



Cloud Services as IT-Enablers for NMHSs

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In today's interconnected world, weather is a critical factor affecting national well-being. Within each nation, the core mission of a National Meteorological and Hydrological Service (NMHS) is to provide forecasts and warnings to protect life and property; in some nations, the mission extends to increase the economic vitality of their nations. However, the information technology enabling this service often is outdated and inadequate to address the needs of today. Further, the required hardware and data processing solutions are often unaffordable and provide modern services for only a few years, before becoming outdated again. Moreover, information technology infrastructure is not core to the NMHS – but it is mission critical.

This presentation will discuss a new technology for providing sustainable, reliable, and affordable modernization solutions via cloud services. Leveraging internet advances, the cloud offers remote capabilities responsively – as if the processing were being done in the forecaster's back office. The cloud environment ensures high reliability and removes the burden NMHSs face with sustaining expensive IT hardware. And, critically, cloud is affordable. It scales to the NMHS mission and budget while services keep pace with new science and rapidly evolving data processing – allowing the NMHS to focus on its core weather and water missions. As a result, the NMHS paradigm shifts from being IT-constrained to being IT-enabled, and the time and technology spent on building meteorological capacity will increase. More time can be spent increasing staff capacity and providing dedicated user services.

At a time when NMHSs are faced with the challenge of limited human resource capability and inadequate computer infrastructure to process data and operate robust modeling programs to effectively make use of high-volume, complex environmental data streams, cloud service solutions offer easy, cost-effective access to the tools necessary to get NMHSs ahead of the game quickly with minimal infrastructure and training requirements.