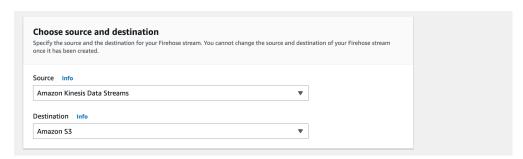# Deliver data

Setup Amazon Firehose Stream

In this section, you will create a new Amazon Data Firehose Stream that will be used to stream processed game data from a Kinesis Data Stream.

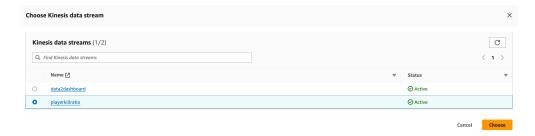1. Navigate to the Amazon Data Firehose Console ↗ and select **Create Firehose Stream**.
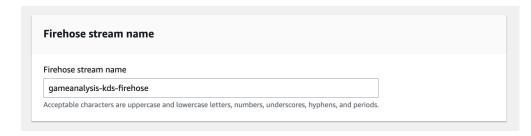

2. For Source, choose Amazon Kinesis Data Stream. Choose Amazon S3 as Destination.

3. Click on Browse button in Source settings and select **playerkillratio** as Kinesis data stream.

4. Change Firehose stream name as **gameanalysis-kds-firehose**.

5. Select S3 bucket starts with game-processed-data-*

Choose a bucket in Amazon S3   ✕

Buckets (95)   ↻

🔍 game-processed-data   ✕   1 match   ‹ 1 ›

Name ↗	▽	Region	▽
○ game-processed-data-cxde33		US East (N. Virginia)	

Cancel   Choose

6. Add S3 bucket prefix as per below and select **Create Firehose stream**

For S3 prefix, copy and paste the following:

```
year=!{timestamp:YYYY}/month=!{timestamp:MM}/day=!{timestamp:dd}/
```
📋

For S3 error prefix copy and paste the following:

```
!{firehose:error-output-type}/year=!{timestamp:YYYY}/month=!{timestamp:MM}/day=!{timest📋dd}
```

S3 bucket prefix - *optional*
By default, Amazon Data Firehose appends the prefix "YYYY/MM/dd/HH" (in UTC) to the data it delivers to Amazon S3. You can override this default by specifying a custom prefix that includes expressions that are evaluated at runtime.

```
year=!{timestamp:YYYY}/month=!{timestamp:MM}/day=!{timestamp:dd}/
```

You can repeat the same keys in your S3 bucket prefix. Maximum S3 bucket prefix characters: 1024.

S3 bucket error output prefix - *optional*
You can specify an S3 bucket error output prefix to be used in error conditions. This prefix can include expressions for Amazon Data Firehose to evaluate at runtime.

```
!{firehose:error-output-type}/year=!{timestamp:YYYY}/month=!
{timestamp:MM}/day=!{timestamp:dd}/
```

S3 bucket and S3 error output prefix time zone   Info
Choose a time zone that you want to use for date and time in S3 prefixes

```
UTC                                                                    ▼
```

7. Change Buffer interval to 30 second and select Compression for data records as GZIP.

▼ **Buffer hints, compression, file extension and encryption**
The fields below are pre-populated with the recommended default values for S3. Pricing may vary depending on storage and request costs.

S3 buffer hints
Amazon Data Firehose buffers incoming records before delivering them to your S3 bucket. Record delivery is triggered once the value of either of the specified buffering hints is reached.

Buffer size
The higher buffer size may be lower in cost with higher latency. The lower buffer size will be faster in delivery with higher cost and less latency.

5	MiB

Minimum: 1 MiB, maximum: 128 MiB. Recommended: 5 MiB.

Buffer interval
The higher interval allows more time to collect data and the size of data may be bigger. The lower interval sends the data more frequently and may be more advantageous when looking at shorter cycles of data activity.

30	seconds

Minimum: 0 seconds, maximum: 900 seconds. Recommended: 300 seconds.

Compression for data records
Amazon Data Firehose can compress records before delivering them to your S3 bucket.

○ Not enabled
◉ GZIP

○ Zip
○ Hadoop-Compatible Snappy

File extension format - *optional*
Enter the full extension format. If you want to add 'gzip file extension' for your 'json' files, enter '.json.gz'

Enter a file extension (for example, .json, .zip, .json.gz)

File extension must start with a period and may only contain allowed characters: 0-9a-z!-_.*(). File extension cannot exceed 128 characters.

8. Click on **Create Firehose stream**.

Encryption for data records
Record gets encrypted in the S3 bucket using an AWS Key Management Service (KMS) key.

◉ Use the encryption setting of the S3 bucket
   Default encryption for S3 bucket is server-side encryption with Amazon S3 managed keys (SSE-S3).
   See S3: Protecting data with server-side encryption [↗] for other encryption options.
○ Use SSE-KMS
   Server-side encryption with AWS Key Management Service (KMS) keys.

▶ **Advanced settings**
   Server-side encryption not enabled; error logging enabled; IAM role KinesisFirehoseServiceRole-gameanalysis--us-east-1-1719241585105; no tags.

Cancel   **Create Firehose stream** ⟵

Previous   Next