**Deep Dive with AWS on 12/15**

**Attendees:**

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Background

* Taking CTD data (one particular instrument, over the side of the ship), taking 4-24 measurements per sec. We manage data/metadata at sea.
* Use FTP transfer currently. Need to find alternative to that as it’s being deprecated. Thought to move to an S3 bucket.
* In development on full release of OASIS software.
* Targeting spring ecosystem monitoring cruise (may-june timeframe) to test this out. C#.NET application.

Security

* Need to make ISSO comfortable with this solution.
* <https://docs.aws.amazon.com/AmazonS3/latest/userguide/security.html>
* Encrypted transfer and security scanning of files in the bucket will be required.
  + Encryption in transit is automatic. Encryption at rest can be handled with customer or AWS managed keys
  + Managed service for security scanning. Can also leverage 3rd party tools
* Cloudtrail monitors all API calls within the account

Cost:

* Need to be able to track cost so we can keep this going forward.
* Cost explorer, aws budgets
  + <https://docs.aws.amazon.com/cost-management/latest/userguide/budgets-managing-costs.html>
  + <https://docs.aws.amazon.com/cost-management/latest/userguide/ce-what-is.html>
* Pricing calculator to understand what costs will likely be
  + <https://calculator.aws/#/createCalculator/S3>

Notification:

* Notification services - Files can be coming into the bucket from different ships at the same time. Would be great to get notification on file upload.
* S3 event notifications built into the service. Can generate a workflow using lambda
* <https://docs.aws.amazon.com/AmazonS3/latest/userguide/NotificationHowTo.html>

Data volumes:

* At most, no more than 3GB/day

Connectivity:

* Connectivity from ships vary - can be intermittent, heading of the ship can impact connection.
* Satellite connection.
* Connection speed varies as well - plenty for this use case

Alternative options to the windows machine running the compute:

* <https://aws.amazon.com/snowball/?whats-new-cards.sort-by=item.additionalFields.postDateTime&whats-new-cards.sort-order=desc>
* <https://aws.amazon.com/datasync/>
* Might be cost prohibitive, and also the ships are only at sea periodically, so might not be a good option from that perspective