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Internet-Draft
Intended status: Informational
Expires: June 20, 2019

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December 17, 2018

GitHub Configuration for IETF Working Groups
draft-cooper-wugh-github-wg-configuration-02

Abstract

The use of GitHub in IETF working group processes is increasing. This document describes possible uses and conventions for working groups which are considering starting to use GitHub. It does not mandate any processes, and does not intend to change the processes used by current working groups.

Discussion of this document takes place on the ietf-and-github mailing list (ietf-and-github@ietf.org), which is archived at https://mailarchive.ietf.org/arch/search?email_list=ietf-and-github.

Status of This Memo

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1. Introduction

Many IETF working groups and participants make use of GitHub in different ways as part of their work on IETF documents. Some others are interested in having their working groups use GitHub to facilitate the development of working group documents, but they are unfamiliar with how to get started or they are unclear about which conventions to follow.

This document proposes a set of administrative processes and conventions for IETF working groups to use if they chose as a working group to use GitHub to facilitate their work. The proposals in this document are not directed at working groups or individuals that are already using GitHub to do IETF work. Practices vary among existing working groups and some of them are not consistent with the conventions proposed here: that is fine. The goal of the proposals in this document is not to require uniformity in current practice, but to help working groups to get started using GitHub in a uniform way if they want to.

The document is meant to spur discussion in the IETF community. If there proves to be rough consensus in the community in support of the

proposals in this document, the functional requirements would need to be discussed with the IETF Tools Team, and the IETF Secretariat who would need to support various pieces of what is proposed here.

2. Administrative Process and Conventions

This section specifies a proposal for an administrative process and conventions to support the creation and management of GitHub organizations for working groups and single-document repositories in a uniform way. The steps could be done manually by the IETF Secretariat or they could be automated. For example, see <https://github.com/richsalz/ietf-gh-scripts> and <https://github.com/martinthomson/i-d-template> for working examples of automation that is in use in some working groups.

In this document the question of whether processes should be manual or automated is deliberately left ambiguous since the first question that should be asked is whether this is functionality the community would want to have supported at all.

Most of the conventions below are drawn from [I-D.thomson-github-bcp].

2.1. Creation of GitHub Organizations

This document proposes that there be a facility in the IETF Datatracker (<https://datatracker.ietf.org/>) interface to allow an area director or working group chair to request the creation of a GitHub organization for a particular working group. Ideally, this facility would appear both as part of the working group chartering UI as well as the working group page UI.

When an area director or working group chair makes a request to create a GitHub organization, the following process would be initiated:

1. Create a GitHub organization for the working group.
2. Name the organization as `ietf-<wgname>-wg`
3. Initialize the organization by designating the IETF Secretariat and the area directors in the working group's area as owners. If the responsible AD for the working group is from another area, that AD will be an owner as well.
4. Initialize the organization with a team that has administrator access. This team will consist of the working group chairs and working group secretary, if one exists.

After the organization is created, the URL for the organization would be added to the working group's page in the datatracker.

Steps 3 and 4 above imply that the GitHub identities of the organization owners and administrators are known. Recording GitHub identities in the datatracker (see <https://trac.tools.ietf.org/tools/ietfdb/ticket/2548>) would facilitate this. The person requesting the organization would need to be notified if the GitHub identities of any of the people meant to be owners or administrators were not available.

2.2. Migration of an Existing Organization

If a working group already has an organization, it would be useful to be able to make it have the same management as one would get with going through the steps in Section 2.1. That is, it would be good to be able to run steps 3 and 4 from Section 2.1 so that the rest of the activities in this section such as personnel work the same for the organizations that were created on their own.

2.3. Personnel Changes

When there are personnel changes in the area or the working group, those changes would be reflected in the GitHub organization. There should likely be an API to specify that there were personnel changes. [[Need to do a bit of research on how to do this through the API, if possible.]]

2.4. Working Group Closing

When a working group is closed, the team with administrative access would be removed and the owner list would be returned to its initial composition. The organization summary and the repositories within the organization would be updated to indicate that they are no longer under development.

2.5. Creation of Document Repository

There are many different scenarios and configurations where it might be useful to have automation and/or established administrative conventions for repositories within WG organizations, such as:

- o Creating a new repository for an individual draft that is at the discretion of the WG chair
- o Creating a new repository for an already-adopted working group draft

- o Migrating an existing document repository into the WG organization
- o Creating a new repository that contains multiple drafts

As an incremental step, this document proposes that there be a facility in the Datatracker interface to allow an administrator of an ietf-<wgname>-wg organization to request the creation of a new repository within that organization for a single document. The document authors would be identified as collaborators. The repository name would be the draft name. Ideally, the repository would be configured with an skeleton draft file, default CONTRIBUTING, LICENSE, and README files, and continuous integration support, in the vein of <<https://github.com/martinthomson/i-d-template>>.

3. Working Group Process

[I-D.thomson-github-bcp] contains discussion of the different possible ways that a working group can use GitHub and the large number of decisions associated with doing so. This section proposes a basic set of administrative policies for working groups to follow and the administrative support needed to carry out those policies.

3.1. Contributions

At a minimum, every repository created in a working group organization needs to incorporate into its CONTRIBUTING file the boilerplate text at <<https://trustee.ietf.org/license-for-open-source-repositories.html>> from the IETF license file for open source repositories. The CONTRIBUTING file can contain other information as well (see <<https://github.com/ietf/repo-files/tree/master/contributing-samples>> for examples).

It would be useful if the user data in the Datatracker could list (at a minimum) the GitHub account of the user so that their contributions could be tracked more easily.

3.2. Backing Up and Archiving GitHub Content

IETF working group mailing lists are automatically backed up by the IETF Secretariat, and the archives are publicly available. All official interactions in a WG must be archived.

It would be good for working group GitHub content to also be backed up and publicly archived. This document proposes using the git protocol [git-protocol] itself for both of these tasks.

Every IETF working group repository on GitHub will have a mirror repository of the same name on a server maintained by the IETF Secretariat. Every hour, a service will use the "git fetch" command on every GitHub repository that is being tracked. The mirror repository will allow anyone to read the repository.

Note that this system will not back up GitHub issues or pull requests. It is very likely that these should be backed up as well. The GitHub API possibly allows this; if so, the IETF Secretariat should back up those at the same time as it is backing up the GitHub repositories.

[I-D.thomson-github-bcp] has more discussion of backing up and archiving.

4. Security Considerations

An attacker who can change the contents of Internet Drafts, particularly late in a working group's process, can possibly cause unnoticed changes in protocols that are eventually adopted.

5. IANA Considerations

This document has no IANA actions.

6. References

6.1. Normative References

[git-protocol]
"Git on the Server - The Protocols", n.d., <<https://git-scm.com/book/en/v2/Git-on-the-Server-The-Protocols#The-Git-Protocol>>.

6.2. Informative References

[I-D.thomson-github-bcp]
Thomson, M. and A. Atlas, "Using GitHub at the IETF", draft-thomson-github-bcp-00 (work in progress), February 2017.

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