Where does DNSSEC stand in .gov? A status update

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Federal Network Security Branch

DHS National Cyber Security Division (NCSD)

FOSE

Deployment diaries: DNSSEC in U.S. federal systems and beyond

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Federal Network Security Branch

- National program which is part of the DHS National Cyber Security Division (with US-CERT, NCS, etc); does not manage DHS internal IT networks.

- Assigned as the executive agent for Office of Management and Budget (OMB) cybersecurity initiatives and FISMA reporting (OMB Memo M-10-28)

- Focused on providing the means to enable long-term strategic prevention of attacks against federal government networks by addressing common challenges faced by all Federal civilian agencies

    - Policy Analysis, Architecture (N&IS), Procurements (RAS), Assessments (CAP), and Reporting (CPM/FISMA)
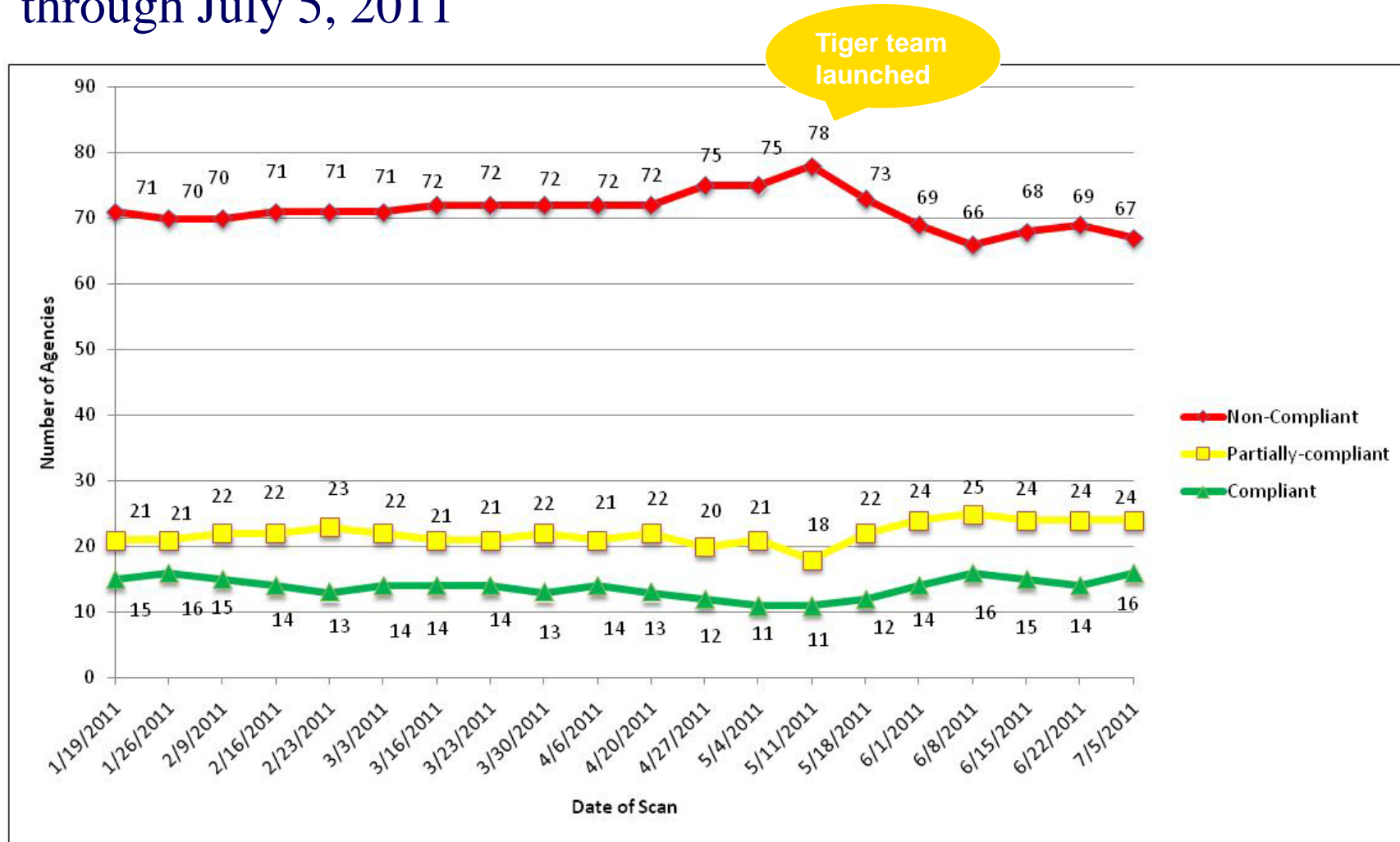
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Agency DNSSEC Responsibilities

- OMB Memo M-08-23: *Securing the Federal Government's Domain Name System Infrastructure*
    - achieve the goal of fully operating DNSSEC **signed** .gov sub-domains by December 2009

- TIC Reference Architecture v2.0
    - TIC Access Providers (TICAPs) resolvers must **validate** DNSSEC signatures for domains looked up by agencies

Agency DNSSEC Signing Trends
through July 5, 2011

Common Implementation Challenges

- Agency Reported Impediments to DNSSEC Implementation
    - Vendors support/solutions not ready
    - Technical problems with signing software and key exchanges
    - Lack of managed DNSSEC solutions
    - Infrastructure upgrades needed
    - Funding and resources needed
    - Contractual barriers with vendors and agency sub components
    - Personnel management and training
    - Communication and governance

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FNS Initiatives for DNSSEC

- DNSSEC Tiger Team
  https://max.omb.gov/community/display/ITI/FNS+Tiger+Team+-+DNSSEC+and+Email+Authentication (requires a .gov or .mil e-mail address to register)

- DNS Reference Architecture
  https://max.omb.gov/community/display/DHS/Domain+Name+System+%28DNS%29+and+DNS+Security+Extensions+%28DNSSEC%29 (requires a .gov or .mil e-mail address to register)

- DNSSEC capabilities in the TIC Architecture v2.0

- DHS Compliance Assessment

- FISMA Reporting

- Weekly DNSSEC Scans of TLDs

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