IETF Update

Making the Internet Work Better

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The Internet Engineering Task Force (IETF)

- **First, one important point:**

  No one really speaks FOR the IETF.

- **I am speaking *about* the IETF as an individual participant.**

- **https://trac.tools.ietf.org/group/iesg/trac/wiki/SpeakingForIetf**

Mission of the IETF

Make the Internet work better by producing **high quality, relevant technical documents** that influence the way people **design, use, and manage the Internet.**

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The IETF is a global community

- **First meeting in 1986**

- **Large open international community of network engineers, operators, vendors and researchers concerned with development and smooth operation of the Internet**

- **Volunteers participate on an individual basis to develop and refine protocols that are useful to operators, manufacturers and vendors utilising the Internet who support the work of the IETF**

- **Produce open standards known as Request for Comments (RFCs).**

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IETF standards make the Internet work

TCP/IP

- IPv4 (RFC791) and IPv6 (RFC2460…)

- TCP (RFC675…) and UDP (RFC768)

E-Mail

- SMTP (RFC5321), IMAP (RFC3501)…

Network and Routing

- MPLS (RFC3031), BGP (RFC4271), OSPF (RFC2178…)

DNS (RFC1034,1035…)

Web

- HTTP (RFC2616…)

VoIP

- SIP (RFC3261…) and RTP (RFC3550…)

…

www.internetsociety.org/deploy360/

The Internet Engineering Task Force (IETF)

- **http://www.ietf.org/**

- ***Anyone* can participate in the mailing lists and discussions**

- ***Anyone* can submit a "draft" document (called an "Internet Draft" or "I-D")**

- **Working Groups debate and discuss drafts**

- **Documents progress through the standards process to become RFCs**

- **Primary venue for all communication is email**

I E T F

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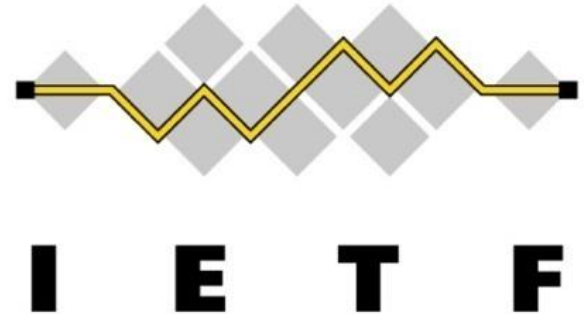
Working Groups and Areas

- **135 working groups**

  - Each working group has 2 or 3 "Chairs"

- **Working Groups have a "Charter" that defines:**

  - Purpose

  - Deliverables

  - Timeframe

- **Working Groups are created, "re-chartered" and "concluded"**

- **Organized into 7 "Areas"**

  - Each area has 2 or 3 "Area Directors" or "ADs"

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IETF Areas - http://www.ietf.org/iesg/area.html

|	
Applications and Real-Time (ART)	• Application protocols and architectures • Real-time (communication) and non-real-time
Transport (TSV)	• Mechanisms related to data transport on the Internet • Includes congestion control
Routing (RTG)	• Routing and signaling protocols
Internet (INT)	• IPv4/IPv6, DNS, DHCP, VPNs, mobility
Operations and Management (OPS)	• Network management • Operations: IPv6, DNS, security, routing
Security (SEC)	• Security protocols and mechanisms, including cryptography
General (GEN)	• Activities focused on supporting and updating IETF processes

Working Groups – By Area

TSV, 12
ART, 44
SEC, 19
GEN, 1
RTG, 24
INT; 19
OPS, 16
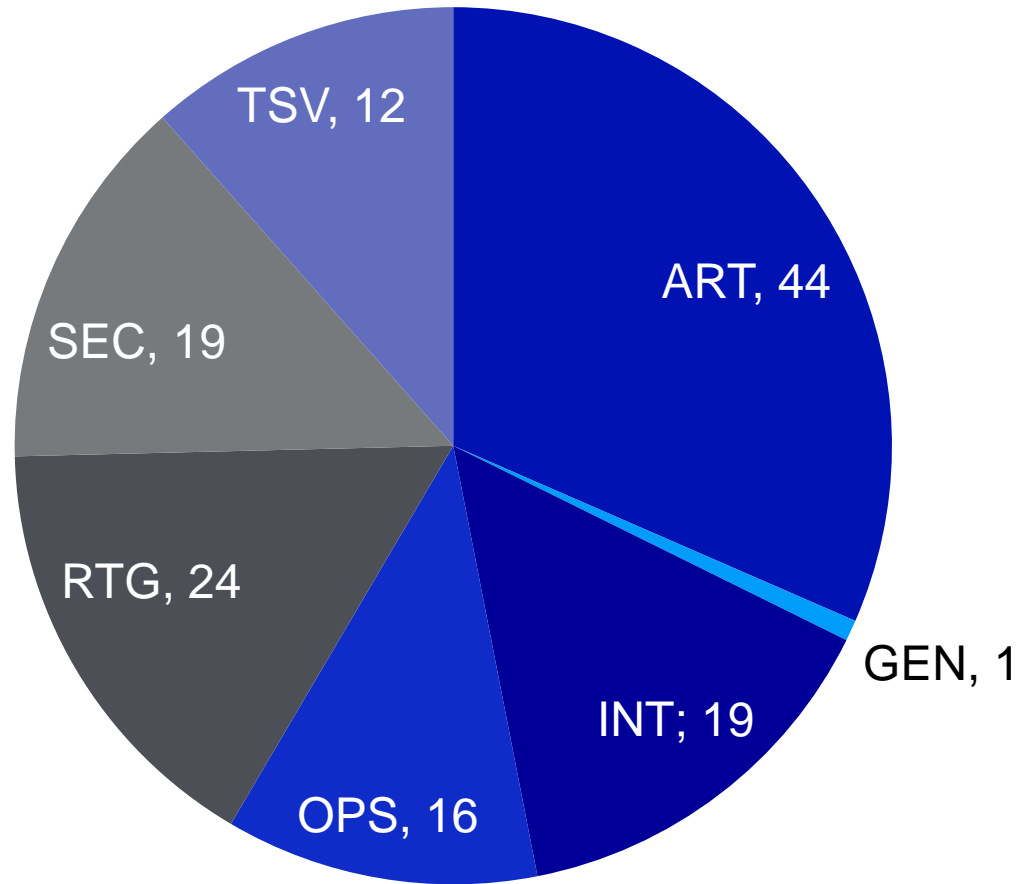
IETF Meetings

- **Three times each year**

- **Move around the world to different locations**

- **Continuation of discussions on email lists**

IETF Meetings – Recent/Upcoming Locations

- **IETF 90 – July 2014 – Toronto, Canada**

- **IETF 91 – November 2014 – Honolulu, USA**

- **IETF 92 – March 2015 – Dallas, USA**

- **IETF 93 – July 2015 – Prague, Czech Republic**

- **IETF 94 – November 2015 – Yokohama, Japan**

- **IETF 95 – April 2016 – Buenos Aires, Argentina**

- **IETF 96 – July 2016 – Berlin, Germany**

- **IETF 97 – November 2016 – Seoul, South Korea**

- **IETF 98 – March 2017 – Chicago, USA**

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IETF 96: 17-22 July 2016, Berlin, Germany

http://www.ietf.org/meeting/96/

- **1,902 on-site participants from 65 countries**

- **Just 2 from RO!**

IETF 96 Hackathon (16-17 July 2016)

Held to encourage developers to discuss, collaborate and develop utilities, ideas, sample code and solutions that show practical implementations of IETF standards.

ISOC posts about IETF 96 at:

- https://www.internetsociety.org/deploy360/blog/tag/ietf96/

- https://www.internetsociety.org/rough-guide-ietf96/

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Next Meeting - IETF 97

13-18 November 2016, Seoul, Korea

http://www.ietf.org/meeting/97/

Remote participation available

- Audio streams

- Web conferencing systems

- Jabber chat rooms

IPv6 Activities

- **IPv6 now common across most working groups**

- **Some key groups:**
  - v6ops (IPv6 Operations) WG
  - 6man (IPv6 Maintenance) WG
  - homenet (Home Networking) WG
  - opsec (Operational Security) WG
  - sunset4 (Sunsetting IPv4) WG

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DNS/DNSSEC Activities

- **dnsop (DNS Operations) WG**
  - Focus on automation of DNSSEC including communication between zones

- **dane (DNS-based Authentication of Named Entities) WG**
  - www.internetsociety.org/deploy360/resources/dane/

- **DNS PRIVate Exchange (DPRIVE)**
  - "mechanisms to provide confidentiality to DNS transactions, to address concerns surrounding pervasive monitoring."

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Routing Activities

- **sidr (Secure Inter-Domain Routing) WG**
  - Focus on securing the routing infrastructure, RPKI, BGPSEC

- **idr (Inter-Domain Routing Working Group) WG**

- **grow (Global Routing Operations) WG**
  - operational problems associated with the global routing system, route leaks

Trust, Identity and Privacy

- **uta (Using TLS in Applications) WG**
  - Aim is to provide guidance to application developers

- **dane (DNS-based Authentication of Named Entities) WG**
  - Client Certificates in DANE TLSA Records, DANE and SMIME

- **acme (Automated Certificate Management Environment)**
  - automate certificate issuance, validation, revocation and renewal in WebPKI

- **trans (Public Notary Transparency) WG**
  - Certificate Transparence allows detection of the mis-issuance of certificates

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IETF Fellows Program

- **Fellowships available to enable people to attend IETF meetings**

- **http://bit.ly/ietf-fellows**

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"Regulators to the IETF" Program

- **Fellowships available for regulators to attend IETF and learn about IETF standards process**

- **http://bit.ly/ietf-fellows**

Summary

IETF makes the Internet work better

- **Fundamental role in Internet administration**

Your participation is critical to the success of the IETF

- **International scope, local relevance**

Open, inclusive, well established structure

- **Evolving together with the Internet**

More information

- **http://www.ietf.org/newcomers.html**

Thank You

http://www.internetsociety.org/deploy360/

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