

# IETF 115 Hackathon

5-6 November 2022

This session is being recorded

IETF 115 London  
hosted by





Image credit: National Library of Medicine



# Welcome !

- First IETF Hackathon?

# Welcome !

- First IETF Hackathon?
- First IETF event?

# Welcome !

- First IETF Hackathon?
- First IETF event?
- First in-person event since COVID-19?

# Why Are We Here

- Advance pace and relevance of IETF standards
  - Bring speed and collaborative spirit of open source community into IETF
  - Flush out ideas, feed into working group sessions
  - Produce sample code, reference implementations, utilities
- Attract developers, new people to IETF
  - Match new, skillful developers with IETF veterans
  - University engagement

# 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.

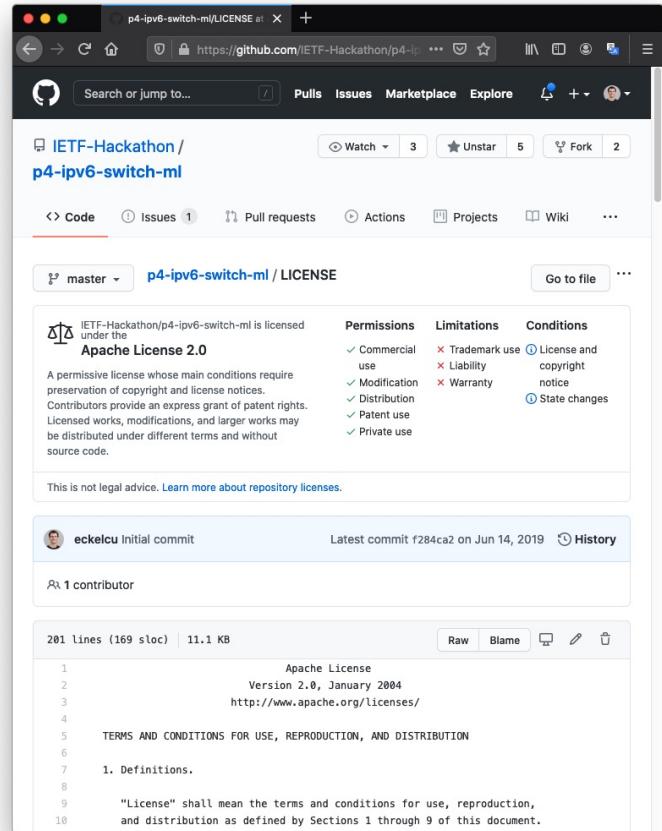
Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:

- [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)



# Code Contribution Guidelines

- Participants can work on any code
- Rules regarding code are per participant's organization and the code's license
- The code itself is NOT an IETF contribution
- Discussions, presentations, and demos in Hackathon are IETF contributions. In this context, Hackathon is like a working group, and the usual IETF copyright and IPR disclosure rules apply



# Projects

- On the [Hackathon wiki](#)

The screenshot shows a web browser displaying the IETF Community Wiki. The page title is "Projects Included in Hackathon". A search bar is at the top. Below the title, there's a note about projects being open to everyone, with some marked as particularly good for newcomers. Three projects are listed with their details:

- ANIMA ACP hacking**
  - Champion(s): Michael Richardson (mcr+ietf at [sandelman.ca](mailto:sandelman.ca))
  - Project info:
    - Work on [RFC8994](#), [RFC8995](#) with a focus on onboarding of new devices, but also upon construction of the ACP among some test equipment.
- Streamlining Social Decision Making for Improved Internet Standards (sodestream)**
  - Champion(s): Stephen McQuistin (sm at [smcquistin.uk](mailto:smcquistin.uk)), Ignacio Castro (i.castro at [gmul.ac.uk](mailto:gmul.ac.uk))
  - Project info:
    - Working on tasks related to the sodestream ([sodestream.github.io](https://sodestream.github.io)) project, which applies natural language processing and social networking techniques to data produced by the IETF, in order to better understand standardisation processes.
- SRv6 Data-Plane Visibility**
  - Champion(s): Thomas Graf (thomas.graf at [swisscom.com](mailto:swisscom.com)), Benoit Claise (benoit.claise at [huawei.com](mailto:huawei.com))

# Projects

- On the [Hackathon wiki](#)
- Not sure which project to join?
- Check the [Lost & Found](#)

The screenshot shows a section of the IETF Community Wiki titled "Hackathon Lost and Found". At the top, there is a navigation bar with icons for search, refresh, and user profile, followed by the title "IETF Community Wiki". Below the title, a breadcrumb navigation shows the path: Home / meeting / 115 / hackathon / lost&found. The main content area has a heading "Hackathon Lost and Found" and two buttons: "Edit" and "Edit on GitHub".

## Hackathon Lost & Found

Are you a Hackathon participant looking for a team to join?  
Are you championing a Hackathon project and in need of some specific expertise?  
If you answered yes to either of these, you have come to the right place.

Participants looking for a team are encouraged to add themselves to the "Skills to Offer" table, providing some information about their skills and interests. This will help others with matching needs and/or interests find you.

Champions wanting help on their projects are encouraged to add themselves to the "Skills Needed" table, providing some information about the skills they seek.

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### Skills to Offer

Name Email Address Skills and/or interests you have to offer

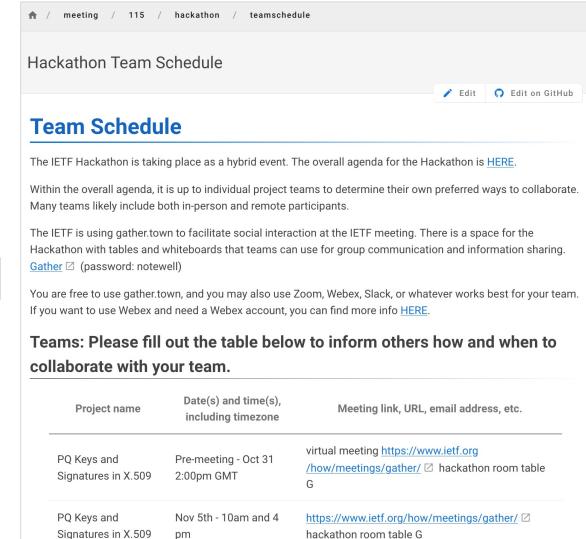
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### Skills Needed

Name Email Address Skills your team needs

# Agenda - Saturday

- **09:30** : Room open for setup by project champions
- **10:00** : Room open for all - pastries and coffee provided
- **10:30** : Hackathon kickoff, [Meetecho](#)
- **10:45** : Form Teams, see [Team Schedule](#)
- **12:30** : Lunch provided
- **15:30** : Afternoon break - snacks provided
- **18:30** : Dinner provided
- **21:00** : Room closes



The screenshot shows a GitHub page titled "Hackathon Team Schedule". The URL is [https://github.com/ietf-hg/meeting/115/hackathon/teamschedule](#). The page has a "Team Schedule" section with the following content:

The IETF Hackathon is taking place as a hybrid event. The overall agenda for the Hackathon is [HERE](#). Within the overall agenda, it is up to individual project teams to determine their own preferred ways to collaborate. Many teams likely include both in-person and remote participants.

The IETF is using gather.town to facilitate social interaction at the IETF meeting. There is a space for the Hackathon with tables and whiteboards that teams can use for group communication and information sharing. [Gather](#) (password: notewell)

You are free to use gather.town, and you may also use Zoom, Webex, Slack, or whatever works best for your team. If you want to use Webex and need a Webex account, you can find more info [HERE](#).

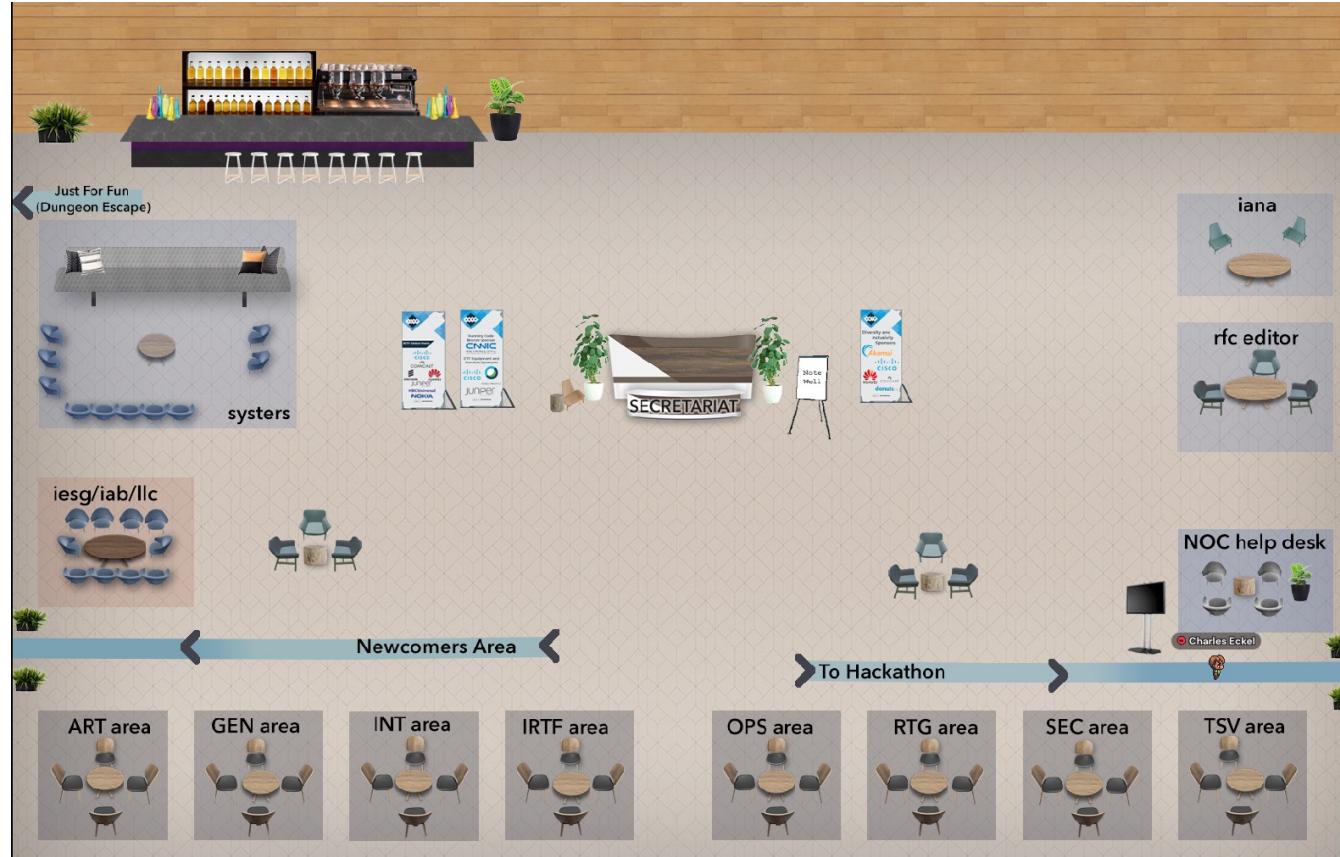
**Teams: Please fill out the table below to inform others how and when to collaborate with your team.**

Project name	Date(s) and time(s), including timezone	Meeting link, URL, email address, etc.
PQ Keys and Signatures in X.509	Pre-meeting - Oct 31 2:00pm GMT	virtual meeting <a href="https://www.ietf.org/how/meetings/gather/">https://www.ietf.org/how/meetings/gather/</a> hackathon room table G
PQ Keys and Signatures in X.509	Nov 5th - 10am and 4 pm	<a href="https://www.ietf.org/how/meetings/gather/">https://www.ietf.org/how/meetings/gather/</a> hackathon room table G

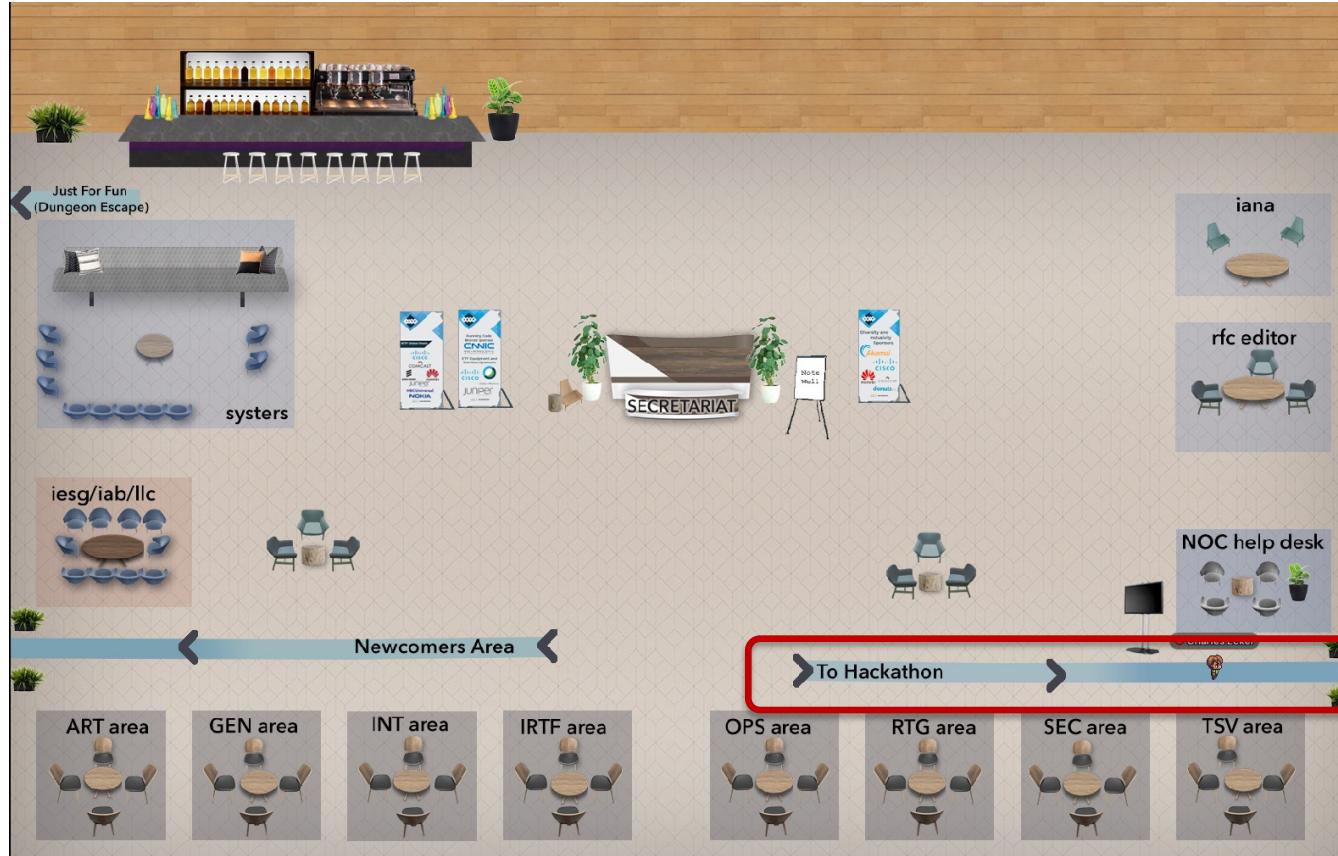
# Agenda - Sunday

- **09:30** : Room opens - pastries and coffee provided
- **12:30** : Lunch provided
- **13:30** : Hacking stops, prepare brief presentation of project
- **14:00** : Project results presentations, [Meetecho](#)
- **16:00** : Hackathon ends
- **17:00** : Tear down complete

# Gather <https://app.gather.town/app/L4fNNdm1NJa1sE2v/ietf>



# Gather <https://app.gather.town/app/L4fNNdm1NJJa1sE2v/ietf>



IETF Hackathon

# Hackathon Space

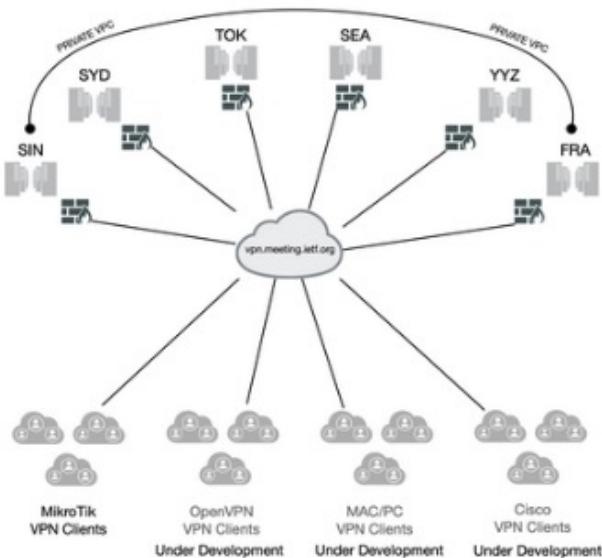


BACK TO MAIN SPACE

# HackNet (<https://hacknet.meeting.ietf.org>)

- The NOC team experiment allows you to join the IETF network while attending remotely
- Version 2 is a complete rebuild of the network
  - Auto provisioning of credentials and device configuration
  - MikroTik is the only hardware that is supported
  - More device types to be added
  - Legacy Pi network is still active but will not have future development or support

HackNet VPN Diagram



# Results Presentations

1. What problem you tried to solve?
2. What you achieved?
3. Highlights
  - Lessons learned
  - Feedback to working group
  - Open source, other SDOs

***4 minutes max***



<https://github.com/ietf-hackathon>

The screenshot shows a GitHub repository page for "ietf-hackathon". The repository name is "IETF-Hackathon". It has 17 followers and an email address for contact: [hackathon@ietf.org](mailto:hackathon@ietf.org). The repository description is: "Repository for sharing code, presentations, and other artifacts at IETF hackathons".

The "Overview" tab is selected. Below it, there is a "Pinned" section containing a repository named "ietf115-project-presentations" (Public). The description for this repository is: "Project results presentations at end of Hackathon". It has 1 HTML file.

On the right side, there is a "People" section showing profile icons of several contributors. Below it, a "Top languages" chart indicates the most used languages in the repository: HTML (red), C (dark grey), Python (blue), Shell (green), and JavaScript (yellow).

The main area also lists other repositories under "Repositories":

- ietf115-project-presentations** (Public)  
Project results presentations at end of Hackathon  
1 HTML, 0 stars, 0 forks, 0 issues, 0 pull requests, Updated on Aug 5
- ietf114-project-presentations** (Public)  
Project results presentations at end of Hackathon  
1 HTML, 3 stars, 4 forks, 0 issues, 1 pull request, Updated on Jul 25
- NSDCatZ** (Public)  
Proof of concept NSD implementation of draft-ietf-dnsop-dns-catalog-zones

<https://github.com/ietf-hackathon>

The screenshot shows the GitHub repository page for "ietf-hackathon". The repository has 17 followers and can be contacted via email at [hackathon@ietf.org](mailto:hackathon@ietf.org). The pinned repository, "ietf115-project-presentations", is highlighted with a red box. It contains project results presentations from the end of the Hackathon and is written in HTML. Other pinned repositories include "ietf114-project-presentations" and "NSDCatZ". The repository page also displays the top languages used: HTML, C, Python, Shell, and JavaScript.

**Pinned**

- [ietf115-project-presentations](#) Public  
Project results presentations at end of Hackathon  
HTML

**Repositories**

- [Find a repository...](#)
- [Type](#)
- [Language](#)
- [Sort](#)

- [ietf115-project-presentations](#) Public  
Project results presentations at end of Hackathon  
HTML ⭐ 0 📈 0 ⏲ 0 🔍 0 Updated on Aug 5
- [ietf114-project-presentations](#) Public  
Project results presentations at end of Hackathon  
HTML ⭐ 3 📈 4 ⏲ 0 🔍 1 Updated on Jul 25
- [NSDCatZ](#) Public  
Proof of concept NSD implementation of draft-ietf-dnsop-dns-catalog-zones

**People**

**Top languages**

- HTML
- C
- Python
- Shell
- JavaScript

<https://github.com/IETF-Hackathon/ietf115-project-presentations>

The screenshot shows a GitHub repository page. At the top, there's a navigation bar with links for Product, Solutions, Open Source, Pricing, a search bar, and sign-in options. Below the header, the repository name 'IETF-Hackathon / ietf115-project-presentations' is displayed, along with its status as 'Public'. To the right of the repository name are buttons for Notifications (with 0 notifications), Fork (0 forks), and Star (0 stars). The main content area shows a list of files and commits. A commit by user 'eckelcu' titled 'add github action' is highlighted, showing it was pushed on Aug 5 at commit hash df1d6ab. Below the commit list is a 'README.md' file containing the following text:

## IETF 115 project presentations

This repo is for IETF Hackathon participants to upload project presentations. For convenience, presentation templates are provided in [PPTX](#) and [HTML](#) formats, the latter of which can be viewed [online](#) if it is put in the [main branch](#). For the HTML format, a corresponding [pdf](#) is automatically generated from the HTML file by a [GitHub action](#) and put in the [pdfs-from-html branch](#).

The use of these templates is optional. If you do use one of these templates, please rename the file such that it clearly identifies your project, e.g., includes the name or acronym of your project. The contents of this repo will be used as the source for all project presentations at

**About**  
Project results presentations at end of Hackathon

- Readme
- 0 stars
- 2 watching
- 0 forks

**Releases**  
No releases published

**Packages**  
No packages published

**Languages**  
HTML 100.0%

<https://github.com/IETF-Hackathon/ietf115-project-presentations>

The screenshot shows a GitHub repository page for 'IETF-Hackathon / ietf115-project-presentations'. The repository is public and has 2 branches and 0 tags. The main branch commit history is displayed, with one commit by 'eckelcu' titled 'add github action' dated Aug 5. Below the commit list is a preview of the 'README.md' file, which contains the following content:

```
IETF 115 project presentations

This repo is for IETF Hackathon participants to upload project presentations. For convenience, presentation templates are provided in PPTX and HTML formats, the latter of which can be viewed online if it is put in the main branch. For the HTML format, a corresponding pdf is automatically generated from the HTML file by a GitHub action and put in the pdfs-from-html branch.
```

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**About**

Project results presentations at end of Hackathon

Readme

0 stars

2 watching

0 forks

**Releases**

No releases published

**Packages**

No packages published

**Languages**

HTML 100.0%

# README

17 lines (10 sloc) | 2.44 KB



## IETF 115 project presentations

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The use of these templates is optional. If you do use one of these templates, please rename the file such that it clearly identifies your project, e.g., includes the name or acronym of your project. The contents of this repo will be used as the source for all project presentations at the end of the Hackathon and remain as a reference after the Hackathon. Presenters are encouraged to run their own presentations using the screen sharing functionality in Meetecho. Alternatively, the Hackathon Chairs can share your presentation and advance slides for you. **For portability, please upload your presentation in PDF or HTML format.**

You **MUST** be a [member](#) of the [IETF-Hackathon GitHub org](#) to add or update a presentation.

To be added as a member, please be sure to:

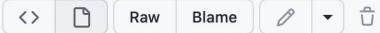
- include the [name](#) by which you are known as part of your in your GitHub profile
- enable two-factor authentication ([2FA](#))
- send your GitHub username to [hackathon-chairs@ietf.org](mailto:hackathon-chairs@ietf.org)

**DO NOT WAIT** until just before project presentations start or your request may be lost in the chaos.

For more info on the Hackathon, including the complete and most up to date agenda, please see the [Hackathon Wiki](#).

# README

17 lines (10 sloc) | 2.44 KB



## IETF 115 project presentations

This repo is for IETF Hackathon participants to upload project presentations. For convenience, presentation templates are provided in [PPTX](#) and [HTML](#) formats, the latter of which can be viewed [online](#) if it is put in the [main branch](#). For the HTML format, a corresponding [pdf](#) is automatically generated from the HTML file by a [GitHub action](#) and put in the [pdfs-from-html branch](#).

The use of these templates is optional. If you do use one of these templates, please rename the file such that it clearly identifies your project, e.g., includes the name or acronym of your project. The contents of this repo will be used as the source for all project presentations at the end of the Hackathon and remain as a reference after the Hackathon. Presenters are encouraged to run their own presentations using the screen sharing functionality in Meetecho. Alternatively, the Hackathon Chairs can share your presentation and advance slides for you. [For portability, please upload your presentation in PDF or HTML format.](#)

You MUST be a member of the [IETF-Hackathon GitHub org](#) to add or update a presentation.

To be added as a member, please be sure to:

- include the [name](#) by which you are known as part of your in your GitHub profile
- enable two-factor authentication ([2FA](#))
- send your GitHub username to [hackathon-chairs@ietf.org](mailto:hackathon-chairs@ietf.org)

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For more info on the Hackathon, including the complete and most up to date agenda, please see the [Hackathon Wiki](#).

# related-implementations

- For individual drafts, authors can edit the set of “Additional resources”
- For WG drafts and RFCs, the chairs can edit the additional resources

The screenshot shows a detailed view of an Internet-Draft page. At the top, there's a navigation bar with links for Groups, Documents, Meetings, Other, and an email address (eckelcu@cisco.com). Below the navigation is a title: "Find Code Related to an Internet-Draft or RFC" followed by the draft identifier "draft-eckel-edm-find-code-01". There are tabs for Status, IESG evaluation record, IESG writeups (which is selected), Email expansions, and History. Below the tabs is a "Versions" section showing "00" and "01". A horizontal timeline bar indicates the progression from version 00 (July 2021) to version 01 (January 2022). The main content area contains several sections with details about the draft:

Document	Type	Active Internet-Draft (individual)
Author	Charles Eckel	(mailto:eckelcu@cisco.com)
Last updated	2022-03-09	(latest revision 2022-01-19)
Stream	(None)	
Intended RFC status	(None)	
Formats	<a href="#">plain text</a> <a href="#">html</a> <a href="#">xml</a> <a href="#">htmlized</a> <a href="#">pdfized</a> <a href="#">bibtex</a>	
Additional Resources	<a href="#">Edit</a>	- GitHub Repository - Example implementation in <a href="#">draft-ietf-shmoo-hackathon</a>
Stream	Stream state	(No stream defined)
Consensus Boilerplate	Unknown	
On Agenda	<a href="#">Edit</a>	None

Additional document resources

https://datatracker.ietf.org/doc/draft-eckel-edm-find-code/edit/resources/ 133% ⌂ ⌄

Datatracker Groups Documents Meetings Other eckelcu@cisco.com Document search

## Additional document resources

### draft-eckel-edm-find-code

Valid tags:

faq, github\_org, github\_repo, github\_username, gitlab\_repo, gitlab\_username, jabber\_log, jabber\_room, mailing\_list, mailing\_list\_archive, related\_implementations, repo, slack, tracker, webpage, wiki, yc\_entry, yc\_impact, zulip

Additional Resources

github\_repo https://github.com/eckelcu/draft-eckel-edm-find-code  
related\_implementations https://datatracker.ietf.org/doc/draft-ietf-shmoo-hackathon/ (Example implementation in draft-ietf-shmoo-hackathon)

Format: 'tag value (Optional description)'. Separate multiple entries with newline. When the value is a URL, use https:// where possible.

Submit Back

# Hackdemo Happy Hour

- Share hackathon projects with IETF Community
- Admiral 1
- Monday 18:00 - 19:00
- [Register](#) your team
  - MUST REGISTER BY 12:00 MONDAY

The screenshot shows a web browser window with the following details:

- Title Bar:** Hackdemo Happy Hour! | IETF
- Address Bar:** https://wiki.ietf.org/meeting/115/hackathon/hackdemo
- Page Header:** IETF Community Wiki
- Search Bar:** Search...
- Breadcrumbs:** Home / meeting / 115 / hackathon / hackdemo
- Section Title:** Hackdemo Happy Hour!
- Buttons:** Edit, Edit on GitHub
- Text Content:**
  - Hackdemo Happy Hour!**
  - Monday, 7 November, Time: 1800 - 1900, Room: Admiral 1
  - Join us for an in depth look at some of the great projects from the IETF Hackathon. This is your opportunity to meet with the teams behind the projects and get answers to any and all of the questions you may have about what they did, how they did it, and the impact it has on work going on at the IETF.
  - Snacks will be provided and a cash bar will be available.
  - Hackathon teams are welcome and encouraged to add their project in the table below.
- Table Headers:** Project Name, Contact Name, Contact Email, Reference Link

# Code Lounge

- Admiral 1
- Space reserved in IETF lounge all week
- Collaborate on running code
- Schedule time for your team

The screenshot shows a web browser window with the following details:

- Title Bar:** Hackathon Code Lounge | IETF
- URL:** https://wiki.ietf.org/meeting/115/hackathon/codelounge
- Page Header:** IETF Community Wiki
- Breadcrumbs:** Home / meeting / 115 / hackathon / codelounge
- Section Headers:** Hackathon Code Lounge, Code Lounge
- Text:** Monday - Friday, 7-11 November, Room: Admiral 1  
The Code Lounge provides a space for groups to informally meet to brainstorm, code, and test ideas. The area will be designated by signage.  
You are encouraged to look at the final agenda and determine time slots best suited to ensure successful attendance of Code Lounge sessions as well as any traditional working group sessions. It is okay for multiple groups to sign up for the same time slots. This is in fact encouraged for work that spans multiple working groups.  
Please sign up for a time slot below by entering your working group or Hackathon project acronym.
- Table:** A grid showing available time slots from Monday, 7 Nov to Friday, 11 Nov. The columns are labeled: Monday, 7 Nov, Tuesday, 8 Nov, Wednesday, 9 Nov, Thursday, 10 Nov, Friday, 11 Nov. The rows represent hours from 08:00 to 20:00. Cells contain "L4S" or "Lounge Closed".

	Monday, 7 Nov	Tuesday, 8 Nov	Wednesday, 9 Nov	Thursday, 10 Nov	Friday, 11 Nov
08:00	L4S	L4S	L4S	L4S	
10:00	L4S	L4S	L4S	L4S	
12:00	L4S	L4S	L4S	L4S	
14:00	L4S	L4S	L4S	L4S	Lounge Closed
16:00	L4S	L4S	L4S	L4S	Lounge Closed
18:00	L4S	L4S	L4S	L4S	Lounge Closed
20:00	L4S	L4S	L4S	L4S	Lounge Closed
- Buttons:** Edit, Edit on GitHub

# THANK YOU!

SILVER RUNNING CODE SPONSOR:



BRONZE RUNNING CODE SPONSOR:



**I C A N N**

# Questions?





\* Photos thanks to © Stonehouse Photographic / Internet Society