**Background**

The FAA’s vision for an info-centric National Airspace System (NAS) includes a move toward an agile infrastructure through the evolution of system-wide information management and adoption of cloud-based enterprise architecture. The Enterprise Services Infrastructure Framework (ESIF) provides the methodology to evaluate and identify programs and program components that qualify for movement to the cloud. The FAA’s info-centric vision for the NAS builds on the Next Generation Air Transportation System foundation in three key areas, or pillars: operations, supporting infrastructure, and integrated safety management. The ESIF supports the infrastructure pillar by investigating emerging technologies and innovative architecture configurations as candidates for NAS infrastructure modernization.

For the FAA, cloud computing offers the potential to reduce development, implementation, and maintenance costs. As a result, both the agency and aviation stakeholders will realize benefits sooner.
**Project Description**

While cloud-based solutions provide the ability to take advantage of a wide spectrum of value-added services and options, they also present challenges and risks to be considered during evaluation and implementation of cloud technology. Application of cloud technologies requires consideration of a variety of topics and perspectives as they might apply to or impact NAS services. The ESIF provides a methodology approach consisting of activities and analysis requirements for programs to determine if they are appropriate for cloud-based architectures. The ESIF process has been applied to several FAA programs, including En Route Automation Modernization (ERAM), Time Based Flow Management (TBFM), and Flight Data Input/Output (FDIO).

**Outcomes**

- Recommendation reports on FAA automation systems (e.g., ERAM and TBFM)
- Recommendation reports on FAA information routing systems (e.g., NADIN, FDIO, etc.)
- Recommendation reports on FAA weather systems (e.g., ITWS, NWP, CSS-Wx)
- Updated ESIF 2.0, incorporated with lessons learned, best practices from previous use cases, and supplemented with support materials

**Drivers**