



Fosdem 2024

# Passbolt: the open source password manager for teams

Lightning talks

Hello, I'm Remy,  
Co-founder of passbolt



## \$ whoami



/passbolt  
@striphis



@passbolt@mastodon.social




passbolt,  
mailvelope,  
open social,  
cakephp cakefest,  
05f5.com...



20 years ago? Throwback from the past...  
Passbolt founders at fosdem with Jon 'Maddog' Hall





Anyone not using  
a password manager  
at work?

# The open source credential manager built for collaboration

Go ahead share your **secrets**...

The screenshot displays the Passbolt web interface. At the top, there are navigation links for 'passwords', 'users', and 'help', along with a 'sign out' button. The main header includes the 'passbolt' logo, a search bar for passwords, and buttons for '+ Create', 'Share', and 'Copy'. A sidebar on the left lists navigation options: 'All items', 'Favorites', 'Recently Modified', 'Shared with me', 'Owned by me', 'Folders' (with sub-items: Root, Personal, Family, Admin), 'Teams' (with sub-items: Admin, DevOps, Developers), and 'Tags'. The main content area shows a list of password entries with columns for Name, Username, Password (masked with dots), and URL. The 'Mastodon' entry is selected. A modal dialog box titled 'Share 3 resources' is open, showing two users: 'Ada Lovelace' (ada@passbolt.com) with a 'varies' dropdown and 'Hedy Lamarr' (hedy@passbolt.com) with an 'is owner' dropdown. Below the user list is a section 'Share with people or groups' with a text input field containing the placeholder 'Start typing a user or a group name'. At the bottom of the dialog are 'Cancel' and 'Save' buttons. In the bottom right corner of the image, there are four browser icons: Firefox, Chrome, Edge, and Brave.

# Quick access & in form menu

Fast & furious cautious!

The image shows a browser window with the Mastodon login page on the left and a passbolt search menu on the right. The Mastodon page features the logo, input fields for 'E-mail address' and 'Password', a 'LOG IN' button, and links for 'Sign up', 'Forgot your password?', and 'Didn't receive confirmation instructions?'. The passbolt menu is open, showing a search bar, a 'Suggested' section with 'mastodon.social (admin@passbolt.com)', and a 'Browse' section with 'Filters', 'Groups', and 'Tags'. A 'Create new' button is at the bottom of the menu.

**mastodon**

E-mail address

Password

**LOG IN**

[Sign up](#) [Forgot your password?](#) [Didn't receive confirmation instructions?](#)

**passbolt**

Search

Suggested

mastodon.social (admin@passbolt.com)  
https://mastodon.social

Browse

Filters

Groups

Tags

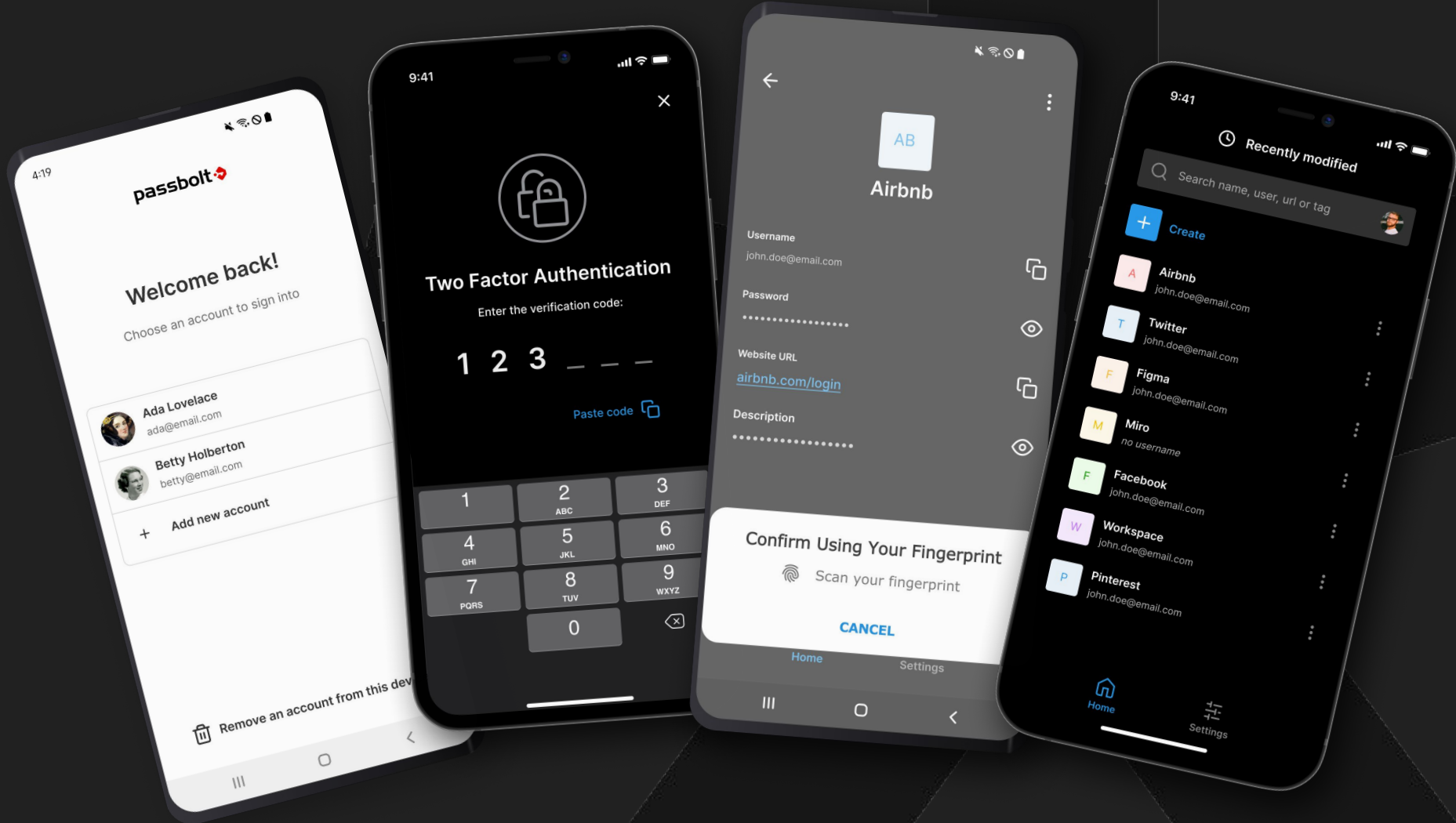
**Create new**

# Android and iOS

Your credentials on the go.



iOS



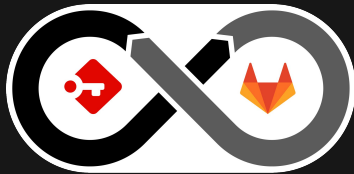
# And **terminals** near you

Via official or community maintained CLIs, libraries, etc. or just Curl and Gpg

```
$> passbolt get 664735b2-4be7-36d9-a9f8-08d42998faf8  
-----BEGIN PGP MESSAGE-----
```

```
$> passbolt get \  
$(passbolt find | awk '/server/ { print $NF }')\  
| gpg -q --no-tty
```

- ✓ Retrieve, store, and share passwords programmatically with the JSON api.
- ✓ Automate recurring tasks with CLI.
- ✓ Use with Ansible collection, Gitlab, etc.



```
$> export SECRET=`curl --location --request GET '${PASSBOLT_URL}'\  
--header 'Authorization: ${ACCESS_TOKEN}' \  
--header 'Content-Type: application/json' \  
| jq -j '.body.data' \  
| gpg -q --no-tty \  
| jq -j '.password`
```

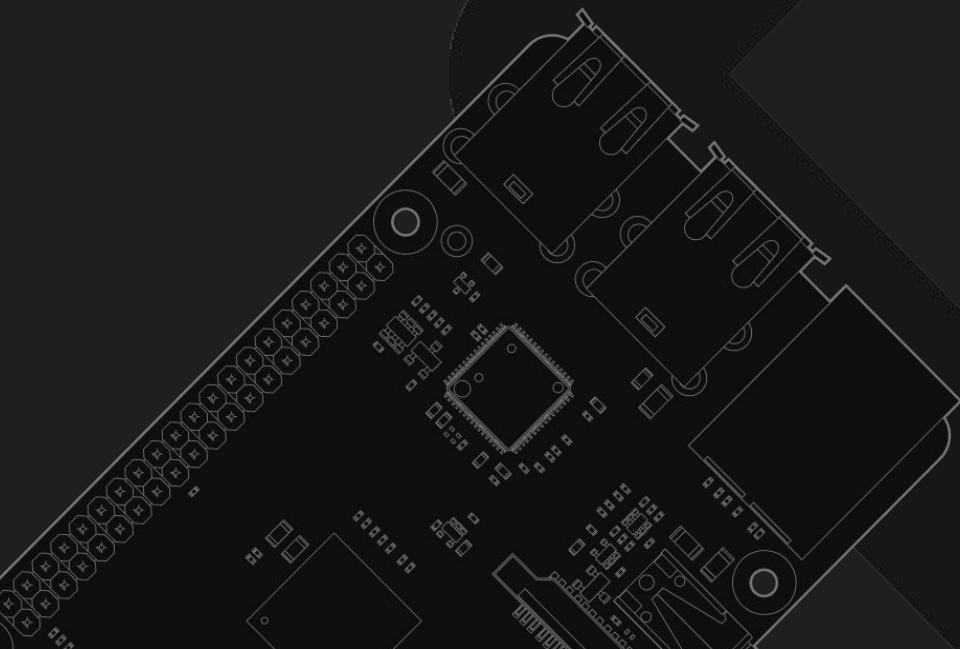


# Got trust issues? **Host it yourself!**

Works in air-gapped environments or on a Raspberry Pi



- ✓ Docker images (rootless / distroless)
- ✓ Debian / Ubuntu packages
- ✓ RPM packages (RHEL, Centos, etc).
- ✓ Helm charts
- ✓ AWS AMI, Digital Ocean, etc.



# How does passbolt compare with...

TL:DR; passbolt focus on secure online **collaboration**

## Keepass\*

- ✗ Synced across devices
- ✗ Nested permissions
- ✗ User management
- ✗ JSON API
- ✗ Browser integration
- ✗ Audit logs
- ✓ Encrypted metadata
- ✓ Offline mode
- ✓ Files / more content types

## \*warden

- ✗ Random private key
- ✗ Mandatory browser extension
- ✗ Challenge-based authentication
- ✗ Nested folders with flexible permissions
- ✗ 100% open source (not “source available”)
- ✗ Secret and password manager all in 1
- ✓ External share (Send)
- ✓ Offline mode
- ✓ Files / more content types



What happened in 2023?

# Single Sign On

SSO **OpenID** will be coming soon in CE!

The image displays two overlapping screenshots of the Passbolt administration interface. The top screenshot shows a modal dialog titled "Test Single Sign-On configuration" with a close button (X). The dialog text reads: "Before saving the settings, we need to test if the configuration is working." Below the text is a button labeled "Sign In with OpenID". At the bottom of the dialog are "Cancel" and "Save settings" buttons. The background shows the "Single Sign-On" settings page with a warning: "Warning, Don't forget to save your settings to apply your modification." and an "Important notice" box stating: "Enabling SSO changes the security risks. For example an attacker with a local machine access maybe be able to access secrets, if the user is still logged in with the Identity provider. Make sure users follow screen lock best practices. [Learn more](#)".

The bottom screenshot shows the "Single Sign-On" settings page. At the top, there is a navigation bar with "passwords users administration help" and a "sign out" link. The Passbolt logo and a search bar are visible. Below the navigation, there is a "Save settings" button. The main content area shows "Administration > Single Sign-On > Settings" and a toggle switch for "Single Sign-On" which is currently turned off. Underneath, there is a section titled "Select a provider" with three options: Microsoft (represented by the Windows logo), Google (represented by the 'G' logo), and OpenID (represented by the OpenID logo). To the right of the settings, there is an "Important notice" box with the same text as in the top screenshot, and a "Need some help?" section with a button labeled "Read the documentation". At the bottom right, there are links for "Terms", "Credits", and a heart icon.

# Collaborative management of TOTP

Both on mobile and web extension

The image displays the Passbolt web interface and its mobile application. The web interface shows a list of TOTP items with columns for Name, Username, Password, and TOTP. The 'Grafana' item is selected, showing its details in a sidebar. The mobile app shows the 'Create TOTP' screen with a list of services and a 'Scan QR code' screen with a QR code and a camera viewfinder.

**Web Interface:**

- Navigation: passwords, users, administration, help, sign out
- Search: Search passwords
- User: Admin User (admin@passbolt.com)
- Actions: + Create, Copy, Edit, Share, Export, More
- Table of TOTP Items:

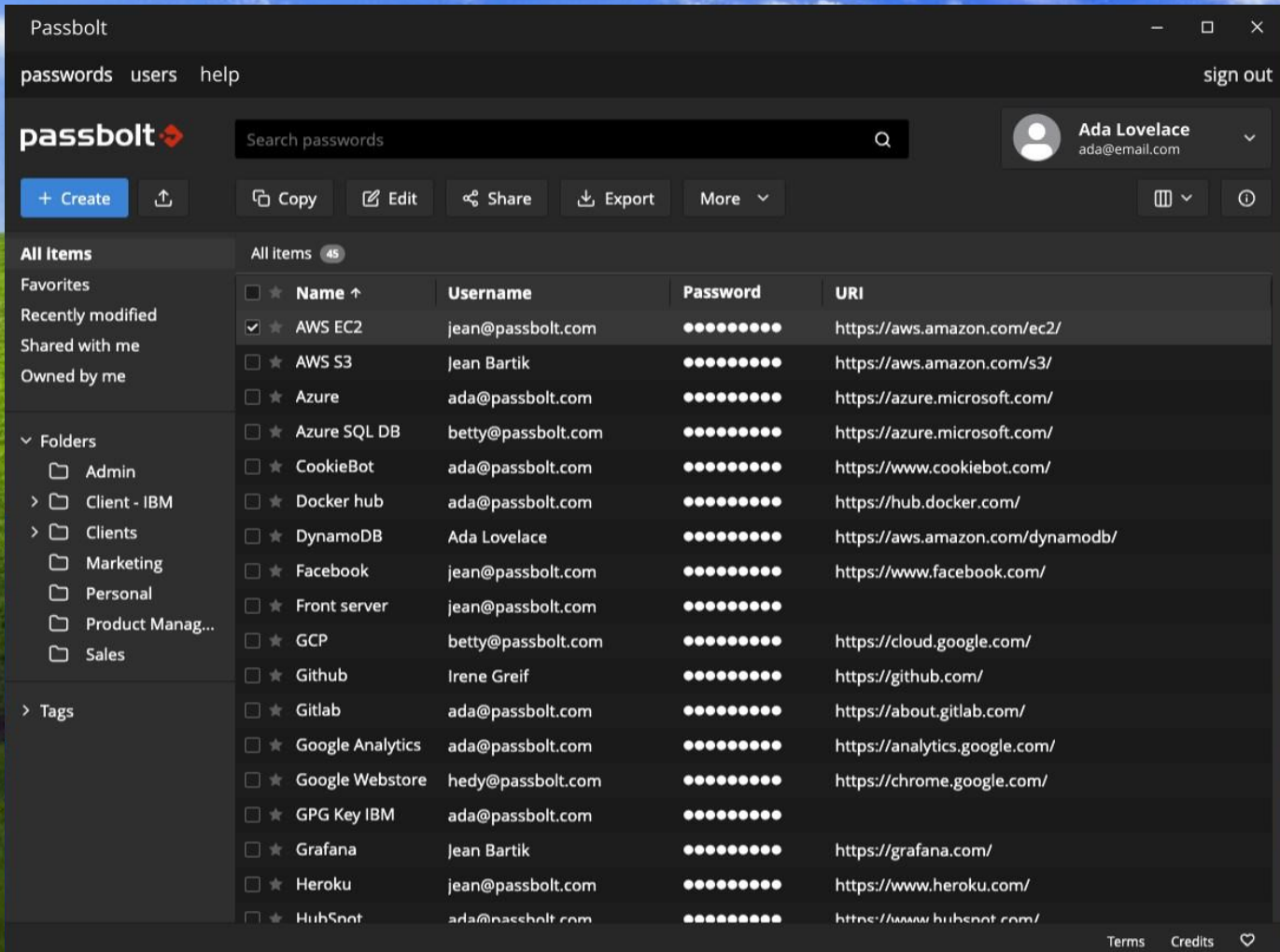
Name	Username	Password	TOTP
RocketChat	Ada Lovelace	••••••••	••• •••
SecureFrame	Hedy Lamarr	••••••••	••• •••
Grafana	Jean Bartik	••••••••	223 275
Supabase	Ada Lovelace	••••••••	••• •••

**Mobile App:**

- Home screen: Search TOTP, Create, List of TOTP items (RocketChat, SecureFrame, Grafana, Supabase)
- Create TOTP screen: Scan QR code, Create TOTP manually
- Scan QR code screen: QR code, Aim the camera at the QR Codes

# Passbolt.exe

If you are into blue screens... 😊



The screenshot shows the Passbolt web application interface. At the top, there are navigation links for "passwords", "users", and "help", along with a "sign out" button. The main header includes the "passbolt" logo, a search bar for passwords, and a user profile for "Ada Lovelace" (ada@email.com). Below the header is a toolbar with buttons for "+ Create", "Copy", "Edit", "Share", "Export", and "More".

The main content area displays a list of password items under the "All Items" tab (45 items). The list is organized into columns: Name, Username, Password, and URI. The "Name" column is sorted in ascending order. The "Password" column shows masked passwords with dots.

<input type="checkbox"/> ★ Name ↑	Username	Password	URI
<input checked="" type="checkbox"/> ★ AWS EC2	jean@passbolt.com	●●●●●●●●	https://aws.amazon.com/ec2/
<input type="checkbox"/> ★ AWS S3	Jean Bartik	●●●●●●●●	https://aws.amazon.com/s3/
<input type="checkbox"/> ★ Azure	ada@passbolt.com	●●●●●●●●	https://azure.microsoft.com/
<input type="checkbox"/> ★ Azure SQL DB	betty@passbolt.com	●●●●●●●●	https://azure.microsoft.com/
<input type="checkbox"/> ★ CookieBot	ada@passbolt.com	●●●●●●●●	https://www.cookiebot.com/
<input type="checkbox"/> ★ Docker hub	ada@passbolt.com	●●●●●●●●	https://hub.docker.com/
<input type="checkbox"/> ★ DynamoDB	Ada Lovelace	●●●●●●●●	https://aws.amazon.com/dynamodb/
<input type="checkbox"/> ★ Facebook	jean@passbolt.com	●●●●●●●●	https://www.facebook.com/
<input type="checkbox"/> ★ Front server	jean@passbolt.com	●●●●●●●●	
<input type="checkbox"/> ★ GCP	betty@passbolt.com	●●●●●●●●	https://cloud.google.com/
<input type="checkbox"/> ★ Github	Irene Greif	●●●●●●●●	https://github.com/
<input type="checkbox"/> ★ Gitlab	ada@passbolt.com	●●●●●●●●	https://about.gitlab.com/
<input type="checkbox"/> ★ Google Analytics	ada@passbolt.com	●●●●●●●●	https://analytics.google.com/
<input type="checkbox"/> ★ Google Webstore	hedy@passbolt.com	●●●●●●●●	https://chrome.google.com/
<input type="checkbox"/> ★ GPG Key IBM	ada@passbolt.com	●●●●●●●●	
<input type="checkbox"/> ★ Grafana	Jean Bartik	●●●●●●●●	https://grafana.com/
<input type="checkbox"/> ★ Heroku	jean@passbolt.com	●●●●●●●●	https://www.heroku.com/
<input type="checkbox"/> ★ HubSpot	ada@passbolt.com	●●●●●●●●	https://www.hubspot.com/

At the bottom right of the interface, there are links for "Terms", "Credits", and a heart icon.

# And also...

- ✓ Performance improvements
- ✓ Improved grid
- ✓ Improve filters & search (mobile)
- ✓ Key export/transfer (mobile)
- ✓ RBAC for UI
- ✓ Suspend user
- ✓ Password policies
- ✓ Passphrase policies
- ✓ MFA policies
- ✓ User self-registration
- ✓ 4 security audits

The image displays two screenshots of the Passbolt administration interface. The top screenshot shows the 'Role Based Access Control' settings page. It features a table with columns for 'UI Permissions', 'Admin', and 'User'. The table lists various permissions such as 'Import / export', 'Password', 'Description', 'Metadata', 'Organisation', and 'Sharing'. A dropdown menu is open over the 'Can see passwords activities' row, showing options: 'Yes, only the password I own', 'No', and 'Yes'. The bottom screenshot shows the 'User self registration' settings page. It includes a toggle for 'User self registration' which is turned on. Below it is a list of 'Email domain safe list' with entries: 'passbolt.com', 'passbolt.in', 'passbolt.dev', 'passbolt.nft', and 'passbolt.lu'. A 'What is user self registration?' sidebar is visible on the right, explaining that user self registration allows users with email from a safe listed domain to create their account without prior invitation.



What's cooking in 2024?



# Password expiry

Fix automatically marking accessed items as expired when a user is deleted, leaves a group, lose a permission, etc.

The screenshot shows the Passbolt web interface. The main content area displays a table of password items. The 'Twitter' item is selected, and a modal dialog titled 'Set an expiry date' is open over it. The modal has three options: 'Select the date automatically' (selected), 'Select the date manually', and 'Never'. The 'Select the date automatically' option shows '389 days from now'. The 'Select the date manually' option has a text input field 'DD/MM/YYYY HH:MM:SS' and a calendar icon. The 'Never' option is 'This resource does not need an expiry date.' The modal has 'Cancel' and 'Save' buttons. In the background, a dropdown menu is visible with options: 'URL' (checked), 'Tags', 'Modified' (checked), and 'Expiry' (checked).

passwords users help

passbolt

Search passwords

+ Create

Share Copy Edit Download More

All items

Favorite Recently Modified Shared with me Owned by me

▼ Folders

- Root
- Personal
  - Family
  - Admin
- Teams

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Resource	Expiry	Password
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gitlab	expired	*****
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Postgresql	in 1 month	*****
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Twitter	in 2 days	*****
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Facebook	in 3 weeks	*****
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Github	in a year	*****
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stripe	never	*****
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PhpMyAdmin	never	*****
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mysql	never	*****
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NPM	never	*****

Set an expiry date

Select the date automatically:

389 days from now.

Select the date manually:

DD/MM/YYYY HH:MM:SS

Never

This resource does not need an expiry date.

Cancel Save

URL

Tags

Modified

Expiry

Terms Privacy Credits















# Redesigned admin panel

passwords users **administration** help sign out

**passbolt**  Name  
name@email.com

**Home** Administration > Home

- Subscription
- Password configuration
  - Password expiry
  - Password policy
- Authentication
  - User passphrase policies
  - Account recovery
  - Single Sign-On
  - Multi Factor Authentication
  - MFA Policy
- User provisioning
  - Self registration
  - Users directory
- Emails
  - Email server
  - Email notifications
- Role-Based Access Control
- Internationalisation

 <b>Subscription</b> Browse and update the subscription key details.	 <b>Password expiry</b> Control the default behaviour of password expiry policy for all users.	 <b>Password policy</b> Modify the default settings of the passwords generator.
 <b>User passphrase policies</b> Define the minimal entropy for the users' private key passphrase.	 <b>Account recovery</b> Control the behavior for account recovery for all users.	 <b>Single Sign-On</b> Select which Single Sign-on provider can be used to login.
 <b>Multi Factor Authentication</b> Select which multi factor authentication provider can be used.	 <b>MFA Policy</b> Control the default behaviour of multi factor authentication.	 <b>Self registration</b> Enable users to enrol without prior admin invitation.
 <b>Users directory</b> Configure the synchronisation of users and groups with passbolt.	 <b>Email server</b> Control the SMTP server configuration used to send emails.	 <b>Email notifications</b> Define which email notifications will be sent.
 <b>Role-Based Access Control</b>	 <b>Internationalisation</b>	


# And also...

- ✓ SSO ADFS
- ✓ Performance improvements
- ✓ Search improvements
- ✓ Icons / Custom fields
- ✓ File attachments
- ✓ More content types (notes, cards)
- ✓ Manifest V3 rollout
- ✓ New help site (admin, dev, user)
- ✓ Biometric login (web)
- ✓ Admin reports
- ✓ 7+ babies


**Sign In**

**Use Touch ID to sign in?**

A passkey for "Yubico demo user" will be saved in Keychain and available on all your devices.



Continue with Touch ID  
[Other Options](#)



**Google Chrome**

Google Chrome is trying to verify your identity on demo.yubico.com.

Touch ID or enter your password to allow this.

[Use Password...](#)

[Cancel](#)

passwords users administration reports help sign out

**passbolt**  Ada  
ada@passbolt.com

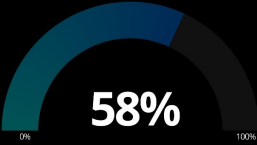
[+ Add](#) [Save](#) [Print](#) [Refresh](#) [More](#) [Layout](#)

**User breakdown**

Activated users	42
Inactive users (pending activation)	5
In recovery	2
Deleted users	15
MFA enabled	40

**Shared resources**

Percentage of shared resources vs overall



58%

**Item breakdown**


Shared items	205
Private items	643

**Groups & devices**

Groups	20
Devices	52

**Passwords quantity report**

Number of passwords created and evolution over the last **12 months**



Month	Quantity
Jan. 2021	30
Feb. 2021	28
Mar. 2021	32
Apr. 2021	25
May 2021	28
Jun. 2021	32
Jul. 2021	18
Aug. 2021	15
Sep. 2021	42
Oct. 2021	45
Nov. 2021	43
Dec. 2021	45

[Terms](#) [Privacy](#) [Credits](#)



What is it made of?

(the secret ingredient is love)

# Three main application **layers**.

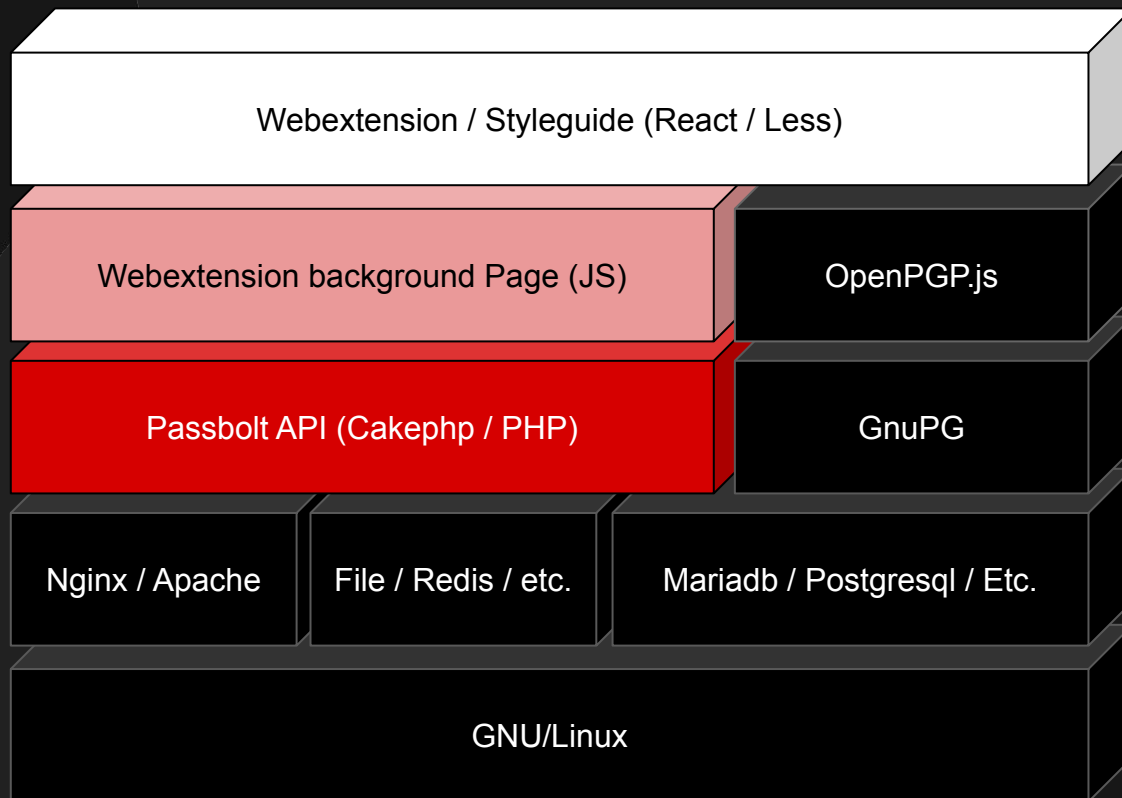
Styleguide, Browser Extension, Web API

**User Interface**  
Interactions, Styling

**Sensitive operations**  
Crypto, validation, API calls

**JSON API**  
(Some HTML content)

**Baseline services**  
LAMP or similar



# Passbolt JSON API (CakePHP)

<https://help.passbolt.com/api>

The screenshot shows a web browser window displaying the Passbolt API documentation. The page title is "View one resource" and the URL is "https://help.passbolt.com/api/resources/read". The page includes a search bar, a navigation menu on the left, and a main content area with a description, a code block for the GET request, a table of possible responses, and a section for examples. There are also two callout boxes on the right side of the page.

**passbolt** Help search [Edit on github](#)

home > help > api > resources > read

## API Documentation

- Introduction
- Authentication
- Resources
  - Index
  - Read**
  - Create
  - Update
  - Delete
  - Share
  - Move
- Resources Types
- Secrets
- Permissions
- Users
- Groups
- OpenPGP Keys
- Comments
- Favorites

### View one resource

It is possible to get data for a single resource identified by the unique UUID. All you need is to make a GET request to `/resources/.json`.

```
GET /resources/<resourceId>.json
```

#### Possible responses

Code	Description
200	OK Response includes the resource metadata object.
400	Bad Request The resourceId supplied is not a valid UUID
403	Authentication Failure The user making the request is not authenticated
404	Not Found The resource either does not exist or the user does not have access permission.

#### Examples

##### Success response

For another perspective on the API you browse the OpenAPI 2.0 specifications using the dedicated API reference site (Swagger UI).

[API Reference](#)

You can also find the latest OpenAPI 2.0 specifications directly on the dedicated repository.

[OpenAPI Specs repository](#)

# Passbolt styleguide (Storybook)

[https://passbolt.github.io/passbolt\\_styleguide](https://passbolt.github.io/passbolt_styleguide)

Getting started / Intro - Page · Storybook

Private browsing

passbolt

Canvas Docs

Find components

GETTING STARTED

Intro

FOUNDATIONS

- Button
- Checkbox
- DragInfo
- Icon
- Link
- Loading
- Password
- PasswordComplexity
- RadioButton
- Search
- Select
- Text
- TextField
- Theme
- Toggle
- Tooltip

COMPONENTS

- AccountRecovery
- Administration
- Authentication
- AuthenticationAccountRecovery
- AuthenticationLogin
- AuthenticationPassphrase
- Common
- QuickAccess
- Resource

passbolt

Welcome to passbolt user interface design kit.

Visit our website Follow on github

passwords users help

passbolt

Name	Username	Password	URI
GitHub	ada@passbolt.com	*****	https://github.com
Passbolt	ada@passbolt.com	*****	https://passbolt.com
Twitter	ada@passbolt.com	*****	https://twitter.com
Facebook	ada@passbolt.com	*****	https://facebook.com
GitHub	ada@passbolt.com	*****	https://github.com
Stripe	ada@passbolt.com	*****	https://stripe.com
PhyfyAdmin	ada@passbolt.com	*****	https://phyfy.com
Myapp	ada@passbolt.com	*****	https://myapp.com
TM4	ada@passbolt.com	*****	https://tm4.com
Snyk	ada@passbolt.com	*****	https://snyk.com
GPG Key (IM)	ada@passbolt.com	*****	https://gpg.com
AKS EC2	ada@passbolt.com	*****	https://aws.com
AKS S3	ada@passbolt.com	*****	https://aws.com
Passport	ada@passbolt.com	*****	https://passport.com
MingDB	ada@passbolt.com	*****	https://mingdb.com
GCP	ada@passbolt.com	*****	https://gcp.com

Create a password

Name \*

Name

URI

URI

Username

Username

Password \*

Password

Description 0

Add a description

Cancel Save

Questions? 🍅?



Thank you Fosdem ❤️

See you at the bar at 14:00  
for some swag & 🍺