Cumulus:
NASA Archives in the Cloud
2018 AGU

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The Problem
More than just storage

STEWARDSHIP

SECURITY & COMPLIANCE

BACKUP & RECOVERY

SERVICES & METRICS

ERROR HANDLING

SIMPLE ACCESS

PROVENANCE
STEWARDSHIP

SECURITY & COMPLIANCE

SERVICES & METRICS

BACKUP & RECOVERY

ERROR HANDLING

SIMPLE ACCESS

PROVENANCE
Dealing with Ingest Failures
Failures to Trigger Ingest
Kinesis Failures
STEWARDSHIP

- SECURITY & COMPLIANCE
- SERVICES & METRICS
- BACKUP & RECOVERY
- SIMPLE ACCESS
- ERROR HANDLING
- PROVENANCE
Data Provenance

Execution Instance

Sync Granule → Process → Move granule → Post to CMR

Granule → Files

v1.10.4 → v1.10.3 → v1.9.0

EOSDIS
Operator Dashboard

CUMULUS Dashboard

Updates

1
Errors

203
Collections

41
Granules

5,313
Executions

13
Ingest Rules
# Granule Reconciliation

## Reconciliation report

<table>
<thead>
<tr>
<th>Created</th>
<th>Status</th>
</tr>
</thead>
</table>

**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>
</tr>
<tr>
<td>MOD09GQ.A0023605._gOahZ.006.8702444238062.hdf.met</td>
<td>If-private</td>
<td>Link</td>
</tr>
</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!

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