

ACT-IAC
Internet Protocol version 6 (IPv6)
Committee
Roadmap Update

10-12-11

Dale Geesey (Auspex Technologies)
Lead IPv6 Group Management

What is IAC

- **MISSION:** To bring industry and government executives together to exchange information, support professional development, improve communications and understanding, solve issues and build partnership and trust, thereby enhancing government's ability to serve the nation's citizenry.
- Created in 1989 by the ACT Board of Directors
- Provide an objective and vendor-neutral forum for obtaining advice from the private sector IT industry.
- Government issues drive the IAC agenda
- Membership in the Industry Advisory Council is open to any private sector organization.

IPv6 Call for Volunteers

At the request of the Federal IPv6 Task Force, the Networks & Telecommunications (N&T) Shared Interest Group (SIG) has established the ACT-IAC IPv6 committee to provide support to the IPv6 Task Force providing guidance, best practices, solution options, etc., with the primary deliverable being the updating of the Planning Guide/Roadmap Toward IPv6 Adoption within the US Government.

- 65 volunteers signed up for the committee
- Multiple group Kick-off meetings and additional one-on-one discussions were held to communicate the goals of the group, roles and responsibilities and group organization
- Sub-groups have been established, each have responsibilities for a set of deliverables
 - Acquisition of Products
 - Project Plan
 - Address Management
 - Implementation and Testing
 - Security

IAC IPv6 Working Group Leads



Task/Group	Volunteer Lead(s)
IPv6 Group Mgmt	Dale Geesey
Project Plan	Atacan Donmez Bill Kyburz Ralph Wallace
Acquisition and Product Certification	Bill Kyburz Ciprian Popoviciu
Address Plan	Kenny Burroughs John Lee
Security	TJ Evans
Implementation and Testing Plan	Atacan Donmez Marcus Buckley Bob Kloak

Federal IPv6 Task Force Working Groups

- Outreach – Collaboration, Training, Media and Education
- Technology – Network Architectures, Security, Tools and Testing
- IT Management – Project Planning / Milestones, Procurement, Acquisition and Vendor Integration

Federal IPv6 Task Force Workgroups	IAC IPv6 Workgroups
Outreach	IPv6 Group Mgmt
Technology	Security Implementation and Testing Plan Address Plan Project Plan
IT Management	Acquisition and Product Certification

Group Alignment

Interagency Workgroups

Industry Workgroups

Outreach: Steve Pirzchalski

IPv6 Group Mgmt: Dale Geesey

- Will collaborate to ensure group integration and coordination of deliverables.
- Own overall Roadmap document

Technology: Stu Mitchell
Sharon Lattanze

Multi-Group: John Lee

- Coordination and synchronization of all technical activities, services and deliverables.

Management: Luis Gonzalez

Acquisition – Bill Kyburz

- Coordination and synchronization of all management/acquisition activities, services and deliverables.

Roadmap Update

- Initial Document published in May 2009
- October 2011 - Update existing document to bring up to date
- December 2011 - Enhancing document based on sub-group work
 - Project Planning
 - Addressing Plan
 - Security Update
 - Acquisition Guidance
 - CDN's Role in IPv6

Roadmap Outline

1 Federal Transition Initiatives

- 1.1 OMB Guidance
- 1.2 IPv6 Federal Acquisition Regulations (FAR)
- 1.3 Federal IPv6 Task Force
- 1.4 Sample Agency Timelines
- 1.5 Agency Progress Tracking
- 1.6 Outreach
- 1.7 USGv6 Activities
- 1.8 DoD IPv6 Profile

2 The Business Rationale for IPv6

3 Federal IPv6 Transition – The To Be State

- 3.1 The 2012 To Be State
- 3.2 The 2014 To Be State
- 3.3 Beyond the 2014 State

4 Leveraging Enterprise Architecture

- 4.1 Using the IT Infrastructure Segment Architecture
- 4.2 EA Driven IPv6 Planning
- 4.3 Developing an IPv6 Transition Strategy Plan
- 4.4 Integration with Capital Planning
- 4.5 OMB IPv6 EA Assessment Criteria

Roadmap Outline Cont.

5 Transition Milestones

- 5.1 Quick Wins
- 5.2 IPv6 Network Service Deployment
- 5.3 Security
- 5.4 Additional Tips

6 IPv6 Impact on Federal Initiatives

- 6.1 Trusted Internet Connection (TIC)
- 6.2 HSPD-12
- 6.3 IT Modernization
- 6.4 FDCC
- 6.5 Network Migration
- 6.6 DNSSEC
- 6.7 Cloud Computing – Cloud First Strategy
- 6.8 Federal Data Center Consolidation Initiative (FDCCI)

7 IPv6 in IT Governance and Procurement

- 7.1 Governance
- 7.2 Procurement

8 Acronym Dictionary

Sample Agency IPv6 Execution Timeline

- Developed by VA for the Federal IPv6 Task Force
- Based on VA's high-level implementation timeline
- Focuses on 2012 and 2014 Milestones
- Broken out from a functional perspective
 - Network Connectivity
 - Addressing
 - Routing
 - Etc.
- Provide a 6 incremental rolling
- Includes identification of key stakeholders
- Example of target timeline for functional achievements to meet 2012 and 2014 dates comfortably

Sample 2012 Agency IPv6 Execution Timeline

Sample Agency IPv6 Execution Timeline 2012 Public Facing Execution	Key Stakeholders (External)	Milestone							
		1	2	3	4	5	6	7	8
		Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
Network Connectivity									
Internet Gateway 1 IPv6 Enabled	Network or other Carriers (ISP)	█							
Internet Gateway 2 IPv6 Enabled		█	█						
Internet Gateway 3 IPv6 Enabled		█	█						
Internet Gateway 4 IPv6 Enabled		█	█						
Addressing									
ISP Provided IPv6 Addresses	Network or other Carriers (ISP)	█							
Announce Agency IPv6 Addresses	ARIN	█	█						
Routing									
Basic IPv6 Routing	Network or other Carriers (ISP) Routing Vendors	█							
IPv6 BGP Routing Gateway 1		█	█						
IPv6 BGP Routing Gateway 2		█	█						
IPv6 BGP Routing Gateway 3		█	█						
IPv6 BGP Routing Gateway 4		█	█						
IPv6 Multi-home Routing		█	█	█					
Domain Name Services (DNS)									
ns1 IPv6 enabled	GSA (.gov) DNS Providers	█							
ns2 IPv6 enabled		█	█						
ns3 IPv6 enabled		█	█						
ns4 IPv6 enabled		█	█						
Primary Agency Domain (www.agency.gov)									
Phase 1	Cloud/Hosting Providers	█							
Phase 2	Web Vendors	█	█						

Sample 2012 Agency IPv6 Execution Timeline Cont.



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Sample Agency IPv6 Execution Timeline 2012 Public Facing Execution	Key Stakeholders (External)	Milestone							
		1	2	3	4	5	6	7	8
		Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
Mail									
Inbound SMTP IPv6 Enabled	Cloud/Hosting Providers								
Outbound SMTP IPv6 Enabled	SMTP/Mail Security Vendors								
Security									
DMZ Basic IPv6 Security	MTIPS/TICAP Providers								
DMZ Comparable IPv6 Security	Security Vendors								
Full IPv6 Security	Security Service Providers								
Network Management									
Basic IPv6 Network Management	Network Management Vendors								
Comparable IPv6 Network Management									
Full IPv6 Network Management									
Public Facing Domains									
1 Public Facing Domain IPv6 Enabled	Cloud/Hosting Providers Web Vendors								
35% Public Facing Domains IPv6 Enabled									
100% Public Facing Domains IPv6 Enabled									
Pilots									
Mission Pilots	Impacted Vendors/Providers								

Sample 2014 Agency IPv6 Execution Timeline



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Sample Agency IPv6 Execution Timeline 2014 Enterprise Network Execution	Key Stakeholders (External)	Milestone							
		1	2	3	4	5	6	7	8
		Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
Network Connectivity									
Core/Backbone Network	Networkx or other Carriers Router Vendors	█	█	█					
Infrastructure Routers 25%				█	█				
Infrastructure Routers 50%				█	█	█			
Infrastructure Routers 100%				█	█	█	█		
Addressing									
Internal IPv6 Addresses Allocated	ARIN DCHPv6 Vendors		█	█					
DHCPv6 Enabled 25%				█	█				
DHCPv6 Enabled 50%				█	█	█			
DHCPv6 Enabled 100%					█	█	█		
Routing									
Core/Backbone Network Routing	Networkx or other Carriers Router Vendors		█	█					
Infrastructure Routing 25%				█	█				
Infrastructure Routing 50%				█	█	█			
Infrastructure Routing 100%					█	█	█		
Domain Name Services (DNS)									
Internal DNS IPv6 Enabled	DNS Vendors		█	█					
Data Centers									
Data Center 1 IPv6 Enabled	Networkx or other Carriers Router Vendors IT Vendors Service Providers	█	█	█					
Data Center 2 IPv6 Enabled				█	█				
Data Center 3 IPv6 Enabled				█	█	█			
Data Center 4 IPv6 Enabled					█	█	█		
Mail									
Exchange IPv6 Enabled	Mail Vendors			█	█				
Internal Applications & Services									
IPv6 Enabled Apps & Services 25%	Application Vendors Service Providers IT Vendors		█	█					
IPv6 Enabled Apps & Services 50%				█	█				
IPv6 Enabled Apps & Services 75%				█	█	█			
IPv6 Enabled Apps & Services 100%					█	█	█		

Sample 2014 Agency IPv6 Execution Timeline Cont.

Sample Agency IPv6 Execution Timeline 2014 Enterprise Network Execution	Key Stakeholders (External)	Milestone							
		1	2	3	4	5	6	7	8
		Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14
End Device Transition									
Internal Servers IPv6 Enabled 25%	Server & OS Vendors Virtualization Vendors IT Vendors								
Internal Servers IPv6 Enabled 50%									
Internal Servers IPv6 Enabled 75%									
Internal Servers IPv6 Enabled 100%									
User Computers IPv6 Enabled 25%	Laptop/Desktop & OS Vendors								
User Computers IPv6 Enabled 50%									
User Computers IPv6 Enabled 75%									
User Computers IPv6 Enabled 100%									
PDA/Mobile Devices IPv6 Enabled 25%	PDA Vendors								
PDA/Mobile Devices IPv6 Enabled 50%									
PDA/Mobile Devices IPv6 Enabled 75%									
PDA/Mobile Devices IPv6 Enabled 100%									
Mission Devices IPv6 Enabled 25%	IT Vendors Device Vendors								
Mission Devices IPv6 Enabled 50%									
Mission Devices IPv6 Enabled 75%									
Mission Devices IPv6 Enabled 100%									
Pilots									
Enclave Pilot Phase 1	IT Vendors								
Enclave Pilot Phase 2									
Enclave Pilot Phase 3									

Call for More Participation: To Join



- To participate in the ACT-IAC IPv6 Committee, please send your contact information to:
- N&T SIG Vice Chair Chris Chroniger (240-601-8402, christopher.chroniger@itsolutions-llc.com)
- N&T SIG Chair Brian Bonacci (443-597-2038, Brian.Bonacci@Level3.com)
- John Shaw (703-208-4800 x222, jshaw@actgov.org), ACT-IAC Shared Interest Groups Director.

Questions



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