DGI IPv6 Conference

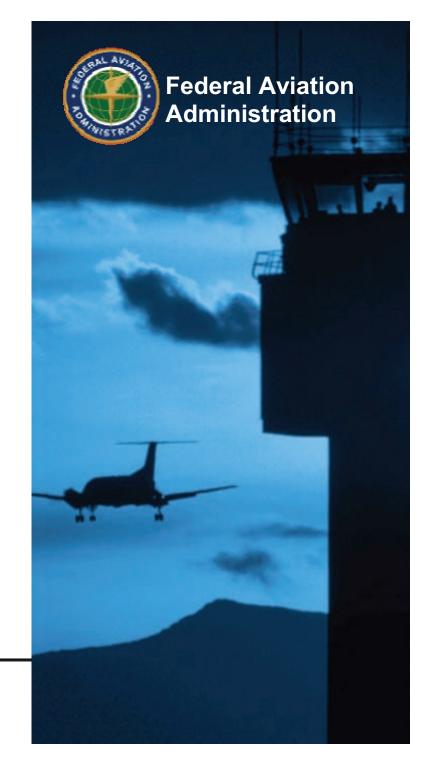
FAA

IPv6 Project Status and Lessons Learned

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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

