Cumulus: NASA Archives in the Cloud

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Lauren Frederick
Cumulus Lead
lauren@element84.com

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The Problem
More than just storage

- STEWARDSHIP
- SECURITY & COMPLIANCE
- BACKUP & RECOVERY
- SERVICES & METRICS
- SIMPLE ACCESS
- ERROR HANDLING
- PROVENANCE
Dealing with Ingest Failures

Sync Granule → Process → Move granule → Post to CMR

→ Handle Failure → Report Failure
Failures to Trigger Ingest
Kinesis Failures
Data Provenance

Execution Instance

Sync Granule → Process → Move granule → Post to CMR

Granule

Files

v1.10.4 → v1.10.3 → v1.9.0
Operator Dashboard

CUMULUS Dashboard

Updates

1 Errors
203 Collections
41 Granules
5,313 Executions
13 Ingest Rules
Discovery

Direct Download

WS GIBS OPeNDAP

Services

Direct S3 Access
Granule Reconciliation

Reconciliation report

OK file count: 172

Files only in DynamoDB (579)

<table>
<thead>
<tr>
<th>GranuleId</th>
<th>Filename</th>
<th>Bucket</th>
<th>S3 Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD09GQ.A9917737.KFw8Br.006.5000644002066</td>
<td>MOD09GQ.A9917737.KFw8Br.006.5000644002066.hdf</td>
<td>If-protected</td>
<td>Link</td>
</tr>
<tr>
<td>MOD09GQ.A0007560.zuzuRq.006.0290148655705</td>
<td>MOD09GQ.A0007560.zuzuRq.006.0290148655705.hdf.met</td>
<td>If-private</td>
<td>Link</td>
</tr>
</tbody>
</table>

Files only in S3 (1231)

<table>
<thead>
<tr>
<th>Filename</th>
<th>Bucket</th>
<th>S3 Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMI_correction_rain.txt</td>
<td>cumulus-data-shared</td>
<td>Link</td>
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<tr>
<td>MOD09GQ.A0023605._gOahZ.006.8702444238062.hdf.met</td>
<td>If-private</td>
<td>Link</td>
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</tbody>
</table>
Validation

- **Unit test and stack deployment**
  - # 1872.2 eslint
  - # 1872.3 Unit tests except API
  - # 1872.4 API unit tests
  - # 1872.5 Deploy Integration Test Stack

- **Integration tests**
  - # 1872.6 Run integration tests

- **Cleanup integration tests**
  - # 1872.7 Cleanup integration tests
Come Find Us

Check us out on github!

https://github.com/nasa/cumulus

Read up

https://nasa.github.io/cumulus/

Use our packages

https://www.npmjs.com/org/cumulus
Questions?
Thank You!

Lauren Frederick

lauren@element84.com
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