

# DGI IPv6 Conference

**FAA**

## **IPv6 Project Status and Lessons Learned**

**Douglas Roseboro**

**IT Research And Technology,  
FAA Chief Technology Officer**

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# Lessons Learned

- **IPv6 deployment is a significant undertaking**
  - Extensive planning and coordination is key to kick start implementation (*policy change, awareness, inventory, conduct study, resource, buy-in, training*)
  - Significant impact on all current and future devices/networks and applications
- **Vendor software / hardware products continue to evolve with IPv6 capabilities**
  - Continue certification process and testing of products
  - Relearning and retesting may be necessary
- **Security is an ongoing effort**
  - Security principles stay the same, but policies may need to be revised to adopt IPv6 features (Policies on tunneling in the internal network)
  - Include security community in IPv6 planning stage and training programs (C&A guidance, penetration tests preparation)
  - Acquire knowledge to install/configure/manage firewalls, to configure IDSs/IPSs and monitoring/controlling IPv6 and tunneled traffic



# Lessons Learned

(Continued)

- **Hands-on is training necessary**
  - Include Network & System administrators, help desk support, network application developers, technology buyers
  - The operational workforce has limited time to devote to training
  - Alternate solutions for hands-on training (such as expanding use of webinars) can be effective
- **Extensive testing is both necessary and beneficial**
  - Unit testing may not be as essential if the products have been successfully tested through the USGv6 associated labs, e.g. UNH-IOL, ICSA
  - Integration tests, on the other hand, are crucial to ensure secure and successful deployment
  - Testing provides hands-on training for gaining IPv6 experiences



# Lessons Learned

(Continued)

## Trusted Internet Connection (TIC) impact

- **Better manage use of Internet access points**
- **TIC strategy to offload heavy internet traffic thru web hosting**
- **Reduced cost ISP cost**
- **Reduces FAA cyber security risks (DDOS)**
- **Front line for routing IPv4/IPv6 traffic**
- **Worldwide site redundancy promotes continuity of FAA services**



# Lessons Learned

(Continued)

- **Unfunded mandate and shrinking agency budget makes IPv6 migration task challenging**
  - Executive support is necessary to drive a successful transition
  - Acquisition policy change necessary for procuring IPv6 products

