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*Fathom Science\**

- *NCSU tech spinoff founded in 2017*
- *Marine environment analytics, applications, and value-added product development*
- *A new SECOORA industry member*

# Objective and Approach

## Objective

- A pilot project to explore the feasibility and cost-benefit of performing routine operational ocean predictions on Amazon web services' (AWS) cloud computing infrastructure, where a large amount of ocean observations now reside
- The project team, comprised of RPS/ASA, NOAA NOS water team, is working to port a prototype ocean prediction system to AWS.

## Approach

- Collaborating with the cyber infrastructure team at RPS/ASA to explore the utility of AWS cloud-computing infrastructure in coastal ocean modeling .
- Documenting procedures and lessons learned in porting a prototype operational ocean prediction system to AWS cloud-computing infrastructure (ongoing).



# Lessons learned and accomplishment

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- A learning curve to climb to move from conventional computing clusters to the commercial cloud
- Built tools and software to successfully benchmark simulations on the AWS.
- Completed cost-analysis to find most cost-effective way to run simulations on AWS.

# Impact

- The flexibility of commercial cloud is becoming a viable option for archiving and disseminating large volumes of data or executing model simulations
- A forward looking effort
- Building knowledge base and know-hows for the community

