

Troubleshooting for AWS Batch & Nextflow

CannotPullImageManifestError: Error response from daemon: manifest unknown: manifest unknown

```
[ec2-user@ip-172-31-32-20 helloWorld]$ nextflow run tutorial.nf -bucket-dir s3:// /nextflow_tutorial_work/

NEXTFLOW ~ version 24.10.3

Launching `tutorial.nf` [mad_volhard] DSL2 - revision: e82728278a

executor > awsbatch (1)
[72/66dc9a] process > splitLetters [100%] 1 of 1, failed: 1 ✖
[- ] process > convertToUpper -
ERROR ~ Error executing process > 'splitLetters'

Caused by:
Task failed to start - CannotPullImageManifestError: Error response from daemon: manifest unknown: manifest unknown

Command executed:

printf 'Hello world!' | split -b 6 - chunk_

Command exit status:
-

Command output:
(empty)

Work dir:
s3:// /nextflow_tutorial_work/72/66dc9afd5eced8b691b64fbf0e295d

Container:
quay.io/biocontainers/salmon

Tip: when you have fixed the problem you can continue the execution adding the option `--resume` to the run command line
-- Check '.nextflow.log' file for details
```

Details

Status

🔴 Failed

Created at

Dec 26, 2024, 12:33:35 UTC+00:00

Status reason

Task failed to start

Started at

-

ARN

[arn:aws:batch:ap-northeast-2:985fb91-89ad-45e9-9aa1-75f73aea21e0](#):job/c985fb91-89ad-45e9-9aa1-75f73aea21e0

Stopped at

Dec 26, 2024, 12:37:56 UTC+00:00

Job ID

[c985fb91-89ad-45e9-9aa1-75f73aea21e0](#)

Log stream name

[nf-quay-io-biocontainers-salmon/default/7f01e52680b6482bb5efb855ff3d1a87](#)

Job attempts

Job configuration

Containers

Logging

Tags

JSON

Job attempts

Created at

Dec 26, 2024, 21:33:35

Started at

-

Stopped at

Dec 26, 2024, 21:37:56

Attempt #1

Status reason

Task failed to start

Started at

-

Stopped at

Dec 26, 2024, 21:37:56

Container Instance ARN

[arn:aws:ecs:ap-northeast-2:igib-a4723f19-7b71-35ba-8fb5-5ac4994eec97](#):container-instance/AWSBatch-IGIB-a4723f19-7b71-35ba-8fb5-5ac4994eec97/1bb2d81cb03f4382b8e0b5be4d0d5199

ECS task ARN

[arn:aws:ecs:ap-northeast-2:igib-a4723f19-7b71-35ba-8fb5-5ac4994eec97](#):task/AWSBatch-IGIB-a4723f19-7b71-35ba-8fb5-5ac4994eec97/7f01e52680b6482bb5efb855ff3d1a87

Exit code

-

Reason

CannotPullImageManifestError: Error response from daemon: manifest unknown: manifest unknown

Log stream name

[nf-quay-io-biocontainers-salmon/default/7f01e52680b6482bb5efb855ff3d1a87](#)

Network interfaces

Attachment ID	Ipv6 address	Private Ipv4 address
No resources		

Solution

Check your docker image.

```
[ec2-user@ip-172-31-32-20 ~]$ docker pull quay.io/biocontainers/salmon
Using default tag: latest
Error response from daemon: manifest for quay.io/biocontainers/salmon:latest not found: manifest unknown: manifest unknown
```

bash: aws: command not found

```
[ec2-user@ip-172-31-32-20 helloWorld]$ nextflow run tutorial.nf -bucket-dir s3://.../nextflow_tutorial_work/

NEXTFLOW ~ version 24.10.3

Launching `tutorial.nf` [voluminous_pasteur] DSL2 - revision: e82728278a

executor > awsbatch (1)
[e6/c0cc8c] process > splitLetters [100%] 1 of 1, failed: 1 ✖
[-] process > convertToUpper -
ERROR ~ Error executing process > 'splitLetters'

Caused by:
  Essential container in task exited

Command executed:

  printf 'Hello world!' | split -b 6 - chunk_

Command exit status:
  127

Command output:
  (empty)

Command error:
  bash: aws: command not found
  bash: line 1: aws: command not found

Work dir:
  s3://.../nextflow_tutorial_work/e6/c0cc8c8f8eda05f0e821e094353adb

Container:
  quay.io/nextflow/rnaseq-nf:v1.1

Tip: when you have fixed the problem you can continue the execution adding the option `--resume` to the run command line
-- Check '.nextflow.log' file for details
```

Solution

Check your container image has the aws cli program.

<https://www.nextflow.io/docs/latest/aws.html#custom-ami>

ERROR ~ Pipeline failed. Please refer to troubleshooting docs: <https://nf-co.re/docs/usage/troubleshooting>

```
Uploading local `bin` scripts folder to s3:// /nf-core_scrnaseq_workdir_2/tmp/b3/944d6c2946dc964109c3b6f42b5246/bin
-[nf-core/scrnaseq] Pipeline completed with errors-
executor > awsbatch (22)
[56/f664ed] process > NFCORE_SCRNASEQ:SCRNASEQ:FASTQC_CHECK:FASTQC (Sample_Y) [100%] 2 of 2 ✓
[23/3e00b7] process > NFCORE_SCRNASEQ:SCRNASEQ:CELLRANGER_ALIGN:CELLRANGER_COUNT (Sample_Y) [100%] 2 of 2 ✓
[3f/4b550e] process > NFCORE_SCRNASEQ:SCRNASEQ:MTX_TO_H5AD (Sample_Y) [100%] 4 of 4 ✓
[75/2c2dd9] process > NFCORE_SCRNASEQ:SCRNASEQ:H5AD_CONVERSION:CONCAT_H5AD (Sample_X) [ 75%] 3 of 4
[b1/f909b2] process > NFCORE_SCRNASEQ:SCRNASEQ:H5AD_CONVERSION:ANNDATAR_CONVERT (combined) [ 71%] 5 of 7
[f9/4df11a] process > NFCORE_SCRNASEQ:SCRNASEQ:EMPTY_DROPLET_REMOVAL:CELLBENDER_REMOVEBACKGROUND (Sample_Y) [ 0%] 0 of 2
[-] process > NFCORE_SCRNASEQ:SCRNASEQ:EMPTY_DROPLET_REMOVAL:ADATA_BARCODES -
[-] process > NFCORE_SCRNASEQ:SCRNASEQ:EMPTYDROPS_H5AD_CONVERSION:CONCAT_H5AD -
[-] process > NFCORE_SCRNASEQ:SCRNASEQ:EMPTYDROPS_H5AD_CONVERSION:ANNDATAR_CONVERT -
[6b/6e7032] process > NFCORE_SCRNASEQ:SCRNASEQ:MULTIQC [ 0%] 0 of 1
ERROR ~ Pipeline failed. Please refer to troubleshooting docs: https://nf-co.re/docs/usage/troubleshooting

-- Check '.nextflow.log' file for details
WARN: Killing running tasks (6)
WARN: Failed to render execution report -- see the log file for details
WARN: Failed to render execution timeline -- see the log file for details
```

Solution

Check the .nextflow.log file content. There may be various causes, but this appears to be because the token has expired.

```
Caused by: com.amazonaws.services.s3.model.AmazonS3Exception: The provided token has expired. (Service: Amazon S3; Status Code: 400; Error Code: ExpiredToken; Request ID: SRHCCGAHPPXY26G; S3 Extended Request ID: S-n4KngEFF0wVtVxZW5CYMxoxTN10503rk6kgN05b8fq+fnTNk/39rzzR6vASzoDLTP31rj7I+; Proxy: n
ull)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor.handleErrorResponse(AmazonHttpClient.java:1880)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor.handleServiceErrorResponse(AmazonHttpClient.java:1418)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor.executeOneRequest(AmazonHttpClient.java:1387)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor.executeHelper(AmazonHttpClient.java:1157)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor.doExecute(AmazonHttpClient.java:814)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor.executeWithTimer(AmazonHttpClient.java:781)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor.execute(AmazonHttpClient.java:755)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor.access$500(AmazonHttpClient.java:715)
at com.amazonaws.http.AmazonHttpClient$RequestExecutor$BuilderImpl.execute(AmazonHttpClient.java:697)
at com.amazonaws.http.AmazonHttpClient.execute(AmazonHttpClient.java:561)
at com.amazonaws.http.AmazonHttpClient.execute(AmazonHttpClient.java:541)
at com.amazonaws.services.s3.AmazonS3Client.invoke(AmazonS3Client.java:5558)
at com.amazonaws.services.s3.AmazonS3Client.invoke(AmazonS3Client.java:5585)
at com.amazonaws.services.s3.AmazonS3Client.access$3$0(AmazonS3Client.java:423)
at com.amazonaws.services.s3.AmazonS3Client$PutObjectStrategy.invokeServiceCall(AmazonS3Client.java:6639)
at com.amazonaws.services.s3.AmazonS3Client.uploadObject(AmazonS3Client.java:1892)
at com.amazonaws.services.s3.AmazonS3Client.putObject(AmazonS3Client.java:1852)
at nextflow.cloud.aws.nio.S3OutputStream.putObject(S3OutputStream.java:636)
at nextflow.cloud.aws.nio.S3OutputStream.putObject(S3OutputStream.java:636)
... 32 common frames omitted
Dec-28 13:52:05.072 [main] DEBUG nextflow.cache.CacheDB - Closing CacheDB done
Dec-28 13:52:05.081 [main] INFO org.pf4j.AbstractPluginManager - Stop plugin 'nf-amazon2.9.2'
Dec-28 13:52:05.081 [main] DEBUG nextflow.plugin.BasePlugin - Plugin stopped nf-amazon
Dec-28 13:52:05.081 [main] INFO org.pf4j.AbstractPluginManager - Stop plugin 'nf-schema2.1.1'
Dec-28 13:52:05.081 [main] DEBUG nextflow.plugin.BasePlugin - Plugin stopped nf-schema
Dec-28 13:52:05.083 [main] DEBUG nextflow.script.ScriptRunner - > Execution complete -- Goodbye
(END)
```

Revision #3
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