CSRIC IV
Working Group 6
Long-Term Core Internet
Protocol Improvements

September 12, 2013

Bill Check, CTO, NCTA
Working Group 6 Chair

Working Group 6: Secure DNS

- <u>Short Description</u>: The Internet's Domain Name System (DNS) is vulnerable to spoofing attacks that can lead to misdirected web requests, etc. One method that has been promoted to address on a long-term basis is adoption of the Domain Name System Security Extentions (DNSSEC), but DNSSEC remains relatively early in deployment and a number of important technical and operational issues remain open concerning its widespread implementation.

Working Group 6: Secure DNS

- Working Group 6 will identify and plan for long-term remedies to DNS vulnerabilities, including:
  - Identify unintended consequences of DNSSEC deployment and ways to mitigate these consequences.
  - Alternatives to DNSSEC that accomplish its long-term goals while minimizing undesirable consequences.
  - Methods to achieve long-term remediation of the DNS infrastructure, regardless of the solution(s) recommended.
  - Practical implementation plans to better secure the Domain Name System infrastructure, including a path to DNSSEC deployment by ISPs (if that is recommended).

Working Group 6: Secure BGP

- <u>Short Description</u>: The protocols used to govern the operation of the Internet's inter-domain routing system are vulnerable to spoofing attacks that can result in erroneous traffic flows. These misdirected flows result in the extrusion of data onto unauthorized networks. One method that has been identified to address these vulnerabilities is application of the BGPSEC security extensions, but BGPSEC remains a relatively immature standard and a number of important technical and operational issues remain open concerning its widespread implementation.

Working Group 6: Secure BGP

- Working Group 6 will identify and plan for long-term remedies to inter-domain routing vulnerabilities, including:
  – Identify unintended consequences of BGPSEC deployment and ways to mitigate these consequences.
  – Alternatives to BGPSEC that accomplish its long-term goals while minimizing undesirable consequences.
  – Methods to achieve long-term remediation of the inter-domain routing infrastructure, regardless of the solution(s) recommended.
  – Practical implementation plans to better secure the inter-domain routing infrastructure, including a path to BGPSEC deployment by ISPs (if that is recommended).

Working Group 6: Participants

Bill Check, CTO, NCTA, Chair Kurian Jacob, FCC Liaison	
Chris Marrow, Google	**More participants in the pipeline…**
Chris Roosenraad, Time Warner Cable	
Christopher Garner, Suddenlink	
Eric Lent, Comcast	
Eric Ziegast, Farsight Security	
Jason Livingood, Comcast	
Mazen Khaddam, Cox Communications	
Michael Kelsen, Time Warner Cable	
Tom Soroka, US Telecom	
Tony Tauber, Comcast	
Warren Kumari, Google	

Working Group 6: Next Steps

- Recruiting additional members
- Working Group kickoff meeting in September
- Review and adoption of work scope
- Adoption of milestones
- Assignment of responsibilities to working group members

Working Group 6: Project Timeline

- Working Group meeting dates:
  - First conference call in September
- Working Group final recommendations:
  - March 2015
- Intermediate Milestones:
  - To be addressed by the Working Group

Thank You

Questions / Comments?