

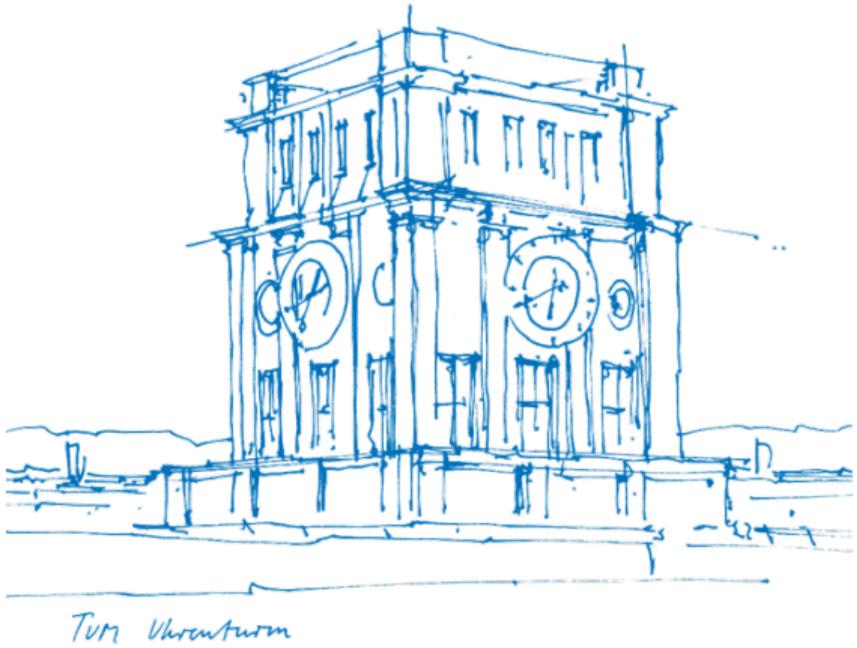
# Open Source Lab

## Source Code Hosting

**Fabian Sauter, Christian Menges, Alexander Stephan**

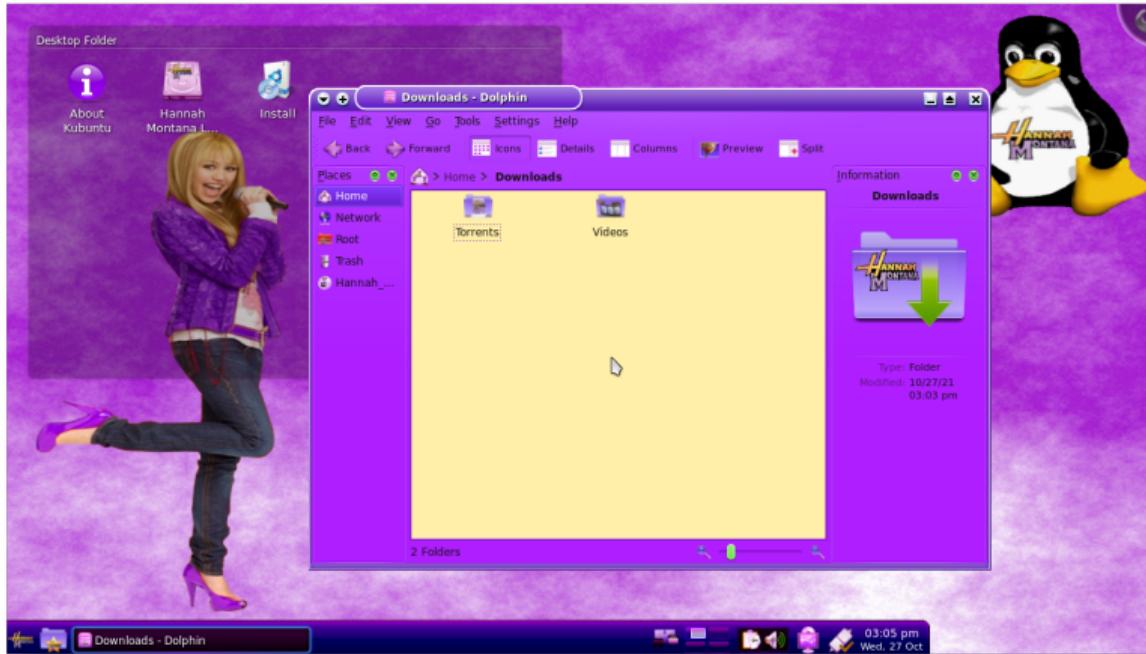
Chair of Connected Mobility  
TUM Department of Informatics  
Technical University of Munich

Garching, May 12, 2022

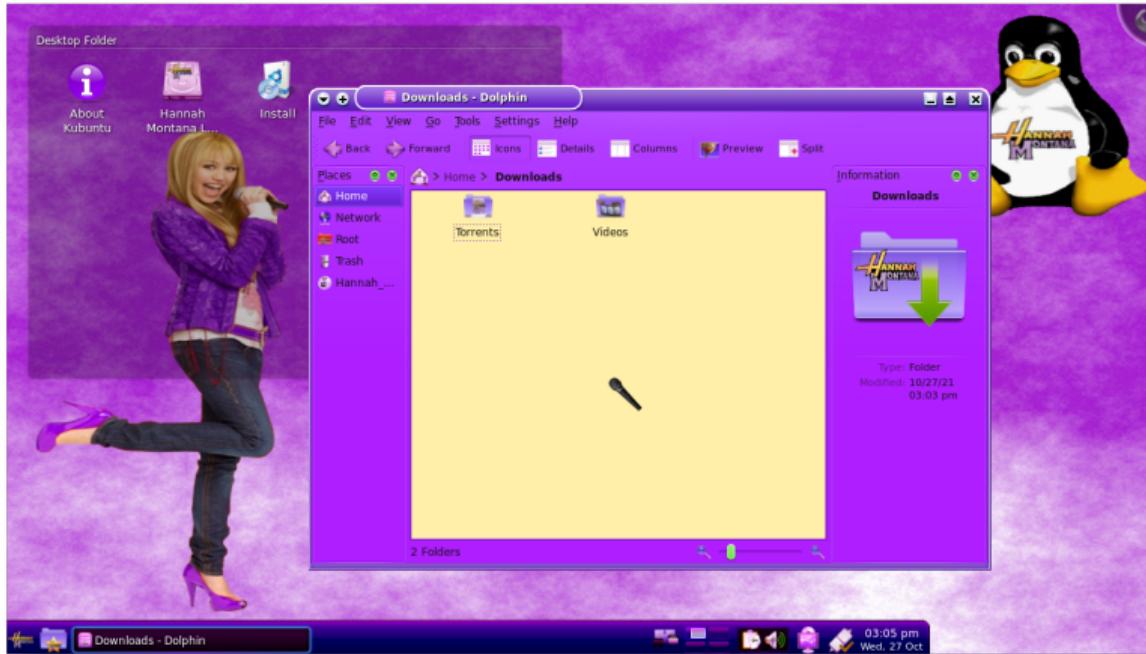


# Why?

# A "free" Backup



# A "free" Backup



# A Way to Publish

# A Way to Publish

softonic APPS SPIELE ARTIKEL Suchen Sie nach Apps, Artikeln,... Q Windows

» Windows » Werkzeuge

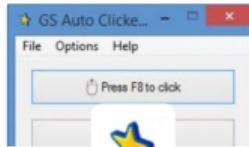
## Werkzeuge für Windows

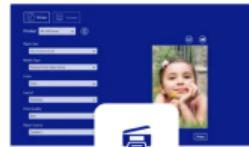
Werkzeuge Subkategorie Lizenz

### Essentials Werkzeuge

Von Softonic empfohlen

 **DroidCam**  
Mit DroidCam das Smartphone als Webcam am PC benutzen

 **GS Auto Clicker**  
Kostenlose Software GS Auto Clicker ermöglicht die Aufzeichnung von...

 **Epson Print and Scan**  
Kostenloses Tool für ein neues Druck- und Scancerlebnis

	<b>Download</b>		<b>Download</b>
3.8 ★	KOSTENLOS	4 ★	KOSTENLOS
2.9 ★	KOSTENLOS		

**Empfohlene Artikel**

 Nachrichten  
Alles was Sie über den neuen Disney-Plus-...  
[Mehr info](#)

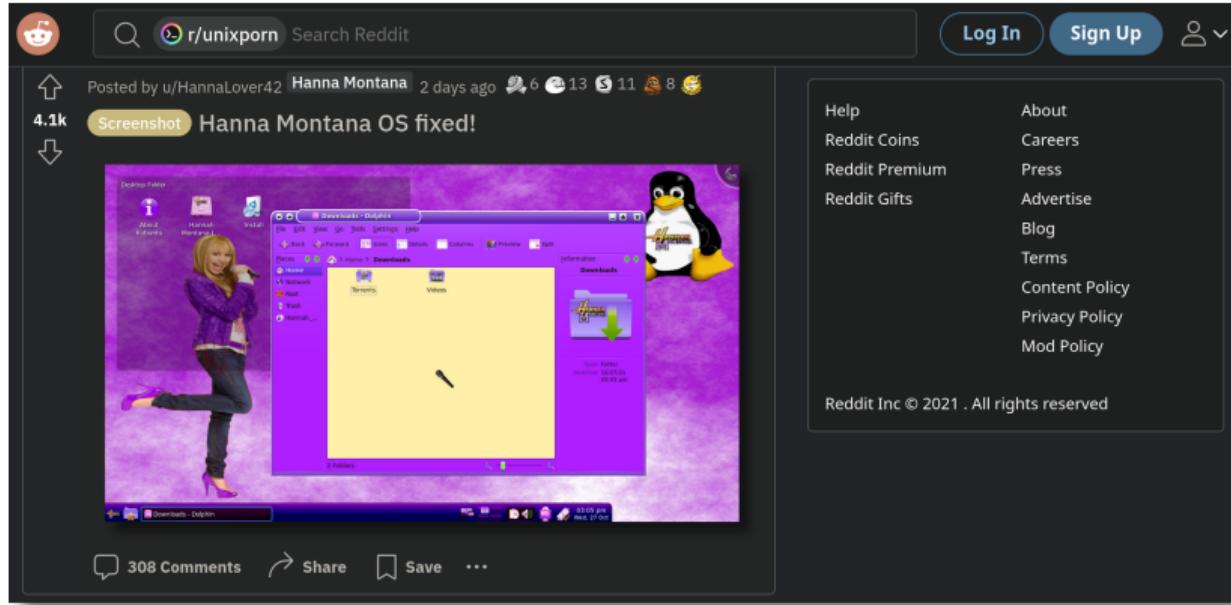
 Gesponsert  
IObit ist wieder ganz vorne dabei – Advanced...  
[Mehr info](#)

 Nachrichten  
Vegas Pro 18 – schneller, einfacher und intelligente...  
[Mehr info](#)

 Artikel  
Top 10 National Geographic...  
[Mehr info](#)

 Artikel  
Top 10 animierte Disney Filme

# Managing the Clouds



A screenshot of a Reddit post from the subreddit [r/unixporn](#). The post was made 2 days ago by user [u/HannaLover42](#) and has received 4.1k upvotes. The title is "Screenshot Hanna Montana OS fixed!". The image shows a Linux desktop environment with a purple theme. A wallpaper of Hanna Montana is visible. A terminal window titled "Downloads - Dolphin" is open, showing a file named "Hanna Montana 14.05.2020 00.43 pm". The desktop also features a penguin icon and various icons for Nautilus, Home, and Downloads.

Posted by u/HannaLover42 **Hanna Montana** 2 days ago 4.1k Screenshot Hanna Montana OS fixed!

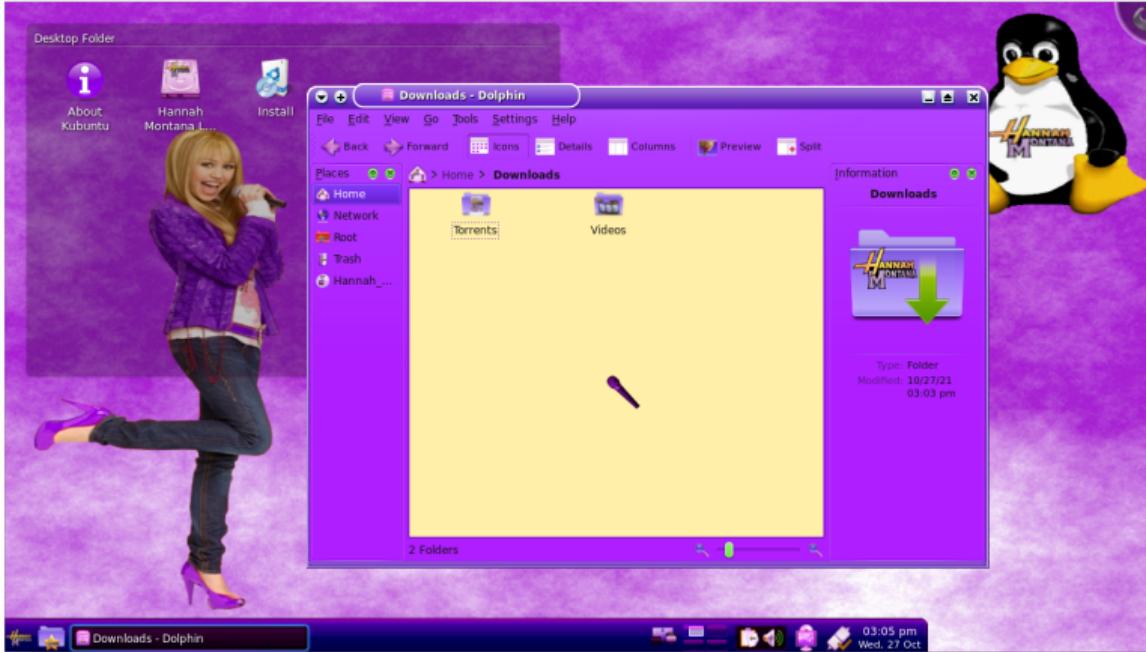
Upvote Downvote

308 Comments Share Save ...

Help About  
Reddit Coins Careers  
Reddit Premium Press  
Reddit Gifts Advertise  
Blog Terms  
Content Policy Privacy Policy  
Mod Policy

Reddit Inc © 2021 . All rights reserved

# Managing the Clouds

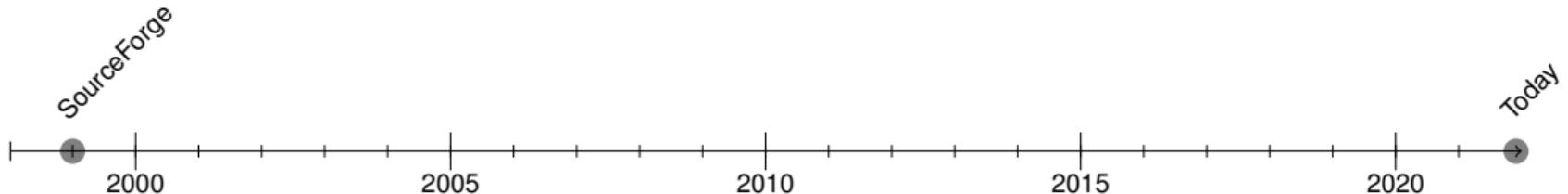


## Evolution

- In FOSS development communities, a forge is a web-based collaborative software platform for both developing and sharing computer applications. A forge platform is generally able to host multiple independent projects.

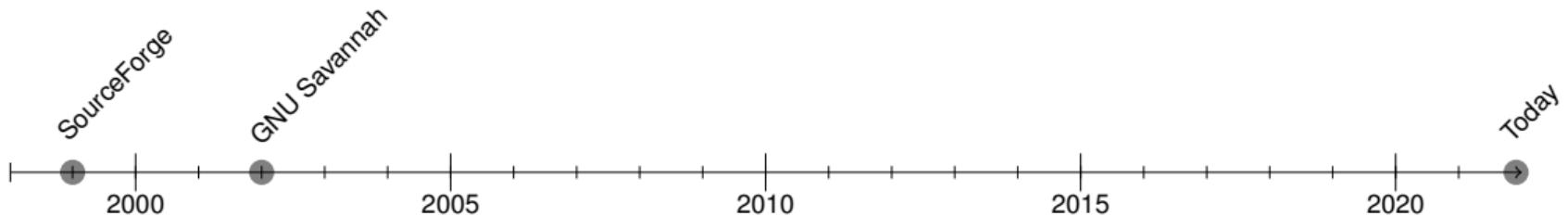
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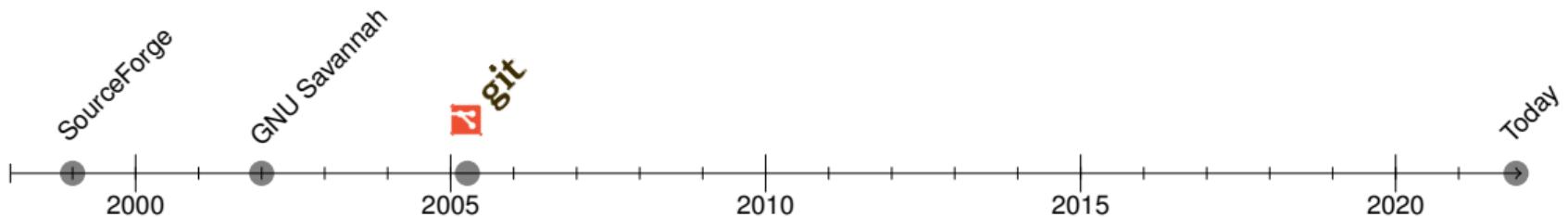
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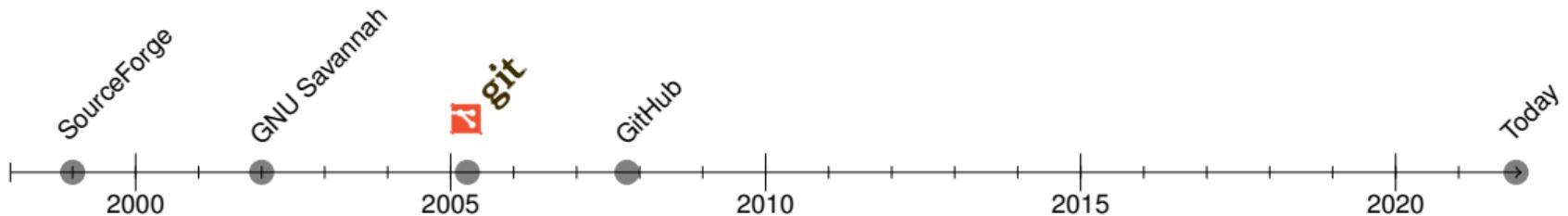
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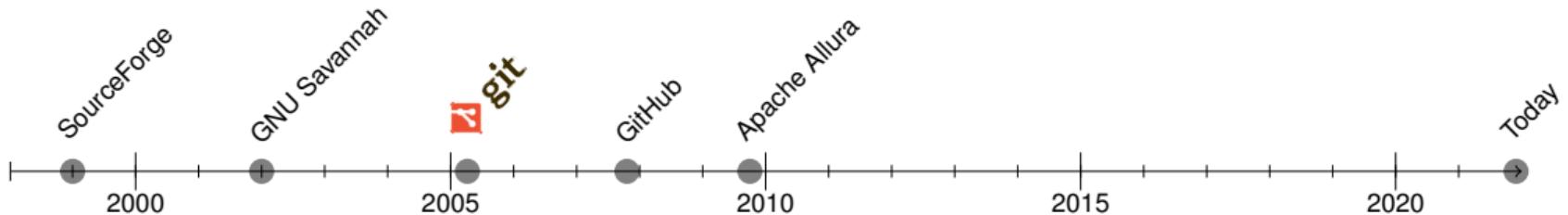
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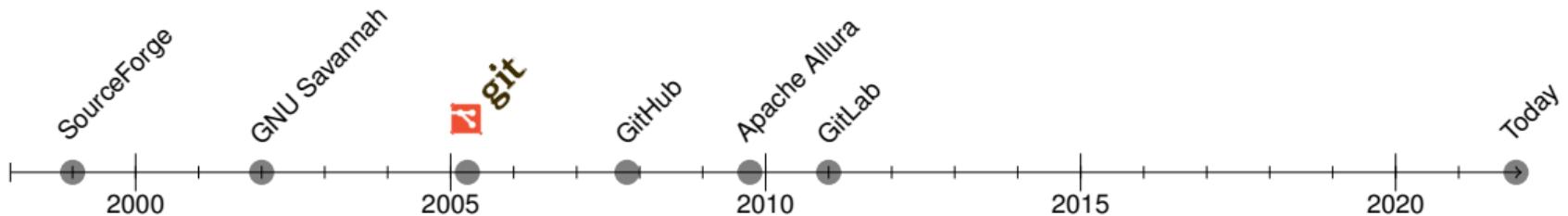
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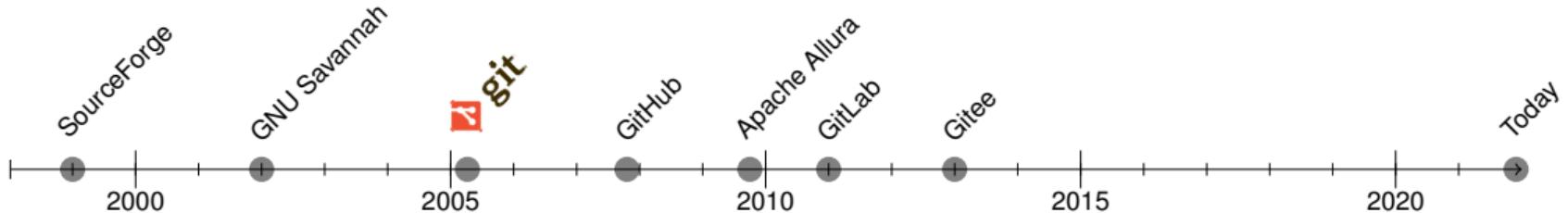
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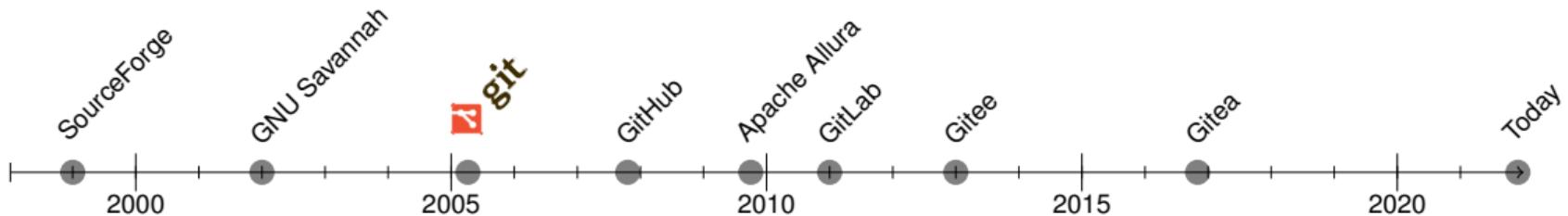
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## Mailing Lists

### A mere historical curiosity?

- List of subscribers who receive all messages sent to a "reflector" email address.
- Code changes are proposed by sending an email with a textual diff.
- List members debate the change with email replies.
- Subsequent changes are more diffs.
- Usability depends on the quality of your email client and how he handles threading.

# Mailing Lists

## A mere historical curiosity?

- List of subscribers who receive all messages sent to a "reflector" email address.
- Code changes are proposed by sending an email with a textual diff.
- List members debate the change with email replies.
- Subsequent changes are more diffs.
- Usability depends on the quality of your email client and how he handles threading.

## Advantages

- The threaded nature of emails.
- User generation of patches.
- Free mixing of discussion and patches.
- Does **not** depend on a company!

Based on: <https://begriffs.com/posts/2018-06-05-mailing-list-vs-github.html>

## Mailing Lists - Example

```
From      Chengfeng Ye <>
Subject   [PATCH] sound/usb: fix null pointer dereference on pointer cs_desc | 0
Date      Sun, 24 Oct 2021 04:17:36 -0700

The pointer cs_desc return from snd_usb_find_clock_source could
be null, so there is a potential null pointer dereference issue.
Fix this by adding a null check before dereference.

Fixes: 9ec73005 ("ALSA: usb-audio: Refactoring UAC2/3 clock setup code")
Signed-off-by: Chengfeng Ye <cyeaa@connect.ust.hk>
---
sound/usb/clock.c | 4 +++
1 file changed, 4 insertions(+)

diff --git a/sound/usb/clock.c b/sound/usb/clock.c
index 81d5ce07d548..98345a695dcc 100644
--- a/sound/usb/clock.c
+++ b/sound/usb/clock.c
@@ -496,6 +496,10 @@ int snd_usb_set_sample_rate_v2v3(struct snd_usb_audio *chip,
                                union uac23_clock_source_desc *cs_desc;

        cs_desc = snd_usb_find_clock_source(chip, clock, fmt->protocol);
+
+       if (!cs_desc)
+           return 0;
+
        if (fmt->protocol == UAC_VERSION_3)
            bmControls = le32_to_cpu(cs_desc->v3.bmControls);
        else
@@
2.17.1

share 0
```

Source: <https://lkml.org/lkml/2021/10/24/86>

## Git Diff

```
git diff <commit-hash-1> <commit-hash-2>
```

```
diff --git a/cpr/curlholder.cpp b/cpr/curlholder.cpp
index 4596ed7f..c70026ec 100644
--- a/cpr/curlholder.cpp
+++ b/cpr/curlholder.cpp
@@ -29,7 +29,7 @@ CurlHolder::~CurlHolder() {

    std::string CurlHolder::urlEncode(const std::string& s) const {
        assert(handle);
-   char* output = curl_easy_escape(handle, s.c_str(), s.length());
+   char* output = curl_easy_escape(handle, s.c_str(), static_cast<int>(s.length()));
        if (output) {
            std::string result = output;
            curl_free(output);
@@ -40,7 +40,7 @@ std::string CurlHolder::urlEncode(const std::string& s) const {

    std::string CurlHolder::urlDecode(const std::string& s) const {
        assert(handle);
```

## Git Patch

```
git format-patch -1 <commit-hash>
```

```
From 67b5c0be845d6b6e3a3bf8ed0c1fe38c533c22dc Mon Sep 17 00:00:00 2001
```

```
From: Kili <kili+git@mailbox.org>
```

```
Date: Tue, 19 Oct 2021 17:45:37 +0200
```

```
Subject: [PATCH] Fix bugprone narrowing conversions
```

```
---
```

```
cpr/curlholder.cpp | 4 +---
```

```
cpr/util.cpp | 3 +-+
```

```
2 files changed, 4 insertions(+), 3 deletions(-)
```

```
diff --git a/cpr/curlholder.cpp b/cpr/curlholder.cpp
```

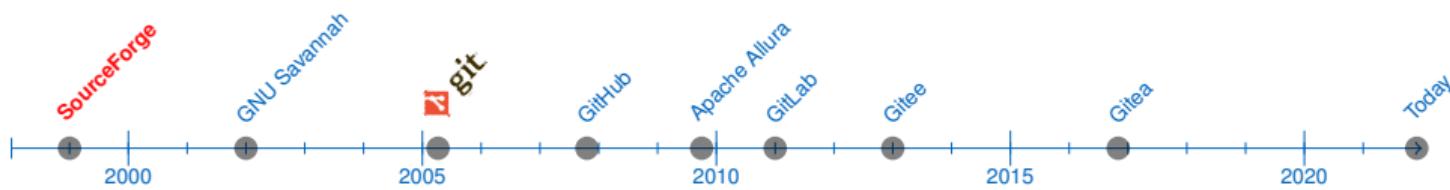
```
index 4596ed7f..c70026ec 100644
```

```
--- a/cpr/curlholder.cpp
```

```
+++ b/cpr/curlholder.cpp
```

```
@@ -29,7 +29,7 @@ CurlHolder::~CurlHolder() {
```

```
    std::string CurlHolder::urlEncode(const std::string& s) const {
```



## SourceForge

Screenshot of the SourceForge project page for Dolibarr ERP - CRM. The page includes a header with navigation links (Help, Create, Join, Login), social media icons, and a search bar. Below the header is a banner for Dolibarr ERP - CRM, followed by a list of project files and a sidebar with recommended projects.

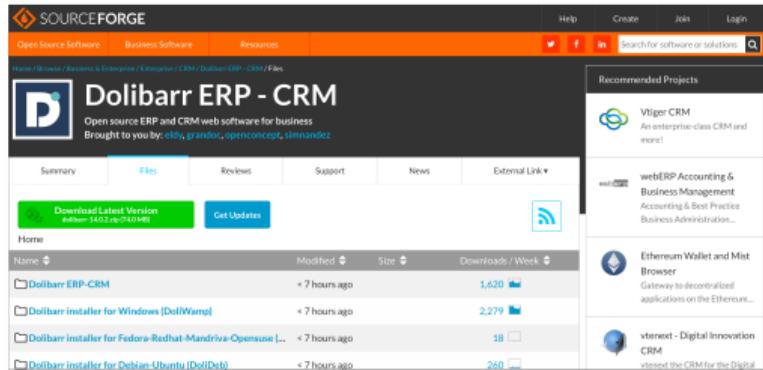
**Dolibarr ERP - CRM**  
Open source ERP and CRM web software for business  
Brought to you by: [ely](#), [grandor](#), [openconcept](#), [simonitez](#)

Name	Modified	Size	Downloads / Week
Dolibarr ERP-CRM	< 7 hours ago	1.620	1,620
Dolibarr installer for Windows (DoliWmp)	< 7 hours ago	2.279	2,279
Dolibarr installer for Fedora-Redhat-Mandriva-OpenSuse ...	< 7 hours ago	18	18
Dolibarr installer for Debian-Ubuntu (DoliDeb)	< 7 hours ago	260	260

<https://sourceforge.net>

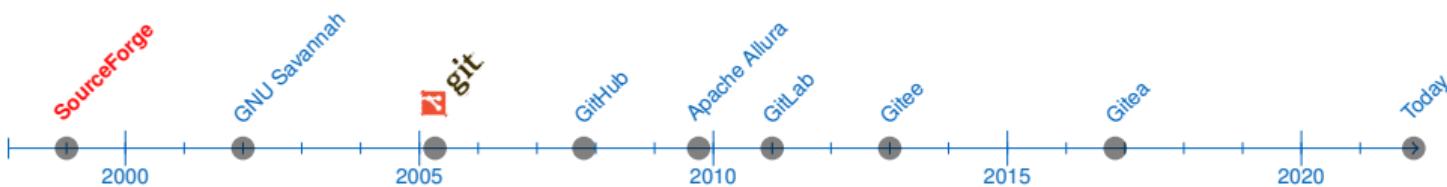


## SourceForge



<https://sourceforge.net>

- Founded in 1999
- First provider of a centralized location for free and open-source software
- PHP backend released in January 2000 (SourceForge Alexandria)
- Last **free** release November 2001
- Then SourceForge Enterprise Edition or SFEE ⇒ TeamForge
- Between 2003 and 2005 a lot of stuff was broken
- 2006 first profitable quarter and integration of Google ads
- Since 2013 bundleware



## SourceForge

The screenshot shows the SourceForge project page for Dolibarr ERP - CRM. It features a header with the SourceForge logo, navigation links (Help, Create, Join, Login), and a search bar. Below the header, there's a banner for Dolibarr ERP - CRM, followed by tabs for Summary, Files, Reviews, Support, News, and External Link. A prominent green button says "Download Latest Version". The main content area displays a table of files with columns for Name, Modified, Size, and Downloads/Week. The table includes entries for Dolibarr CRM, Dolibarr installer for Windows, Dolibarr installer for Fedora-Redhat-Mandriva-Ubuntu, and Dolibarr installer for Debian-Ubuntu. To the right, there's a sidebar titled "Recommended Projects" listing Vtiger CRM, webERP Accounting & Business Management, Ethereum Wallet and Mist Browser, and vternexx - Digital Innovation CRM.

<https://sourceforge.net>

- Has been temporarily banned in China three times: in September 2002 in July 2008 (for about a month) and on August 6, 2012 (for several days).
- September 2012: Acquired from Geeknet by the online job site Dice.com for \$20 million
- January 2016: Sold to the San Diego-based BIZX, LLC (Slashdot Media since 2019) for an undisclosed amount



## Apache Allura

The screenshot shows the Apache Allura Git interface. The top navigation bar includes links for Home, Projects, Apache Allura™, Git, Register, and Log In. The main content area displays a commit tree for the 'master' branch. The tree view shows a single commit by Dave Brondsema from 4 days ago, which failed due to image failures. Below the tree, a list of recent commits is shown:

File	Date	Author	Commit
Allura	4 days ago	Dave Brondsema	[04f14f] Log more details about image failures
AlluraTest	2021-09-13	Dave Brondsema	[08b150] [#8396] upgrade decorator
ForgeActivity	2021-10-08	Dave Brondsema	[3fc130] Handle historical activities with null icon_url...
ForgeBlog	2021-09-29	Dave Brondsema	[1f11d2] Add type hints for all mapped classes' query attrs
ForgeChat	2021-09-29	Dave Brondsema	[1f11d2] Add type hints for all mapped classes' query attrs
ForgeDiscussion	2021-09-29	Dave Brondsema	[1f11d2] Add type hints for all mapped classes' query attrs

<https://forge-allura.apache.org/p/allura/git/ci/master/tree/>



## Apache Allura

The screenshot shows the Apache Allura Git interface. At the top, there are links for 'Apache Allura Home' and 'Allura Project'. On the right, there are 'Register' and 'Log In' buttons. The main area displays a commit history for the 'master' branch. The commits are listed in reverse chronological order:

File	Date	Author	Commit
Allura	4 days ago	Dave Brondsema	[04f14f] Log more details about image failures
AlluraTest	2021-09-13	Dave Brondsema	[08b150] [#8396] upgrade decorator
ForgeActivity	2021-10-08	Dave Brondsema	[3fc130] Handle historical activities with null icon_url...
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ForgeDiscussion	2021-09-29	Dave Brondsema	[1f11d2] Add type hints for all mapped classes' query attrs

On the left sidebar, there are sections for 'Browse Commits', 'Merge Requests' (4), 'Forks' (49), and 'Branches' (with 'master' selected). The URL shown is <https://forge-allura.apache.org/p/allura/git/ci/master/tree/>.

- Started in October 2009 as an Python, open-source reimplementation for the developer tools from SourceForge
- First announced in March 2011
- Platform for new projects on SourceForge since July 2011
- Since March 2013 part of the Apache Software Foundation (ASF)

<https://forge-allura.apache.org/p/allura/git/ci/master/tree/>



## GNU Savannah

**GNU GRUB - Git Repositories**

Group Main Homepage Download Mailing lists Source code Bugs  
Tasks News

Not Logged in Login New User

This Page Language Clean Reload Printer Version

Search in Projects Search

Hosted Projects Hosting requirements Register New Project Full List Contributors Wanted Statistics

Site Help User Docs: Cookbook User Docs: In Depth Guide Get Support

**Browsing the Git Repository**

You can Browse the Git repository of this project with your web browser. This gives you a good picture of the current status of the source files. You may also view the complete histories of any file in the repository as well as differences among two versions.

- [Browse Sources Repository](#)

**Getting a Copy of the Git Repository**

**Anonymous clone:**

```
git clone https://git.savannah.gnu.org/git/grub.git
```

**Member clone:**

```
git clone <membername>@git.savannah.gnu.org:/src/git/grub.git
```

<https://savannah.gnu.org>



## GNU Savannah

**GNU GRUB - Git Repositories**

Group Main Homepage Download Mailing lists Source code Bugs  
Tasks News

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**Getting a Copy of the Git Repository**

**Anonymous clone:**

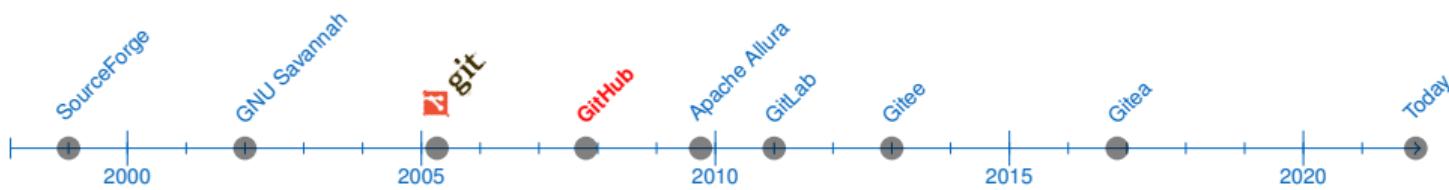
```
git clone https://git.savannah.gnu.org/git/grub.git
```

**Member clone:**

```
git clone <membername>@git.savannah.gnu.org:/src/git/grub.git
```

<https://savannah.gnu.org>

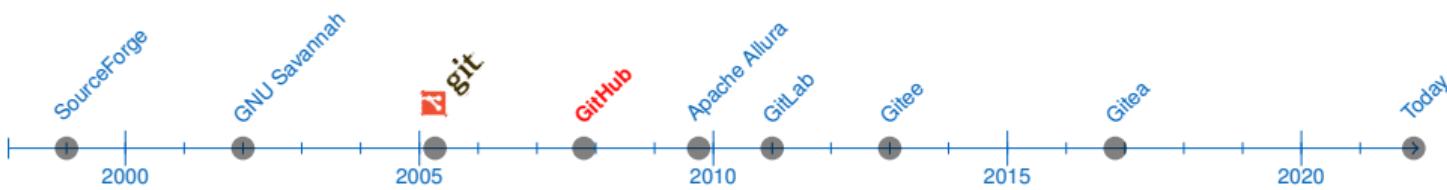
- Loïc Dachary installed SourceForge for GNU projects.
- SourceForge turned into proprietary software ⇒ fork (2001/2002)
- Only for free software without **ANY** proprietary parts like image formats, etc.
- Split into `savannah.gnu.org` and `savannah.nongnu.org`
- Host for all GNU projects



## GitHub

A screenshot of a GitHub repository page for 'TUM-Dev / tum-thesis-latex'. The page shows a public repository with 12 stars and 169 forks. The 'Code' tab is selected. The repository description is: 'A LaTeX template for TUM Bachelor/Master theses.' It features GitHub Actions CI, a dark theme, and a LaTeX template. The repository has 54 commits across branches .github/workflows, build, chapters, and data, with the most recent commit being 'Initial commit.' 8 years ago. There is one tag available.

<https://github.com>



## GitHub

The screenshot shows a GitHub repository page for `TUM-Dev/tum-thesis-latex`. The page includes a header with notifications, stars (12), forks (169), and a link to the repository's code. Below the header, there are tabs for Code, Issues, Pull requests, Actions, Security, and Insights. The Code tab is selected. The main content area displays the repository's README file, which describes it as a LaTeX template for TUM Bachelor/Master theses. It also lists several recent commits:

- serenita and COM8 Adjustet links in the README to act... - on Jul 23 (54)
- .github/workflows GitHub actions CI - 6 months ago
- build Add dark theme - 5 months ago
- chapters Simplify template. - 6 years ago
- data Initial commit. - 8 years ago

<https://github.com>

- Initially written using Ruby on Rails, but more recently broken up into services using e.g. Go, Java and even some Haskell
- Development of the GitHub.com platform began on October 19, 2007
- Launched in April 2008
- 2010 surpassed SourceForge and Google Code



## GitHub

A screenshot of a GitHub repository page for 'TUM-Dev / tum-thesis-latex'. The page includes navigation tabs for Code, Issues, Pull requests, Actions, Security, and Insights. The main content area shows a master branch commit history with contributions from serenita and COM8. The repository description is 'A LaTeX template for TUM Bachelor/Master theses.' and it includes labels for latex, latex-template, and hackoberfest.

<https://github.com>

- November 2011 GitHub Enterprise is available (selfhosted)
- July 2012 Andreessen Horowitz invested \$100 million in venture capital
- Bought by Microsoft in 2018 for \$ 7.5 Billion
- November 2020, source code for GitHub Enterprise Server was leaked
- Freemium model (Support, GitHub Enterprise Server, Job postings, CI minutes, ...)

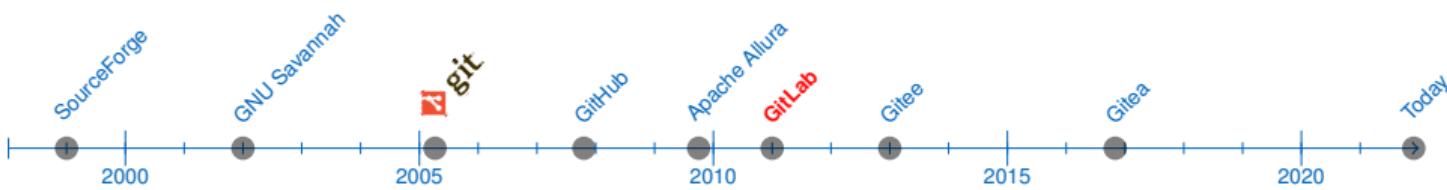


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<https://github.com>

- Censorship: youtube-dl, Russian suicide manuals
- "Supports" Open Source, but their code is **not** Open Source!
- 2019 blocking developers in Iran, Crimea, Cuba, North Korea, and Syria
- Hosts the code for ICE (U.S. Immigration and Customs Enforcement)
- Some internal drama...

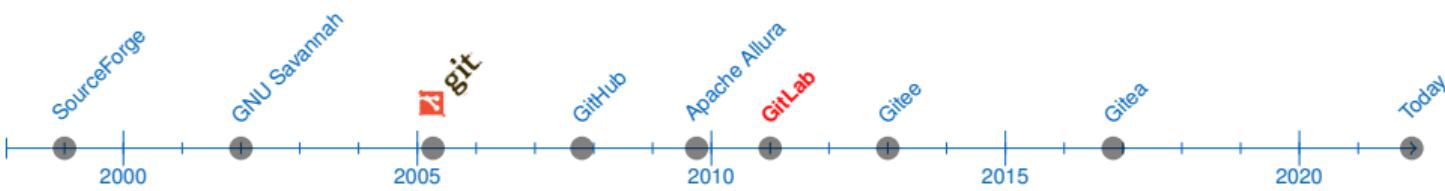


## GitLab

The screenshot shows the GitLab interface for the 'linux-stable' project. The top navigation bar includes 'Menu', a search icon, and 'Sign in / Register'. The sidebar on the left has icons for 'Issues', 'Merge requests', 'Commits', 'Branches', 'Tags', 'File browser', 'Commits', 'Merge requests', 'File browser', 'Commits', 'Merge requests', 'File browser', and 'Documentation'. The main content area displays the project details: 'linux-stable' (Project ID: 11284407), 1,044,422 Commits, 88 Branches, 3,889 Tags, 2.3 GB Files, and 2.3 GB Storage. It also shows that it's a 'Mirror from linux-stable' and was 'Forked from linux-kernel / torvalds-linux'. Below this, there's a commit list with a recent entry by Linus Torvalds: 'Linux 5.15-rc6' (519d8195) authored 1 day ago. At the bottom, there are buttons for 'README' and 'Other', and a table showing the last commit and update for 'Documentation'.

Name	Last commit	Last update
Documentation	Merge tag 'for_linus' of git://.../linus/ into... (519d8195)	1 day ago

<https://gitlab.com>

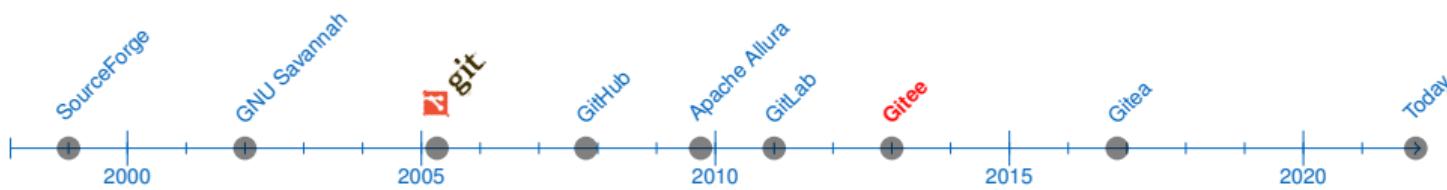


## GitLab

The screenshot shows a GitLab project page for 'linux-stable'. The top navigation bar includes 'Menu', a search icon, and 'Sign in / Register'. The main content area displays project statistics: 1,044,422 Commits, 88 Branches, 3,889 Tags, 2.3 GB Files, and 2.3 GB Storage. Below this, it shows a 'Mirror from linux-stable' and links to 'Read more' and 'Forked from linux-kernel / torvalds-linux'. A commit list for 'Linux 5.15-rc6' by Linus Torvalds is shown, dated 'authored 1 day ago'. At the bottom, there are tabs for 'README' and 'Other', and a table showing the last commit and update for 'Documentation'.

- Code written in Ruby and later parts in Go
- First version 2011
- GitLab.com since 2012
- Since July 2013: GitLab CE: Community Edition and GitLab EE: Enterprise Edition under the MIT License.
- February 2014 GitLab EE changed to the "GitLab Enterprise Edition License"
- You can host your own instance
- Freemium model (Support, GitLab EE, CI minutes, ...)

<https://gitlab.com>

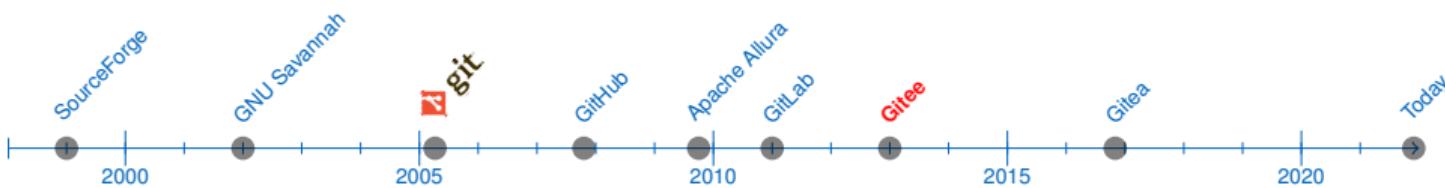


## Gitee

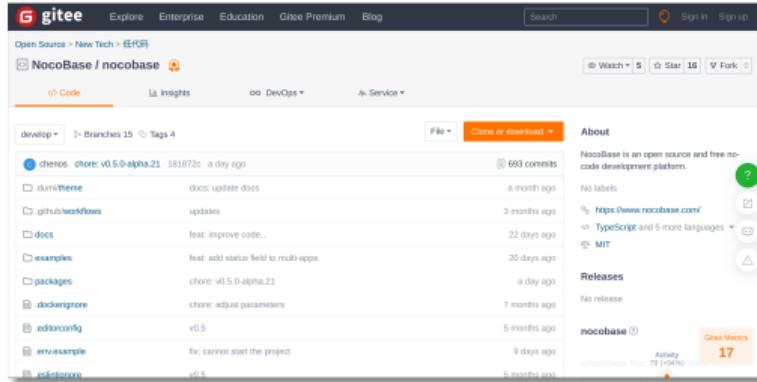
The screenshot shows the Gitee interface for the repository `Nocobase/nocobase`. The page includes:

- Header: Explore, Enterprise, Education, Gitee Premium, Blog, Search, Sign in, Sign up.
- Breadcrumbs: Open Source > New Tech > 项目
- Repository details: `Nocobase/nocobase`, 693 commits, 15 branches, 4 tags, 16 stars, 9 forks.
- Code tab: Shows a list of recent commits by various users (chenos, dumatheme, githua/workflows, etc.) with their commit messages and timestamps.
- About section: Describes Nocobase as an open source and free no-code development platform, with links to the website (<https://www.nocobase.com/>), TypeScript support, and MIT license.
- Releases section: No releases listed.
- Activity: Shows 17 issues and 73 pull requests.

<https://gitee.com>



## Gitee



<https://gitee.com>

- "Chinese" GitHub
- Operator: Shenzhen AOSI Network Information Co., Ltd.
- Launched by Open Source China in 2013
- Since May 2020, Gitee grew from 5 million registered users to 8 million (as of May 2022)



## Gitea

The screenshot shows the Gitea web interface for the repository `Lruihao / FixIt`. At the top, there are navigation links for 'Erkunden' and 'Hilfe', and buttons for 'Registrieren' and 'Anmelden'. Below the header, the repository details are shown: 'Beobachten' (1), 'Favorisieren' (0), 'Fork' (0). The main content area includes tabs for 'Code', 'Issues' (2), 'Projekte', 'Releases', 'Wiki', and 'Aktivität'. A brief description states: 'A clean, elegant but advanced blog theme for Hugo 一个简洁、优雅且高效的 Hugo 主题'. Below this, repository statistics are listed: 1003 Commits, 6 Branches, 6 Tags, and 54 MiB. A 'Branch: master' dropdown is set to 'master'. The URL `HTTPS://try.gitea.io/Lruihao/FixIt.git` is provided. The commit history table shows the following recent changes:

Cell	Chore: inject a theme meta tag in the ...	vor 3 Tagen
.github	Chore: update contributors.md	vor 3 Wochen
archetypes	Feat: add new front matter 'authorEmail'	vor 2 Wochen
assets	Perf: complete giscus comment system (#130)	vor 4 Tagen

<https://gitea.io>



## Gitea

The screenshot shows the Gitea interface for the repository `Lruihao / FixIt`. The top navigation bar includes links for 'Erkunden', 'Hilfe', 'Registrieren', and 'Anmelden'. The main content area shows the repository details: 'Beobachten' (1), 'Favorisieren' (0), 'Fork' (0). Below this are tabs for 'Code', 'Issues' (2), 'Projekte', 'Releases', 'Wiki', and 'Aktivität'. A brief description states: 'A clean, elegant but advanced blog theme for Hugo 一个简洁、优雅且高效的 Hugo 主题'. It lists tags: hugo, hugo-blog-theme, hugo-theme. Repository stats: 1003 Commits, 6 Branches, 6 Tags, 54 MiB. A 'Branch: master' dropdown is shown next to an 'HTTPS' link (<https://try.gitea.io/Lruihao/FixIt.git>). A list of recent commits follows:

Commit	Message	Time
314fc999cd	Chore: inject a theme meta tag in the ...	vor 3 Tagen
.github	Chore: update contributors.md	vor 3 Wochen
archetypes	Feat: add new front matter 'authorEmail'	vor 2 Wochen
assets	⚡ Perf: complete giscus comment system (#130)	vor 4 Tagen

<https://gitea.io>

- Open-source forge software
- Written in go
- Came from a fork of Gogs in November of 2016 since it was under the control of a single maintainer. Users were frustrated.
- Design based on the old GitHub design
- Code hosted on GitHub:  
<https://github.com/go-gitea/gitea>