

# DetNet WG

## IETF 121

Dublin

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Online Agenda and Slides at:

<https://datatracker.ietf.org/meeting/121/session/detnet>

WG Information: <https://datatracker.ietf.org/wg/detnet/>



This session is being recorded

# IETF 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.

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

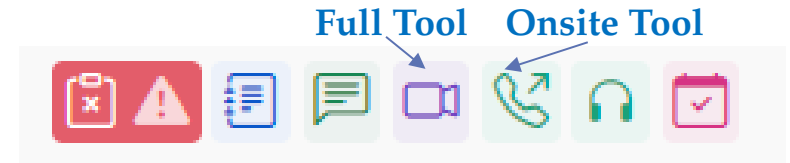
- BCP 9 (Internet Standards Process)
- BCP 25 (Working Group processes)
- BCP 25 (Anti-Harassment Procedures)
- BCP 54 (Code of Conduct)
- BCP 78 (Copyright)
- BCP 79 (Patents, Participation)
- <https://www.ietf.org/privacy-policy/> (Privacy Policy)

Also see: <http://www.ietf.org/about/note-well.html>

# IETF Conduct Guidelines

- The IESG has asked all chairs to remind their working groups of the need for appropriate behavior. This is described in more detail in BCP 54. In summary:
  1. IETF participants extend respect and courtesy to their colleagues at all times.
  2. IETF participants have impersonal discussions.
  3. IETF participants devise solutions for the global Internet that meet the needs of diverse technical and operational environments.
  4. Individuals are prepared to contribute to the ongoing work of the group.

# IETF 121 Meeting Tips



- **In-person participants**

- Make sure to sign into the session using the Meetecho Onsite Tool from the Datatracker agenda
- Use Meetecho to join the mic queue
- *Keep audio and video off if not using the onsite version*

- **Remote participants**

- Make sure your audio and video are off unless you are chairing or presenting during a session
- Use of a headset is strongly recommended

# Meeting Administrivia

- Meetecho
  - Using meetecho queue control
  - Chat/Jabber available for use
  - Blue sheets
- Note taking
  - <https://notes.ietf.org/notes-ietf-121-detnet?both>
  - Please help with minute taking (only discussion needs to be captured)
- Online Agenda and Slides at:  
<https://datatracker.ietf.org/meeting/121/session/detnet>
- Data tracker: <http://datatracker.ietf.org/wg/detnet/>
- Chat: <https://zulip.ietf.org/#narrow/stream/detnet>

# Agenda

- 01) Intro, WG Status, Draft Status
- 02) DetNet Controller Plane Framework
- 03) RAW Architecture
- 04) Dataplane Enhancement Taxonomy
- 05) Latency Guarantee with Stateless Fair Queuing
- 06) Deadline Based Deterministic Forwarding
- 07) Timeslot Queueing and Forwarding Mechanism
- 08) Mechanism to control jitter caused by policing in Detnet
- 09) Resilient Cycle Queueing and Forwarding
- 10) Data Unit Groups for DetNet-Enabled Networks

● 15:00 END

# Reminder

- **WG Authors:** please focus on
  - a) Changes from last meeting
  - b) Plans to complete the document
  - c) Please keep to scheduled time, including discussion.
  
- **Non-WG documents:** please focus on
  - a) What area of the WG charter is addressed by the draft
  - b) For new drafts, a summary of technical details  
for old drafts, what has changed
  - c) Next step or what is needed from the WG

# WG Status

- New RFCs
  - [RFC 9633](#) – Deterministic Networking (DetNet) YANG Data Model
  - [RFC 9634](#) – Operations, Administration and Maintenance (OAM) for (DetNet) with the IP Data Plane
- Publication requested
  - [draft-ietf-raw-technologies-13](#) <== Publication Requested (with AD)  
Reliable and Available Wireless Technologies
- WG last call
  - [draft-ietf-raw-architecture-21](#) – Reliable and Available Wireless Architecture (On agenda, 2<sup>nd</sup> LC)
  - [draft-ietf-detnet-controller-plane-framework-07](#) – Controller Plane Framework (On agenda)
- Recent adoption
  - None
- Candidate for adoption
  - None



# WG Status

- Not on agenda
  - [draft-ietf-detnet-scaling-requirements-06](#)  
Requirements for Scaling Deterministic Networks
  - [draft-ietf-detnet-ran-industrial-req-01](#)  
Requirements for Reliable Wireless Industrial Services
- Expired
  - [draft-ietf-ran-framework-02](#) <=== Last update: 23-09-13  
Reliable and Available Wireless Framework
  - [draft-ietf-detnet-topology-yang-01](#) <=== Last update: 23-04-07  
Deterministic Networking (DetNet) Topology YANG Model

# Liaisons Statements Received

2024-04-10	ITU-T-SG-13	<a href="#">LS on work items related to deterministic networking in SG13</a>	for information
<i>... new ... Draft Recommendation ITU-T Y.3129 (formerly Y.det-FQ-rf) "Requirements and framework for stateless fair queuing in large scale networks including IMT-2020 and beyond"</i>			
2024-10-25	IEEE 802.1	<a href="#">Liaison response to LS 156 on work items related to deterministic networking in SG13</a>	for information
Response from IEEE 802.1 to the above ITU-T SG13 LS, DetNet WG in cc (dated: 2024-07-18)			
2024-08-27	ITU-T-SG-13	<a href="#">LS on request for feedback on work items related to deterministic networking in SG13</a>	<b>for action</b> by 2025-02-14
<i>... SG13 would like to seek your feedback as to the above work items, in particular with regard to their relation to work conducted by IEEE and IETF, possible overlap with your work, and/or further opportunities for collaboration you see between our organisations. ...</i>			
2024-10-28	5G-ACIA	<a href="#">5G-ACIA LS on DetNet for 5G Industrial Use Cases</a>	for information
<i>5G-ACIA is glad to inform the IETF DetNet Working Group about the publication of 5G-ACIA's white paper on "DetNet-based deterministic IP communication over 5G network for industrial applications" ... The white paper includes a summary of the IETF standardization work on DetNet. Additionally, it identifies the potential for progress on the standardization of the DetNet Controller Plane (for the IP data plane). ...</i>			

# Outgoing Liaisons Statements and Communications

- Communications on draft-ietf-raw-technologies to
  - 3GPP RAN2, RAN3, SA2, SA3
    - [Draft LS](#) sent to list, no objections from WG
  - IEEE 802.11 and 802.15
    - via the [IETF – IEEE 802 Coordination Team](#)

# Reminder: IPR Disclosure Process

- We follow process put in place in other groups as a result of very late IPR disclosures
  - This is not a required IETF process

- Includes

Polling of draft authors & contributors:

1. Prior to moving to next step in WG process
  - a. Before an individual draft becomes a WG document and
  - b. Before a WG document goes to last call
2. Requires IPR compliance statement from **all** listed in draft
3. Request that an IPR statement be sent to the list by any new author or contributor when added to a WG document

# Reminder: Document Status

- We ask authors of all WG document to provide a status update to the WG at *\*every\** IETF meeting
  - Status includes, at a minimum, recent changes, open issues, and plan to complete document
  - Via:
    - (a) A report during the IETF session
    - (b) An e-mail to WG list, sent no later than the Internet-Draft submission cut-off

# Progressing Work

- Utilize the mailing list!
  - Working Group consensus is determined on the mailing list
  - Mailing list is to be used for WG decision making and discussions
    - Resolving open issues
    - Reviewing changes to WG documents
    - Introducing new drafts
    - Potential new Working Group topics
- Virtual meetings
  - Virtual interims can be scheduled as needed
    - Periodically, or as needed to cover a specific topic **<==** WG members can make requests to chairs
- Informal (working) meetings
  - Meetecho is available **<==** WG members can make requests to chairs/secretary
  - These meetings will be announced on the WG list

# Plan for Queuing Solutions

- Now that have a Taxonomy document, time to consider approach for progressing queuing solution(s)
  - Some key questions:
    - How many to progress?
    - How do we choose?
- Proposed approach
  - Leverage Taxonomy document's functional characterization to identify categories of solutions
    - Definitions of categories to be added to Taxonomy document
  - WG to select, at most, one solution per category
    - WG may choose to not publish a solution for some categories