Introducing SyncStar

Create Bootable Media At Conference Kiosks

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Foundation

আধার / প্রতিষ্ঠান

Introduction

পরিচয় / परिचय

- **Working as Software Engineer**
  Fedora Infrastructure and Release Engineering
  Red Hat Community Linux Engineering
- **Serving in Fedora Council**
  Previously as a community initiative lead
  Currently as an elected representative
- **Mentored in Outreachy Internships**
  Previously in the Fedora Websites and Apps team
  Recently in the Fedora Infrastructure team
- **Speaking in FOSS Events**
  Multiple talks in FOSDEM and CentOS Connect
  Representation during Fedora Project events

Fedorator

ফেডোরেটর / ফেডোরেটর

- **Kiosk Self-Service Device**
  Writes Fedora Linux image onto USB flash drives
  Intended to be used in Fedora Project booths
- **Hardware in Building Service**
  Touchscreen was used with two open USB ports
  Raspberry Pi was placed in a 3D printed case
- **Powered by Open Source**
  Codebase made in Python is free and open source
  Anyone with these resources could make these
- **Built during Flock 2017**
  Workshop initiative was driven by David Labsky
  Around seven documented managers present

Fedorator - Fedora Project Wiki

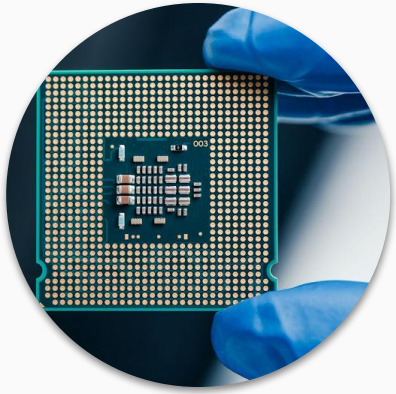
Challenges
आह्वान / चुनौतियाँ

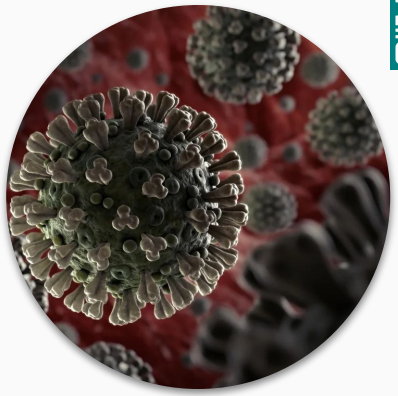
- **Global Semiconductor Shortage**
  Raspberry Pis and other devices were inaccessible
  Logistics hurt several regions worldwide

- **Paused In-Person Conferences**
  People could not meet due to COVID 19 pandemic
  Not much effectiveness in online conferences

- **Availability of 3D Printers**
  Access to 3D printers and touchscreens was less
  Increased the barrier of entry for managers

- **Poor Presence On Resuming**
  Less interest when in-person conferences started
  Lack of capital to spend on newer resources

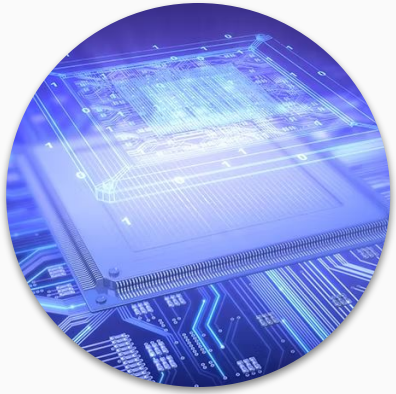




Objective

উদ্দেশ্য / उद्देश्य

- **Reduced Hardware Dependence**
  No Raspberry Pis? No touchscreen? No problem
  Project can run everywhere with a USB port
- **Improved Self-Service Interaction**
  User interaction can happen on a separate device
  Headless service has browser based frontend
- **Tried, Tested and Ergo Trusted**
  100% functional coverage with over 46 testcases
  Packaged and published on Fedora and PyPI
- **Support for Literally Everyone**
  Support for all GNU/Linux distributions available
  Try the service out in your conference kiosk

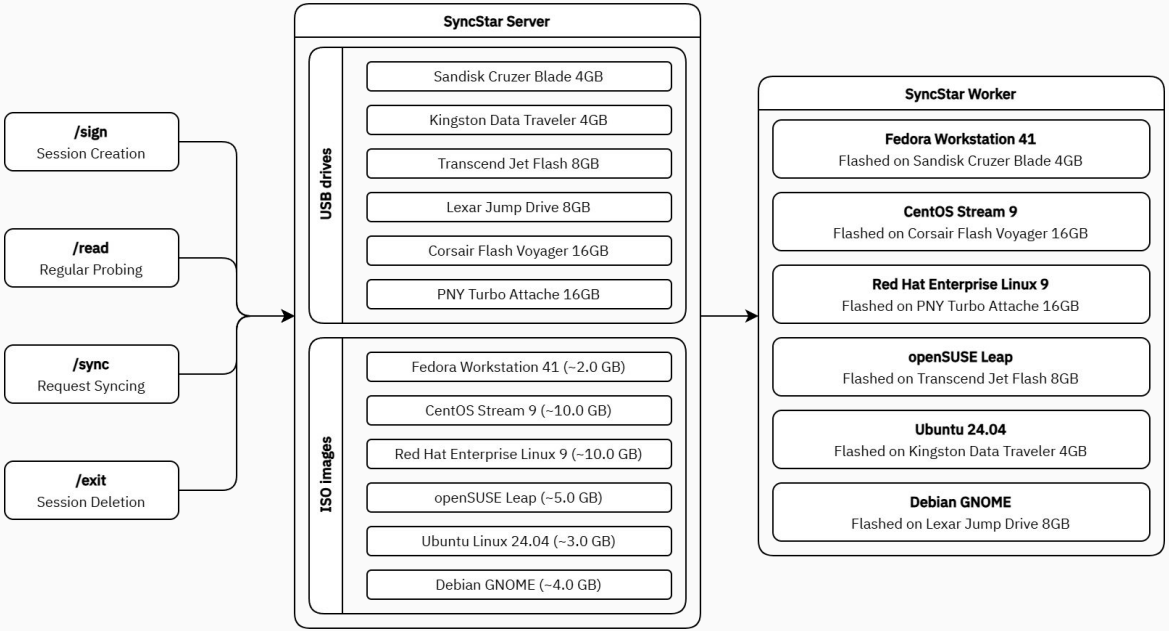


gridhead/syncstar - GitHub

Architecture

स्थापत्य / वास्तुकला

- **Uses Flask and Celery**
  Keeps it convenient with the scaling up complexity
  Allows for tracking tasks reliably and flexibly
- **Convert and Copy Files**
  Wraps GNU CoreUtils DD for actual synchronizing
  Nature of the ISO image is retained on flashing
- **ReactJS-Based Frontend**
  Makes it simple with the foundational components
  Easy to achieve community of contributors
- **Only Four Basic Endpoints**
  Parallelism is supported in the miniature processes
  Automated with more USB ports and more OSes

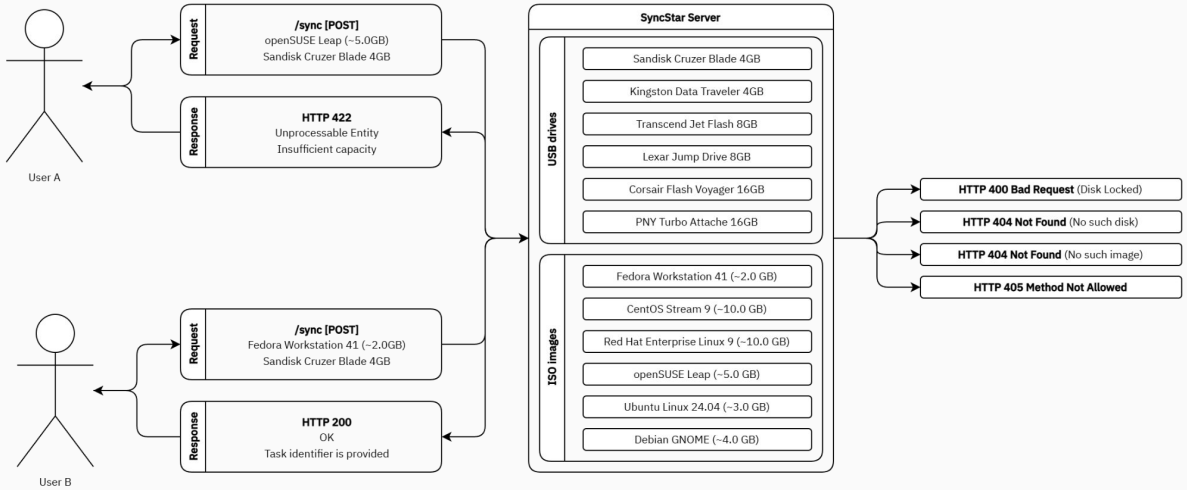


gridhead/syncstar - GitHub

Robustness

বলিষ্ঠতা / मज़बूती

- **Insufficient capacity**
  Synchronization is aborted if size is excessive
  Visual cues are provided to inform issues
- **Authenticated endpoints**
  All endpoints require an existing session to operate
  Should be safe in a relatively open network too
- **Improper methods**
  Operations will not work without proper methods
  Safeguards against mistakenly opening links
- **Absent specificities**
  Synchronization does not progress without assets
  Requested images and drives are required



Scenario

दृश्यकल्प / परिदृश्य

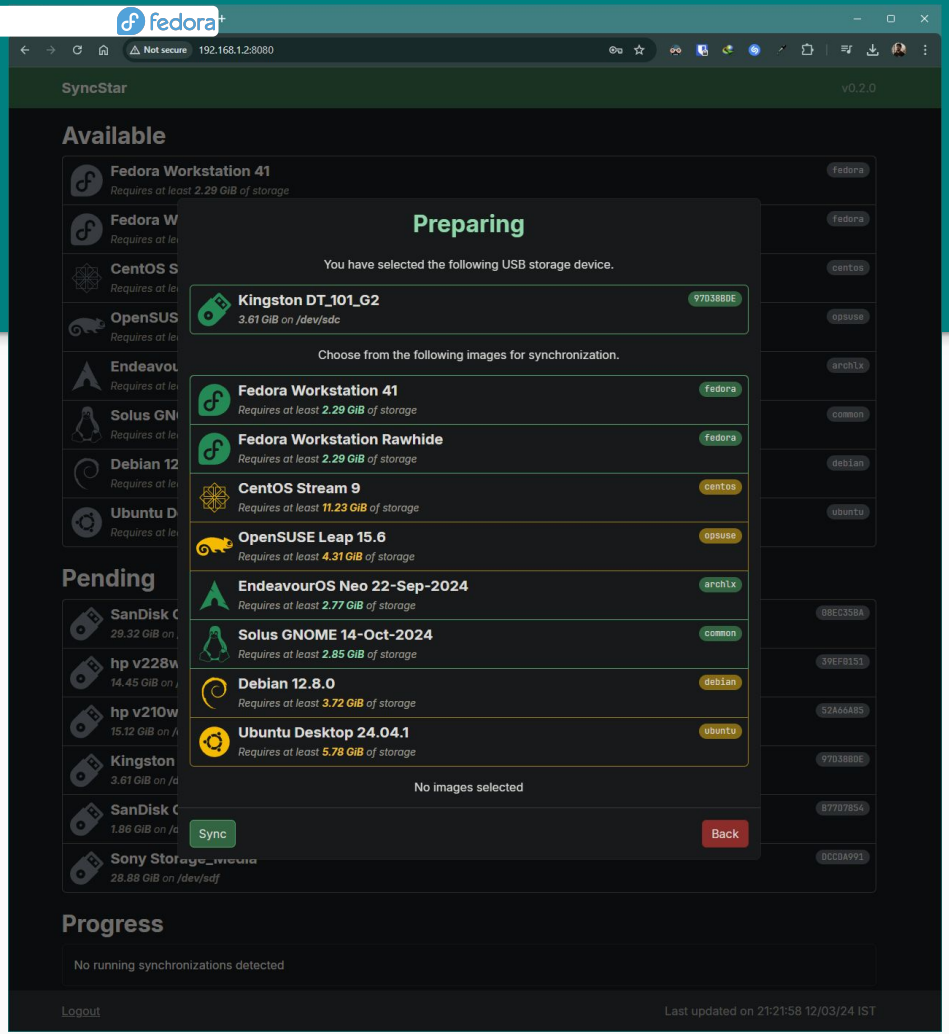
- **Initializing the Kiosk Service**
  Setup the service on the conference booth device
  Open up the dashboard in the same network
- **Welcoming the Booth Visitors**
  Present the branded USB drives on the booth desk
  Allow the visitors to explore the swags available
- **Propagate the FOSS Distribution**
  Let the visitors start the synchronization process
  Strike up a conversation while it progresses
- **Continue in Careful Discretion**
  Allow other attendees to use their USB flash drives
  Advertise for participation in the community

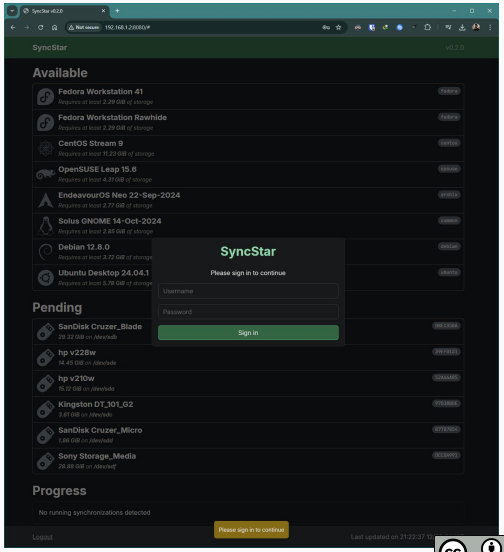
Workshop

कर्मशाला / कार्यशाला

Illustrations

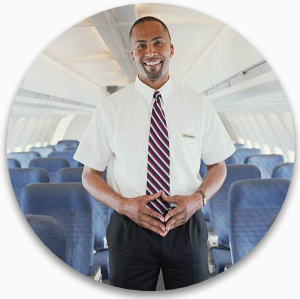
दृष्टांत / चित्रण





Volunteers

स्वेच्छासेवक / स्वयंसेवक



Attendant

- Welcome the **attendee** to the conference booth
- Share about the GNU/Linux distribution represented
- Guide the **attendee** into using the kiosk service
- Allow the **attendee** to take away the USB flash drive
- Initiate a relevant conversation with the **attendee**

Attendee

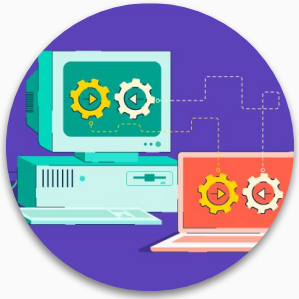
- Come to the **attendant** at the conference booth
- Inquire about the GNU/Linux distribution represented
- Ask the **attendant** about using the kiosk service
- Ask the **attendant** if the USB flash drives are swags
- Initiate a relevant conversation with the **attendant**

Rationale

यौक्तिकता / औचित्य

Engagement

- Preflashed drives might not be suited or trusted
- Walking through the syncing process is empowering
- Opportunities to build community connections
- Encourage sustainability with bring-your-own-drive
- Visitors can take the environment for a spin



Compatibility

- Preflashed drive might not account for hardwares
- Recent version of operating system can be provided
- USB drives can later be used for other purposes
- Different requirements can be addressed with spins
- Visitors can verify the synced image for integrity

Thank you

धन्यवाद / ধন্যবাদ

Contact

Fedora. https://fedoraproject.org/wiki/User:T0xic0der
GitHub. https://github.com/gridhead
LinkedIn. https://www.linkedin.com/in/gridhead
PyPI. https://pypi.org/user/t0xic0der/
Telegram. https://t.me/gridhead
Twitter. https://x.com/gridheader

Project

Fedora. https://src.fedoraproject.org/rpms/syncstar
GitHub. https://github.com/gridhead/syncstar
Packages. https://packages.fedoraproject.org/pkgs/syncstar/
PyPI. https://pypi.org/project/syncstar/
Updates. https://bodhi.fedoraproject.org/updates/?packages=syncstar
Magazine. https://fedoramagazine.org/introducing-syncstar/