

OCTO update for SSAC

Samaneh Tajalizadehkhoob

SSAC Monthly Meeting

9 November 2024



● Identifier Research, Operations, and Security

Made of the IANA Functions (PTI) & OCTO



John Crain
Sr VP IROS & CTO

IROS

OCTO



Collecting data, researching and writing papers, providing training and capacity building, and trying to help identify and measure DNS security threats and abuse.

IANA Functions
<PTI>



Delivering the names, numbers, and protocol parameters functions that the community depends upon for the Internet to work.

OCTO Who is Who



John Crain
Senior Vice President IROS & CTO

OCTO

IROS Operations
& Admin

Security,
Stability, &
Resiliency



Dr. Samaneh Tajalizadehkhoob
Snr. Director SSR

Technical
Engagement



Adiel A. Akplogan
Vice President, Technical Eng.

Research



Matt Larson
Vice President, Research



Steve Conte
Sr. Director of IROS
Operations

Ongoing Engagement

- Technical Engagement with DNS Operators
 - Webinars on technical topics related to Identifier technologies
 - Capacity building sessions with ccTLDs and resolver operators on DNS operation best practices (including DNSSEC)
- KINDNS (kindns.org) - To promote a holistic framework for secured DNS operations (DNSathon at NOGs).
- Contribute to technical assessment of local/regional policies, regulations, and technology trends.
- Build bridges between regional communities and OCTO research activities.
- Work to support ICANN constituencies in broadening their reach to the global Technical community (relaying on our regional structure).

Ongoing activities

- IETF participation
 - DELEG, root server priming, trust anchor
- ICANN DNS Symposium
 - September 2024 in Santa Marta, Colombia
- Closer partnership with L-root operations team
 - Research and architecture
- Data set management
 - L-root traffic, TLD zone file archive, DNS Core, longitudinal TLD apex parameter measurement
- Name Collision Analysis Project (NCAP) (complete)
 - Project management and SME support

Ongoing activities

- Collaborations with
 - Academic community
 - RIR community
 - M3AAWG
- Program committee on a couple of top tier security conferences
 - USENIX
 - IMC
 - PAM
 - Ecrime (APWG)
- IGF MAG member from the technical community 2024
 - Contributed to discussions around IGF 2024 and WSIS 20+

Ongoing research

- Blockchain-based alternative name systems
 - OCTO-039: Introduction to Blockchain Name System Technologies
 - OCTO-040: Introduction to Blockchain Technologies
- Public resolver usage
 - Follow-on work to OCTO-032 focusing on North and South America
- Classifying resolver behavior at the root

Ongoing research

- ICANN Domain Metrics **Keep an eye for the updates on DNS Abuse session at ICANN 81 Wednesday 13:15**
- ICANN Funded Domain Name Security Threat Information Collection & Reporting (INFERMAL)- **ICANN 81 Wednesday 13:15**
- Quantifying the prevalence and implications of “**Active**” Domains
 - [Paper](#) accepted and presented at IEEE Security & Privacy EUROPE
- Developing a **classifier** for **unsolicited** email, based on data from APWG
 - Paper accepted and presented at TRUSTCOM
- Developing Metrics that allows for Reputation Block Lists **Evaluations**
 - [Paper](#) accepted and presented at APWG e-crime 2023 conference
- Blockchain based domains based on **root data observations**
 - Initial research results presented at IDS
- **DNS Abuse prediction** research
 - Flag potentially malicious domain names using ML techs
- Estimating malicious domains’ **uptime (time to mitigate)**
- Distinguishing between maliciously registered and compromised domains

Future work

- Are there areas where OCTO could help SAAC with measurement, research and outreach?

Engage with ICANN



Thank You and Questions

Visit us at icann.org

Email: email



[@icann](https://twitter.com/icann)



facebook.com/icannorg



youtube.com/icannnews



flickr.com/icann



linkedin/company/icann



soundcloud/icann



instagram.com/icannorg