The Signature HTTP Authentication Scheme

(fka HTTP Unprompted Authentication)

draft-ietf-httpbis-unprompted-auth

IETF 119 – Brisbane – 2024-03-19

David Schinazi – dschinazi.ietf@gmail.com
David Oliver – david@guardianproject.info
Jonathan Hoyland – jonathan.hoyland@gmail.com

Quick Summary, Motivation, Mechanism, History

Client authenticates to server using asymmetric cryptography

Server hides the fact that it serves authenticated resources

Leverages a TLS key exporter

Adopted back in February 2023

Closed remaining open issues in Prague

What's new since Prague

- 4 independent open-source implementations that interoperate

http-sigauth-java ⟷ http-signature-auth-go ⟷ Google QUICHE

ngx-http-sig-auth-module

- Security analysis in Tamarin

Oh, one more thing

How to use this with intermediaries?

Today draft recommends intermediary sends key exporter to upstream HTTP server

But how to send it is left as an exercise to the reader

Two implementers have use cases for intermediary support

Proposal: PR#2762 – define a new ~~header~~ field to send it as an SF Byte Sequence

```
Signature-Auth-Context: :VGhpcyBleG...0ZXMgI/+h:
```

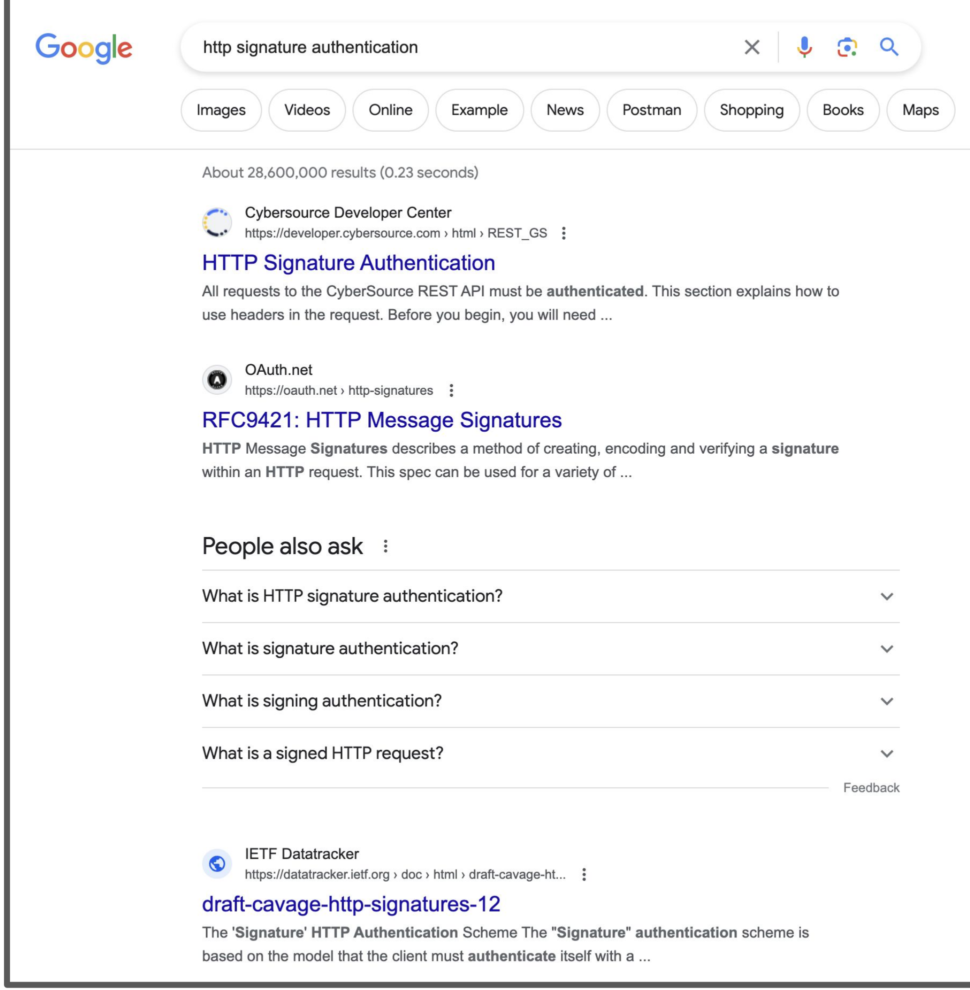
Name Collision

draft-cavage-http-signatures-12

Replaced by RFC 9421 (HTTP Message Signatures)

But implemented and deployed

Solution: rename the HTTP auth scheme



About 28,600,000 results (0.23 seconds)

Cybersource Developer Center
https://developer.cybersource.com › html › REST_GS

HTTP Signature Authentication

All requests to the CyberSource REST API must be **authenticated**. This section explains how to use headers in the request. Before you begin, you will need ...

OAuth.net
https://oauth.net › http-signatures

RFC9421: HTTP Message Signatures

HTTP Message **Signatures** describes a method of creating, encoding and verifying a **signature** within an **HTTP** request. This spec can be used for a variety of ...

People also ask

What is HTTP signature authentication?

What is signature authentication?

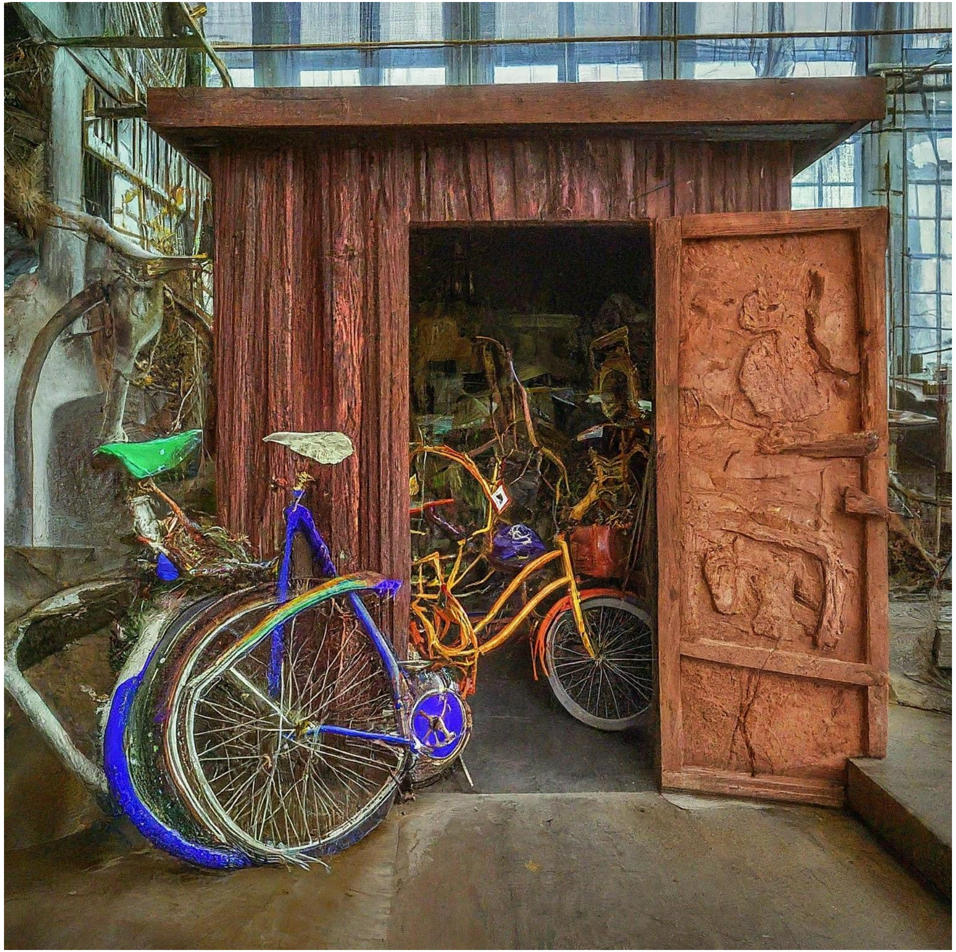
What is signing authentication?

What is a signed HTTP request?

IETF Datatracker
https://datatracker.ietf.org › doc › html › draft-cavage-ht...

draft-cavage-http-signatures-12

The '**Signature**' **HTTP Authentication** Scheme The "**Signature**" **authentication** scheme is based on the model that the client must **authenticate** itself with a ...



Renaming the auth scheme

```
Authorization: UnpromptedSignature
```

Next Steps

Editors would like to perform a quick editorial pass

Then perhaps WGLC?

The Signature HTTP Authentication Scheme

(fka HTTP Unprompted Authentication)

draft-ietf-httpbis-unprompted-auth

IETF 119 – Brisbane – 2024-03-19

David Schinazi – dschinazi.ietf@gmail.com
David Oliver – david@guardianproject.info
Jonathan Hoyland – jonathan.hoyland@gmail.com