

U.S. Navy Fleet Numerical Meteorology and Oceanography Center

“We went from a relatively low number of computing cores to more than 20,000 cores when performing the ensemble predictions. We were able to bring a lot of cores online and surge our capacity. We could run our cyclone ensemble model 84 times in a six-hour period, which we would be very challenged to do with other systems.”

– Bill Kerr, Technical Director, FNMOC

Key Products and Services

Microsoft Azure
Azure CycleCloud



Situation

Accurately forecasting tropical cyclones globally requires intensive computing resources. But allocating these resources can be challenging because forecasters can never be sure how many storms will form during any season.



Solution

To obtain the necessary computing resources, the U.S. Navy partnered with Microsoft to build a modeling solution using Microsoft Azure and Azure CycleCloud. This allowed the Navy to spin up thousands of high-performance computing cores in rapid response to developing storms.



Impact

During a period when four storms were active, including two that would make landfall on the US Gulf Coast, the new modeling solution demonstrated surge capacity to produce rapid, highly accurate forecasts.