

Internet Engineering Task Force Newcomers' Overview

February 2021



Welcome to the IETF!

IETF Note Well

<https://www.ietf.org/about/note-well/>

This is a reminder of IETF policies in effect on various topics such as patents or code of conduct. It is only meant to point you in the right direction. Exceptions may apply. The IETF's patent policy and the definition of an IETF "contribution" and "participation" are set forth in BCP 79; please read it carefully.

As a reminder:

- By participating in the IETF, you agree to follow IETF processes and policies.
- If you are aware that any IETF contribution is covered by patents or patent applications that are owned or controlled by you or your sponsor, you must disclose that fact, or not participate in the discussion.
- As a participant in or attendee to any IETF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.
- Personal information that you provide to IETF will be handled in accordance with the IETF Privacy Statement.
- As a participant or attendee, you agree to work respectfully with other participants; please contact the ombudsteam (<https://www.ietf.org/contact/ombudsteam>) if you have questions or concerns about this.

IETF Note Well (cont.)

<https://www.ietf.org/about/note-well/>

Definitive information is in the documents listed below and other IETF BCPs.
For advice, please talk to WG chairs or ADs:

- [BCP 9](#) (Internet Standards Process)
- [BCP 25](#) (Working Group processes)
- [BCP 25](#) (Anti-Harassment Procedures)
- [BCP 54](#) (Code of Conduct)
- [BCP 78](#) (Copyright)
- [BCP 79](#) (Patents, Participation)
- [Privacy Policy](#)

Newcomer Activities @ IETF 110

<https://www.ietf.org/how/meetings/110/newcomers>

- Newcomer's tutorial webinars (time and dates)
 - Tuesday, February 23 @ 1300 UTC
 - Friday, February 26 @ 0000 UTC
- Newcomers Ask Me Anything (AMA)
 - Tuesday, March 09 @ 14:00 UTC
 - Thursday, March 11 @ 15:30 UTC
- IETF Guides (sign ups ongoing now)

Scope: Preparing for an IETF Meeting

<https://www.ietf.org/about/participate/>

This presentation includes:

- Information immediately useful to you as you attend your first(ish) IETF meetings
- Strategies to make the most of the meeting (whether in person or remote)

This presentation does **not** include information about:

- The history of the IETF; How to write a “standard”; and many other things...

The IETF and Related Organizations

IETF Mission

<https://www.ietf.org/about/mission/>

The mission of the IETF is to make the Internet work better by producing high quality, relevant technical documents that influence the way people design, use, and manage the Internet.

[[RFC 3935](#)]



The IETF is ...

- A Standards Development Organization (SDO)
- With self-selected individual participants, no formal membership
- No formal voting (but we do hum...)
- No formal government role
- Driven by market-based adoption (a *real* standard is one people use)
- Focused on Internet technologies
- Bottom-up... and unique!

IETF Areas

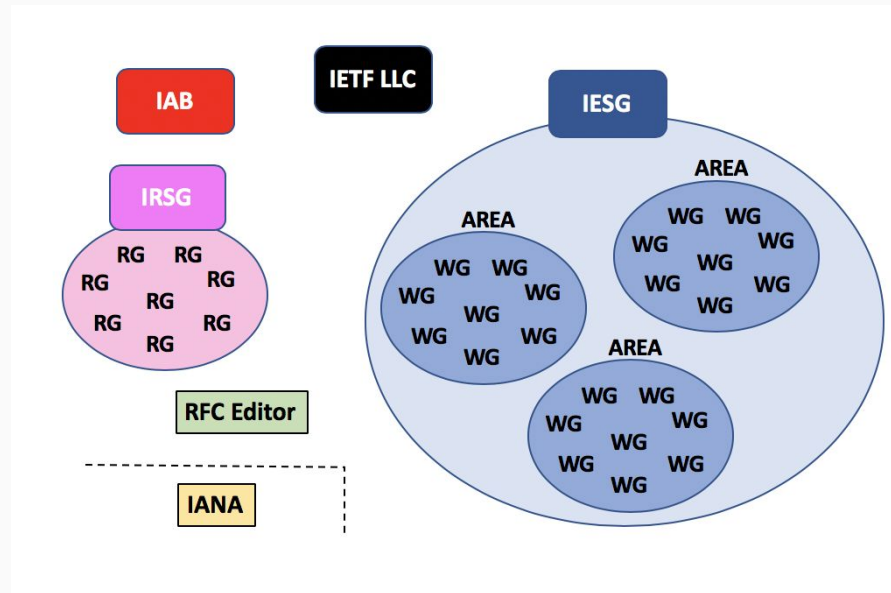
Applications and Real-Time (ART)	<ul style="list-style-type: none">• Application protocols and architectures• Real-time (communication) and non-real-time
Transport (TSV)	<ul style="list-style-type: none">• Mechanisms related to data transport on the Internet<ul style="list-style-type: none">- Includes congestion control
Routing (RTG)	<ul style="list-style-type: none">• Routing and signaling protocols
Internet (INT)	<ul style="list-style-type: none">• IPv4/IPv6, DNS, DHCP, mobility
Operations and Management (OPS)	<ul style="list-style-type: none">• Network management• Operations: IPv6, DNS, security, routing
Security (SEC)	<ul style="list-style-type: none">• Security protocols and mechanisms
General (GEN)	<ul style="list-style-type: none">• Activities focused on supporting and updating IETF processes

The IETF and Consensus

- IETF mantra:
 - “We reject kings, presidents and voting. We believe in rough consensus and running code.”
- Rough consensus is achieved when all issues are addressed, but not necessarily accommodated
- Dissenting opinions are heard, but are not controlling
- Humming: a way of measuring consensus that is not voting
- Session chair is responsible for building consensus
- WG mailing list consensus has to be taken into account
- “On Consensus and Humming in the IETF”, P. Resnick, [[RFC 7282](#)]

Alphabet soup

- IESG -- Internet Engineering Steering Group
 - Areas and Working Groups here!
- IRTF -- Internet Research Task Force
 - Research Groups here!
- IAB -- Internet Architecture Board
- IETF LLC -- IETF Administration LLC



Who does what?

- **IESG:** responsible for technical management of IETF activities and the Internet standards process
- **IRTF:** a parallel organization focused on longer-term research topics for the Internet
- **IAB:** provides oversight of the Internet architecture and the standards process
- **IETF LLC:** provides the corporate legal home for the IETF, the IAB, and the IRTF; provides fiscal and administrative support

IETF Week in a Nutshell

An IETF Meeting week (in person)

- Organized events on the agenda include:
 - Working Group sessions: ~130 working groups (some subset meeting)
 - Birds of a Feather sessions (BOFs)
 - IRTF sessions: ~ 15 research groups (some subset meeting)
 - Area-wide sessions, IETF-wide plenary(s), invited lunch talks
 - Hackathon and Code Sprint
 - Social Events
 - Tutorials, Deep Dives & Lunch Sessions
 - Hot RFC Lightning Talks
 - Side Meetings, Open Time

An IETF Meeting week (cont.)

Activities not on the agenda include:

- Hallway meetings
- Many Bar BOFs
- Marathon Editing Sessions

We have an **App** (IETFers)!



The **Agenda** is your friend!

<https://datatracker.ietf.org/meeting/110/agenda>



IETF 110 Meeting week (online)

- IETF 110 will be all online 8-12 March 2021 (with a few activities in the two weeks preceding...
 - Newcomer's overviews and Meetecho training sessions are the week of 22-24 February 2020
 - Hackathon is online 1-5 March
 - Newcomer Ask Me Anything Sessions will be held in the IETF 110 Gather space on Tuesday, March 09 @ 14:00 UTC and Thursday, March 11 @ 15:30 UTC
- Meetings will run 12:00 to 18:00 UTC
- All session information will be linked from the IETF Datatracker agenda page
 - <https://datatracker.ietf.org/meeting/agenda/>
- Informal side meetings (<https://trac.ietf.org/trac/ietf/meeting/wiki/110sidemeetings>)
- Additional information on how to participate:
 - <https://www.ietf.org/how/meetings/110/session-participant-guide/>
- Newcomer specific activities (<https://www.ietf.org/how/meetings/110/newcomers/>)

Working Group sessions

- Biggest part of an IETF week
- Most work is done on mailing lists in between meetings
- Face-to-face meetings mostly focused on solving key issues
- Sessions are streamed & recorded
- Charter (including milestones) is negotiated with area director



Birds-of-a-Feather (BOF) sessions

- Often precedes formation of a WG
- Usually includes discussion of a proposed WG charter
- Sometimes a one-shot for a timely topic
- Proposed by a group interested in a topic
- Approved by ADs
- Generally meet only once



IRTF Research Group sessions

- Officially an activity of the IAB
- Focused more on research versus engineering topics
- IRTF RGs often meet at IETF meetings
- IRTF meetings at the IETF are open to all IETF attendees

Useful reference on the IRTF: RFC 7418
“An IRTF Primer for IETF Participants”

[\[RFC 7418\]](#)



Area-wide Sessions, Plenaries, and invited lunch talks



POTENTIAL OUTCOME: IETF TAKES LEADERSHIP ROLE
IETF91

The IETF has leverage-able experience in:

- Protocol definition
- Architecture definition
- Modeling languages

The IETF has RIGHT FOCUS

- Not too broad (e.g. not Health & Safety, etc.)
- Not too narrow (e.g. single service domain)

• APIs Platforms and Frameworks WILL be the future standards front for software driven network architectures

• Same standardization reasoning applies to these higher level concepts – system design, interoperability, and choice.

A diagram consisting of four interconnected circles: a blue circle labeled 'Protocol', a green circle labeled 'YANG Models', a purple circle labeled 'API', and a teal circle labeled 'Framework Definition'. The circles are arranged in a diamond shape and are connected to each other.



Four kinds of predictions

1. 5G
2. 6G
3. Network applications
4. Network applications

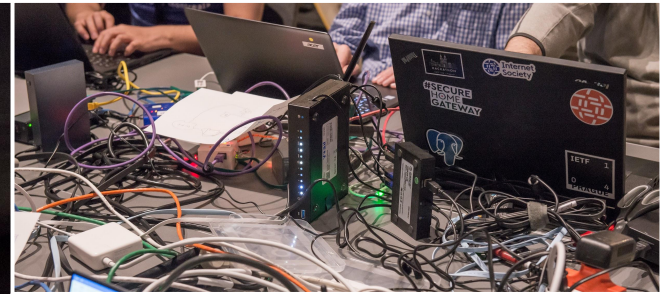
Internet as a utility is water + electricity
Prediction: this will meet 100% of 5G/6G

8G

A speaker presenting to an audience in a conference room. The speaker is standing at a podium, gesturing towards the audience. The audience is seated in rows, facing the speaker. There are screens on the wall behind the speaker.



Hackathons and Code Sprints



Hackathon Details

- Free to participate, open to everyone
- Collaborative, working toward shared goals
- Advance pace and relevance of IETF standards
 - Flush out ideas, feed back into working groups
- Attract developers, universities
 - Team newcomers with veterans
 - Reduce time to meaningful contribution
- Weekend at start of each IETF meeting
 - Week before IETF meeting when meeting is online only
- <https://www.ietf.org/how/runningcode/hackathons/>

Networking and Social Events



But wait... there is more...

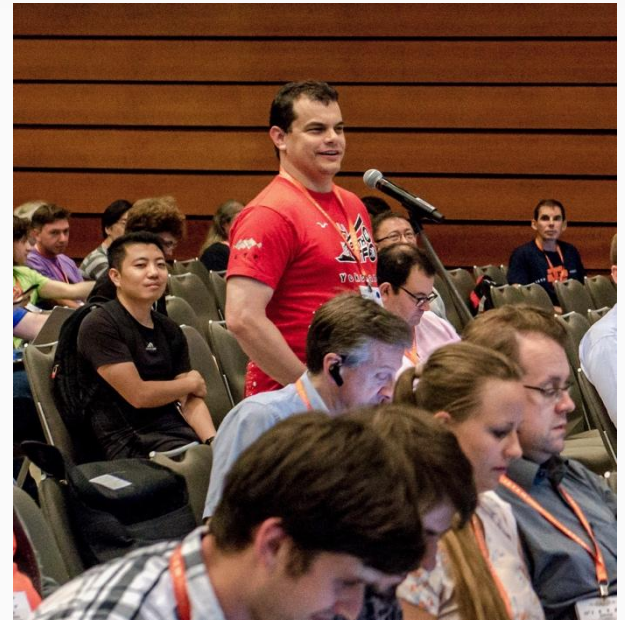
- Side meetings (ongoing agenda experiment)
 - <https://trac.ietf.org/trac/ietf/meeting/wiki/110sidemeetings>
- Technology Deep Dive: Domain Name System (DNS) part 2
 - <https://www.ietf.org/live/ietf110-tdd>

General Meeting Etiquette

- Read documents of interest before WG sessions
- Behave respectfully and tolerantly towards all participants
- Talk (and listen) to people
- Enjoy yourself
- Remember to sleep!

IETF Session Etiquette - the online version!

- Practice good online meeting practices.
 - Test your configuration in advance.
 - Keep yourself muted and video off except when speaking.
 - Use a headset if possible
 - Speak slowly and clearly. Be concise.
- Technical comments & questions are welcome
- Use the WG Jabber channel to discuss meeting-relevant topics



Bringing New Work to the IETF

- Develop some collaborators with similar interest
- Write some initial drafts, maybe have some Bar BoFs
- Talk to Area Directors in the relevant area (maybe DISPATCH)
- Propose a BoF (drafts, charter, agenda all needed)
- Hold the BoF (Consensus determines the next steps)
- But first... Check out ... Tutorial on Bringing New Work to the IETF:
 - slides: <https://www.ietf.org/proceedings/103/slides/slides-103-edu-ses-sl-bringing-new-work-to-the-ietf-00.pdf>
 - video: <https://www.youtube.com/watch?v=YnK3rsZG4Ec>

The Resources

- People
- Information
- Tools

IETF Participants (and culture)



Passionate, smart,
vocal people.

Have a question?
Don't be shy; we're
all here to help.



Technical excellence
is highly valued.

Do your homework
then please speak up
and contribute!



Informal dress code.
(when we meet in
person or are on
camera!)



Close working
relationships
(people know each
other)

Area Directors (ADs) and WG Chairs

- Working Group Chairs
 - <https://datatracker.ietf.org/wg/photos/>
- Area Directors
 - <https://www.ietf.org/about/groups/iesg/members/>
- IETF General Chair - Alissa Cooper
 - <https://datatracker.ietf.org/person/Alissa%20Cooper>

NOTE: If you have any questions or concerns about working group operations or behaviors, please feel free to discuss these with either the working group chairs or the responsible Area Directors for that working group.

IETF Executive Director



Jay Daley

<https://datatracker.ietf.org/person/Jay%20Daley>

IETF Secretariat



RFC Editor Staff & IANA Staff



The Ombudsteam

- IETF Participants must not engage in harassment while at IETF meetings, virtual meetings, or social events or while participating in mailing lists.
 - Report any harassment to the [Ombudsteam](#) ([RFC 7776](#), [BCP 25](#))
<https://www.ietf.org/blog/ietf-anti-harassment-policy/>
 - Allison Mankin, Pete Resnick, Melinda Shore



Newcomer Resources

The Tao of the IETF:

A Novice's Guide to the Internet Engineering Task Force

<https://www.ietf.org/about/participate/tao/>

Newcomer's Information Page for IETF 110

<https://www.ietf.org/how/meetings/110/newcomers/>

Tutorials:

<https://www.ietf.org/about/participate/tutorials/>

More Meeting Resources

First-time attendees mailing list

<https://www.ietf.org/mailman/listinfo/110-newcomers>

IETF Systems

<https://www.ietf.org/blog/ietf-systems/>

Meeting mailing lists

<https://www.ietf.org/how/meetings/ietf-meeting-mailing-lists/>

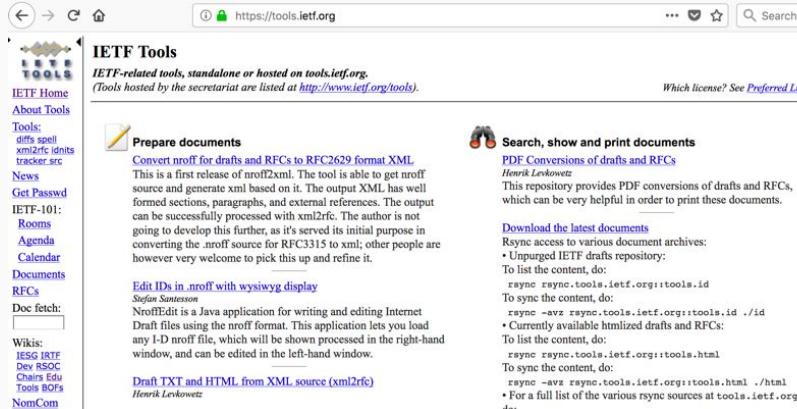
Meeting issues: <https://www.ietf.org/how/meetings/issues/>

One stop shop for all links: <https://www.ietf.org/links/>

Datatracker and Tools Page

IETF Datatracker

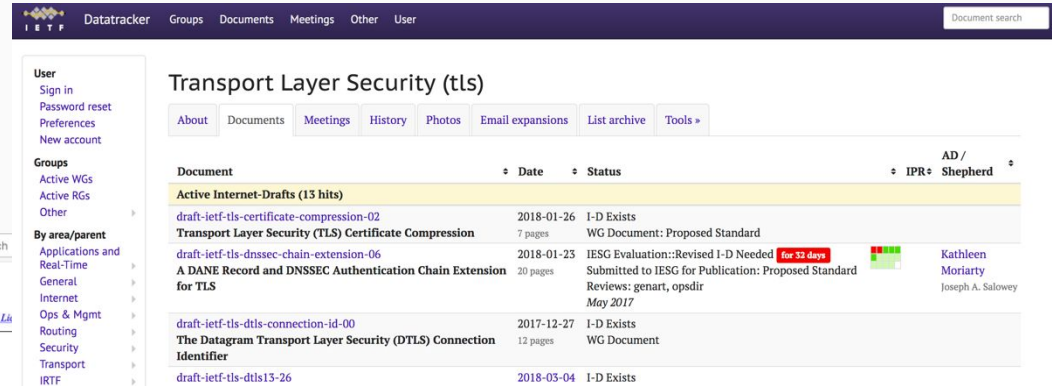
<https://datatracker.ietf.org/>



The screenshot shows the IETF Tools page. At the top, it says "IETF Tools" and "IETF-related tools, standalone or hosted on tools.ietf.org." Below this, there are several tool categories:

- Prepare documents:** Convert nroff for drafts and RFCs to RFC2629 format XML. This is a first release of nroff2xml. The tool is able to get nroff source and generate xml based on it. The output XML has well formed sections, paragraphs, and external references. The output can be successfully processed with xml2rfc. The author is not going to develop this further, as it's served its initial purpose in converting the nroff source for RFC3315 to xml; other people are however very welcome to pick this up and refine it.
- Edit IDs in nroff with wysiwyg display:** NroffEdit is a Java application for writing and editing Internet Draft files using the nroff format. This application lets you load any I-D nroff file, which will be shown processed in the right-hand window, and can be edited in the left-hand window.
- Draft TXT and HTML from XML source (xml2rfc):** Henrik Levkowetz

Other tools listed include: diff5, spell, xml2rfc, idnits, tracker, etc. News, Get Passwd, IETF-101: Rooms, Agenda, Calendar, Documents, RFCs, Doc fetch, Wikis (IESG, IRTF, Dev, RSOC, Chairs, Edu, Tools, BOFs, NomCom).



The screenshot shows the IETF Datatracker page for Transport Layer Security (tls). The page has a navigation bar with "Datatracker", "Groups", "Documents", "Meetings", "Other", and "User". A search bar is in the top right. The main content area is titled "Transport Layer Security (tls)" and has tabs for "About", "Documents", "Meetings", "History", "Photos", "Email expansions", "List archive", and "Tools".

Below the tabs, there is a table of documents:

Document	Date	Status	AD / IPR	Shepherd
Active Internet-Drafts (15 hits)				
draft-ietf-tls-certificate-compression-02	2018-01-26	I-D Exists		
Transport Layer Security (TLS) Certificate Compression	7 pages	WG Document: Proposed Standard		
draft-ietf-tls-dnssec-chain-extension-06	2018-01-23	IESG Evaluation::Revised I-D Needed for 32 days		Kathleen Moriarty
A DANE Record and DNSSEC Authentication Chain Extension for TLS	20 pages	Submitted to IESG for Publication: Proposed Standard		Joseph A. Salowey
		Reviews: genart, opsdirt		
		May 2017		
draft-ietf-tls-dtls-connection-id-00	2017-12-27	I-D Exists		
The Datagram Transport Layer Security (DTLS) Connection Identifier	12 pages	WG Document		
draft-ietf-tls-dtls13-26	2018-03-04	I-D Exists		

Tools Page

<https://tools.ietf.org/>

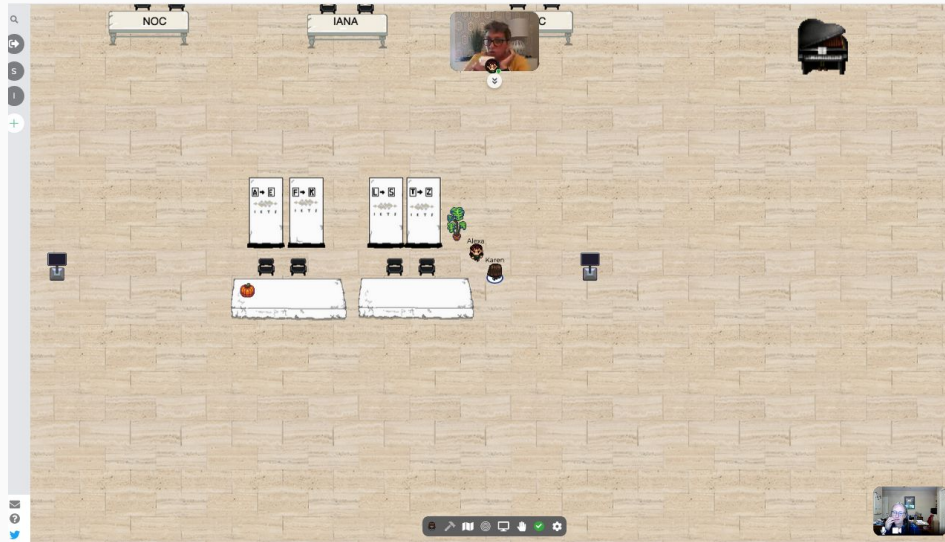
Meetecho

- Meetecho is the IETF custom tool for remote participation!
- All sessions are linked off of the datatracker agenda page.
- Additional information <https://www.ietf.org/how/meetings/110/session-participant-guide/>
- Participant Practice sessions

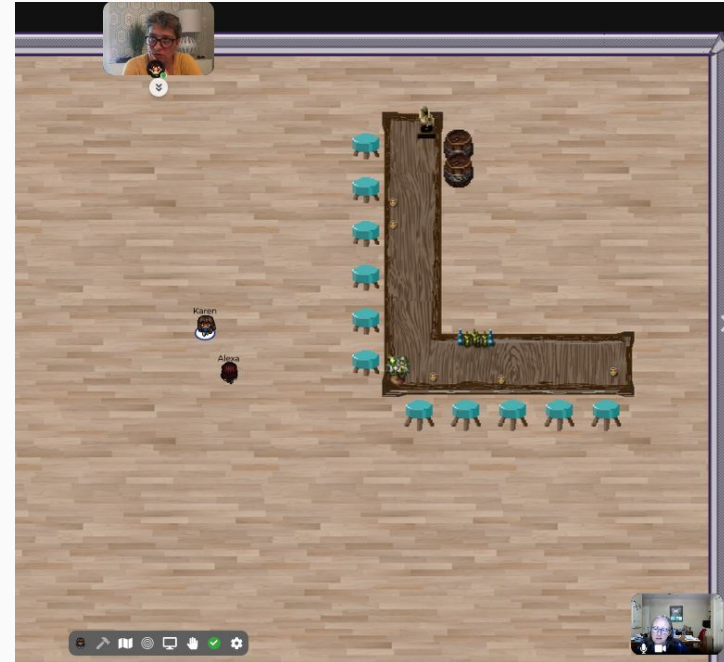


The Meetecho team at IETF 83, (left to right) Lorenzo Miniero, Simon Romano, Tobia Castaldi, and Alessandro Amirante

gather.town: The IETF virtual hallway track



Stay tuned for links and directions!



Jabber/XMPP Groupchat

The IETF uses eXtensible Messaging and Presence Protocol (XMPP) [[RFC 6120](#)] to host a number of chat rooms during the IETF meeting.

- Used to ask questions and provide a hint of where the discussion is at on slides for audio remote listeners.
- Integrated into Meetecho for IETF 110 Online sessions
- More information at:
<https://www.ietf.org/how/meetings/jabber/>

Above all: Enjoy!



Questions or Feedback?



What did we miss?

Please help us help you - answer our survey!

https://ietf.iad1.qualtrics.com/jfe/form/SV_9ymwhsQBABFi8R

For any additional questions, feel free to contact us at edu-team@ietf.org

