VAuth is not a Paywall

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Agenda

- Context

- Challenges

- Concept

- Access Check

- Example

Context

- Premium Products at Axel Springer
    - Bild Plus
    - Bundesliga bei Bild
- Subscriptions
- Multiple Channels
- Web Pages, mobile, Apps (JSON), Images, Video

Challenges

- Request Rates ~100k/sec (all sites)

- Deliver premium content only to paying users

  - No embarrassing „just delete your cookies" model

- CDN + Varnish

- Cache downstream as much as possible (think mobile, corporate proxies)

Basic Idea

- Be stateless in Varnish – no extra backend calls in the delivery path ever

- Permissions in signed cookie

  - can't be modified as long as the signing key is kept secret

  - detection of re-use / replay possible

- CMS Object defines Access rights

- Site structure remains, no fixed premium/free areas

  „VAuth is not a paywall"

VAuth

- Design
  - Premium / Conversion / Free Objects
  - Clubs
- Technical Components
  - VAuth Cookie: Lease of access rights
  - X-VAuth-Clubs: HTTP Object requires rights
  - Premium/Conversion Content
    - Headers define Conversion Objects
  - VAUCH (DON) VAuth/SSO Middleware
    - talks to Login & Registration Services
    - hands out Vauth cookies (initial / renewal)

VAuth Cookie

```
Cookie: vauth=v0001~st
%3D1351761549~exp%3D1351765149~acl
%3D%2F%2A~id%3D%3Aclub%3A~data%3Du
%3Dhttp_test~hmac
%3D8be0340346a621f8d6de9...
```

VAuth Cookie

```
Cookie:
vauth=v0001~st=1351761549~exp=13517
65149~acl=/*~id=:club:~data=u=http_
test~hmac=8be0340346a621f8d6de9...
```

- start/end timestamp

- Clubs

- ID and other payload

- signature

CMS Objects

X-VAuth-Clubs: :club1:club2:

X-VAuth-Conv:
http://my.site/conversion1.html

X-VAuth-Conv-NoUser:
http://my.site/conversion2.html

X-VAuth-Conv-PrivMiss:
http://my.site/conversion3.html

Access check

- Premium Object?

- VAuth Cookie OK?

- Do Clubs from Cookie and HTTP Object intersect?

  - as long as there is at least one club both in the VAuth cookie and in X-VAuth-Clubs, access is granted

- If no match, redirect to conversion

Video

- Video Player Requests Video Token

- Varnish checks VAuth against CMS Object for that Video

- If OK, generate short lived token handing over the permission to video CDN

Video example

```
> GET /BILD/26/04/41/92/26044192,property=Video.mp4
HTTP/1.1
> Host: videos-world.bild.de.t.ak.token.bild.de
> Cookie: vauth=v0001~st%3D1363270389~exp
%3D1363356797~acl%3D%2F%2A~id%3D
%3ATST1005093%3A~data%3Du
%3DAUTO_t.ak.token.bild.de~hmac
%3D52707fb1497b8b09dbecb58b3a40a0fc2b12e0e8e7be4ce1
bf5af58308b72d3e;

< HTTP/1.1 302 Go to Akamai Video
< Retry-After: 0
< Location: http://videos-
world.bild.de/BILD/26/04/41/92/26044193,property=Vi
deo.mp4?
hdnea=st=1363270406~exp=1363270446~acl=/BILD/26/04/
41/92/26044193,property=Video.mp4*~data=u=AUTO_t.ak
.token.bild.de~hmac=88e26b6bb178ec3612c895347db8fb8
cd6bfe25deb07739c5f289a99f76c0c50
```

Thank you!

Questions?

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