2019 FreedomBox Summit
Summary of Proceedings

November 2019

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1. Introduction

On Friday, November 15th, 2019, the FreedomBox Foundation held its second annual Summit in New York City. We invited core team members Sunil Mohan Adapa (Lead Developer) and James Valleroy (Release Manager) to join the Foundation's staff for a full day of discussions, while core team member Joseph Nuthalapati (DevOps Engineer) participated remotely via Mumble. Over the course of three formal sessions including a virtual Q&A, participants at the 2019 Summit discussed the wide-ranging challenges facing the project and actionable plans in response to these challenges. This document provides a summary of the Summit's proceedings.

Eben Moglen opened the 2019 Summit by commenting on the many meanings of the term "summit." He observed one sense in which "summit" can be used to describe our gathering: the summit of a mountain is the best position from which to see the long view. Our objective, he said, was to make short-term decisions with a long view. In the ICT industry, companies are trying to oligopolize web services. Meanwhile, networks of activists and even the European Commission are trying to restore some equality to the internet by federating web services. FreedomBox, at this moment in history, has an opportunity to rise to the occasion.

At the 2018 Summit, we agreed that the project had so much breadth that it was time to improve what we already had. In the year since, we have kept our word and improved many of our features, like updating our user interface's "Apps" page, improving the Backups module, and more. In addition, we also successfully patched several issues in time for the Debian Buster freeze and Buster's subsequent release in July 2019, which has made the FreedomBox Buster release our most reliable release yet. The Buster release notably includes support for stable-backports, which enables the FreedomBox team to push feature updates to the stable branch on a biweekly basis. In April 2019, we launched a product with Olimex, fulfilling a long-held goal for

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the FreedomBox project. And in the summer after the product launch, the FreedomBox core team discussed, drafted, and ratified a code of conduct and a set of community governance principles for the first time since our project's founding. 2019 was FreedomBox's best year yet.

Now that the FreedomBox project has entered the product phase of its existence, expectations are higher. It is, therefore, more important than ever that our core team members operate as a cohesive unit. One of the chief goals of the inaugural Summit in 2018 was to unify the core team under a shared vision. At the 2019 Summit, discussions were noticeably more focused and linear than the previous year's, which we took as a sign that we had achieved our goal of unifying the team. Unity is a precondition of collective action. And the Summit is our annual opportunity to create unity. This report represents our best efforts.

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2. Summit Schedule

Friday (Nov. 15):
- 11:00am-1:30pm: **SESSION I – Discussing our Challenges**
  - **Aim**: Discuss the main challenges facing the FreedomBox community. We will refer to an agenda

- 1:45pm-2:45pm: **Lunch Break**

- 3:00pm-4:00pm: **SESSION II – Q&A with the FreedomBox Community**
  - **Aim**: Hold a Q&A session with the FreedomBox community hosted over Mumble
    - Start with an address to the community by Eben Moglen followed by Q&A

- 4:00pm-5:00pm: **SESSION III – Consolidating the Questions Before Us**
  - **Aim**: Discuss the proceedings of the Q&A session and determine our priorities

- 6:00pm-7:00pm: **Dinner**

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3. Summary of Conclusions

Over the course of the Summit, several conclusions were drawn. What follows is a summary of the main conclusions.

3.1 Apps: Nextcloud

- Nextcloud is one of our most requested applications.
- Why we need it:
  1. Nextcloud provides a file server
  2. Nextcloud could fill a lot of FreedomBox's gaps in functionality with its own applications, e.g. it could fill the gaps left by former FreedomBox apps Coquelicot (single file-sharing) and Shaarli (bookmarks).
     - Note: Nextcloud's plug-ins are not always well developed, and they may divert attention from FreedomBox's other apps. For security reasons, the default setting of Nextcloud on FreedomBox should be for plug-ins and applications to be turned off.
- Why packaging Nextcloud is so hard: The way it handles updates is a source of friction. Each security update can only be pushed if users update the version of Nextcloud. Nextcloud's developers don't want to backport security updates into old stable versions.
- Nextcloud will be an optional module. Installing a FreedomBox shouldn't depend on Nextcloud and its dependencies. Nextcloud should always be an optional module within FreedomBox, no matter how it is installed.

3.2 Reachability: WireGuard

- WireGuard is ready to be integrated into FreedomBox soon.
- WireGuard will be part of our set of reachability solutions.
- Right now, it's still in Debian unstable, and it doesn't yet have mainline kernel support.

3.3 Reachability: Creating reachability wizards in the user interface

- Plans for reachability wizards are already in GitLab.
  - The wizards should have simple options, and explanations of advantages and limitations of each option.

- These wizards are ready to be implemented.

3.4 Email server

- An email server is one of our most requested applications.

- Many technical problems remain, and solving them would be a large undertaking.

- Implementing an email server isn't practicable until we have made more progress on the reachability problem, because reachability is a precondition of hosting a mail server.

- We'll delay the email server until we have made more progress on reachability. Once FreedomBox is more easily reachable on the public internet, then development on an email server can begin.

3.5 Fediverse

- We want FreedomBox to offer software that interoperates with the fediverse. The most popular format in the fediverse is microblogging, so we should start there.

- There are three options for microblogging:
  1. WordPress + the Pterotype plug-in, which enables a blog to enter streams with ActivityPub-based services.
  2. Bob Mottram's Epicyon, a lightweight ActivityPub-compliant microblogging server.
  3. Mastodon proper is an option, but its 80+ dependencies and 1 GB of required RAM are too much for us right now.

3.6 Expanding our hardware support

- We want to continue to support more hardware.

- We are interested in the hardware made by Olimex and PINE64, in particular.

3.7 Hardware for next product

- Before we partner with another hardware seller, we should discuss upstream support in the beginning of the process. Upstream support (i.e. in Debian and mainline kernel) of the hardware is a precondition for a partnership. We expect the hardware producer to upstream firmware support themselves, although we can help.

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3.8 Appealing to post-Millennials

- Post-Millennials grew up with very flashy software, so they have different expectations than older FreedomBox users.

- We should make our documentation and tutorials more interactive, using videos, GIFs, and iOS and Android apps.

3.9 Responding to the apt issue from the Buster release

- We should prepare our software updates to slow down before the next stable release, so we can intervene before major updates reach our users.

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4. Action Items

What follows is a summary of the actions items we agreed upon at the 2019 Summit.

4.1 Order in which we will execute our top development priorities

1. Reachability 1.0
   - "Reachability 1.0" includes reachability solutions that have already been outlined on GitLab (e.g. install wizards) and WireGuard integration.
   - We will reserve any further, or more complex, reachability solutions for Reachability 1.1, which can be postponed until after we execute the next two development priorities.
   - **Timeline:** Reachability 1.0 should be completed by June 1, 2020.
2. Nextcloud
   - Integrating Nextcloud includes figuring out how its packages will be delivered to FreedomBox users (more details below).
   - **Timeline:** after Reachability 1.0 is completed.
3. Email server
   - This includes relying on the reachability solutions that make your FreedomBox available on the public internet, so it can't come until after Reachability 1.0.
   - **Timeline:** after Reachability 1.0 and Nextcloud are completed.

4.2 Integrating Nextcloud into FreedomBox

- We will pursue two packaging plans for Nextcloud, in the following order:
  1. Debian Fasttrack
     - We will package dependencies for Nextcloud in Debian-main and Debian Fasttrack, as appropriate. Nextcloud itself will be packaged in Debian Fasttrack.
     - For packaging dependencies, we can find old, no-longer-maintained ownCloud PHP dependencies and build off of those.
  2. Snaps
     - If packaging Nextcloud for Debian Fasttrack doesn't work out, we will aim to integrate it into FreedomBox via snaps.

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- If we integrate Nextcloud via snaps, then we will be sure to make Nextcloud and its dependencies completely optional. A FreedomBox installation should not depend on snaps. It should always be possible to use your FreedomBox as a Debian pure-blend, even if there is optional snap-based software available for download in the user interface.
- **Timeline**: after reachability 1.0 is completed.

4.3 WireGuard

- We will continue to work on integrating WireGuard into FreedomBox.
- **Timeline**: since WireGuard's integration depends on upstream activity out of our control, the timeline is undetermined. It may take six months for it to be ready for mainstream use in FreedomBox, although developers can experiment with it in the unstable branch sooner.

4.4 Fediverse

- We agreed to pursue microblogging services which are ActivityPub-compliant.
- Before beginning any development, we agreed to evaluate Epicyon as an option for FreedomBox.
- **Timeline:** as we are still in an evaluation stage, a timeline has not been set.

4.5 Factory Reset feature

- We should have a factory reset feature to assist users when they need it, e.g. during relocation.
- Users can backup their files using the backups module, reset the FreedomBox OS to a fresh install using the Factory Reset feature, and upload their data via the Backups module's "restore" feature.

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4.6 Planning for the next Debian stable release in 2021

- We should keep the FreedomBox stable version in Debian 10 (i.e. Buster) until months after Debian 11 is released in 2021. This will allow us to evaluate Debian 11 for any potential issues, like the apt issue of July 2019, before pushing it to our users.

- With stable-backports now enabled, users won't be sacrificing features by staying in Buster after Debian 11 is released.

- **Timeline:** before the Debian 11 release in 2021.

4.7 Hardware priorities for the short-term

- We will continue building support for new hardware.

- New functionality to explore in hardware:

  1. It is our primary priority to explore NAS functionality for future hardware. This is possible with new, more powerful hardware.

  2. It is our secondary priority to explore Wi-Fi routing capabilities for future hardware.

- We should support more boards with the RK3399 processor, because they are so powerful.

- **Timeline:** hardware is tested on an ongoing basis throughout the year.

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