



I E T F[®]

Computing-Aware Traffic Steering (cats)

IETF 116, Yokohama

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Online Agenda and Slides: <https://datatracker.ietf.org/meeting/116/session/cats>

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

Note taking: <https://notes.ietf.org/notes-ietf-116-cats>



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.
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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.

Meeting Administrivia

- Meetecho:
 - We are using Meetecho queue control
 - Chat available for use via Meetecho/Zulip
 - Blue sheets
- Note taking:
 - <https://notes.ietf.org/notes-ietf-116-cats>
 - Cheng Li and Linda Dunbar have volunteered, but...
 - Please help with minute taking
 - Please check that your comments are recorded correctly
- Session Materials: <https://datatracker.ietf.org/meeting/116/session/cats>
- Data tracker: <http://datatracker.ietf.org/wg/cats/>
- Zulip: <https://zulip.ietf.org/#narrow/stream/cats>

Meeting Tips



In-person participants

- Make sure to sign into the session using the Meetecho (usually the “onsite tool” client) from the agenda
 - <https://meetings.conf.meetecho.com/onsite116/?group=cats&short=&item=1>
- Use Meetecho to join the mic queue
- ***Keep audio and video off, if not using the onsite version***
- ***Please wear a mask according to latest IETF policy***

Remote participants

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

Acknowledgement

Thanks for John Scudder and Jim Guichard to provide the guidance and help for the WG forming to discuss this work.

Thanks for Joel Halpern, Dino Farinacci, Jari Arkko, Cullen Jennings, Martin Duke and Zhenbin Li to provide the comments to abstract the CATS directions and work items.

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Agenda

Slot	Start	Duration	Information
1	15:30	5 mins	Title: Meeting admin Presenter: Chairs
2	15:35	5 mins	Title: Quick review of charter deliverables and milestones Presenter: Chairs
3a	15:40	10 mins	Title: Problem statement and use cases Presenter: Kehan Yao Drafts: https://datatracker.ietf.org/doc/draft-yao-cats-ps-usecases/
3b	15:50	10 mins	Title: SDWAN and SFC use cases Presenter: Shuai Zhang Drafts: https://datatracker.ietf.org/doc/draft-zhang-cats-computing-aware-sdwan-usecase/ https://datatracker.ietf.org/doc/draft-zhang-cats-computing-aware-sfc-usecase/
4	16:00	10 mins	Title: Gap Analysis and Requirements Presenter: Daniel Huang Drafts: https://datatracker.ietf.org/doc/draft-yao-cats-gap-reqs/
5	16:10	15 mins	Title: Framework and Architecture Presenter: Cheng Li Drafts: https://datatracker.ietf.org/doc/draft-ldbc-cats-framework/
6a	16:25	10 mins	Title: Compute Resource Modeling Consideration Presenter: Kehan Yao Drafts: https://datatracker.ietf.org/doc/draft-du-cats-computing-modeling-description/
6b	16:35	10 mins	Title: Compute Metric Distribution Presenter: Hang Shi Drafts: https://datatracker.ietf.org/doc/draft-shi-cats-analysis-of-metric-distribution/
7	16:45	10 mins	Title: Open Discussion
8	16:55	5 mins	Title: Next steps Presenter: Chairs

Deliverables and Milestones

- All drafts are welcome
 - Post them in the Datatracker
 - Discuss them on the list
- But...
 - Our initial focus must be on our deliverables and milestones
- Milestones are very clear...

Date	Milestone
Jul 2023	Adopt the CATS Problem Statement, Use Cases, Gap Analysis, and Requirements documents
Jul 2024	Adopt the CATS Framework and Architecture document
Nov 2025	Submit the CATS Framework and Architecture document to the IESG for publication as Informational

- Note well: Only the Framework and Architecture are list as going for RFC

Groundwork

- The charter is clear: the WG must make progress on “groundwork”
 - **Problem statement** for the need to consider both network and computing resource status.
 - **Use cases** for steering traffic from applications that have critical SLAs that would benefit from the integrated consideration of network and computing resource status.
 - **Requirements** for commonly agreed **computing metrics** and their distribution across the overlay network, as well as the appropriate **frequency and scope of distribution**.
- Scope for “additional groundwork”
 - Analyze the **suitability and usefulness of computing and networking metrics** for traffic steering decisions in CATS with a CATS metrics ontology as a possible outcome.
 - Analyze **methods for distributing the necessary information** to utilize the identified metrics in CATS use cases.
- Also study applicability of existing tools and mechanisms:
 - Analysis of implementing the CATS control and data plane using existing mechanisms, including identifying **the limitations of existing tools** in fulfilling requirements.
 - Study potential new approaches for the CATS control and data plane solution that can **fill the identified gaps in existing tools and solutions**.
 - Study **FCAPS** (fault, configuration, accounting, performance, security) requirements, mechanisms, and suitability of existing messaging protocols (NETCONF) and data models (YANG).