Bruh2023's ETS URL Shortener

Developed by

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Challenge Requirements

- Trustable, and secure
- Using Software-as-a-Service (SaaS)
- Analytics Tracking
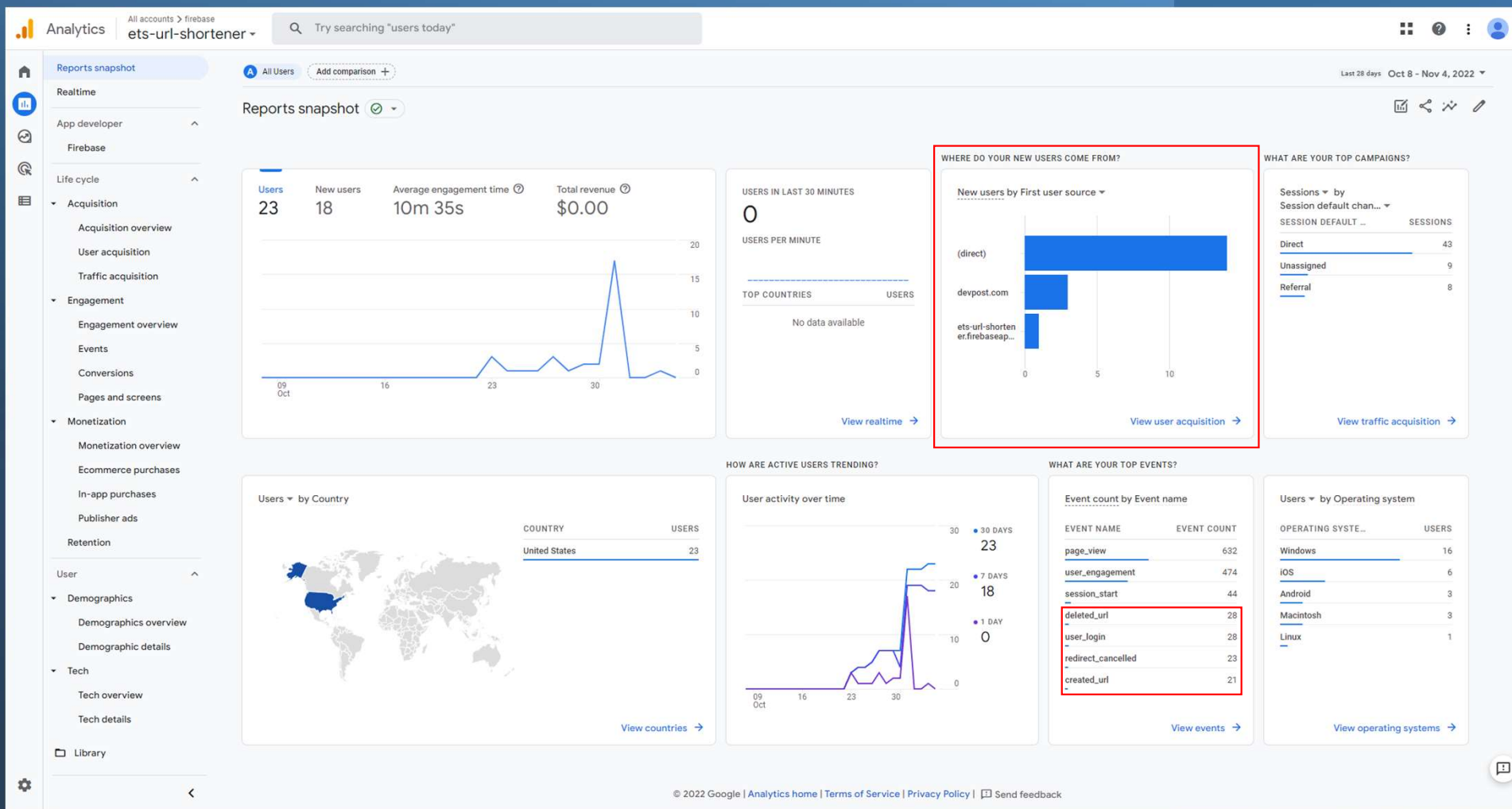
Software Stack

Firebase

- A simple all-in-one SaaS provider.

- Flexible, scalable, and affordable.

- We are using their free services for
    - Hosting,
    - Firestore (Database),
    - Analytics, and
    - Authentication.

Analytics

- Track user interactions in real time.
  - Created/Edited/Deleted a Short URL.
  - Accessed or Cancelled a redirect.
- Track where the user came from.
- An intuitive Analytics Console
  - To easily monitor everything.

Google Analytics

Analytics Console

Security

Authentication Providers

Native providers

- ✉ Email/Password ✓
- 📞 Phone
- 👤 Anonymous

Additional providers

- G Google
- f Facebook
- ▶ Play Games
- Game Center
- Ⓐ Apple
- GitHub
- Microsoft
- 🐦 Twitter
- Y Yahoo

Custom providers

- 🔒 OpenID Connect
- 🔒 SAML

Our Unique Approach

Secure Links

Single Trust Policy

We trust state workers to provide good links

Trusted users can then create their own links easily

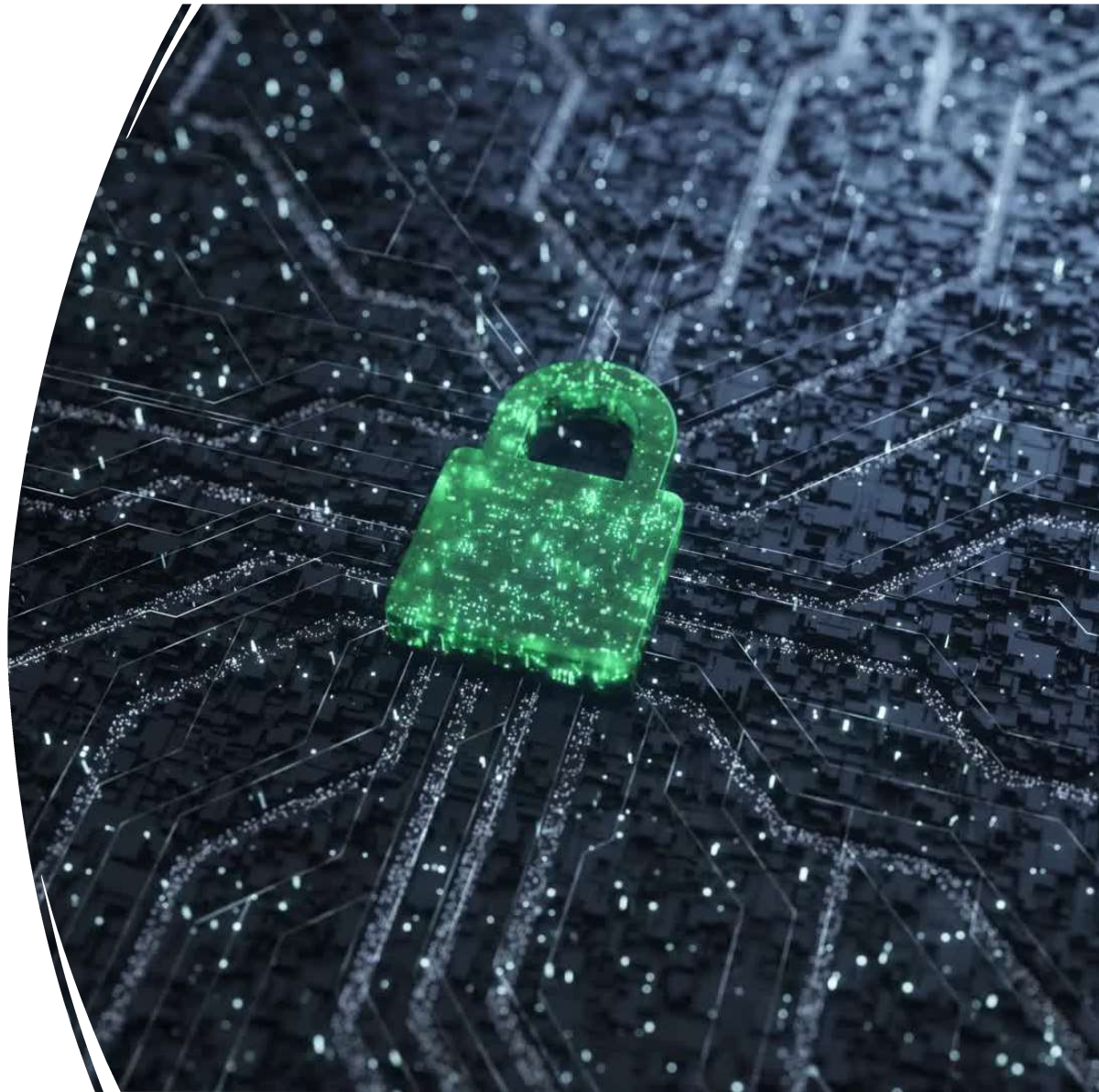Unauthorized users cannot access the link shortener

During Pilot Phase

Roll out to specific VIPs

Restrict users by email address

Able to implement a request system but eventually allow seamless shortening

Passwordless Authentication

- All you need to memorize is your email; not another password.

- Reduces possible attack vectors for hackers.

Streamlined
User Experience

A trusted user logs in

Creates a new short URL

Link is immediately ready for use.

A QR Code can be generated, or the short URL can be copied directly.

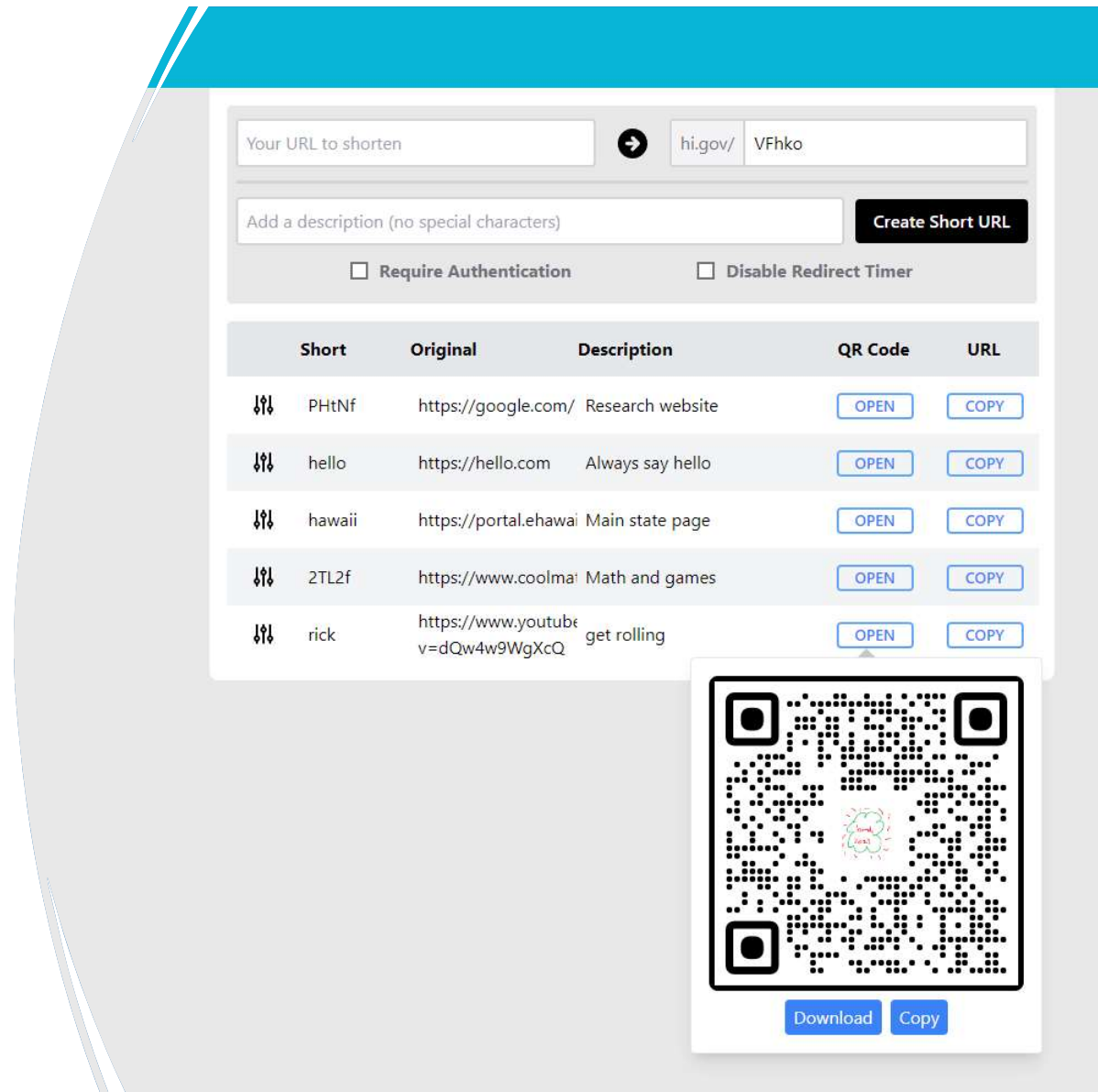← with a logo for branding, too!

Utility & Impact

Impact on current and new users

User-friendly Interface

Creating Positive Change

Designing for the end user

- Key values
  - Simple
  - Intuitive
  - Responsive
- Vision
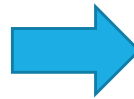 - Accessible
  - Broad coverage

UTILITY — ETS ADMINS

Currently

Admins manually configures a short URL by editing the primary webserver.

- Time consuming process
- Manually remove and manage URLs
- Possibility for human error

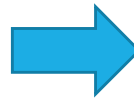**With our solution**

Links are created and stored in a database

- Easy to manage database
- Analytics console
- Low maintenance

POSITIVE CHANGE – STATE WORKERS EVERYWHERE

Currently

Send a request to ETS admins
- Wastes time waiting for response
- Share hard to read long links
- Contact ETS for any changes/removal
- Users may become impatient and use 3rd party shorteners instead.

With our solution

Easily create and manage links from anywhere
- Share secure links
- Increase communication efficiency
- Instantly share via links or QR codes
- Share links for internal or external use
- Update and remove links in real time

Solution Demo

Authentication

Email

example@email.com

Login

URL Shortener

Logout

	Your URL to shorten	➜	hi.gov/	9JStj

Add a description (no special characters)		Create Short URL

☐ Require Authentication   ☐ Disable Redirect Timer

	Short	Original	Description	QR Code	URL
⇅	PHtNf	https://google.com/	Research website	OPEN	COPY
⇅	hello	https://hello.com	Always say hello	OPEN	COPY
⇅	hawaii	https://portal.ehawai	Main state page	OPEN	COPY
⇅	2TL2f	https://www.coolma	Math and games	OPEN	COPY
⇅	rick	https://www.youtube v=dQw4w9WgXcQ	get rolling	OPEN	COPY

That's all, thank you!