



QuTech Customer Case Study: NWS Cloud

▶ **Client:** National Weather Service (NWS)

▶ **Client Scenario:**

The National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS) required a Cloud Computing Infrastructure as a Service (IaaS) solution to provide a test and development platform Innovation Center. The purpose of the Innovation Center was to migrate data and applications to a Government-only Private Cloud to provide virtualized hosting services for their application suite software development efforts. The virtualized hosting services required 1) network and bandwidth provisioning; 2) compute environment provisioning (production, staging/QA, and testing); and 3) redundancy, 4) backup/recovery, and 5) scalability. They were in need of datacenter hosting capabilities, network utilization, firewall administration, and virtual machine monitoring. The existing environment was cumbersome and expensive, consisting of multiple racks of physical devices that required long procurement and configuration lead times to allow for alternate development environments.

▶ **QuTech Solution:**

The goal of this project was a smooth and seamless transition to the Cloud environment for the development and test platform, initially for the Advanced Weather Information Processing Systems (AWIPS II). QuTech successfully implemented proactive monitoring services, including business process workflow monitoring, provided insight to application performance and application utilization data to system owners/stake holders, consulted with system owners and administrators to implement best practices for cloud migration, and adjusted cloud resources as application utilization and demand increased. QuTech used a low risk migration strategy so that if any issues were identified, NWS could quickly and safely fallback to the original infrastructure. QuTech successfully demonstrated that the cloud environment can run and replicate any operational system, and that the cloud environment is system agnostic. We proved that resources can be scaled and optimized based on system requirements, and delivered a high-quality, right-sized cloud solution, giving NWS improved agility, scalability, and flexibility.

The benefits of virtualization were realized during the migration of the application with rapid and low risk cloning of the staging environment to production. This process minimized any potential changes between the testing environment and the transition to production. The NWS was able to take advantage of a redundant architecture with many failsafe mechanisms that were not in place in the original government datacenter at a much lower cost point. As a result of our expertise, we were able to increase NWS's cloud resources threefold to 15Ghz without additional hardware. This increase in resources took mere minutes. Processing time for the data was reduced to levels quicker than the physical hardware.

For further information, please contact :

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