Abstract

The NCEP Central Operations (NCO) IT platform plays a critical role in supporting NOAA’s Weather-Ready Nation. NCO is responsible for managing the network infrastructure and the two private cloud data centers that run applications used by NWS forecasters, Government partners, Emergency Managers, and private users. The topics this poster will include are: the architecture, application responsibilities, and challenges supporting applications that transmit watches, warnings, and advisories.

What We Do

- Disseminate Watches/Warnings/Advisories (WWA) to the public
- Interface with the Wireless Emergency Alerting (WEA) system
- Aggregate Observational Data for Public Consumption
- Post Process Satellite and NCEP Model Data
- Interface with FAA Systems to Exchange Weather Data
- Provide Radar & Radar-Derived Products
- Make Data Available in Multiple Formats & Delivery Mechanisms

Challenges

- Extremely Low Latency Data Requirements
- Message Paths Traverse Private, Public & Satellite
- Manage Multiple Layers of Redundancy
- Communicating Changes Effectively
- Application Upgrades Completed Without Customer Impact

How We Operate

- Operate 2 Uniform On-Prem Data Centers
- Applications Reside in a "Hot Backup" Posture
- Dedicated Infrastructure Resources to WWAs
- Use Content Delivery Networks for Security & Offloading
- Enforce Platform & Software Standards
- Monitor Applications for Uptime & Timeliness
- Run in 24/7/365 posture

What are the NWS Information Technology Platforms that Deliver Emergency Managers Data?