes

StreamClass

The target stream quality for sessions that are hosted in this stream group. Set a stream class that is appropriate to the type of content that you're streaming. Stream class determines the type of computing resources Amazon GameLift Streams uses and impacts the cost of streaming. The following options are available:

A stream class can be one of the following:

- **`gen6n_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra_win2022` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session

- **`gen6n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen6n_medium` (NVIDIA, medium)** Supports applications with moderate 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 6 GB VRAM
  - Tenancy: Supports up to 4 concurrent stream sessions
- **`gen6n_small` (NVIDIA, small)** Supports applications with lightweight 3D scene complexity and low CPU usage. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 1 vCPUs, 4 GB RAM, 2 GB VRAM
  - Tenancy: Supports up to 12 concurrent stream sessions
- **`gen6n_medium_win2022` (NVIDIA, medium)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 6 GB VRAM
  - Tenancy: Supports 1 concurrent stream session

- **`gen6n_small_win2022` (NVIDIA, small)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 3 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6e_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6e_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p

- Reference frame rate: 60 fps
- Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
- Tenancy: Supports up to 2 concurrent stream sessions

- **`gen5n_ultra` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen4n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen4n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 8 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen4n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session

Type: String

Valid Values: `gen4n_high | gen4n_ultra | gen4n_win2022 | gen5n_high | gen5n_ultra | gen5n_win2022 | gen6n_small | gen6n_medium | gen6n_high | gen6n_ultra | gen6n_ultra_win2022 | gen6n_pro | gen6n_pro_win2022 | gen6n_small_win2022 | gen6n_medium_win2022 | gen6e_pro | gen6e_pro_win2022`

Required: Yes

ClientToken

A unique identifier that represents a client request. The request is idempotent, which ensures that an API request completes only once. When users send a request, Amazon GameLift Streams automatically populates this field.

Type: String

Length Constraints: Minimum length of 32. Maximum length of 128.

Pattern: `[\x21-\x7E]+`

Required: No

DefaultApplicationIdentifier

The unique identifier of the Amazon GameLift Streams application that you want to set as the default application in a stream group. The application that you specify must be in READY status. The default application is pre-cached on always-on compute resources, reducing stream startup times. Other applications are automatically cached as needed.

If you do not link an application when you create a stream group, you will need to link one later, before you can start streaming, using AssociateApplications.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`. Example ID: `a-9ZY8X7Wv6`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: No

LocationConfigurations

A set of one or more locations and the streaming capacity for each location.

Type: Array of LocationConfiguration objects

Array Members: Minimum number of 1 item. Maximum number of 100 items.

Required: No

Tags

A list of labels to assign to the new stream group resource. Tags are developer-defined key-value pairs. Tagging AWS resources is useful for resource management, access management and cost allocation. See Tagging AWS Resources in the *AWS General Reference*. You can use TagResource to add tags, UntagResource to remove tags, and ListTagsForResource to view tags on existing resources.

Type: String to string map

Map Entries: 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/1.1 201
Content-type: application/json

{
   "Arn": "string",
   "AssociatedApplications": [ "string" ],
   "CreatedAt": number,
   "DefaultApplication": {
      "Arn": "string",
      "Id": "string"
   },
   "Description": "string",
```

```
   "ExpiresAt": number,
   "Id": "string",
   "LastUpdatedAt": number,
   "LocationStates": [
      {
         "AllocatedCapacity": number,
         "AlwaysOnCapacity": number,
         "IdleCapacity": number,
         "InternalVpcIpv4CidrBlock": "string",
         "LocationName": "string",
         "MaximumCapacity": number,
         "OnDemandCapacity": number,
         "RequestedCapacity": number,
         "Status": "string",
         "TargetIdleCapacity": number,
         "VpcTransitConfiguration": {
            "Ipv4CidrBlocks": [ "string" ],
            "TransitGatewayId": "string",
            "TransitGatewayResourceShareArn": "string",
            "VpcId": "string"
         }
      }
   ],
   "Status": "string",
   "StatusReason": "string",
   "StreamClass": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

Arn

The Amazon Resource Name (ARN) that is assigned to the stream group resource and that uniquely identifies the group across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:streamgroup/[resource ID]`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

AssociatedApplications

A set of applications that this stream group is associated to. You can stream any of these applications by using this stream group.

This value is a set of Amazon Resource Names (ARNs) that uniquely identify application resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: Array of strings

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

DefaultApplication

The default Amazon GameLift Streams application that is associated with this stream group.

Type: DefaultApplication object

Description

A descriptive label for the stream group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

ExpiresAt

The time at which this stream group expires. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC). After this time, you will no longer be able to update this stream group or use it to start stream sessions. Only Get and Delete operations will work on an expired stream group.

Type: Timestamp

Id

A unique ID value that is assigned to the resource when it's created. Format example: `sg-1AB2C3De4`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

LocationStates

This value is the set of locations, including their name, current status, and capacities.

A location can be in one of the following states:

- `ACTIVATING`: Amazon GameLift Streams is preparing the location. You cannot stream from, scale the capacity of, or remove this location yet.
- `ACTIVE`: The location is provisioned with initial capacity. You can now stream from, scale the capacity of, or remove this location.
- `ERROR`: Amazon GameLift Streams failed to set up this location. The `StatusReason` field describes the error. You can remove this location and try to add it again.
- `REMOVING`: Amazon GameLift Streams is working to remove this location. This will release all provisioned capacity for this location in this stream group.

Type: Array of LocationState objects

Status

The current status of the stream group resource. Possible statuses include the following:

- `ACTIVATING`: The stream group is deploying and isn't ready to host streams.
- `ACTIVE`: The stream group is ready to host streams.

- ACTIVE_WITH_ERRORS: One or more locations in the stream group are in an error state. Verify the details of individual locations and remove any locations which are in error.
- DELETING: Amazon GameLift Streams is in the process of deleting the stream group.
- ERROR: An error occurred when the stream group deployed. See StatusReason (returned by CreateStreamGroup, GetStreamGroup, and UpdateStreamGroup) for more information.
- EXPIRED: The stream group is expired and can no longer host streams. This typically occurs when a stream group is 365 days old, as indicated by the value of ExpiresAt. Create a new stream group to resume streaming capabilities.
- UPDATING_LOCATIONS: One or more locations in the stream group are in the process of updating (either activating or deleting).

Type: String

Valid Values: ACTIVATING | UPDATING_LOCATIONS | ACTIVE | ACTIVE_WITH_ERRORS | ERROR | DELETING | EXPIRED

StatusReason

A short description of the reason that the stream group is in ERROR status. The possible reasons can be one of the following:

- internalError: The request can't process right now because of an issue with the server. Try again later.
- noAvailableInstances: Amazon GameLift Streams does not currently have enough available capacity to fulfill your request. Wait a few minutes and retry the request as capacity can shift frequently. You can also try to make the request using a different stream class or in another region.

Type: String

Valid Values: internalError | noAvailableInstances

StreamClass

The target stream quality for the stream group.

A stream class can be one of the following:

- **gen6n_pro_win2022 (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up

through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.

- Reference resolution: 1080p
- Reference frame rate: 60 fps
- Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
- Tenancy: Supports 1 concurrent stream session

- **`gen6n_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra_win2022` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions

- **`gen6n_medium` (NVIDIA, medium)** Supports applications with moderate 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 6 GB VRAM
  - Tenancy: Supports up to 4 concurrent stream sessions
- **`gen6n_small` (NVIDIA, small)** Supports applications with lightweight 3D scene complexity and low CPU usage. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 1 vCPUs, 4 GB RAM, 2 GB VRAM
  - Tenancy: Supports up to 12 concurrent stream sessions
- **`gen6n_medium_win2022` (NVIDIA, medium)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 6 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_small_win2022` (NVIDIA, small)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 3 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6e_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM

  - Tenancy: Supports 1 concurrent stream session
- **`gen6e_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen5n_ultra` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen4n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p

- Reference frame rate: 60 fps
- Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
- Tenancy: Supports 1 concurrent stream session

- **gen4n_high (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 8 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **gen4n_ultra (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session

Type: String

Valid Values: `gen4n_high | gen4n_ultra | gen4n_win2022 | gen5n_high | gen5n_ultra | gen5n_win2022 | gen6n_small | gen6n_medium | gen6n_high | gen6n_ultra | gen6n_ultra_win2022 | gen6n_pro | gen6n_pro_win2022 | gen6n_small_win2022 | gen6n_medium_win2022 | gen6e_pro | gen6e_pro_win2022`

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

ConflictException

The requested operation would cause a conflict with the current state of a service resource associated with the request. Resolve the conflict before retrying this request.

Message

Description of the error.

HTTP Status Code: 409

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ServiceQuotaExceededException

The request would cause the resource to exceed an allowed service quota. Resolve the issue before you try again.

Message

Description of the error.

HTTP Status Code: 402

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to create a Amazon GameLift Streams stream group with a `gen4n_high` stream class. The application for the stream group is specified with an ARN value. Values for capacity must be whole number multiples of the tenancy value of the stream group's stream class.

Sample Request

```
aws gameliftstreams create-stream-group \
  --description "MyGame JPregion" \
  --stream-class gen4n_high \
  --default-application-identifier arn:aws:gameliftstreams:us-
west-2:123456789012:application/a-9ZY8X7Wv6 \
  --location-configurations '[{"LocationName": "us-west-2", "AlwaysOnCapacity": 2,
 "MaximumCapacity": 4, "TargetIdleCapacity": 1}]'
```

See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateStreamSessionAdminShell

Creates an administrative terminal session with full access to the live runtime environment of the Amazon GameLift Streams stream session. Use the returned credentials (`SessionId`, `StreamUrl` and `TokenValue`) with the AWS Systems Manager Session Manager plugin for the AWS CLI to access the terminal session.

The stream session must be in one of the following statuses: `ACTIVE`, `CONNECTED`, `PENDING_CLIENT_RECONNECTION`, or `RECONNECTING`.

The `StreamUrl` is valid for 60 seconds. After it expires, call this operation again to get a new URL.

> **Important**
>
> The returned credentials grant full access to the live runtime environment of the Amazon GameLift Streams stream session. The operator who connects to the terminal session has the same level of access that your Amazon GameLift Streams applications have, including potentially user input, screen images, and application data files. Grant permissions to call this operation only to trusted IAM identities that require live runtime environment access.

Request Syntax

```
POST /streamgroups/Identifier/streamsessions/StreamSessionIdentifier/access HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

The stream group that runs this stream session.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

StreamSessionIdentifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the stream session resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamsession/sg-1AB2C3De4/ABC123def4567`. Example ID: `ABC123def4567`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "SessionId": "string",
   "StreamUrl": "string",
   "TokenValue": "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.

SessionId

An AWS Systems Manager session identifier that uniquely identifies the requested terminal session. Use this value with the AWS Systems Manager Session Manager plugin.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

StreamUrl

An AWS Systems Manager WebSocket connection endpoint for the requested terminal session.

Type: String

TokenValue

An AWS Systems Manager authentication token that authenticates your access to the session ID and WebSocket URL. This token must be treated with the same level of security as other user credentials. The token value is only valid for establishing a new connection within 60 seconds of generation.

Type: String

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

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

StreamSessionAccessNotReadyException

The terminal connection to the stream session is not yet available. Wait before retrying the request.

Message

Description of the error.

HTTP Status Code: 409

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

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 V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateStreamSessionConnection

Enables clients to reconnect to a stream session while preserving all session state and data in the disconnected session. This reconnection process can be initiated when a stream session is in either `PENDING_CLIENT_RECONNECTION` or `ACTIVE` status. The process works as follows:

1. Initial disconnect:
   - When a client disconnects or loses connection, the stream session transitions from `CONNECTED` to `PENDING_CLIENT_RECONNECTION`
2. Reconnection time window:
   - Clients have `ConnectionTimeoutSeconds` (defined in StartStreamSession) to reconnect before session termination
   - Your backend server must call **CreateStreamSessionConnection** to initiate reconnection
   - Session transitions to `RECONNECTING` status
3. Reconnection completion:
   - On successful **CreateStreamSessionConnection**, session status changes to `ACTIVE`
   - Provide the new connection information to the requesting client
   - Client must establish connection within `ConnectionTimeoutSeconds`
   - Session terminates automatically if client fails to connect in time

For more information about the stream session lifecycle, see Stream sessions in the *Amazon GameLift Streams Developer Guide*.

To begin re-connecting to an existing stream session, specify the stream group ID and stream session ID that you want to reconnect to, and the signal request to use with the stream.

Request Syntax

```
POST /streamgroups/Identifier/streamsessions/StreamSessionIdentifier/connections
 HTTP/1.1
Content-type: application/json

{
   "ClientToken": "string",
   "SignalRequest": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

The stream group that you want to run this stream session with. The stream group must be in `ACTIVE` status.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

StreamSessionIdentifier

Amazon Resource Name (ARN) or ID that uniquely identifies the stream session resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamsession/sg-1AB2C3De4/ABC123def4567`. Example ID: `ABC123def4567`.

The stream session must be in `PENDING_CLIENT_RECONNECTION` or `ACTIVE` status.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

SignalRequest

A WebRTC ICE offer string to use when initializing a WebRTC connection. The offer is a very long JSON string. Provide the string as a text value in quotes. The offer must be newly generated, not the same offer provided to `StartStreamSession`.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

ClientToken

A unique identifier that represents a client request. The request is idempotent, which ensures that an API request completes only once. When users send a request, Amazon GameLift Streams automatically populates this field.

Type: String

Length Constraints: Minimum length of 32. Maximum length of 128.

Pattern: `[\x21-\x7E]+`

Required: No

Response Syntax

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

{
   "SignalResponse": "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.

SignalResponse

The WebRTC answer string that the stream server generates in response to the `SignalRequest`.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

ConflictException

The requested operation would cause a conflict with the current state of a service resource associated with the request. Resolve the conflict before retrying this request.

Message

Description of the error.

HTTP Status Code: 409

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

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 V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteApplication

Permanently deletes an Amazon GameLift Streams application resource. This also deletes the application content files stored with Amazon GameLift Streams. However, this does not delete the original files that you uploaded to your Amazon S3 bucket; you can delete these any time after Amazon GameLift Streams creates an application, which is the only time Amazon GameLift Streams accesses your Amazon S3 bucket.

You can only delete an application that meets the following conditions:

- The application is in `READY` or `ERROR` status. You cannot delete an application that's in `PROCESSING` or `INITIALIZED` status.
- The application is not the default application of any stream groups. You must first delete the stream group by using DeleteStreamGroup.
- The application is not linked to any stream groups. You must first unlink the stream group by using DisassociateApplications.
- An application is not streaming in any ongoing stream session. You must wait until the client ends the stream session or call TerminateStreamSession to end the stream.

If any active stream groups exist for this application, this request returns a `ValidationException`.

Request Syntax

```
DELETE /applications/Identifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`. Example ID: `a-9ZY8X7Wv6`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

ConflictException

The requested operation would cause a conflict with the current state of a service resource associated with the request. Resolve the conflict before retrying this request.

Message

Description of the error.

HTTP Status Code: 409

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to delete a Amazon GameLift Streams application.

Sample Request

```
aws gameliftstreams delete-application \
  --identifier arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteStreamGroup

Permanently deletes all compute resources and information related to a stream group. To delete a stream group, specify the unique stream group identifier. During the deletion process, the stream group's status is `DELETING`. This operation stops streams in progress and prevents new streams from starting. As a best practice, before deleting the stream group, call ListStreamSessions to check for streams in progress and take action to stop them. When you delete a stream group, any application associations referring to that stream group are automatically removed.

Request Syntax

```
DELETE /streamgroups/Identifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

ConflictException

The requested operation would cause a conflict with the current state of a service resource associated with the request. Resolve the conflict before retrying this request.

Message

Description of the error.

HTTP Status Code: 409

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to delete a stream group.

Sample Request

```
aws gameliftstreams delete-stream-group \
  --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DisassociateApplications

When you disassociate, or unlink, an application from a stream group, you can no longer stream this application by using that stream group's allocated compute resources. Any streams in process will continue until they terminate, which helps avoid interrupting an end-user's stream. Amazon GameLift Streams will not initiate new streams in the stream group using the disassociated application. The disassociate action does not affect the stream capacity of a stream group. To disassociate an application, the stream group must be in `ACTIVE` status.

If you disassociate the default application, Amazon GameLift Streams will automatically choose a new default application from the remaining associated applications. To change which application is the default application, call UpdateStreamGroup and specify a new `DefaultApplicationIdentifier`.

Request Syntax

```
POST /streamgroups/Identifier/disassociations HTTP/1.1
Content-type: application/json

{
   "ApplicationIdentifiers": [ "string" ]
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

A stream group to disassociate these applications from.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

ApplicationIdentifiers

A set of applications that you want to disassociate from the stream group.

This value is a set of either Amazon Resource Names (ARN) or IDs that uniquely identify application resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`. Example ID: `a-9ZY8X7Wv6`.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Response Syntax

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

{
   "ApplicationArns": [ "string" ],
   "Arn": "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.

ApplicationArns

A set of applications that are disassociated from this stream group.

This value is a set of Amazon Resource Names (ARNs) that uniquely identify application resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: Array of strings

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Arn

An Amazon Resource Name (ARN) that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to disassociate, or unlink, multiple applications from a stream group.

Sample Request

```
aws gameliftstreams disassociate-applications \
    --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/
sg-1AB2C3De4 \
    --application-identifiers a-9ZY8X7Wv6 a-1Z78C7Wv6
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ExportStreamSessionFiles

Export the files that your application modifies or generates in a stream session, which can help you debug or verify your application. When your application runs, it generates output files such as logs, diagnostic information, crash dumps, save files, user data, screenshots, and so on. The files can be defined by the engine or frameworks that your application uses, or information that you've programmed your application to output.

You can only call this action on a stream session that is in progress, specifically in one of the following statuses `ACTIVE`, `CONNECTED`, `PENDING_CLIENT_RECONNECTION`, and `RECONNECTING`. You must provide an Amazon Simple Storage Service (Amazon S3) bucket to store the files in. When the session ends, Amazon GameLift Streams produces a compressed folder that contains all of the files and directories that were modified or created by the application during the stream session. AWS uses your security credentials to authenticate and authorize access to your Amazon S3 bucket.

Amazon GameLift Streams collects the following generated and modified files. Find them in the corresponding folders in the `.zip` archive.

- `application/`: The folder where your application or game is stored.

- `profile/`: The user profile folder.
- `temp/`: The system temp folder.

To verify the status of the exported files, use GetStreamSession.

To delete the files, delete the object in the S3 bucket.

Request Syntax

```
PUT /streamgroups/Identifier/streamsessions/StreamSessionIdentifier/exportfiles
 HTTP/1.1
Content-type: application/json

{
   "OutputUri": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

StreamSessionIdentifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the stream session resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamsession/sg-1AB2C3De4/ABC123def4567`. Example ID: `ABC123def4567`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

OutputUri

The S3 bucket URI where Amazon GameLift Streams uploads the set of compressed exported files for this stream session. Amazon GameLift Streams generates a ZIP file name based on the stream session metadata. Alternatively, you can provide a custom file name with a `.zip` file extension.

Example 1: If you provide an S3 URI called `s3://amzn-s3-demo-destination-bucket/MyGame_Session1.zip`, then Amazon GameLift Streams will save the files at that location.

Example 2: If you provide an S3 URI called `s3://amzn-s3-demo-destination-bucket/MyGameSessions_ExportedFiles/`, then Amazon GameLift Streams will save the files at `s3://amzn-s3-demo-destination-bucket/MyGameSessions_ExportedFiles/YYYYMMDD-HHMMSS-appId-sg-Id-sessionId.zip` or another similar name.

Type: String

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

Pattern: `s3://.*(/|\.zip|\.ZIP)`

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 Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

This example shows how to use the CLI to tell Amazon GameLift Streams to export the generated files when the stream session ends.

Sample Request

```
aws gameliftstreams export-stream-session-files \
    --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/
sg-1AB2C3De4 \
    --stream-session-identifier arn:aws:gameliftstreams:us-
west-2:111122223333:streamsession/sg-1AB2C3De4/ABC123def4567 \
    --output-uri s3://amzn-s3-demo-destination-bucket/prefix/
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetApplication

Retrieves properties for an Amazon GameLift Streams application resource. Specify the ID of the application that you want to retrieve. If the operation is successful, it returns properties for the requested application.

Request Syntax

```
GET /applications/Identifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`. Example ID: `a-9ZY8X7Wv6`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "ApplicationLogOutputUri": "string",
   "ApplicationLogPaths": [ "string" ],
   "ApplicationSourceUri": "string",
```

```
   "Arn": "string",
   "AssociatedStreamGroups": [ "string" ],
   "CreatedAt": number,
   "Description": "string",
   "ExecutablePath": "string",
   "Id": "string",
   "LastUpdatedAt": number,
   "ReplicationStatuses": [
      {
         "Location": "string",
         "Status": "string"
      }
   ],
   "RuntimeEnvironment": {
      "Type": "string",
      "Version": "string"
   },
   "Status": "string",
   "StatusReason": "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.

Arn

The Amazon Resource Name (ARN) that's assigned to an application resource and uniquely identifies it across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:application/[resource ID]`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

ApplicationLogOutputUri

An Amazon S3 URI to a bucket where you would like Amazon GameLift Streams to save application logs. Required if you specify one or more `ApplicationLogPaths`.

Type: String

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

Pattern: `$|^s3://([a-zA-Z0-9][a-zA-Z0-9._-]{1,61}[a-zA-Z0-9])(/[a-zA-Z0-9._-]+)*/?`

ApplicationLogPaths

Locations of log files that your content generates during a stream session. Amazon GameLift Streams uploads log files to the Amazon S3 bucket that you specify in `ApplicationLogOutputUri` at the end of a stream session. To retrieve stored log files, call GetStreamSession and get the `LogFileLocationUri`.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

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

ApplicationSourceUri

The original Amazon S3 location of uploaded stream content for the application.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

AssociatedStreamGroups

A set of stream groups that this application is associated with. You can use any of these stream groups to stream your application.

This value is a set of Amazon Resource Names (ARNs) that uniquely identify stream group resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`.

Type: Array of strings

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Description

A human-readable label for the application. You can edit this value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

ExecutablePath

The relative path and file name of the executable file that launches the content for streaming.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Id

A unique ID value that is assigned to the resource when it's created. Format example: `a-9ZY8X7Wv6`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

ReplicationStatuses

A set of replication statuses for each location.

Type: Array of ReplicationStatus objects

RuntimeEnvironment

Configuration settings that identify the operating system for an application resource. This can also include a compatibility layer and other drivers.

A runtime environment can be one of the following:

- For Linux applications
  - Ubuntu 22.04 LTS (`Type=UBUNTU, Version=22_04_LTS`)
- For Windows applications
  - Microsoft Windows Server 2022 Base (`Type=WINDOWS, Version=2022`)
  - Proton 10.0-4 (`Type=PROTON, Version=20260204`)
  - Proton 9.0-2 (`Type=PROTON, Version=20250516`)
  - Proton 8.0-5 (`Type=PROTON, Version=20241007`)
  - Proton 8.0-2c (`Type=PROTON, Version=20230704`)

Type: RuntimeEnvironment object

Status

The current status of the application resource. Possible statuses include the following:

- `INITIALIZED`: Amazon GameLift Streams has received the request and is initiating the work flow to create an application.
- `PROCESSING`: The create application work flow is in process. Amazon GameLift Streams is copying the content and caching for future deployment in a stream group.
- `READY`: The application is ready to deploy in a stream group.
- `ERROR`: An error occurred when setting up the application. See `StatusReason` for more information.
- `DELETING`: Amazon GameLift Streams is in the process of deleting the application.

Type: String

Valid Values: `INITIALIZED | PROCESSING | READY | DELETING | ERROR`

StatusReason

A short description of the status reason when the application is in `ERROR` status.

Type: String

Valid Values: `internalError | accessDenied | sourceModified`

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to retrieve information about a Amazon GameLift Streams application. This example uses the application ID value.

Sample Request

```
aws gameliftstreams get-application \
  --identifier arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

GetStreamGroup

Retrieves properties for a Amazon GameLift Streams stream group resource. Specify the ID of the stream group that you want to retrieve. If the operation is successful, it returns properties for the requested stream group.

Request Syntax

```
GET /streamgroups/Identifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Arn": "string",
```

```
   "AssociatedApplications": [ "string" ],
   "CreatedAt": number,
   "DefaultApplication": {
      "Arn": "string",
      "Id": "string"
   },
   "Description": "string",
   "ExpiresAt": number,
   "Id": "string",
   "LastUpdatedAt": number,
   "LocationStates": [
      {
         "AllocatedCapacity": number,
         "AlwaysOnCapacity": number,
         "IdleCapacity": number,
         "InternalVpcIpv4CidrBlock": "string",
         "LocationName": "string",
         "MaximumCapacity": number,
         "OnDemandCapacity": number,
         "RequestedCapacity": number,
         "Status": "string",
         "TargetIdleCapacity": number,
         "VpcTransitConfiguration": {
            "Ipv4CidrBlocks": [ "string" ],
            "TransitGatewayId": "string",
            "TransitGatewayResourceShareArn": "string",
            "VpcId": "string"
         }
      }
   ],
   "Status": "string",
   "StatusReason": "string",
   "StreamClass": "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.

Arn

The Amazon Resource Name (ARN) that is assigned to the stream group resource and that uniquely identifies the group across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:streamgroup/[resource ID]`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

AssociatedApplications

A set of applications that this stream group is associated to. You can stream any of these applications by using this stream group.

This value is a set of Amazon Resource Names (ARNs) that uniquely identify application resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: Array of strings

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

DefaultApplication

The default Amazon GameLift Streams application that is associated with this stream group.

Type: DefaultApplication object

Description

A descriptive label for the stream group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

ExpiresAt

The time at which this stream group expires. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC). After this time, you will no longer be able to update this stream group or use it to start stream sessions. Only Get and Delete operations will work on an expired stream group.

Type: Timestamp

Id

A unique ID value that is assigned to the resource when it's created. Format example: `sg-1AB2C3De4`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

LocationStates

This value is the set of locations, including their name, current status, and capacities.

A location can be in one of the following states:

- `ACTIVATING`: Amazon GameLift Streams is preparing the location. You cannot stream from, scale the capacity of, or remove this location yet.
- `ACTIVE`: The location is provisioned with initial capacity. You can now stream from, scale the capacity of, or remove this location.
- `ERROR`: Amazon GameLift Streams failed to set up this location. The `StatusReason` field describes the error. You can remove this location and try to add it again.
- `REMOVING`: Amazon GameLift Streams is working to remove this location. This will release all provisioned capacity for this location in this stream group.

Type: Array of LocationState objects

Status

The current status of the stream group resource. Possible statuses include the following:

- ACTIVATING: The stream group is deploying and isn't ready to host streams.
- ACTIVE: The stream group is ready to host streams.
- ACTIVE_WITH_ERRORS: One or more locations in the stream group are in an error state. Verify the details of individual locations and remove any locations which are in error.
- DELETING: Amazon GameLift Streams is in the process of deleting the stream group.
- ERROR: An error occurred when the stream group deployed. See StatusReason (returned by CreateStreamGroup, GetStreamGroup, and UpdateStreamGroup) for more information.
- EXPIRED: The stream group is expired and can no longer host streams. This typically occurs when a stream group is 365 days old, as indicated by the value of ExpiresAt. Create a new stream group to resume streaming capabilities.
- UPDATING_LOCATIONS: One or more locations in the stream group are in the process of updating (either activating or deleting).

Type: String

Valid Values: ACTIVATING | UPDATING_LOCATIONS | ACTIVE | ACTIVE_WITH_ERRORS | ERROR | DELETING | EXPIRED

StatusReason

A short description of the reason that the stream group is in ERROR status. The possible reasons can be one of the following:

- internalError: The request can't process right now because of an issue with the server. Try again later.
- noAvailableInstances: Amazon GameLift Streams does not currently have enough available capacity to fulfill your request. Wait a few minutes and retry the request as capacity can shift frequently. You can also try to make the request using a different stream class or in another region.

Type: String

Valid Values: internalError | noAvailableInstances

StreamClass

The target stream quality for the stream group.

A stream class can be one of the following:

- **`gen6n_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra_win2022` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM

  - Tenancy: Supports 1 concurrent stream session
- **gen6n_high (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **gen6n_medium (NVIDIA, medium)** Supports applications with moderate 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 6 GB VRAM
  - Tenancy: Supports up to 4 concurrent stream sessions
- **gen6n_small (NVIDIA, small)** Supports applications with lightweight 3D scene complexity and low CPU usage. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 1 vCPUs, 4 GB RAM, 2 GB VRAM
  - Tenancy: Supports up to 12 concurrent stream sessions
- **gen6n_medium_win2022 (NVIDIA, medium)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 6 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **gen6n_small_win2022 (NVIDIA, small)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 3 GB VRAM

  - Tenancy: Supports 1 concurrent stream session

- **`gen6e_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6e_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen5n_ultra` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p

- Reference frame rate: 60 fps
- Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
- Tenancy: Supports 1 concurrent stream session

- **`gen4n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen4n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 8 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen4n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session

Type: String

Valid Values: `gen4n_high | gen4n_ultra | gen4n_win2022 | gen5n_high | gen5n_ultra | gen5n_win2022 | gen6n_small | gen6n_medium | gen6n_high | gen6n_ultra | gen6n_ultra_win2022 | gen6n_pro | gen6n_pro_win2022 | gen6n_small_win2022 | gen6n_medium_win2022 | gen6e_pro | gen6e_pro_win2022`

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to retrieve metadata for a stream group by specifying the stream group's ARN value.

Sample Request

```
aws gameliftstreams get-stream-group \
  --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetStreamSession

Retrieves properties for a Amazon GameLift Streams stream session resource. Specify the Amazon Resource Name (ARN) of the stream session that you want to retrieve and its stream group ARN. If the operation is successful, it returns properties for the requested resource.

Request Syntax

```
GET /streamgroups/Identifier/streamsessions/StreamSessionIdentifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

The stream group that runs this stream session.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

StreamSessionIdentifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the stream session resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamsession/sg-1AB2C3De4/ABC123def4567`. Example ID: `ABC123def4567`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AdditionalEnvironmentVariables": {
      "string" : "string"
   },
   "AdditionalLaunchArgs": [ "string" ],
   "ApplicationArn": "string",
   "Arn": "string",
   "ConnectionTimeoutSeconds": number,
   "CreatedAt": number,
   "Description": "string",
   "ExportFilesMetadata": {
      "OutputUri": "string",
      "Status": "string",
      "StatusReason": "string"
   },
   "LastUpdatedAt": number,
   "Location": "string",
   "LogFileLocationUri": "string",
   "PerformanceStatsConfiguration": {
      "SharedWithClient": boolean
   },
   "Protocol": "string",
   "SessionLengthSeconds": number,
   "SignalRequest": "string",
   "SignalResponse": "string",
   "Status": "string",
   "StatusReason": "string",
   "StreamGroupId": "string",
   "UserId": "string",
   "WebSdkProtocolUrl": "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.

AdditionalEnvironmentVariables

A set of options that you can use to control the stream session runtime environment, expressed as a set of key-value pairs. You can use this to configure the application or stream session details. You can also provide custom environment variables that Amazon GameLift Streams passes to your game client.

> **Note**
>
> If you want to debug your application with environment variables, we recommend that you do so in a local environment outside of Amazon GameLift Streams. For more information, refer to the Compatibility Guidance in the troubleshooting section of the Developer Guide.

`AdditionalEnvironmentVariables` and `AdditionalLaunchArgs` have similar purposes. `AdditionalEnvironmentVariables` passes data using environment variables; while `AdditionalLaunchArgs` passes data using command-line arguments.

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 256.

Key Pattern: `[_a-zA-Z][_a-zA-Z0-9]*`

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

AdditionalLaunchArgs

A list of CLI arguments that are sent to the streaming server when a stream session launches. You can use this to configure the application or stream session details. You can also provide custom arguments that Amazon GameLift Streams passes to your game client.

`AdditionalEnvironmentVariables` and `AdditionalLaunchArgs` have similar purposes. `AdditionalEnvironmentVariables` passes data using environment variables; while `AdditionalLaunchArgs` passes data using command-line arguments.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

ApplicationArn

The application streaming in this session.

This value is an Amazon Resource Name (ARN) that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Arn

The Amazon Resource Name (ARN) that's assigned to a stream session resource. When combined with the stream group resource ID, this value uniquely identifies the stream session across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:streamsession/[stream group resource ID]/[stream session resource ID]`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

ConnectionTimeoutSeconds

The length of time that Amazon GameLift Streams should wait for a client to connect or reconnect to the stream session. This time span starts when the stream session reaches `ACTIVE` or `PENDING_CLIENT_RECONNECTION` state. If no client connects (or reconnects) before the timeout, Amazon GameLift Streams terminates the stream session.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 3600.

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Description

A human-readable label for the stream session. You can update this value at any time.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

ExportFilesMetadata

Provides details about the stream session's exported files.

Type: ExportFilesMetadata object

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Location

The location where Amazon GameLift Streams hosts and streams your application. For example, `us-east-1`. For a complete list of locations that Amazon GameLift Streams supports, refer to Regions, quotas, and limitations in the *Amazon GameLift Streams Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20.

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

LogFileLocationUri

Access location for log files that your content generates during a stream session. These log files are uploaded to cloud storage location at the end of a stream session. The Amazon GameLift Streams application resource defines which log files to upload.

Type: String

PerformanceStatsConfiguration

The performance stats configuration for the stream session

Type: PerformanceStatsConfiguration object

Protocol

The data transfer protocol in use with the stream session.

Type: String

Valid Values: `WebRTC`

SessionLengthSeconds

The maximum duration of a session. Amazon GameLift Streams will automatically terminate a session after this amount of time has elapsed, regardless of any existing client connections.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

SignalRequest

The WebRTC ICE offer string that a client generates to initiate a connection to the stream session.

Type: String

Length Constraints: Minimum length of 1.

SignalResponse

The WebRTC answer string that the stream server generates in response to the `SignalRequest`.

Type: String

Status

The current status of the stream session. A stream session is ready for a client to connect when in `ACTIVE` status.

- `ACTIVATING`: The stream session is starting and preparing to stream.
- `ACTIVE`: The stream session is ready and waiting for a client connection. A client has `ConnectionTimeoutSeconds` (specified in `StartStreamSession`) from when the session reaches `ACTIVE` state to establish a connection. If no client connects within this timeframe, the session automatically terminates.
- `CONNECTED`: The stream session has a connected client. A session will automatically terminate if there is no user input for 60 minutes, or if the maximum length of a session specified by `SessionLengthSeconds` in `StartStreamSession` is exceeded.
- `ERROR`: The stream session failed to activate. See `StatusReason` (returned by `GetStreamSession` and `StartStreamSession`) for more information.
- `PENDING_CLIENT_RECONNECTION`: A client has recently disconnected and the stream session is waiting for the client to reconnect. A client has `ConnectionTimeoutSeconds` (specified in `StartStreamSession`) from when the session reaches `PENDING_CLIENT_RECONNECTION` state to re-establish a connection. If no client connects within this timeframe, the session automatically terminates.
- `RECONNECTING`: A client has initiated a reconnect to a session that was in `PENDING_CLIENT_RECONNECTION` state.
- `TERMINATING`: The stream session is ending.
- `TERMINATED`: The stream session has ended.

Type: String

Valid Values: `ACTIVATING | ACTIVE | CONNECTED | PENDING_CLIENT_RECONNECTION | RECONNECTING | TERMINATING | TERMINATED | ERROR`

StatusReason

A short description of the reason the stream session is in `ERROR` status or `TERMINATED` status.

`ERROR` status reasons:

- `applicationLogS3DestinationError`: Could not write the application log to the Amazon S3 bucket that is configured for the streaming application. Make sure the bucket still exists.

- `internalError`: An internal service error occurred. Start a new stream session to continue streaming.
- `invalidSignalRequest`: The WebRTC signal request that was sent is not valid. When starting or reconnecting to a stream session, use `generateSignalRequest` in the Amazon GameLift Streams Web SDK to generate a new signal request.
- `placementTimeout`: Amazon GameLift Streams could not find available stream capacity to start a stream session. Increase the stream capacity in the stream group or wait until capacity becomes available.

`TERMINATED` status reasons:

- `apiTerminated`: The stream session was terminated by an API call to TerminateStreamSession.
- `applicationExit`: The streaming application exited or crashed. The stream session was terminated because the application is no longer running.
- `connectionTimeout`: The stream session was terminated because the client failed to connect within the connection timeout period specified by `ConnectionTimeoutSeconds`.
- `maxSessionLengthTimeout`: The stream session was terminated because it exceeded the maximum session length timeout period specified by `SessionLengthSeconds`.
- `reconnectionTimeout`: The stream session was terminated because the client failed to reconnect within the reconnection timeout period specified by `ConnectionTimeoutSeconds` after losing connection.

Type: String

Valid Values: `internalError | invalidSignalRequest | placementTimeout | applicationLogS3DestinationError | applicationExit | connectionTimeout | reconnectionTimeout | maxSessionLengthTimeout | idleTimeout | apiTerminated`

StreamGroupId

The unique identifier for the Amazon GameLift Streams stream group that is hosting the stream session. Format example: `sg-1AB2C3De4`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

UserId

An opaque, unique identifier for an end-user, defined by the developer.

Type: String

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

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

WebSdkProtocolUrl

The URL of an S3 bucket that stores Amazon GameLift Streams WebSDK files. The URL is used to establish connection with the client.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the CLI to retrieve metadata for a stream session.

Sample Request

```
aws gameliftstreams get-stream-session \
    --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/
sg-1AB2C3De4 \
    --stream-session-identifier arn:aws:gameliftstreams:us-
west-2:111122223333:streamsession/sg-1AB2C3De4/ABC123def4567
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListApplications

Retrieves a list of all Amazon GameLift Streams applications that are associated with the AWS account in use. This operation returns applications in all statuses, in no particular order. You can paginate the results as needed.

Request Syntax

```
GET /applications?MaxResults=MaxResults&NextToken=NextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

MaxResults

The number of results to return. Use this parameter with `NextToken` to return results in sequential pages. Default value is 25.

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

NextToken

The token that marks the start of the next set of results. Use this token when you retrieve results as sequential pages. To get the first page of results, omit a token value. To get the remaining pages, provide the token returned with the previous result set.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Items": [
      {
         "Arn": "string",
```

```
            "CreatedAt": number,
            "Description": "string",
            "Id": "string",
            "LastUpdatedAt": number,
            "RuntimeEnvironment": {
               "Type": "string",
               "Version": "string"
            },
            "Status": "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.

Items

A collection of Amazon GameLift Streams applications that are associated with the AWS account in use. Each item includes application metadata and status.

Type: Array of ApplicationSummary objects

NextToken

A token that marks the start of the next sequential page of results. If an operation doesn't return a token, you've reached the end of the list.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to get a list of Amazon GameLift Streams applications, with 10 results returned with each request.

Sample Request

```
aws gameliftstreams list-applications \
  --next-token
 eyJhd3NBY2NvdW50SWQiOnsicyI6IjMwMjc3NjAxNjM5OCJ9LCJidWlsZElkIjp7InMiOiJidWlsZC01NWYxZTZmMS1jY2
 \
  --max-results 10
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListStreamGroups

Retrieves a list of all Amazon GameLift Streams stream groups that are associated with the AWS account in use. This operation returns stream groups in all statuses, in no particular order. You can paginate the results as needed.

Request Syntax

```
GET /streamgroups?MaxResults=MaxResults&NextToken=NextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

MaxResults

The number of results to return. Use this parameter with `NextToken` to return results in sequential pages. Default value is 25.

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

NextToken

A token that marks the start of the next set of results. Use this token when you retrieve results as sequential pages. To get the first page of results, omit a token value. To get the remaining pages, provide the token returned with the previous result set.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Items": [
      {
```

```
         "Arn": "string",
         "CreatedAt": number,
         "DefaultApplication": {
            "Arn": "string",
            "Id": "string"
         },
         "Description": "string",
         "ExpiresAt": number,
         "Id": "string",
         "LastUpdatedAt": number,
         "Status": "string",
         "StreamClass": "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.

Items

A collection of Amazon GameLift Streams stream groups that are associated with the AWS account in use. Each item includes stream group metadata and status, but doesn't include capacity information.

Type: Array of StreamGroupSummary objects

NextToken

A token that marks the start of the next sequential page of results. If an operation doesn't return a token, you've reached the end of the list.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to retrieve a complete list of stream groups. Because the request doesn't include a `MaxResults` or a `NextToken`, the request returns the first 25 results in the list.

Sample Request

```
aws gameliftstreams list-stream-groups
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListStreamSessions

Retrieves a list of Amazon GameLift Streams stream sessions that a stream group is hosting.

To retrieve stream sessions, specify the stream group, and optionally filter by stream session status. You can paginate the results as needed.

This operation returns the requested stream sessions in no particular order.

Request Syntax

```
GET /streamgroups/Identifier/streamsessions?
ExportFilesStatus=ExportFilesStatus&MaxResults=MaxResults&NextToken=NextToken&Status=Status
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ExportFilesStatus

Filter by the exported files status. You can specify one status in each request to retrieve only sessions that currently have that exported files status.

Exported files can be in one of the following states:

- SUCCEEDED: The exported files are successfully stored in an S3 bucket.
- FAILED: The session ended but Amazon GameLift Streams couldn't collect and upload the files to S3.
- PENDING: Either the stream session is still in progress, or uploading the exported files to the S3 bucket is in progress.

Valid Values: SUCCEEDED | FAILED | PENDING

Identifier

The unique identifier of a Amazon GameLift Streams stream group to retrieve the stream session for. You can use either the stream group ID or the Amazon Resource Name (ARN).

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

MaxResults

The number of results to return. Use this parameter with `NextToken` to return results in sequential pages. Default value is 25.

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

NextToken

The token that marks the start of the next set of results. Use this token when you retrieve results as sequential pages. To get the first page of results, omit a token value. To get the remaining pages, provide the token returned with the previous result set.

Status

Filter by the stream session status. You can specify one status in each request to retrieve only sessions that are currently in that status.

Valid Values: `ACTIVATING | ACTIVE | CONNECTED | PENDING_CLIENT_RECONNECTION | RECONNECTING | TERMINATING | TERMINATED | ERROR`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Items": [
      {
         "ApplicationArn": "string",
         "Arn": "string",
         "CreatedAt": number,
         "ExportFilesMetadata": {
            "OutputUri": "string",
```

```
            "Status": "string",
            "StatusReason": "string"
         },
         "LastUpdatedAt": number,
         "Location": "string",
         "Protocol": "string",
         "Status": "string",
         "StatusReason": "string",
         "UserId": "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.

Items

A collection of Amazon GameLift Streams stream sessions that are associated with a stream group and returned in response to a list request. Each item includes stream session metadata and status.

Type: Array of StreamSessionSummary objects

NextToken

A token that marks the start of the next sequential page of results. If an operation doesn't return a token, you've reached the end of the list.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the CLI to retrieve a list of stream sessions for a specified stream group and filter to return stream sessions in ERROR status. The request doesn't include a `MaxResults` or a `NextToken`, so the request returns the first 25 results in the set.

Sample Request

```
aws gameliftstreams list-stream-sessions \
    --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/
sg-1AB2C3De4 \
    --status ERROR
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListStreamSessionsByAccount

Retrieves a list of Amazon GameLift Streams stream sessions that this user account has access to.

In the returned list of stream sessions, the `ExportFilesMetadata` property only shows the `Status` value. To get the `OutpurUri` and `StatusReason` values, use GetStreamSession.

We don't recommend using this operation to regularly check stream session statuses because it's costly. Instead, to check status updates for a specific stream session, use GetStreamSession.

Request Syntax

```
GET /streamsessions?
ExportFilesStatus=ExportFilesStatus&MaxResults=MaxResults&NextToken=NextToken&Status=Status
 HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ExportFilesStatus

Filter by the exported files status. You can specify one status in each request to retrieve only sessions that currently have that exported files status.

Valid Values: `SUCCEEDED | FAILED | PENDING`

MaxResults

The number of results to return. Use this parameter with `NextToken` to return results in sequential pages. Default value is 25.

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

NextToken

The token that marks the start of the next set of results. Use this token when you retrieve results as sequential pages. To get the first page of results, omit a token value. To get the remaining pages, provide the token returned with the previous result set.

Status

Filter by the stream session status. You can specify one status in each request to retrieve only sessions that are currently in that status.

Valid Values: `ACTIVATING | ACTIVE | CONNECTED | PENDING_CLIENT_RECONNECTION | RECONNECTING | TERMINATING | TERMINATED | ERROR`

Request Body

The request does not have a request body.

Response Syntax

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

{
   "Items": [
      {
         "ApplicationArn": "string",
         "Arn": "string",
         "CreatedAt": number,
         "ExportFilesMetadata": {
            "OutputUri": "string",
            "Status": "string",
            "StatusReason": "string"
         },
         "LastUpdatedAt": number,
         "Location": "string",
         "Protocol": "string",
         "Status": "string",
         "StatusReason": "string",
         "UserId": "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.

Items

A collection of Amazon GameLift Streams stream sessions that are associated with a stream group and returned in response to a list request. Each item includes stream session metadata and status.

Type: Array of StreamSessionSummary objects

NextToken

A token that marks the start of the next sequential page of results. If an operation doesn't return a token, you've reached the end of the list.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

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 V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListTagsForResource

Retrieves all tags assigned to a Amazon GameLift Streams resource. To list tags for a resource, specify the ARN value for the resource.

Learn more

Tagging AWS Resources in the *AWS General Reference*

AWS Tagging Strategies

Request Syntax

```
GET /tags/ResourceArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ResourceArn

The Amazon Resource Name (ARN) that you want to retrieve tags for. To get an Amazon GameLift Streams resource ARN, call a List or Get operation for the resource.

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

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

A collection of tags that have been assigned to the specified resource.

Type: String to string map

Map Entries: 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 Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

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 V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

RemoveStreamGroupLocations

Removes a set of remote locations from this stream group. To remove a location, the stream group must be in `ACTIVE` status. When you remove a location, Amazon GameLift Streams releases allocated compute resources in that location. Stream sessions can no longer start from removed locations in a stream group. Amazon GameLift Streams also deletes the content files of all associated applications that were in Amazon GameLift Streams's internal Amazon S3 bucket at this location.

You cannot remove the AWS Region location where you initially created this stream group, known as the primary location. However, you can set the stream capacity to zero to avoid incurring costs for allocated compute resources in that location.

Request Syntax

```
DELETE /streamgroups/Identifier/locations?locations=Locations HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

A stream group to remove the specified locations from.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Locations

A set of locations to remove this stream group. For example, `us-east-1`.

For a complete list of locations that Amazon GameLift Streams supports, refer to Regions, quotas, and limitations in the *Amazon GameLift Streams Developer Guide*.

Array Members: Minimum number of 1 item. Maximum number of 100 items.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to remove multiple locations from the stream group.

Sample Request

```
aws gameliftstreams remove-stream-group-locations \
    --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/
sg-1AB2C3De4 \
    --locations us-east-1 ap-northeast-1
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

StartStreamSession

This action initiates a new stream session and outputs connection information that clients can use to access the stream. A stream session refers to an instance of a stream that Amazon GameLift Streams transmits from the server to the end-user. A stream session runs on a compute resource that a stream group has allocated. The start stream session process works as follows:

1. Prerequisites:
   - You must have a stream group in `ACTIVE` status
   - You must have idle or on-demand capacity in a stream group in the location you want to stream from
   - You must have at least one application associated to the stream group (use AssociateApplications if needed)
2. Start stream request:
   - Your backend server calls **StartStreamSession** to initiate connection
   - Amazon GameLift Streams creates the stream session resource, assigns an Amazon Resource Name (ARN) value, and begins searching for available stream capacity to run the stream
   - Session transitions to `ACTIVATING` status
3. Placement completion:
   - If Amazon GameLift Streams is successful in finding capacity for the stream, the stream session status changes to `ACTIVE` status and **StartStreamSession** returns stream connection information
   - If Amazon GameLift Streams was not successful in finding capacity within the placement timeout period (defined according to the capacity type and platform type), the stream session status changes to `ERROR` status and **StartStreamSession** returns a `StatusReason` of `placementTimeout`
4. Connection completion:
   - Provide the new connection information to the requesting client
   - Client must establish connection within `ConnectionTimeoutSeconds` (specified in **StartStreamSession** parameters)
   - Session terminates automatically if client fails to connect in time

For more information about the stream session lifecycle, see Stream sessions in the *Amazon GameLift Streams Developer Guide*.

Timeouts to be aware of that affect a stream session:

- **Placement timeout**: The amount of time that Amazon GameLift Streams has to find capacity for a stream request. Placement timeout varies based on the capacity type used to fulfill your stream request:
  - **Always-on capacity**: 75 seconds
  - **On-demand capacity**:
    - Linux/Proton runtimes: 90 seconds
    - Windows runtime: 10 minutes
- **Connection timeout**: The amount of time that Amazon GameLift Streams waits for a client to connect to a stream session in `ACTIVE` status, or reconnect to a stream session in `PENDING_CLIENT_RECONNECTION` status, the latter of which occurs when a client disconnects or loses connection from a stream session. If no client connects before the timeout, Amazon GameLift Streams terminates the stream session. This value is specified by `ConnectionTimeoutSeconds` in the `StartStreamSession` parameters.
- **Maximum session length**: A stream session will be terminated after this amount of time has elapsed since it started, regardless of any existing client connections. This value is specified by `SessionLengthSeconds` in the `StartStreamSession` parameters.

To start a new stream session, specify a stream group ID and application ID, along with the transport protocol and signal request to use with the stream session.

For stream groups that have multiple locations, provide a set of locations ordered by priority using a `Locations` parameter. Amazon GameLift Streams will start a single stream session in the next available location. An application must be finished replicating to a remote location before the remote location can host a stream.

To reconnect to a stream session after a client disconnects or loses connection, use CreateStreamSessionConnection.

Request Syntax

```
POST /streamgroups/Identifier/streamsessions HTTP/1.1
Content-type: application/json

{
   "AdditionalEnvironmentVariables": {
```

```
      "string" : "string"
   },
   "AdditionalLaunchArgs": [ "string" ],
   "ApplicationIdentifier": "string",
   "ClientToken": "string",
   "ConnectionTimeoutSeconds": number,
   "Description": "string",
   "Locations": [ "string" ],
   "PerformanceStatsConfiguration": {
      "SharedWithClient": boolean
   },
   "Protocol": "string",
   "SessionLengthSeconds": number,
   "SignalRequest": "string",
   "UserId": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

The stream group to run this stream session with.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

ApplicationIdentifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`. Example ID: `a-9ZY8X7Wv6`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Protocol

The data transport protocol to use for the stream session.

Type: String

Valid Values: `WebRTC`

Required: Yes

SignalRequest

A WebRTC ICE offer string to use when initializing a WebRTC connection. Typically, the offer is a very long JSON string. Provide the string as a text value in quotes.

Amazon GameLift Streams also supports setting the field to "NO_CLIENT_CONNECTION". This will create a session without needing any browser request or Web SDK integration. The session starts up as usual and waits for a reconnection from a browser, which is accomplished using CreateStreamSessionConnection.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

AdditionalEnvironmentVariables

A set of options that you can use to control the stream session runtime environment, expressed as a set of key-value pairs. You can use this to configure the application or stream session

details. You can also provide custom environment variables that Amazon GameLift Streams passes to your game client.

> **Note**
>
> If you want to debug your application with environment variables, we recommend that you do so in a local environment outside of Amazon GameLift Streams. For more information, refer to the Compatibility Guidance in the troubleshooting section of the Developer Guide.

`AdditionalEnvironmentVariables` and `AdditionalLaunchArgs` have similar purposes. `AdditionalEnvironmentVariables` passes data using environment variables; while `AdditionalLaunchArgs` passes data using command-line arguments.

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 256.

Key Pattern: `[_a-zA-Z][_a-zA-Z0-9]*`

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

Required: No

AdditionalLaunchArgs

A list of CLI arguments that are sent to the streaming server when a stream session launches. You can use this to configure the application or stream session details. You can also provide custom arguments that Amazon GameLift Streams passes to your game client.

`AdditionalEnvironmentVariables` and `AdditionalLaunchArgs` have similar purposes. `AdditionalEnvironmentVariables` passes data using environment variables; while `AdditionalLaunchArgs` passes data using command-line arguments.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

Required: No

ClientToken

A unique identifier that represents a client request. The request is idempotent, which ensures that an API request completes only once. When users send a request, Amazon GameLift Streams automatically populates this field.

Type: String

Length Constraints: Minimum length of 32. Maximum length of 128.

Pattern: `[\x21-\x7E]+`

Required: No

ConnectionTimeoutSeconds

Length of time (in seconds) that Amazon GameLift Streams should wait for a client to connect or reconnect to the stream session. Applies to both connection and reconnection scenarios. This time span starts when the stream session reaches `ACTIVE` state. If no client connects before the timeout, Amazon GameLift Streams terminates the stream session. Default value is 120.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 3600.

Required: No

Description

A human-readable label for the stream session. You can update this value later.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

Required: No

Locations

A list of locations, in order of priority, where you want Amazon GameLift Streams to start a stream from. For example, `us-east-1`. Amazon GameLift Streams selects the location with

the next available capacity to start a single stream session in. If this value is empty, Amazon GameLift Streams attempts to start a stream session in the primary location.

For a complete list of locations that Amazon GameLift Streams supports, refer to Regions, quotas, and limitations in the *Amazon GameLift Streams Developer Guide*.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 20.

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

Required: No

PerformanceStatsConfiguration

Configuration settings for sharing the stream session's performance stats with the client

Type: PerformanceStatsConfiguration object

Required: No

SessionLengthSeconds

The maximum duration of a session. Amazon GameLift Streams will automatically terminate a session after this amount of time has elapsed, regardless of any existing client connections. Default value is 43200 (12 hours).

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

Required: No

UserId

An opaque, unique identifier for an end-user, defined by the developer.

Type: String

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

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

Required: No

Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "AdditionalEnvironmentVariables": {
      "string" : "string"
   },
   "AdditionalLaunchArgs": [ "string" ],
   "ApplicationArn": "string",
   "Arn": "string",
   "ConnectionTimeoutSeconds": number,
   "CreatedAt": number,
   "Description": "string",
   "ExportFilesMetadata": {
      "OutputUri": "string",
      "Status": "string",
      "StatusReason": "string"
   },
   "LastUpdatedAt": number,
   "Location": "string",
   "LogFileLocationUri": "string",
   "PerformanceStatsConfiguration": {
      "SharedWithClient": boolean
   },
   "Protocol": "string",
   "SessionLengthSeconds": number,
   "SignalRequest": "string",
   "SignalResponse": "string",
   "Status": "string",
   "StatusReason": "string",
   "StreamGroupId": "string",
   "UserId": "string",
   "WebSdkProtocolUrl": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

AdditionalEnvironmentVariables

A set of options that you can use to control the stream session runtime environment, expressed as a set of key-value pairs. You can use this to configure the application or stream session details. You can also provide custom environment variables that Amazon GameLift Streams passes to your game client.

> **Note**
>
> If you want to debug your application with environment variables, we recommend that you do so in a local environment outside of Amazon GameLift Streams. For more information, refer to the Compatibility Guidance in the troubleshooting section of the Developer Guide.

`AdditionalEnvironmentVariables` and `AdditionalLaunchArgs` have similar purposes. `AdditionalEnvironmentVariables` passes data using environment variables; while `AdditionalLaunchArgs` passes data using command-line arguments.

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 256.

Key Pattern: `[_a-zA-Z][_a-zA-Z0-9]*`

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

AdditionalLaunchArgs

A list of CLI arguments that are sent to the streaming server when a stream session launches. You can use this to configure the application or stream session details. You can also provide custom arguments that Amazon GameLift Streams passes to your game client.

`AdditionalEnvironmentVariables` and `AdditionalLaunchArgs` have similar purposes. `AdditionalEnvironmentVariables` passes data using environment variables; while `AdditionalLaunchArgs` passes data using command-line arguments.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

ApplicationArn

The application streaming in this session.

This value is an Amazon Resource Name (ARN) that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Arn

The Amazon Resource Name (ARN) that's assigned to a stream session resource. When combined with the stream group resource ID, this value uniquely identifies the stream session across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:streamsession/[stream group resource ID]/[stream session resource ID]`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

ConnectionTimeoutSeconds

The length of time that Amazon GameLift Streams should wait for a client to connect or reconnect to the stream session. This time span starts when the stream session reaches `ACTIVE` or `PENDING_CLIENT_RECONNECTION` state. If no client connects (or reconnects) before the timeout, Amazon GameLift Streams terminates the stream session.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 3600.

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Description

A human-readable label for the stream session. You can update this value at any time.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

ExportFilesMetadata

Provides details about the stream session's exported files.

Type: ExportFilesMetadata object

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Location

The location where Amazon GameLift Streams hosts and streams your application. For example, `us-east-1`. For a complete list of locations that Amazon GameLift Streams supports, refer to Regions, quotas, and limitations in the *Amazon GameLift Streams Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20.

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

LogFileLocationUri

Access location for log files that your content generates during a stream session. These log files are uploaded to cloud storage location at the end of a stream session. The Amazon GameLift Streams application resource defines which log files to upload.

Type: String

PerformanceStatsConfiguration

The performance stats configuration for the stream session

Type: PerformanceStatsConfiguration object

Protocol

The data transfer protocol in use with the stream session.

Type: String

Valid Values: `WebRTC`

SessionLengthSeconds

The maximum duration of a session. Amazon GameLift Streams will automatically terminate a session after this amount of time has elapsed, regardless of any existing client connections.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 86400.

SignalRequest

The WebRTC ICE offer string that a client generates to initiate a connection to the stream session.

Type: String

Length Constraints: Minimum length of 1.

SignalResponse

The WebRTC answer string that the stream server generates in response to the `SignalRequest`.

Type: String

Status

The current status of the stream session. A stream session is ready for a client to connect when in `ACTIVE` status.

- `ACTIVATING`: The stream session is starting and preparing to stream.
- `ACTIVE`: The stream session is ready and waiting for a client connection. A client has `ConnectionTimeoutSeconds` (specified in `StartStreamSession`) from when the session

reaches ACTIVE state to establish a connection. If no client connects within this timeframe, the session automatically terminates.

- CONNECTED: The stream session has a connected client. A session will automatically terminate if there is no user input for 60 minutes, or if the maximum length of a session specified by SessionLengthSeconds in StartStreamSession is exceeded.
- ERROR: The stream session failed to activate. See StatusReason (returned by GetStreamSession and StartStreamSession) for more information.
- PENDING_CLIENT_RECONNECTION: A client has recently disconnected and the stream session is waiting for the client to reconnect. A client has ConnectionTimeoutSeconds (specified in StartStreamSession) from when the session reaches PENDING_CLIENT_RECONNECTION state to re-establish a connection. If no client connects within this timeframe, the session automatically terminates.
- RECONNECTING: A client has initiated a reconnect to a session that was in PENDING_CLIENT_RECONNECTION state.
- TERMINATING: The stream session is ending.
- TERMINATED: The stream session has ended.

Type: String

Valid Values: ACTIVATING | ACTIVE | CONNECTED | PENDING_CLIENT_RECONNECTION | RECONNECTING | TERMINATING | TERMINATED | ERROR

StatusReason

A short description of the reason the stream session is in ERROR status or TERMINATED status.

ERROR status reasons:

- applicationLogS3DestinationError: Could not write the application log to the Amazon S3 bucket that is configured for the streaming application. Make sure the bucket still exists.
- internalError: An internal service error occurred. Start a new stream session to continue streaming.
- invalidSignalRequest: The WebRTC signal request that was sent is not valid. When starting or reconnecting to a stream session, use generateSignalRequest in the Amazon GameLift Streams Web SDK to generate a new signal request.
- placementTimeout: Amazon GameLift Streams could not find available stream capacity to start a stream session. Increase the stream capacity in the stream group or wait until capacity becomes available.

TERMINATED status reasons:

- apiTerminated: The stream session was terminated by an API call to TerminateStreamSession.
- applicationExit: The streaming application exited or crashed. The stream session was terminated because the application is no longer running.
- connectionTimeout: The stream session was terminated because the client failed to connect within the connection timeout period specified by ConnectionTimeoutSeconds.
- maxSessionLengthTimeout: The stream session was terminated because it exceeded the maximum session length timeout period specified by SessionLengthSeconds.
- reconnectionTimeout: The stream session was terminated because the client failed to reconnect within the reconnection timeout period specified by ConnectionTimeoutSeconds after losing connection.

Type: String

Valid Values: internalError | invalidSignalRequest | placementTimeout | applicationLogS3DestinationError | applicationExit | connectionTimeout | reconnectionTimeout | maxSessionLengthTimeout | idleTimeout | apiTerminated

StreamGroupId

The unique identifier for the Amazon GameLift Streams stream group that is hosting the stream session. Format example: sg-1AB2C3De4.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

UserId

An opaque, unique identifier for an end-user, defined by the developer.

Type: String

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

Pattern: [-_a-zA-Z0-9/=+]*

WebSdkProtocolUrl

The URL of an S3 bucket that stores Amazon GameLift Streams WebSDK files. The URL is used to establish connection with the client.

Type: String

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

ConflictException

The requested operation would cause a conflict with the current state of a service resource associated with the request. Resolve the conflict before retrying this request.

Message

Description of the error.

HTTP Status Code: 409

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the CLI to start a Amazon GameLift Streams stream session. The request uses an ARN value to identify a stream group for the new session.

Sample Request

```
aws gameliftstreams start-stream-session \
  --description MyGame-stream \
  --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4
 \
  --application-identifier arn:aws:gameliftstreams:us-west-2:111122223333:application/
a-9ZY8X7Wv6 \
  --protocol WebRTC \
```

```
--signal-request "[webrtc-ice-offer json string]" \
--connection-timeout-seconds 300 \
--session-length-seconds 7200 \
--additional-launch-args '["-dx11","-fullscreen"]' \
--additional-environment-variables '{"USERNAME": "BestPlayerEver",
    "LANG": "ja_JP.UTF-8",
    "AUTHTOKEN": "abcdef01234567899876543210fedcba"
  }'
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

TagResource

Assigns one or more tags to a Amazon GameLift Streams resource. Use tags to organize AWS resources for a range of purposes. You can assign tags to the following Amazon GameLift Streams resource types:

- Application
- StreamGroup

Learn more

Tagging AWS Resources in the *AWS General Reference*

AWS Tagging Strategies

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 Amazon Resource Name (ARN) of the Amazon GameLift Streams resource that you want to apply tags to.

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Tags

A list of tags, in the form of key-value pairs, to assign to the specified Amazon GameLift Streams resource.

Type: String to string map

Map Entries: 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 Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

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 V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

TerminateStreamSession

Permanently terminates an active stream session. When called, the stream session status changes to `TERMINATING`. You can terminate a stream session in any status except `ACTIVATING`. If the stream session is in `ACTIVATING` status, an exception is thrown.

Request Syntax

```
DELETE /streamgroups/Identifier/streamsessions/StreamSessionIdentifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

The stream group that runs this stream session.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

StreamSessionIdentifier

Amazon Resource Name (ARN) or ID that uniquely identifies the stream session resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamsession/sg-1AB2C3De4/ABC123def4567`. Example ID: `ABC123def4567`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

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 V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UntagResource

Removes one or more tags from a Amazon GameLift Streams resource. To remove tags, specify the Amazon GameLift Streams resource and a list of one or more tags to remove.

Request Syntax

```
DELETE /tags/ResourceArn?tagKeys=TagKeys HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ResourceArn

The Amazon Resource Name (ARN) of the Amazon GameLift Streams resource that you want to remove tags from.

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Required: Yes

TagKeys

A list of tag keys to remove from the specified Amazon GameLift Streams resource.

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 Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

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 V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateApplication

Updates the mutable configuration settings for a Amazon GameLift Streams application resource. You can change the `Description`, `ApplicationLogOutputUri`, and `ApplicationLogPaths`.

To update application settings, specify the application ID and provide the new values. If the operation is successful, it returns the complete updated set of settings for the application.

Request Syntax

```
PATCH /applications/Identifier HTTP/1.1
Content-type: application/json

{
   "ApplicationLogOutputUri": "string",
   "ApplicationLogPaths": [ "string" ],
   "Description": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`. Example ID: `a-9ZY8X7Wv6`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

ApplicationLogOutputUri

An Amazon S3 URI to a bucket where you would like Amazon GameLift Streams to save application logs. Required if you specify one or more `ApplicationLogPaths`.

> **Note**
>
> The log bucket must have permissions that give Amazon GameLift Streams access to write the log files. For more information, see Application log bucket permission policy in the *Amazon GameLift Streams Developer Guide*.

Type: String

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

Pattern: `$|^s3://([a-zA-Z0-9][a-zA-Z0-9._-]{1,61}[a-zA-Z0-9])(/[a-zA-Z0-9._-]+)*/?`

Required: No

ApplicationLogPaths

Locations of log files that your content generates during a stream session. Enter path values that are relative to the `ApplicationSourceUri` location, or relative to the user's home directory when using a supported path variable. You can specify up to 10 log paths. Each individual log file cannot exceed 50 MB in size.

Each path can be a directory or an exact file path. When you specify a directory, Amazon GameLift Streams collects only files with the following extensions: `.txt`, `.log`, and `.utrace`. To collect files with other extensions, specify the exact file path. The copy operation is not performed recursively in subfolders.

The following path variables are recognized when they appear as the first component of a path: `%USERPROFILE%` (Windows and Proton), `$HOME` or ~ (Linux). Use a path variable when your application writes logs outside of the application directory.

Amazon GameLift Streams uploads designated log files to the Amazon S3 bucket that you specify in `ApplicationLogOutputUri` at the end of a stream session. To retrieve stored log files, call GetStreamSession and get the `LogFileLocationUri`.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

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

Required: No

Description

A human-readable label for the application.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

Required: No

Response Syntax

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

{
   "ApplicationLogOutputUri": "string",
   "ApplicationLogPaths": [ "string" ],
   "ApplicationSourceUri": "string",
   "Arn": "string",
   "AssociatedStreamGroups": [ "string" ],
   "CreatedAt": number,
   "Description": "string",
   "ExecutablePath": "string",
   "Id": "string",
   "LastUpdatedAt": number,
   "ReplicationStatuses": [
      {
         "Location": "string",
         "Status": "string"
      }
   ],
   "RuntimeEnvironment": {
```

```
      "Type": "string",
      "Version": "string"
   },
   "Status": "string",
   "StatusReason": "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.

Arn

The Amazon Resource Name (ARN) that's assigned to an application resource and uniquely identifies it across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:application/[resource ID]`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

ApplicationLogOutputUri

An Amazon S3 URI to a bucket where you would like Amazon GameLift Streams to save application logs. Required if you specify one or more `ApplicationLogPaths`.

Type: String

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

Pattern: `$|^s3://([a-zA-Z0-9][a-zA-Z0-9._-]{1,61}[a-zA-Z0-9])(/[a-zA-Z0-9._-]+)*/?`

ApplicationLogPaths

Locations of log files that your content generates during a stream session. Amazon GameLift Streams uploads log files to the Amazon S3 bucket that you specify in

`ApplicationLogOutputUri` at the end of a stream session. To retrieve stored log files, call GetStreamSession and get the `LogFileLocationUri`.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 10 items.

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

ApplicationSourceUri

The original Amazon S3 location of uploaded stream content for the application.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

AssociatedStreamGroups

A set of stream groups that this application is associated with. You can use any of these stream groups to stream your application.

This value is a set of Amazon Resource Names (ARNs) that uniquely identify stream group resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`.

Type: Array of strings

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Description

A human-readable label for the application. You can edit this value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

ExecutablePath

The relative path and file name of the executable file that launches the content for streaming.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Id

A unique ID value that is assigned to the resource when it's created. Format example: `a-9ZY8X7Wv6`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

ReplicationStatuses

A set of replication statuses for each location.

Type: Array of ReplicationStatus objects

RuntimeEnvironment

Configuration settings that identify the operating system for an application resource. This can also include a compatibility layer and other drivers.

A runtime environment can be one of the following:

- For Linux applications
  - Ubuntu 22.04 LTS (`Type=UBUNTU, Version=22_04_LTS`)
- For Windows applications
  - Microsoft Windows Server 2022 Base (`Type=WINDOWS, Version=2022`)

- Proton 10.0-4 (`Type=PROTON, Version=20260204`)
- Proton 9.0-2 (`Type=PROTON, Version=20250516`)
- Proton 8.0-5 (`Type=PROTON, Version=20241007`)
- Proton 8.0-2c (`Type=PROTON, Version=20230704`)

Type: RuntimeEnvironment object

Status

The current status of the application resource. Possible statuses include the following:

- `INITIALIZED`: Amazon GameLift Streams has received the request and is initiating the work flow to create an application.
- `PROCESSING`: The create application work flow is in process. Amazon GameLift Streams is copying the content and caching for future deployment in a stream group.
- `READY`: The application is ready to deploy in a stream group.
- `ERROR`: An error occurred when setting up the application. See `StatusReason` for more information.
- `DELETING`: Amazon GameLift Streams is in the process of deleting the application.

Type: String

Valid Values: `INITIALIZED | PROCESSING | READY | DELETING | ERROR`

StatusReason

A short description of the status reason when the application is in `ERROR` status.

Type: String

Valid Values: `internalError | accessDenied | sourceModified`

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to use the AWS CLI to update the mutable metadata for a Amazon GameLift Streams application. This example uses the application ID value.

Sample Request

```
aws gameliftstreams update-application \
  --identifier arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6 \
  --description "MyGame_jp v1"
```

See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateStreamGroup

Updates the configuration settings for an Amazon GameLift Streams stream group resource. To update a stream group, it must be in `ACTIVE` status. You can change the description, the set of locations, and the requested capacity of a stream group per location. If you want to change the stream class, create a new stream group.

Stream capacity represents the number of concurrent streams that can be active at a time. You set stream capacity per location, per stream group. The following capacity settings are available:

- **Always-on capacity**: This setting, if non-zero, indicates minimum streaming capacity which is allocated to you and is never released back to the service. You pay for this base level of capacity at all times, whether used or idle.
- **Maximum capacity**: This indicates the maximum capacity that the service can allocate for you. Newly created streams may take a few minutes to start. Capacity is released back to the service when idle. You pay for capacity that is allocated to you until it is released.
- **Target-idle capacity**: This indicates idle capacity which the service pre-allocates and holds for you in anticipation of future activity. This helps to insulate your users from capacity-allocation delays. You pay for capacity which is held in this intentional idle state.

Values for capacity must be whole number multiples of the tenancy value of the stream group's stream class.

To update a stream group, specify the stream group's Amazon Resource Name (ARN) and provide the new values. If the request is successful, Amazon GameLift Streams returns the complete updated metadata for the stream group. Expired stream groups cannot be updated.

Request Syntax

```
PATCH /streamgroups/Identifier HTTP/1.1
Content-type: application/json

{
   "DefaultApplicationIdentifier": "string",
   "Description": "string",
   "LocationConfigurations": [
      {
         "AlwaysOnCapacity": number,
         "LocationName": "string",
```

```
         "MaximumCapacity": number,
         "OnDemandCapacity": number,
         "TargetIdleCapacity": number,
         "VpcTransitConfiguration": {
            "Ipv4CidrBlocks": [ "string" ],
            "VpcId": "string"
         }
      }
   ]
}
```

URI Request Parameters

The request uses the following URI parameters.

Identifier

An Amazon Resource Name (ARN) or ID that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`. Example ID: `sg-1AB2C3De4`.

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

Request Body

The request accepts the following data in JSON format.

DefaultApplicationIdentifier

The unique identifier of the Amazon GameLift Streams application that you want to set as the default application in a stream group. The application that you specify must be in READY status. The default application is pre-cached on always-on compute resources, reducing stream startup times. Other applications are automatically cached as needed.

Note that this parameter only sets the default application in a stream group. To associate a new application to an existing stream group, you must use AssociateApplications.

When you switch default applications in a stream group, it can take up to a few hours for the new default application to be pre-cached.

This value is an Amazon Resource Name (ARN) or ID that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`. Example ID: `a-9ZY8X7Wv6`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: No

Description

A descriptive label for the stream group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

Required: No

LocationConfigurations

A set of one or more locations and the streaming capacity for each location.

Type: Array of LocationConfiguration objects

Array Members: Minimum number of 1 item. Maximum number of 100 items.

Required: No

Response Syntax

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

```
{
   "Arn": "string",
   "AssociatedApplications": [ "string" ],
   "CreatedAt": number,
   "DefaultApplication": {
      "Arn": "string",
      "Id": "string"
   },
   "Description": "string",
   "ExpiresAt": number,
   "Id": "string",
   "LastUpdatedAt": number,
   "LocationStates": [
      {
         "AllocatedCapacity": number,
         "AlwaysOnCapacity": number,
         "IdleCapacity": number,
         "InternalVpcIpv4CidrBlock": "string",
         "LocationName": "string",
         "MaximumCapacity": number,
         "OnDemandCapacity": number,
         "RequestedCapacity": number,
         "Status": "string",
         "TargetIdleCapacity": number,
         "VpcTransitConfiguration": {
            "Ipv4CidrBlocks": [ "string" ],
            "TransitGatewayId": "string",
            "TransitGatewayResourceShareArn": "string",
            "VpcId": "string"
         }
      }
   ],
   "Status": "string",
   "StatusReason": "string",
   "StreamClass": "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.

Arn

The Amazon Resource Name (ARN) that is assigned to the stream group resource and that uniquely identifies the group across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:streamgroup/[resource ID]`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

AssociatedApplications

A set of applications that this stream group is associated with. You can stream any of these applications with the stream group.

This value is a set of Amazon Resource Names (ARNs) that uniquely identify application resources. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: Array of strings

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

DefaultApplication

The default Amazon GameLift Streams application that is associated with this stream group.

Type: DefaultApplication object

Description

A descriptive label for the stream group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

ExpiresAt

The time at which this stream group expires. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC). After this time, you will no longer be able to update this stream group or use it to start stream sessions. Only Get and Delete operations will work on an expired stream group.

Type: Timestamp

Id

A unique ID value that is assigned to the resource when it's created. Format example: `sg-1AB2C3De4`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

LocationStates

This value is set of locations, including their name, current status, and capacities.

A location can be in one of the following states:

- `ACTIVATING`: Amazon GameLift Streams is preparing the location. You cannot stream from, scale the capacity of, or remove this location yet.
- `ACTIVE`: The location is provisioned with initial capacity. You can now stream from, scale the capacity of, or remove this location.
- `ERROR`: Amazon GameLift Streams failed to set up this location. The `StatusReason` field describes the error. You can remove this location and try to add it again.
- `REMOVING`: Amazon GameLift Streams is working to remove this location. This will release all provisioned capacity for this location in this stream group.

Type: Array of LocationState objects

Status

The current status of the stream group resource. Possible statuses include the following:

- ACTIVATING: The stream group is deploying and isn't ready to host streams.
- ACTIVE: The stream group is ready to host streams.
- ACTIVE_WITH_ERRORS: One or more locations in the stream group are in an error state. Verify the details of individual locations and remove any locations which are in error.
- DELETING: Amazon GameLift Streams is in the process of deleting the stream group.
- ERROR: An error occurred when the stream group deployed. See StatusReason (returned by CreateStreamGroup, GetStreamGroup, and UpdateStreamGroup) for more information.
- EXPIRED: The stream group is expired and can no longer host streams. This typically occurs when a stream group is 365 days old, as indicated by the value of ExpiresAt. Create a new stream group to resume streaming capabilities.
- UPDATING_LOCATIONS: One or more locations in the stream group are in the process of updating (either activating or deleting).

Type: String

Valid Values: ACTIVATING | UPDATING_LOCATIONS | ACTIVE | ACTIVE_WITH_ERRORS | ERROR | DELETING | EXPIRED

StatusReason

A short description of the reason that the stream group is in ERROR status. The possible reasons can be one of the following:

- internalError: The request can't process right now because of an issue with the server. Try again later.
- noAvailableInstances: Amazon GameLift Streams does not currently have enough available capacity to fulfill your request. Wait a few minutes and retry the request as capacity can shift frequently. You can also try to make the request using a different stream class or in another region.

Type: String

Valid Values: internalError | noAvailableInstances

StreamClass

The target stream quality for the stream group.

A stream class can be one of the following:

- **`gen6n_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra_win2022` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM

  - Tenancy: Supports 1 concurrent stream session
- **gen6n_high (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **gen6n_medium (NVIDIA, medium)** Supports applications with moderate 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 6 GB VRAM
  - Tenancy: Supports up to 4 concurrent stream sessions
- **gen6n_small (NVIDIA, small)** Supports applications with lightweight 3D scene complexity and low CPU usage. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 1 vCPUs, 4 GB RAM, 2 GB VRAM
  - Tenancy: Supports up to 12 concurrent stream sessions
- **gen6n_medium_win2022 (NVIDIA, medium)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 6 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **gen6n_small_win2022 (NVIDIA, small)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 3 GB VRAM

  - Tenancy: Supports 1 concurrent stream session

- **`gen6e_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6e_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen5n_ultra` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p

- Reference frame rate: 60 fps
- Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
- Tenancy: Supports 1 concurrent stream session

- **`gen4n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen4n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 8 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen4n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session

Type: String

Valid Values: `gen4n_high | gen4n_ultra | gen4n_win2022 | gen5n_high | gen5n_ultra | gen5n_win2022 | gen6n_small | gen6n_medium | gen6n_high | gen6n_ultra | gen6n_ultra_win2022 | gen6n_pro | gen6n_pro_win2022 | gen6n_small_win2022 | gen6n_medium_win2022 | gen6e_pro | gen6e_pro_win2022`

Errors

For information about the errors that are common to all actions, see Common Error Types.

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

Message

Description of the error.

HTTP Status Code: 403

ConflictException

The requested operation would cause a conflict with the current state of a service resource associated with the request. Resolve the conflict before retrying this request.

Message

Description of the error.

HTTP Status Code: 409

InternalServerException

The service encountered an internal error and is unable to complete the request.

Message

Description of the error.

HTTP Status Code: 500

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

Message

Description of the error.

HTTP Status Code: 404

ServiceQuotaExceededException

The request would cause the resource to exceed an allowed service quota. Resolve the issue before you try again.

Message

Description of the error.

HTTP Status Code: 402

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

Message

Description of the error.

HTTP Status Code: 429

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

Message

Description of the error.

HTTP Status Code: 400

Examples

CLI Example

The following example shows how to update stream capacity in the primary location. In response, Amazon GameLift Streams attempts to provision additional resources until the stream group's allocated, always-on capacity reaches the new requested capacity of 4.

Sample Request

```
aws gameliftstreams update-stream-group \
```

```
  --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4
 \
  --location-configurations '[{"LocationName": "us-west-2", "AlwaysOnCapacity": 4}]'
```

CLI Example

The following example shows how to update both always-on capacity and maximum capacity with target-idle capacity. In response, Amazon GameLift Streams attempts to provision resources to maintain a baseline of 4 capacity. With a target-idle capacity of 2, the service keeps 2 capacity available and ready beyond what's actively streaming, up to the maximum capacity of 10. If stream requests exceed the rate at which the service can replenish the buffer, or if you don't specify a target-idle capacity, new sessions may take several minutes to start while the service provisions additional capacity as needed.

Sample Request

```
aws gameliftstreams update-stream-group \
  --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4
 \
  --location-configurations '[{"LocationName": "us-west-2", "AlwaysOnCapacity": 4,
 "MaximumCapacity": 10, "TargetIdleCapacity": 2}]'
```

CLI Example

The following example shows how to update stream capacity in two locations.

Sample Request

```
aws gameliftstreams update-stream-group \
    --identifier arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/
sg-1AB2C3De4 \
    --location-configurations '[{"LocationName": "us-west-2", "AlwaysOnCapacity": 4}, \
      {"LocationName": "ap-northeast-1", "AlwaysOnCapacity": 4}]'
```

See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

Data Types

The Amazon GameLift Streams 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:

- ApplicationSummary
- DefaultApplication
- ExportFilesMetadata
- LocationConfiguration
- LocationState
- PerformanceStatsConfiguration
- ReplicationStatus
- RuntimeEnvironment
- StreamGroupSummary
- StreamSessionSummary
- VpcTransitConfiguration
- VpcTransitConfigurationResponse

ApplicationSummary

Describes an application resource that represents a collection of content for streaming with Amazon GameLift Streams. To retrieve additional application details, call GetApplication.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Arn

An Amazon Resource Name (ARN) that's assigned to an application resource and uniquely identifies the application across all AWS Regions. Format is `arn:aws:gameliftstreams:[AWS Region]:[AWS account]:application/[resource ID]`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Required: No

Description

A human-readable label for the application. You can edit this value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

Required: No

Id

An ID that uniquely identifies the application resource. Example ID: `a-9ZY8X7Wv6`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

Required: No

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Required: No

RuntimeEnvironment

Configuration settings that identify the operating system for an application resource. This can also include a compatibility layer and other drivers.

A runtime environment can be one of the following:

- For Linux applications
  - Ubuntu 22.04 LTS (`Type=UBUNTU, Version=22_04_LTS`)
- For Windows applications
  - Microsoft Windows Server 2022 Base (`Type=WINDOWS, Version=2022`)
  - Proton 10.0-4 (`Type=PROTON, Version=20260204`)
  - Proton 9.0-2 (`Type=PROTON, Version=20250516`)
  - Proton 8.0-5 (`Type=PROTON, Version=20241007`)
  - Proton 8.0-2c (`Type=PROTON, Version=20230704`)

Type: RuntimeEnvironment object

Required: No

Status

The current status of the application resource. Possible statuses include the following:

- `INITIALIZED`: Amazon GameLift Streams has received the request and is initiating the work flow to create an application.
- `PROCESSING`: The create application work flow is in process. Amazon GameLift Streams is copying the content and caching for future deployment in a stream group.
- `READY`: The application is ready to deploy in a stream group.
- `ERROR`: An error occurred when setting up the application. For more information about the error, call `GetApplication` and refer to `StatusReason`.
- `DELETING`: Amazon GameLift Streams is in the process of deleting the application.

Type: String

Valid Values: `INITIALIZED | PROCESSING | READY | DELETING | ERROR`

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

DefaultApplication

Represents the default Amazon GameLift Streams application that a stream group hosts.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Arn

An Amazon Resource Name (ARN) that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Required: No

Id

An ID that uniquely identifies the application resource. Example ID: `a-9ZY8X7Wv6`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

ExportFilesMetadata

Provides details about the stream session's exported files.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

OutputUri

The S3 bucket URI where Amazon GameLift Streams uploaded the set of compressed exported files for a stream session. Amazon GameLift Streams generates a ZIP file name based on the stream session metadata. Alternatively, you can provide a custom file name with a `.zip` file extension.

Example 1: If you provide an S3 URI called `s3://amzn-s3-demo-destination-bucket/MyGame_Session1.zip`, then Amazon GameLift Streams will save the files at that location.

Example 2: If you provide an S3 URI called `s3://amzn-s3-demo-destination-bucket/MyGameSessions_ExportedFiles/`, then Amazon GameLift Streams will save the files at `s3://amzn-s3-demo-destination-bucket/MyGameSessions_ExportedFiles/YYYYMMDD-HHMMSS-appId-sg-Id-sessionId.zip` or another similar name.

Type: String

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

Pattern: `s3://.*(/|\.zip|\.ZIP)`

Required: No

Status

The result of the ExportStreamSessionFiles operation.

Type: String

Valid Values: `SUCCEEDED | FAILED | PENDING`

Required: No

StatusReason

A short description of the reason the export is in `FAILED` status.

Type: String

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

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

LocationConfiguration

Configuration settings that define a stream group's stream capacity for a location. When configuring a location for the first time, you must specify a numeric value for at least one of the two capacity types. To update the capacity for an existing stream group, call UpdateStreamGroup. To add a new location and specify its capacity, call AddStreamGroupLocations.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

LocationName

A location's name. For example, `us-east-1`. For a complete list of locations that Amazon GameLift Streams supports, refer to Regions, quotas, and limitations in the *Amazon GameLift Streams Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20.

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

Required: Yes

AlwaysOnCapacity

This setting, if non-zero, indicates minimum streaming capacity which is allocated to you and is never released back to the service. You pay for this base level of capacity at all times, whether used or idle.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

MaximumCapacity

This indicates the maximum capacity that the service can allocate for you. Newly created streams may take a few minutes to start. Capacity is released back to the service when idle. You pay for capacity that is allocated to you until it is released.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

OnDemandCapacity

This field is deprecated. Use `MaximumCapacity` instead. This parameter cannot be used with `MaximumCapacity` or `TargetIdleCapacity` in the same location configuration.

The streaming capacity that Amazon GameLift Streams can allocate in response to stream requests, and then de-allocate when the session has terminated. This offers a cost control measure at the expense of a greater startup time (typically under 5 minutes). Default is 0 when creating a stream group or adding a location.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

TargetIdleCapacity

This indicates idle capacity which the service pre-allocates and holds for you in anticipation of future activity. This helps to insulate your users from capacity-allocation delays. You pay for capacity which is held in this intentional idle state.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

VpcTransitConfiguration

Configuration for connecting the stream group to resources in your Amazon VPC using AWS Transit Gateway. This setting is optional. If specified, Amazon GameLift Streams creates a

Transit Gateway to enable private network connectivity between the service VPC and your VPC. The VPC ID cannot be changed after the stream group is created, but you can update the CIDR blocks by calling UpdateStreamGroup.

Type: VpcTransitConfiguration 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

LocationState

Represents a location and its corresponding stream capacity and status.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AllocatedCapacity

This value is the stream capacity that Amazon GameLift Streams has provisioned in a stream group that can respond immediately to stream requests. It includes resources that are currently streaming and resources that are idle and ready to respond to stream requests. When target-idle capacity is configured, the idle resources include the capacity buffer maintained beyond ongoing sessions. You pay for this capacity whether it's in use or not. After making changes to capacity, it can take a few minutes for the allocated capacity count to reflect the change while compute resources are allocated or deallocated. Similarly, when allocated on-demand capacity is no longer needed, it can take a few minutes for Amazon GameLift Streams to spin down the allocated capacity.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

AlwaysOnCapacity

This setting, if non-zero, indicates minimum streaming capacity which is allocated to you and is never released back to the service. You pay for this base level of capacity at all times, whether used or idle.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

IdleCapacity

This value is the amount of allocated capacity that is not currently streaming. It represents the stream group's ability to respond immediately to new stream requests with near-instant startup time.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

InternalVpcIpv4CidrBlock

The CIDR block of the service VPC for this location. Add this CIDR block to your VPC route table to enable traffic routing through the Transit Gateway.

Type: String

Pattern: `(([0-9]|[1-9][0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.){3}([0-9]|[1-9][0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])/([0-9]|[1-2][0-9]|3[0-2])`

Required: No

LocationName

A location's name. For example, `us-east-1`. For a complete list of locations that Amazon GameLift Streams supports, refer to Regions, quotas, and limitations in the *Amazon GameLift Streams Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20.

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

Required: No

MaximumCapacity

This indicates the maximum capacity that the service can allocate for you. Newly created streams may take a few minutes to start. Capacity is released back to the service when idle. You pay for capacity that is allocated to you until it is released.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

OnDemandCapacity

The streaming capacity that Amazon GameLift Streams can allocate in response to stream requests, and then de-allocate when the session has terminated. This offers a cost control measure at the expense of a greater startup time (typically under 5 minutes). Default is 0 when creating a stream group or adding a location.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

RequestedCapacity

This value is the always-on capacity that you most recently requested for a stream group. You request capacity separately for each location in a stream group. In response to an increase in requested capacity, Amazon GameLift Streams attempts to provision compute resources to make the stream group's allocated capacity meet requested capacity. When always-on capacity is decreased, it can take a few minutes to deprovision allocated capacity to match the requested capacity.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

Status

This value is set of locations, including their name, current status, and capacities.

A location can be in one of the following states:

- `ACTIVATING`: Amazon GameLift Streams is preparing the location. You cannot stream from, scale the capacity of, or remove this location yet.
- `ACTIVE`: The location is provisioned with initial capacity. You can now stream from, scale the capacity of, or remove this location.

- ERROR: Amazon GameLift Streams failed to set up this location. The `StatusReason` field describes the error. You can remove this location and try to add it again.
- `REMOVING`: Amazon GameLift Streams is working to remove this location. This will release all provisioned capacity for this location in this stream group.

Type: String

Valid Values: `ACTIVATING | ACTIVE | ERROR | REMOVING`

Required: No

TargetIdleCapacity

This indicates idle capacity which the service pre-allocates and holds for you in anticipation of future activity. This helps to insulate your users from capacity-allocation delays. You pay for capacity which is held in this intentional idle state.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

VpcTransitConfiguration

The VPC transit configuration for this location, including the Transit Gateway details needed to complete the VPC attachment setup.

Type: VpcTransitConfigurationResponse 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

PerformanceStatsConfiguration

Configuration settings for sharing the stream session's performance stats with the client

Contents

> **Note**
>
> In the following list, the required parameters are described first.

SharedWithClient

Performance stats for the session are streamed to the client when set to `true`. Defaults to `false`.

Type: Boolean

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

ReplicationStatus

Represents the status of the replication of an application to a location. An application cannot be streamed from a location until it has finished replicating there.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Location

A location's name. For example, `us-east-1`. For a complete list of locations that Amazon GameLift Streams supports, refer to Regions, quotas, and limitations in the *Amazon GameLift Streams Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20.

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

Required: No

Status

The current status of the replication process.

Type: String

Valid Values: `REPLICATING | COMPLETED`

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

RuntimeEnvironment

Configuration settings that identify the operating system for an application resource. This can also include a compatibility layer and other drivers.

A runtime environment can be one of the following:

- For Linux applications
  - Ubuntu 22.04 LTS (`Type=UBUNTU, Version=22_04_LTS`)
- For Windows applications
  - Microsoft Windows Server 2022 Base (`Type=WINDOWS, Version=2022`)
  - Proton 10.0-4 (`Type=PROTON, Version=20260204`)
  - Proton 9.0-2 (`Type=PROTON, Version=20250516`)
  - Proton 8.0-5 (`Type=PROTON, Version=20241007`)
  - Proton 8.0-2c (`Type=PROTON, Version=20230704`)

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Type

The operating system and other drivers. For Proton, this also includes the Proton compatibility layer.

Type: String

Valid Values: `PROTON | WINDOWS | UBUNTU`

Required: Yes

Version

Versioned container environment for the application operating system.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

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

StreamGroupSummary

Describes a Amazon GameLift Streams stream group resource for hosting content streams. To retrieve additional stream group details, call GetStreamGroup.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Arn

An Amazon Resource Name (ARN) that uniquely identifies the stream group resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamgroup/sg-1AB2C3De4`.

Type: String

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

Pattern: `(^[a-zA-Z0-9-]+$)|(^arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)$)`

Required: Yes

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Required: No

DefaultApplication

Object that identifies the Amazon GameLift Streams application to stream with this stream group.

Type: DefaultApplication object

Required: No

Description

A descriptive label for the stream group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

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

Required: No

ExpiresAt

The time at which this stream group expires. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC). After this time, you will no longer be able to update this stream group or use it to start stream sessions. Only Get and Delete operations will work on an expired stream group.

Type: Timestamp

Required: No

Id

An ID that uniquely identifies the stream group resource. Example ID: `sg-1AB2C3De4`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

Required: No

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Required: No

Status

The current status of the stream group resource. Possible statuses include the following:

- `ACTIVATING`: The stream group is deploying and isn't ready to host streams.
- `ACTIVE`: The stream group is ready to host streams.
- `ACTIVE_WITH_ERRORS`: One or more locations in the stream group are in an error state. Verify the details of individual locations and remove any locations which are in error.
- `DELETING`: Amazon GameLift Streams is in the process of deleting the stream group.
- `ERROR`: An error occurred when the stream group deployed. See `StatusReason` (returned by `CreateStreamGroup`, `GetStreamGroup`, and `UpdateStreamGroup`) for more information.
- `EXPIRED`: The stream group is expired and can no longer host streams. This typically occurs when a stream group is 365 days old, as indicated by the value of `ExpiresAt`. Create a new stream group to resume streaming capabilities.
- `UPDATING_LOCATIONS`: One or more locations in the stream group are in the process of updating (either activating or deleting).

Type: String

Valid Values: `ACTIVATING | UPDATING_LOCATIONS | ACTIVE | ACTIVE_WITH_ERRORS | ERROR | DELETING | EXPIRED`

Required: No

StreamClass

The target stream quality for the stream group.

A stream class can be one of the following:

- **`gen6n_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session

- **`gen6n_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 64 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra_win2022` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen6n_medium` (NVIDIA, medium)** Supports applications with moderate 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 6 GB VRAM
  - Tenancy: Supports up to 4 concurrent stream sessions

- **`gen6n_small` (NVIDIA, small)** Supports applications with lightweight 3D scene complexity and low CPU usage. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 1 vCPUs, 4 GB RAM, 2 GB VRAM
  - Tenancy: Supports up to 12 concurrent stream sessions
- **`gen6n_medium_win2022` (NVIDIA, medium)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 6 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6n_small_win2022` (NVIDIA, small)** Supports applications with low 3D scene complexity. Powered by NVIDIA L4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 2 vCPUs, 8 GB RAM, 3 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6e_pro_win2022` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen6e_pro` (NVIDIA, pro)** Supports applications with extremely high 3D scene complexity which require maximum resources. Powered by NVIDIA L40S Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 16 vCPUs, 128 GB RAM, 48 GB VRAM

  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen5n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 4 vCPUs, 16 GB RAM, 12 GB VRAM
  - Tenancy: Supports up to 2 concurrent stream sessions
- **`gen5n_ultra` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Powered by NVIDIA A10G Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 24 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen4n_win2022` (NVIDIA, ultra)** Supports applications with extremely high 3D scene complexity. Runs applications on Microsoft Windows Server 2022 Base and supports DirectX 12. Compatible with Unreal Engine versions up through 5.6, 32 and 64-bit applications, and anti-cheat technology. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session
- **`gen4n_high` (NVIDIA, high)** Supports applications with moderate to high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p

- Reference frame rate: 60 fps
- Workload specifications: 4 vCPUs, 16 GB RAM, 8 GB VRAM
- Tenancy: Supports up to 2 concurrent stream sessions

- **`gen4n_ultra` (NVIDIA, ultra)** Supports applications with high 3D scene complexity. Powered by NVIDIA T4 Tensor Core GPUs.
  - Reference resolution: 1080p
  - Reference frame rate: 60 fps
  - Workload specifications: 8 vCPUs, 32 GB RAM, 16 GB VRAM
  - Tenancy: Supports 1 concurrent stream session

Type: String

Valid Values: `gen4n_high | gen4n_ultra | gen4n_win2022 | gen5n_high | gen5n_ultra | gen5n_win2022 | gen6n_small | gen6n_medium | gen6n_high | gen6n_ultra | gen6n_ultra_win2022 | gen6n_pro | gen6n_pro_win2022 | gen6n_small_win2022 | gen6n_medium_win2022 | gen6e_pro | gen6e_pro_win2022`

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

StreamSessionSummary

Describes an Amazon GameLift Streams stream session. To retrieve additional details for the stream session, call GetStreamSession.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ApplicationArn

An Amazon Resource Name (ARN) that uniquely identifies the application resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:application/a-9ZY8X7Wv6`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Required: No

Arn

An Amazon Resource Name (ARN) that uniquely identifies the stream session resource. Example ARN: `arn:aws:gameliftstreams:us-west-2:111122223333:streamsession/sg-1AB2C3De4/ABC123def4567`.

Type: String

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

Pattern: `arn:aws:gameliftstreams:([^: ]*):([0-9]{12}):([^: ]*)`

Required: No

CreatedAt

A timestamp that indicates when this resource was created. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Required: No

ExportFilesMetadata

Provides details about the stream session's exported files.

Type: ExportFilesMetadata object

Required: No

LastUpdatedAt

A timestamp that indicates when this resource was last updated. Timestamps are expressed using in ISO8601 format, such as: `2022-12-27T22:29:40+00:00` (UTC).

Type: Timestamp

Required: No

Location

The location where Amazon GameLift Streams hosts and streams your application. For example, `us-east-1`. For a complete list of locations that Amazon GameLift Streams supports, refer to Regions, quotas, and limitations in the *Amazon GameLift Streams Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20.

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

Required: No

Protocol

The data transfer protocol in use with the stream session.

Type: String

Valid Values: `WebRTC`

Required: No

Status

The current status of the stream session resource.

- ACTIVATING: The stream session is starting and preparing to stream.
- ACTIVE: The stream session is ready and waiting for a client connection. A client has ConnectionTimeoutSeconds (specified in StartStreamSession) from when the session reaches ACTIVE state to establish a connection. If no client connects within this timeframe, the session automatically terminates.
- CONNECTED: The stream session has a connected client. A session will automatically terminate if there is no user input for 60 minutes, or if the maximum length of a session specified by SessionLengthSeconds in StartStreamSession is exceeded.
- ERROR: The stream session failed to activate. See StatusReason (returned by GetStreamSession and StartStreamSession) for more information.
- PENDING_CLIENT_RECONNECTION: A client has recently disconnected and the stream session is waiting for the client to reconnect. A client has ConnectionTimeoutSeconds (specified in StartStreamSession) from when the session reaches PENDING_CLIENT_RECONNECTION state to re-establish a connection. If no client connects within this timeframe, the session automatically terminates.
- RECONNECTING: A client has initiated a reconnect to a session that was in PENDING_CLIENT_RECONNECTION state.
- TERMINATING: The stream session is ending.
- TERMINATED: The stream session has ended.

Type: String

Valid Values: ACTIVATING | ACTIVE | CONNECTED | PENDING_CLIENT_RECONNECTION | RECONNECTING | TERMINATING | TERMINATED | ERROR

Required: No

StatusReason

A short description of the reason the stream session is in ERROR status or TERMINATED status.

ERROR status reasons:

- applicationLogS3DestinationError: Could not write the application log to the Amazon S3 bucket that is configured for the streaming application. Make sure the bucket still exists.

- `internalError`: An internal service error occurred. Start a new stream session to continue streaming.
- `invalidSignalRequest`: The WebRTC signal request that was sent is not valid. When starting or reconnecting to a stream session, use `generateSignalRequest` in the Amazon GameLift Streams Web SDK to generate a new signal request.
- `placementTimeout`: Amazon GameLift Streams could not find available stream capacity to start a stream session. Increase the stream capacity in the stream group or wait until capacity becomes available.

`TERMINATED` status reasons:

- `apiTerminated`: The stream session was terminated by an API call to TerminateStreamSession.
- `applicationExit`: The streaming application exited or crashed. The stream session was terminated because the application is no longer running.
- `connectionTimeout`: The stream session was terminated because the client failed to connect within the connection timeout period specified by `ConnectionTimeoutSeconds`.
- `maxSessionLengthTimeout`: The stream session was terminated because it exceeded the maximum session length timeout period specified by `SessionLengthSeconds`.
- `reconnectionTimeout`: The stream session was terminated because the client failed to reconnect within the reconnection timeout period specified by `ConnectionTimeoutSeconds` after losing connection.

Type: String

Valid Values: `internalError | invalidSignalRequest | placementTimeout | applicationLogS3DestinationError | applicationExit | connectionTimeout | reconnectionTimeout | maxSessionLengthTimeout | idleTimeout | apiTerminated`

Required: No

UserId

An opaque, unique identifier for an end-user, defined by the developer.

Type: String

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

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

VpcTransitConfiguration

Configuration for connecting a stream group location to resources in your Amazon VPC using AWS Transit Gateway. When you specify a VPC transit configuration, Amazon GameLift Streams creates a Transit Gateway and shares it with your account using AWS Resource Access Manager. After the stream group is active, you must complete the setup by accepting the resource share, creating a VPC attachment, and configuring routing.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Ipv4CidrBlocks

A list of IPv4 CIDR blocks in your VPC that you want the stream group to be able to access. You can specify up to 5 CIDR blocks. The CIDR blocks must be valid subsets of the VPC's CIDR blocks and cannot overlap with the service VPC CIDR block.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Pattern: `(([0-9]|[1-9][0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.){3}([0-9]|[1-9][0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])/([0-9]|[1-2][0-9]|3[0-2])`

Required: Yes

VpcId

The ID of the Amazon VPC that you want to connect to the stream group. The VPC must be in the same AWS account as the stream group. This value cannot be changed after the stream group is created.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

VpcTransitConfigurationResponse

The VPC transit configuration details for a stream group location, including the Transit Gateway information needed to complete the VPC attachment setup.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Ipv4CidrBlocks

The IPv4 CIDR blocks in your VPC that the stream group can access.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Pattern: `(([0-9]|[1-9][0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])\.){3}([0-9]|[1-9][0-9]|1[0-9]{2}|2[0-4][0-9]|25[0-5])/([0-9]|[1-2][0-9]|3[0-2])`

Required: No

TransitGatewayId

The ID of the Transit Gateway that Amazon GameLift Streams created for this VPC connection. Use this ID when creating your VPC attachment.

Type: String

Required: No

TransitGatewayResourceShareArn

The ARN of the AWS Resource Access Manager resource share for the Transit Gateway. You must accept this resource share before you can create a VPC attachment.

Type: String

Required: No

VpcId

The ID of the Amazon VPC that is connected to the stream group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

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

Service-specific Errors

The Amazon GameLift Streams API contains service-specific exceptions that various actions return. This section describes each exception in detail.

The following service-specific exceptions are returned:

- AccessDeniedException
- ConflictException
- InternalServerException
- ResourceNotFoundException
- ServiceQuotaExceededException
- StreamSessionAccessNotReadyException
- ThrottlingException
- ValidationException

AccessDeniedException

You don't have the required permissions to access this Amazon GameLift Streams resource. Correct the permissions before you try again.

HTTP Status Code returned: 403

Contents

Message

Description of the error.

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 Ruby V3

ConflictException

The requested operation would cause a conflict with the current state of a service resource associated with the request. Resolve the conflict before retrying this request.

HTTP Status Code returned: 409

Contents

Message

Description of the error.

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 Ruby V3

InternalServerException

The service encountered an internal error and is unable to complete the request.

HTTP Status Code returned: 500

Contents

Message

Description of the error.

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 Ruby V3

ResourceNotFoundException

The resource specified in the request was not found. Correct the request before you try again.

HTTP Status Code returned: 404

Contents

Message

Description of the error.

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 Ruby V3

ServiceQuotaExceededException

The request would cause the resource to exceed an allowed service quota. Resolve the issue before you try again.

HTTP Status Code returned: 402

Contents

Message

Description of the error.

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 Ruby V3

StreamSessionAccessNotReadyException

The terminal connection to the stream session is not yet available. Wait before retrying the request.

HTTP Status Code returned: 409

Contents

Message

Description of the error.

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 Ruby V3

ThrottlingException

The request was denied due to request throttling. Retry the request after the suggested wait time.

HTTP Status Code returned: 429

Contents

Message

Description of the error.

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 Ruby V3

ValidationException

One or more parameter values in the request fail to satisfy the specified constraints. Correct the invalid parameter values before retrying the request.

HTTP Status Code returned: 400

Contents

Message

Description of the error.

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 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*.

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 Error Types

This section lists common error types that this AWS service may return. Not all services return all error types listed here. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You don't have permission to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 403

ExpiredTokenException

The security token included in the request has expired. Request a new security token and try again.

HTTP Status Code: 403

IncompleteSignature

The request signature doesn't conform to AWS standards. Verify that you're using valid AWS credentials and that your request is properly formatted. If you're using an SDK, ensure it's up to date.

HTTP Status Code: 403

InternalFailure

The request can't be processed right now because of an internal server issue. Try again later. If the problem persists, contact AWS Support.

HTTP Status Code: 500

MalformedHttpRequestException

The request body can't be processed. This typically happens when the request body can't be decompressed using the specified content encoding algorithm. Verify that the content encoding header matches the compression format used.

HTTP Status Code: 400

NotAuthorized

You don't have permissions to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 401

OptInRequired

Your AWS account needs a subscription for this service. Verify that you've enabled the service in your account.

HTTP Status Code: 403

RequestAbortedException

The request was aborted before a response could be returned. This typically happens when the client closes the connection.

HTTP Status Code: 400

RequestEntityTooLargeException

The request entity is too large. Reduce the size of the request body and try again.

HTTP Status Code: 413

RequestTimeoutException

The request timed out. The server didn't receive the complete request within the expected time frame. Try again.

HTTP Status Code: 408

ServiceUnavailable

The service is temporarily unavailable. Try again later.

HTTP Status Code: 503

ThrottlingException

Your request rate is too high. The AWS SDKs automatically retry requests that receive this exception. Reduce the frequency of requests.

HTTP Status Code: 400

UnknownOperationException

The action or operation isn't recognized. Verify that the action name is spelled correctly and that it's supported by the API version you're using.

HTTP Status Code: 404

UnrecognizedClientException

The X.509 certificate or AWS access key ID you provided doesn't exist in our records. Verify that you're using valid credentials and that they haven't expired.

HTTP Status Code: 403

ValidationError

The input doesn't meet the required format or constraints. Check that all required parameters are included and that values are valid.

HTTP Status Code: 400