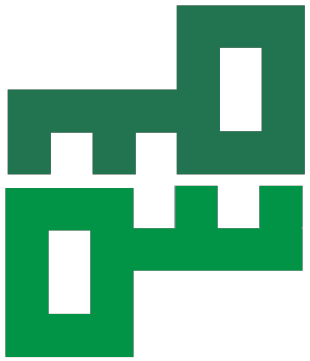
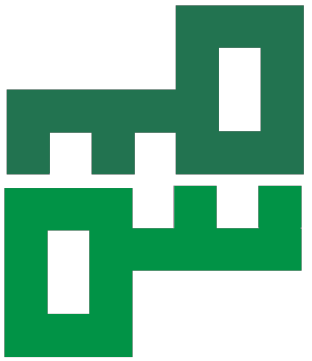
DO! NOT! TRACK!

Workshop for Firefox

Anton, Cryptoparty Graz



2015-04-25
Linuxtage Graz, FH Joanneum



Anton
PGP-key and Fingerprint
2048R, 2014-02-27
A727 CC1E 08AD F9F3 9C43
E650 BFE1 E2F8 8AF5 A989

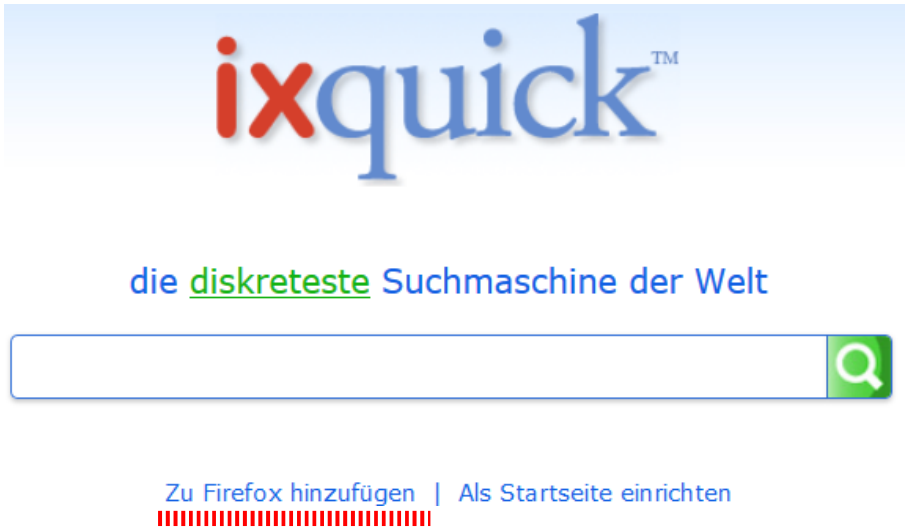
Countermeasures against webtracking for Firefox *(setting named "DNT1", see the study)*

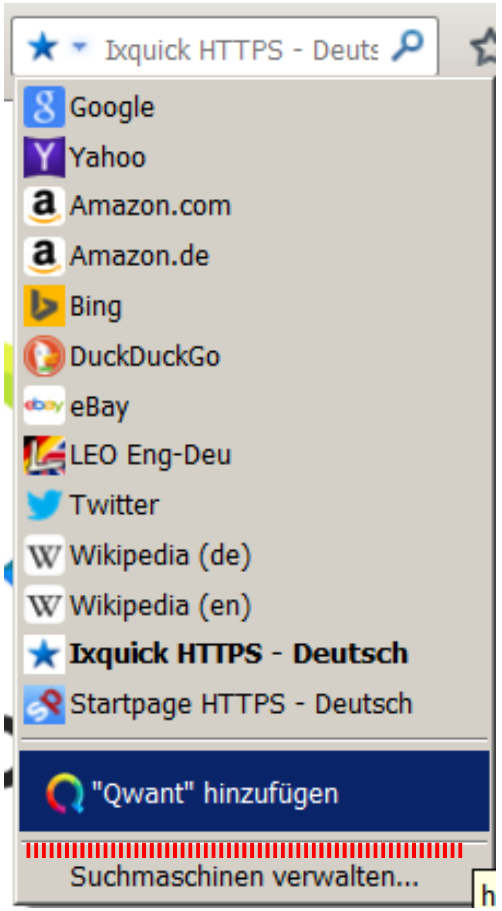
If possible: Use Firefox ESR (higher frequency!)

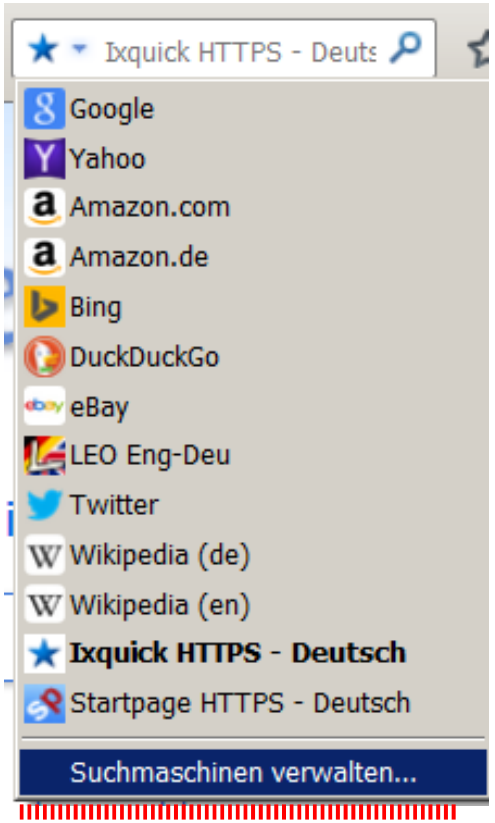
Only search engines:

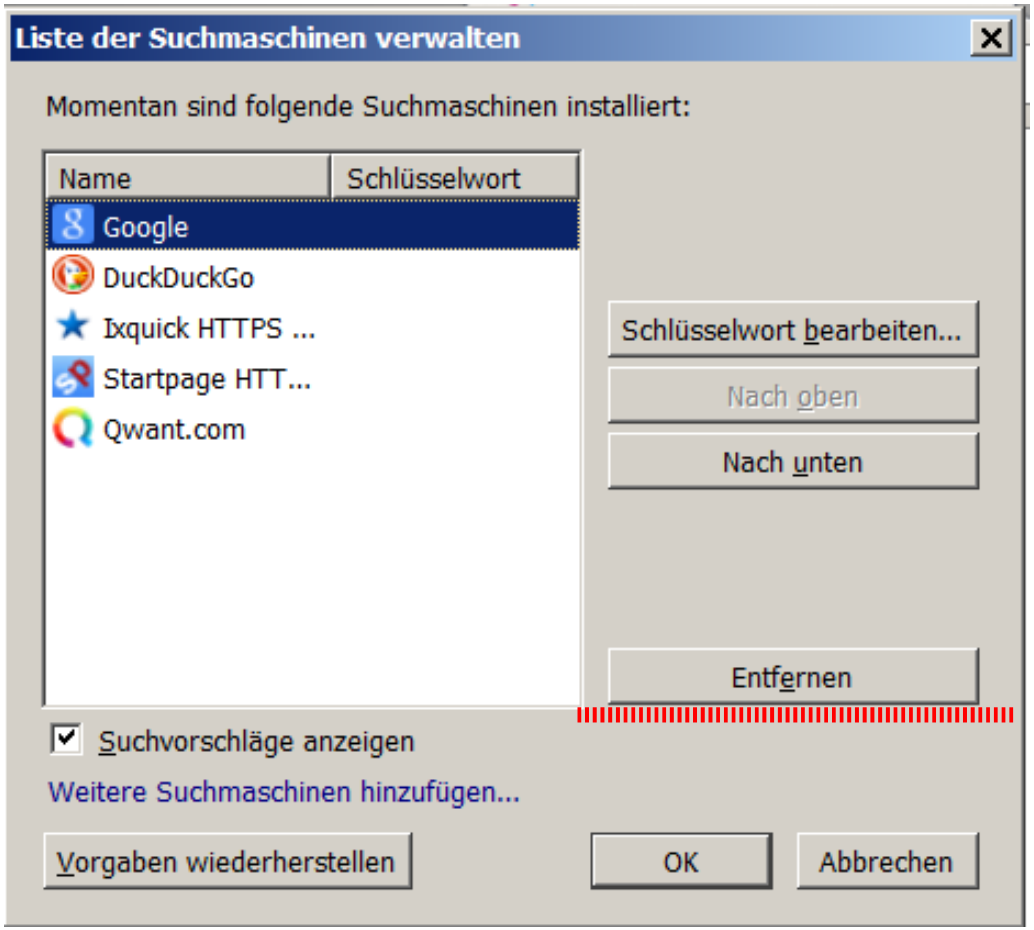
Ixquick, DuckDuckGo, Qwant, Startpage

=> promise of data protection (one needs to believe that ...)

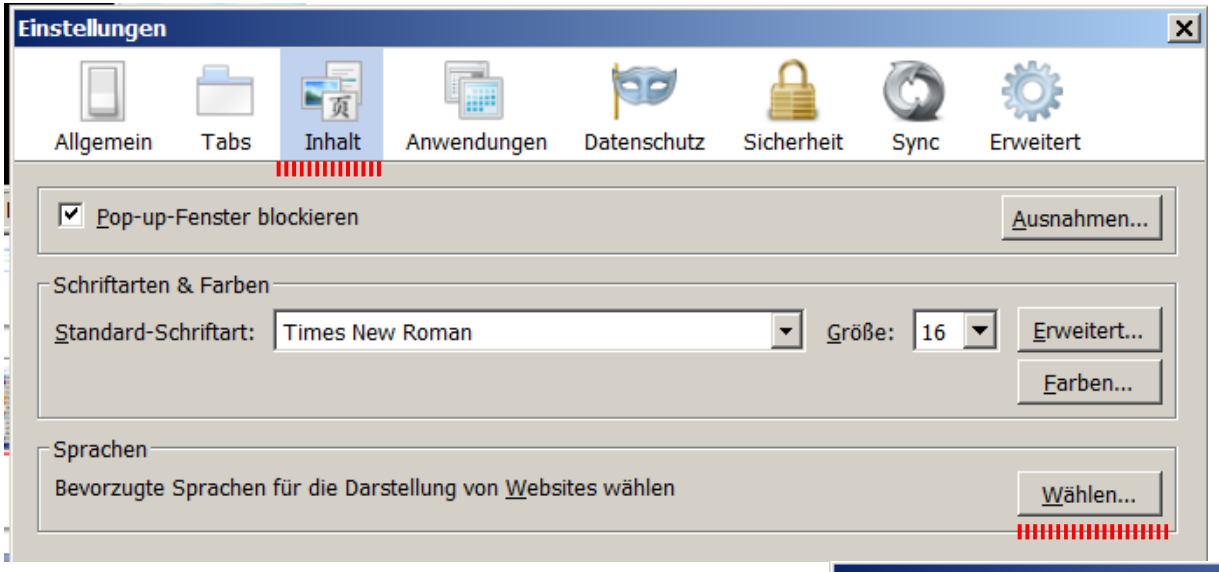



Ixquick HTTPS - Deuts
Google
Yahoo
Amazon.com
Amazon.de
Bing
DuckDuckGo
eBay
LEO Eng-Deu
Twitter
Wikipedia (de)
Wikipedia (en)
Ixquick HTTPS - Deutsch
Startpage HTTPS - Deutsch
"Qwant" hinzufügen
Suchmaschinen verwalten...

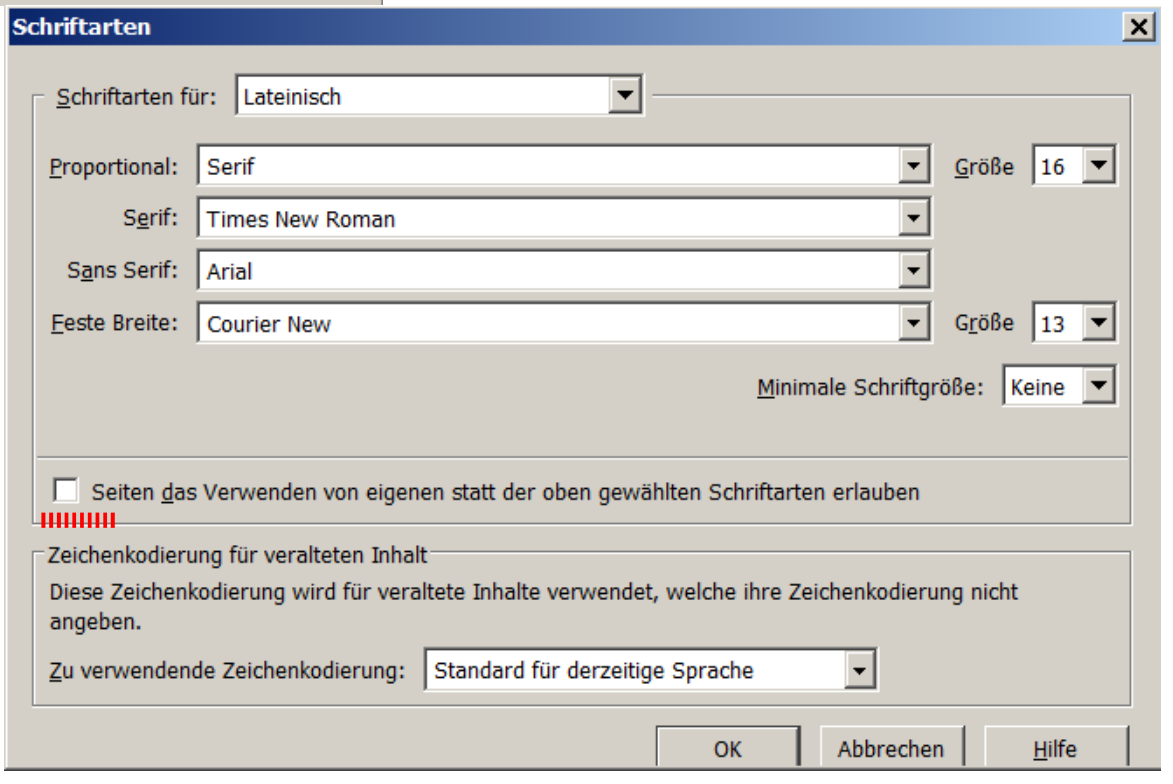

Ixquick HTTPS - Deuts
Google
Yahoo
Amazon.com
Amazon.de
Bing
DuckDuckGo
eBay
LEO Eng-Deu
Twitter
Wikipedia (de)
Wikipedia (en)
Ixquick HTTPS - Deutsch
Startpage HTTPS - Deutsch
Suchmaschinen verwalten...


Liste der Suchmaschinen verwalten
Momentan sind folgende Suchmaschinen installiert:
Name
Schlüsselwort
Google
DuckDuckGo
Ixquick HTTPS ...
Startpage HTT...
Qwant.com
Schlüsselwort bearbeiten...
Nach oben
Nach unten
Entfernen
Suchvorschläge anzeigen
Weitere Suchmaschinen hinzufügen...
Vorgaben wiederherstellen
OK
Abbrechen

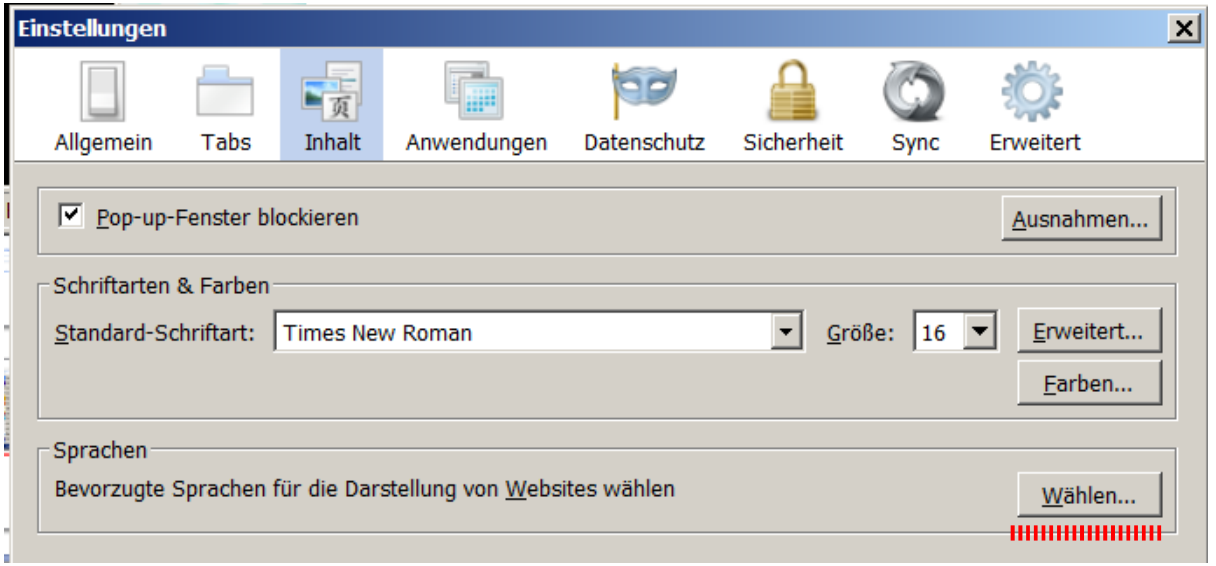
Only 3 local standard fonts (less data broadcastet, smaller fingerprint)

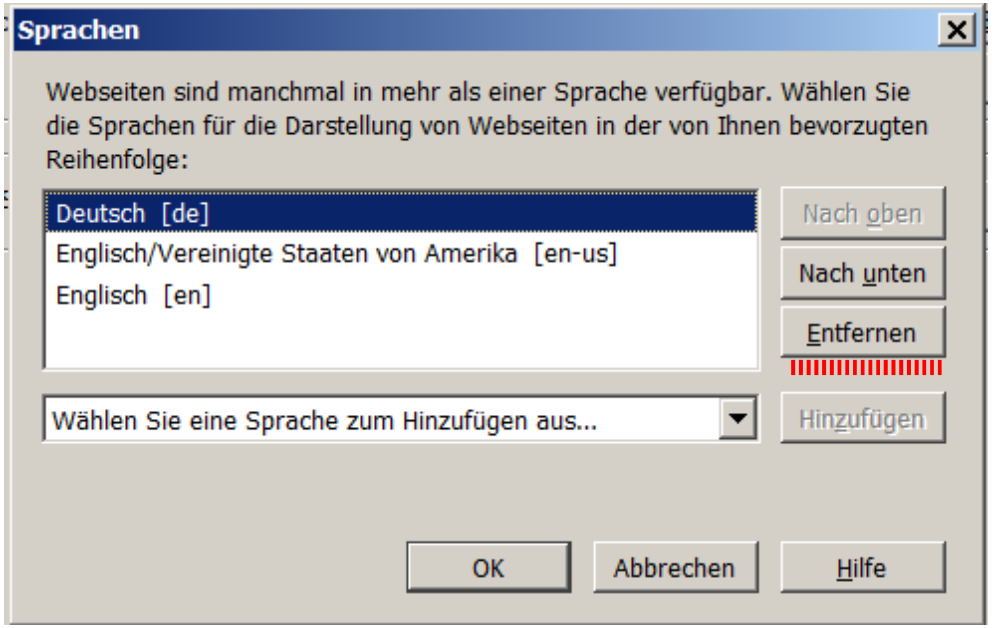


Here with Windows fonts, other for Mac, Linux, BSD

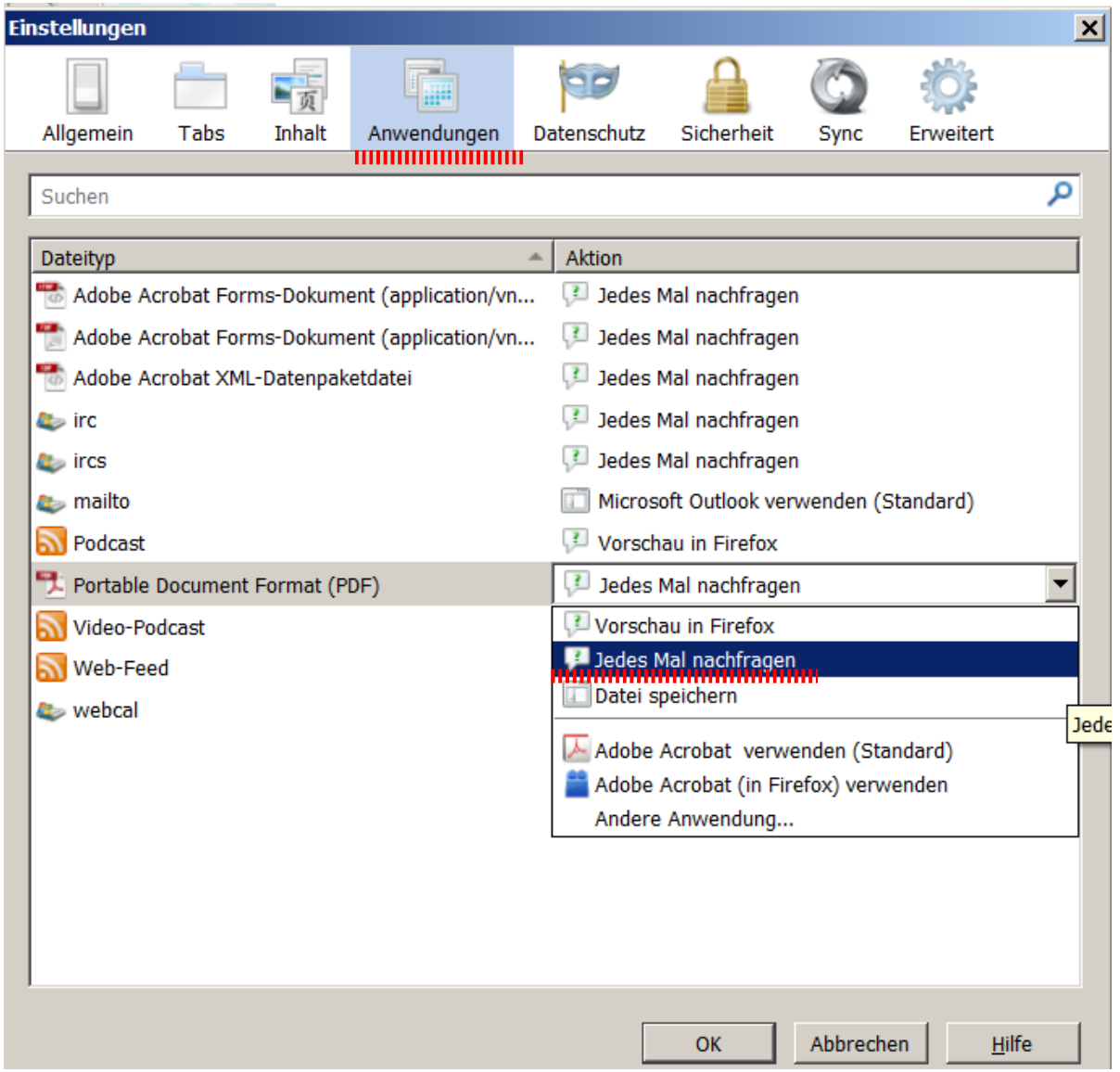


Set language to en-us,en (most widespread, smaller fingerprint)



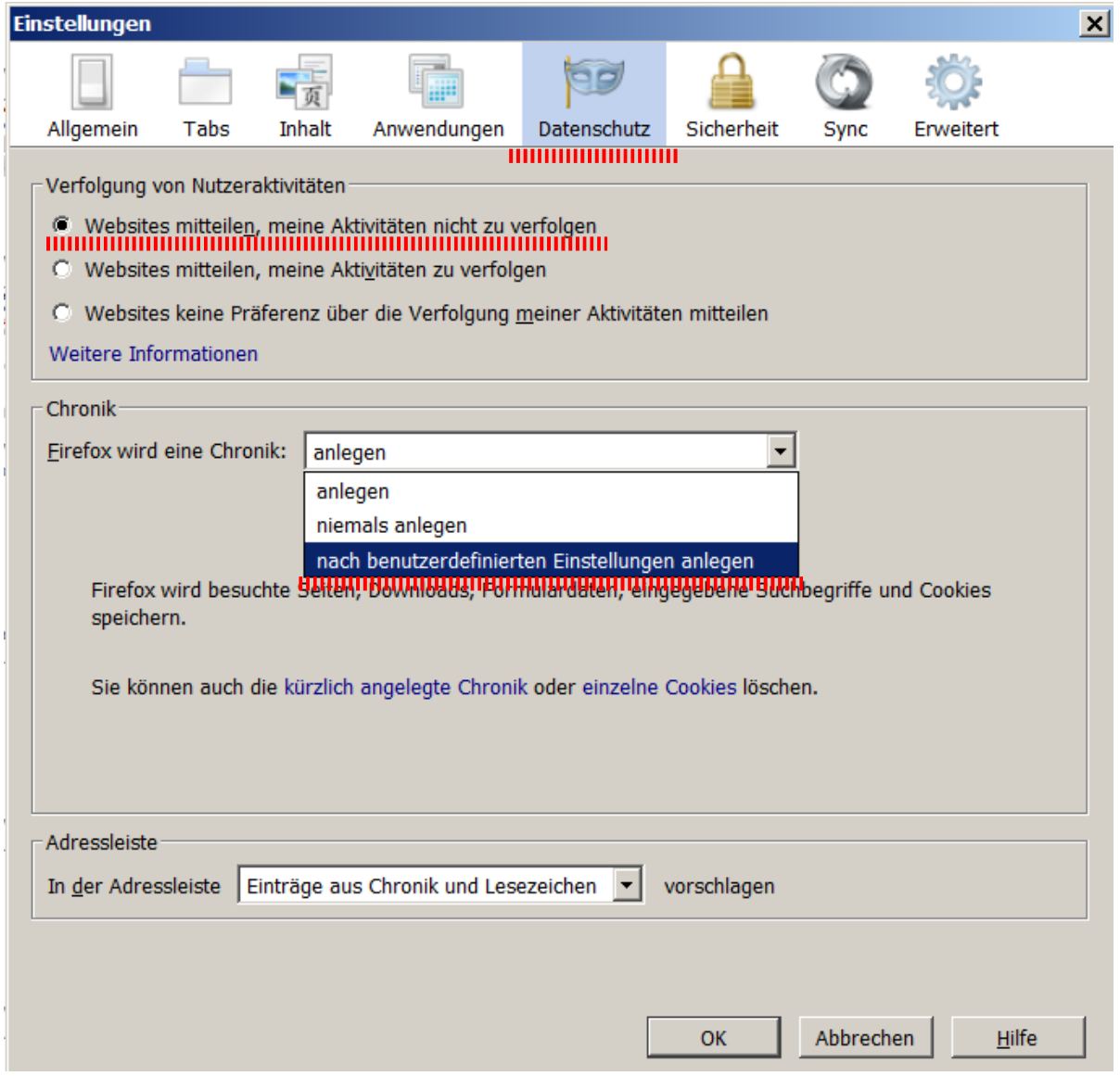


External applications: Always ask (less data broadcastet, smaller fingerprint, better security)



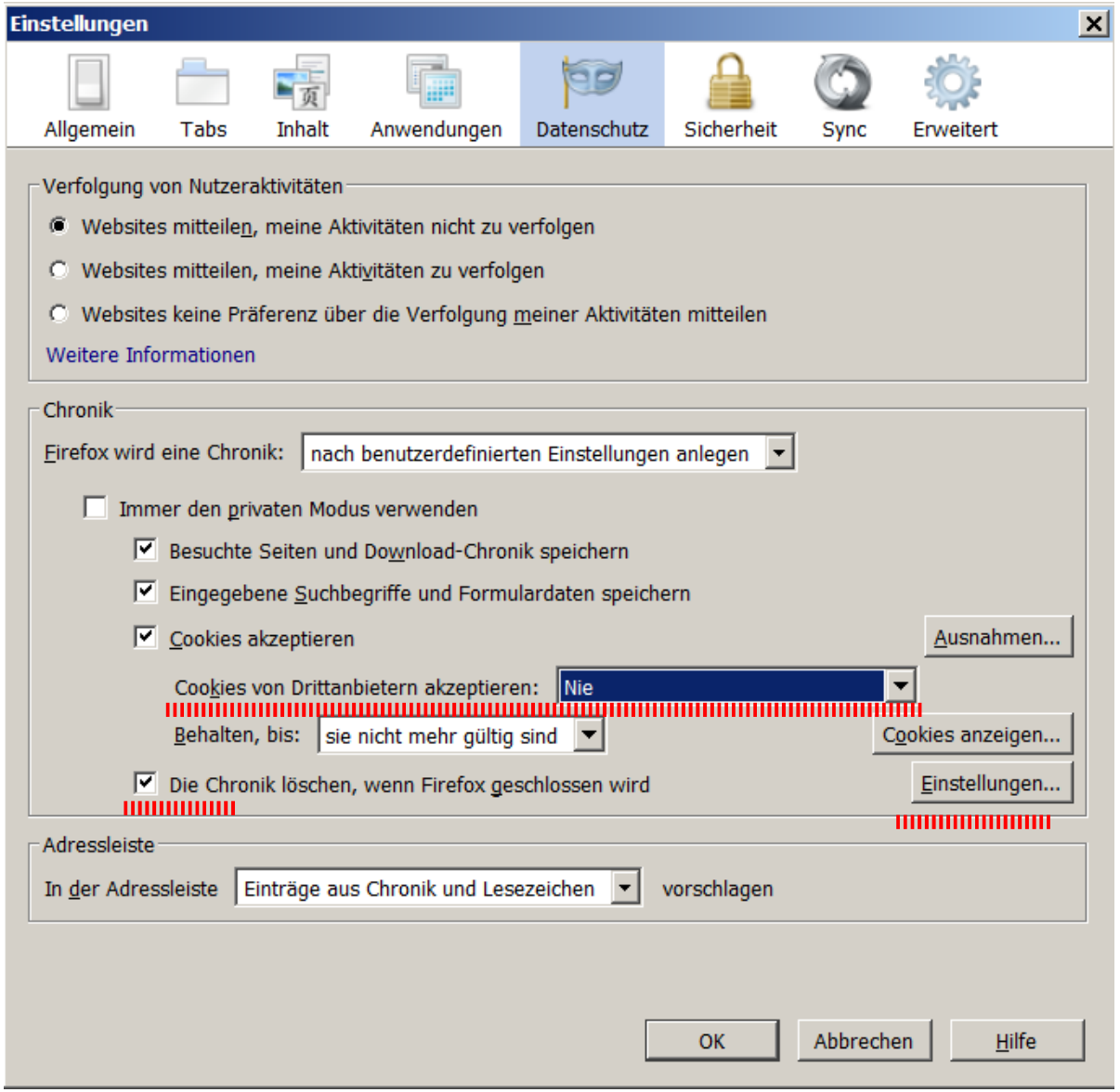
Send Do-not-track header

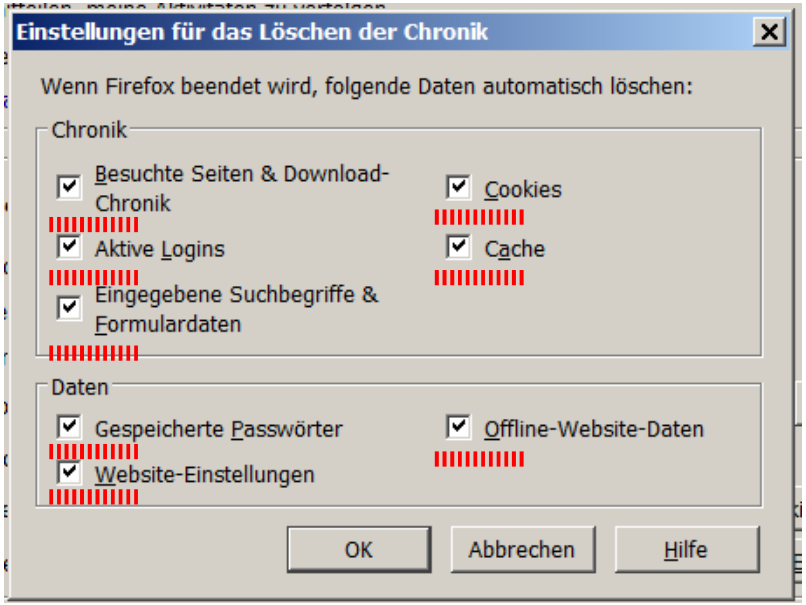
Change settings for local storage



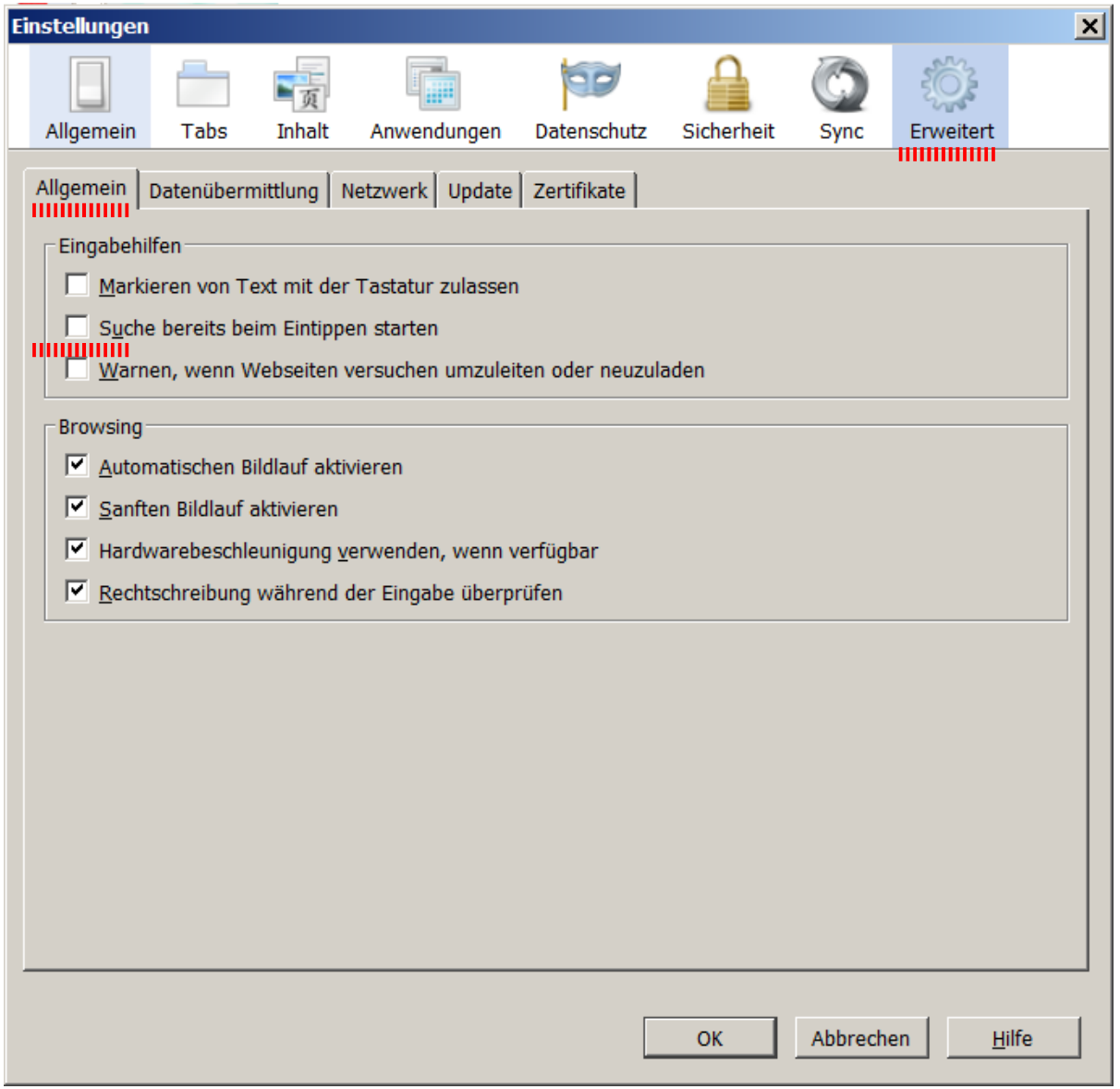
Block 3rd party cookies

Automatic deletion of locally stored markers

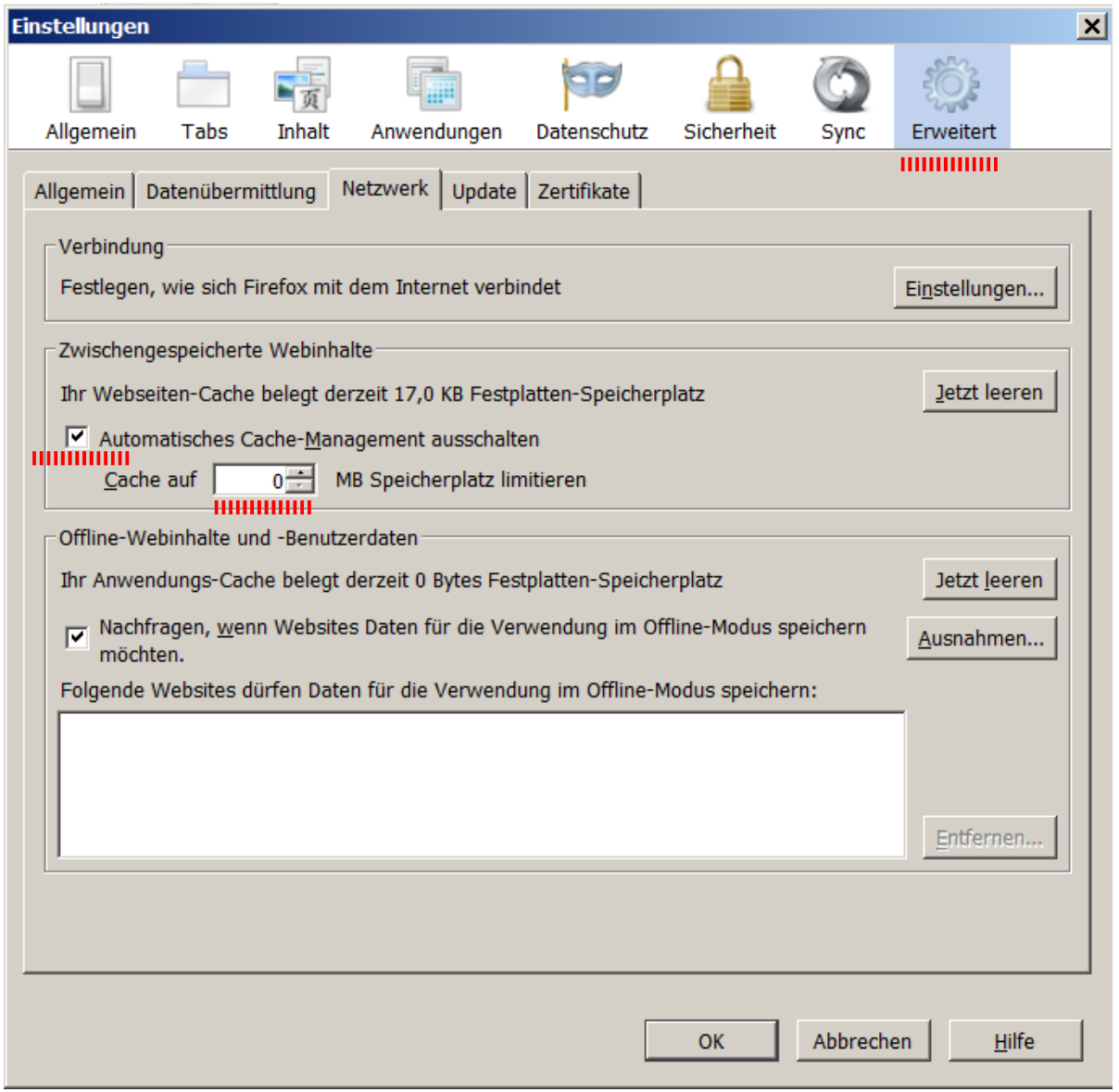




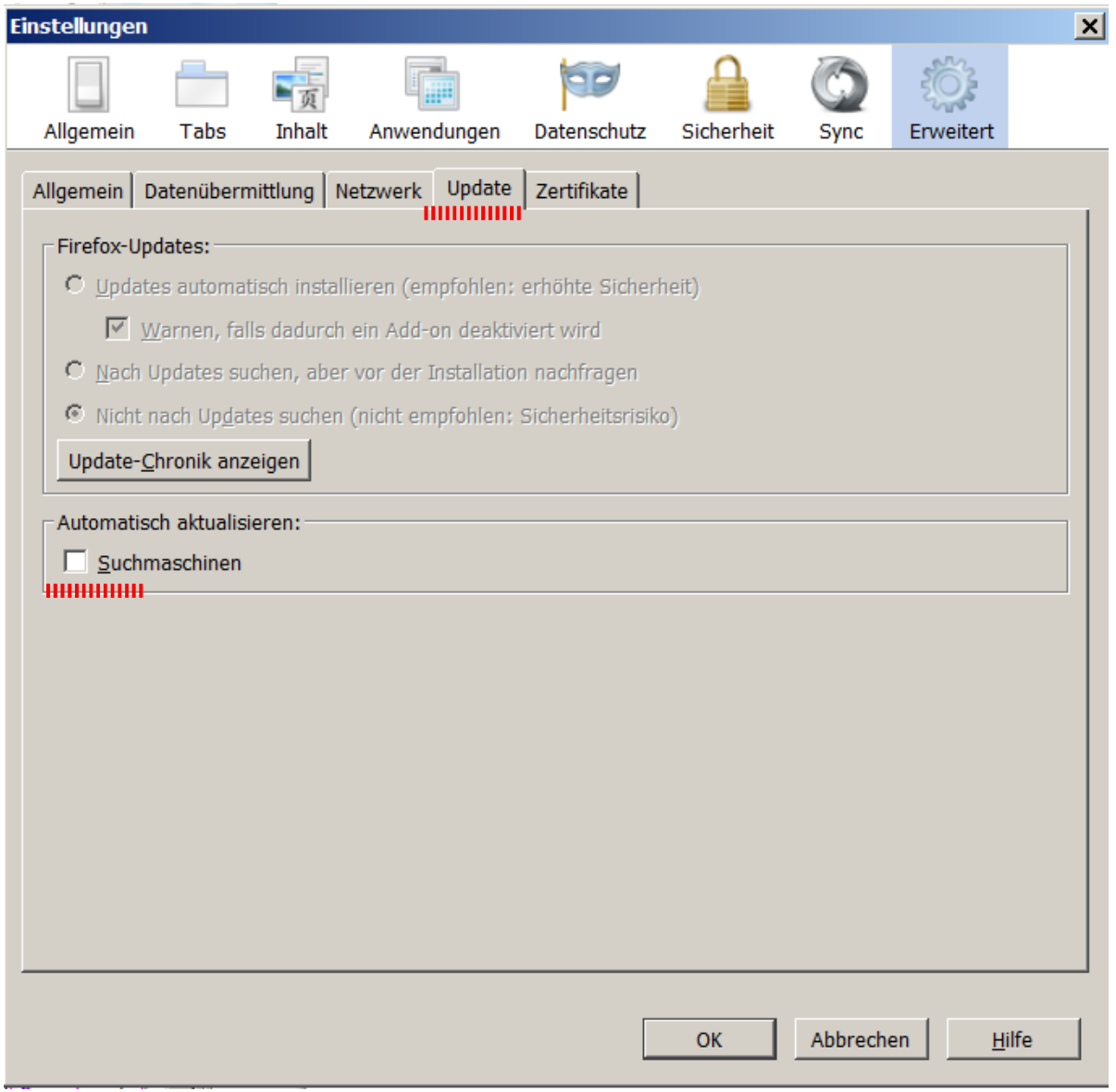
Stop sending you entries in the address bar to search engines



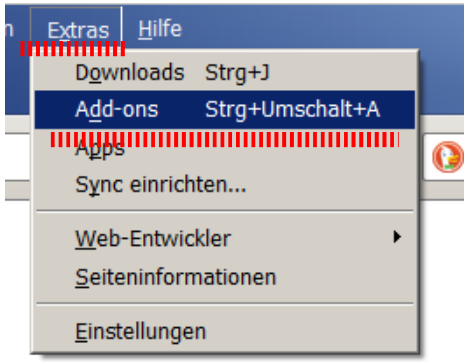
Set cache disk to 0 MB (less tracking pixels)

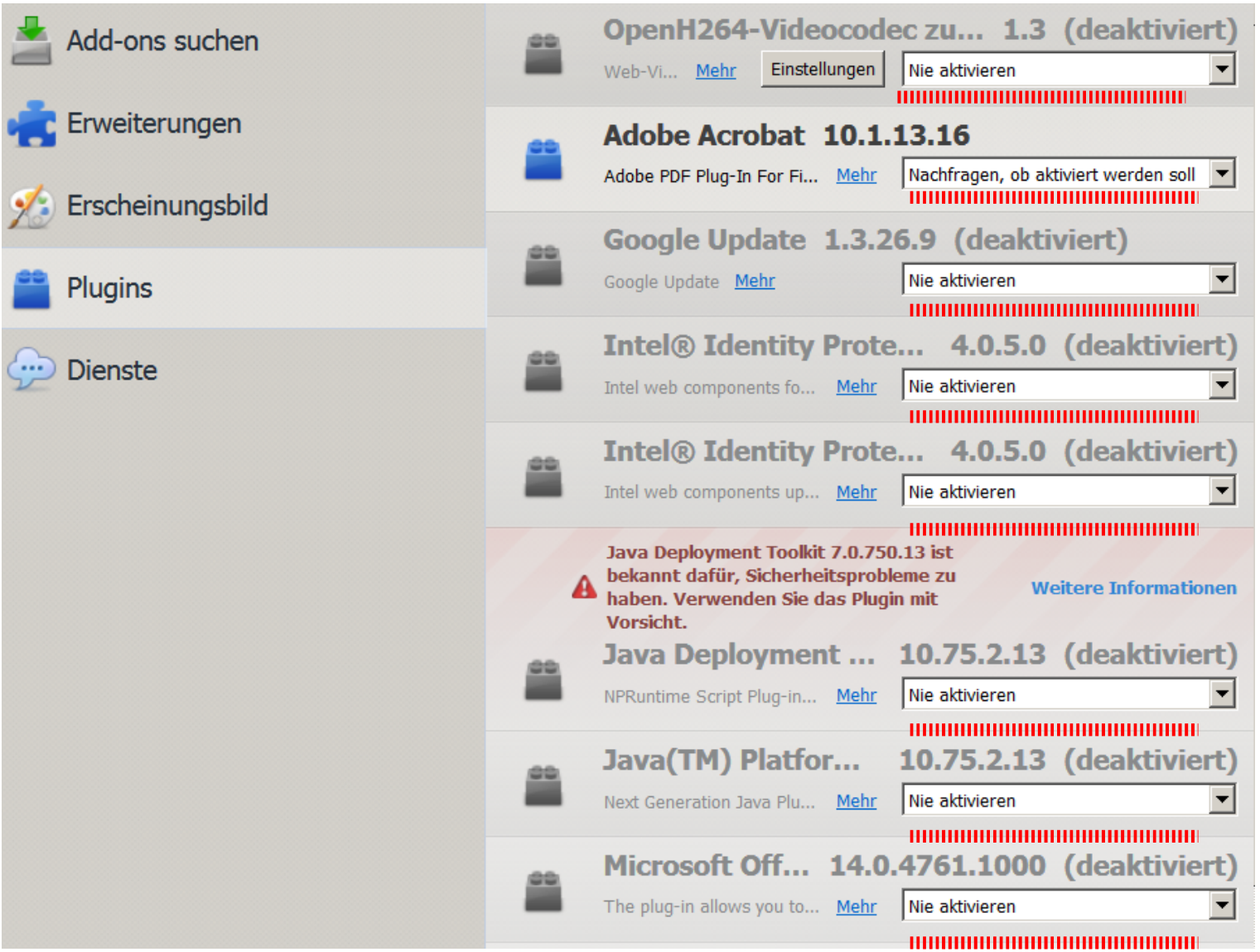


Disable automatic update of search engines (Google won't come back ...)

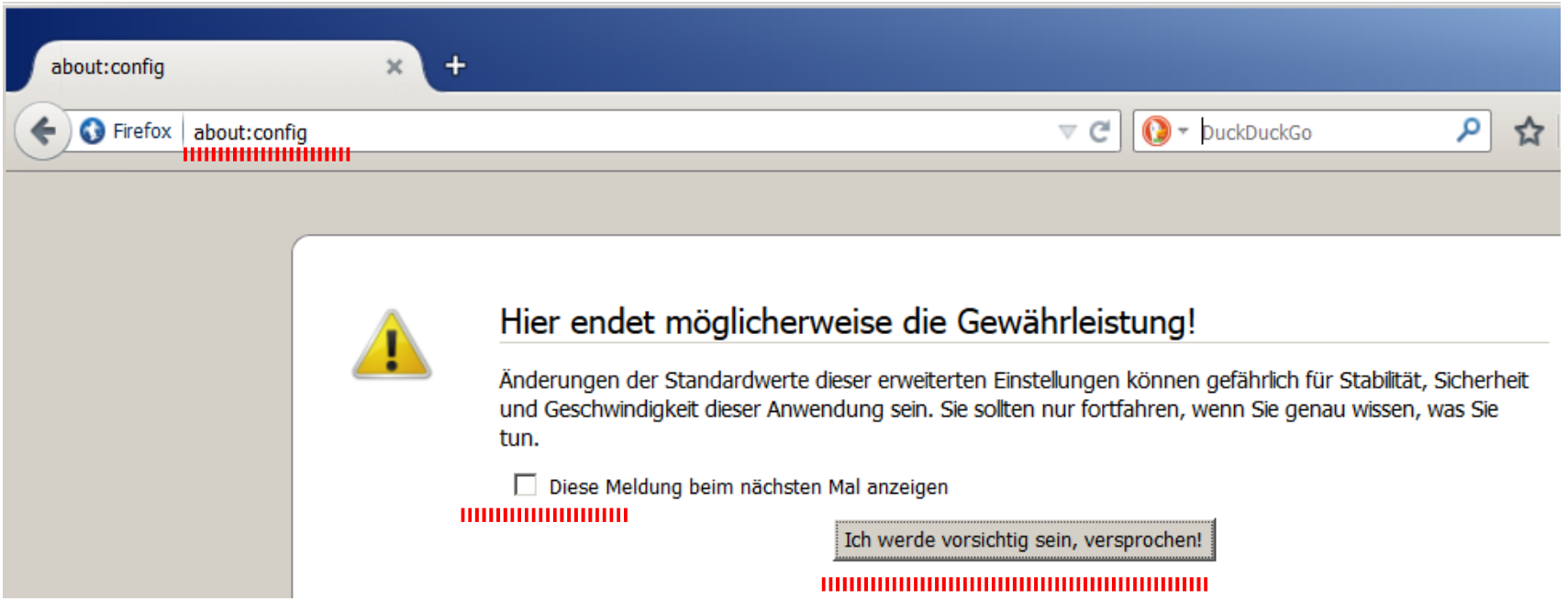


Set necessary plugins to always ask (e. g. Flash Player, PDF reader), disable the rest. Drastically reduces the amount of broadcastet data and the fingerprint. Improves the security, deactivates exploitable plugins.





Measures in about:config



In case of Firefox/Iceweasel on Debian:

Set user agent to standard version of *actual release*

Mozilla/5.0 (X11; Linux i686; rv:37.0) Gecko/20100101 Firefox/37.0 or for x64 to

Mozilla/5.0 (X11; Linux x86_64; rv:37.0) Gecko/20100101 Firefox/37.0

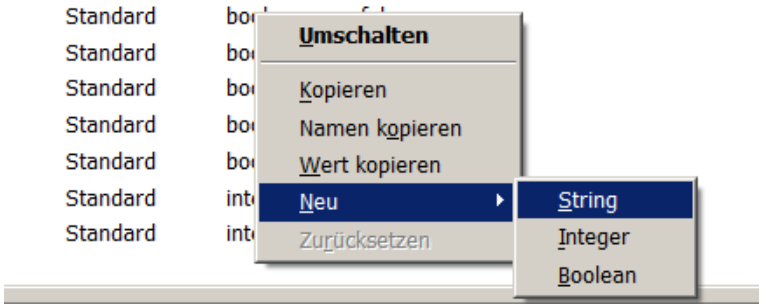
Much more widespread than

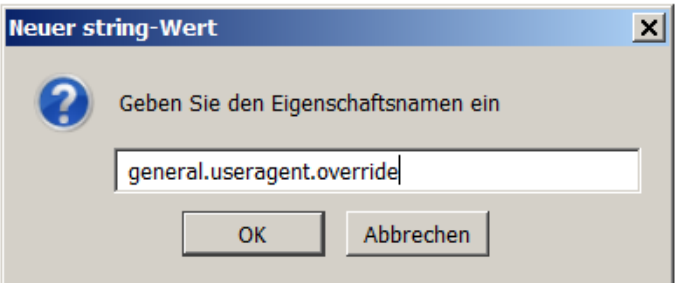
Mozilla/5.0 (X11; Linux i686; rv:37.0) Gecko/20100101 Firefox/37.0 Iceweasel/37.0.1

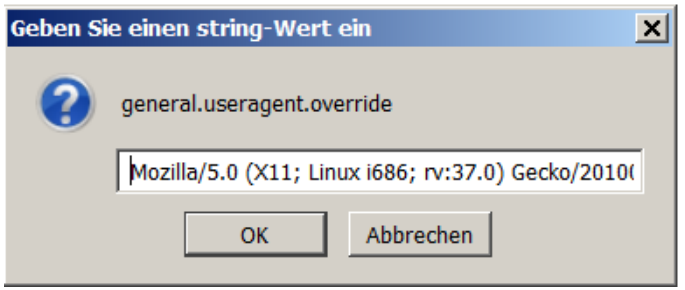
--> Leave small user group, enter bigger user group.

Right mouse click in about:config, new string

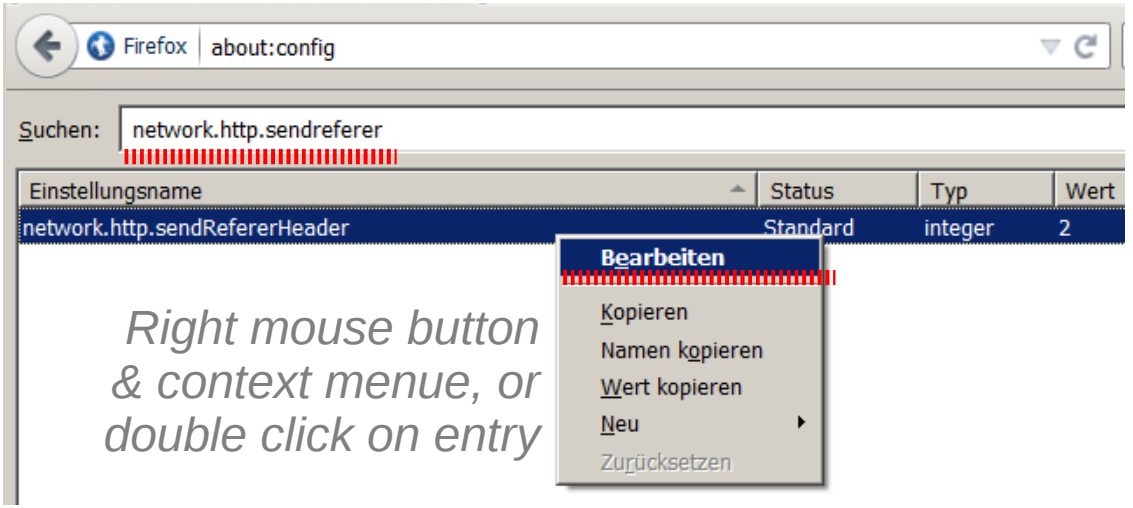
general.useragent.override

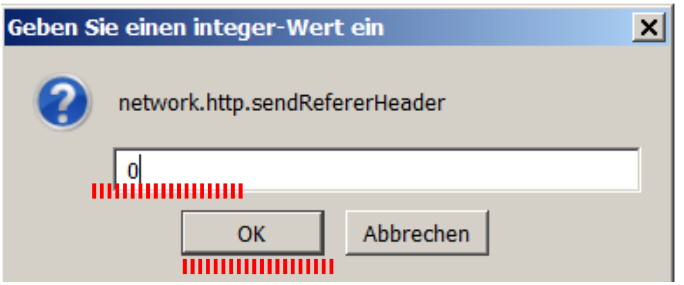






Stop telling, from which site you come





Stop telling public IP beside proxy via JS and WebRTC

```
media.peerconnection.enabled     = false
```

Stop telling your location

```
geo.enabled                      = false
```

Stop pre-loading of linked sites (via http)

```
network.dns.disablePrefetch      = true
network.prefetch-next            = false
```

AddOns

- Prefer encrypted version of sites

  *Surveillants at net hubs only see, **that** you connect to https://site1.eu, not **what** you do there*

  HTTPS everywhere

- Block 3rd party JS *e. g. JS from tracker.com on site1.eu*

  => mainly fingerprinters

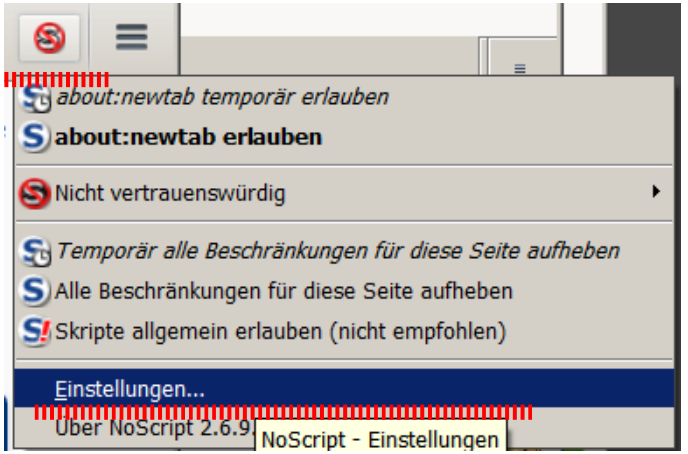
  NoScript (setup next slide)

- Apply preconfigured filter lists for 3rd party tracking domains (blacklisting)

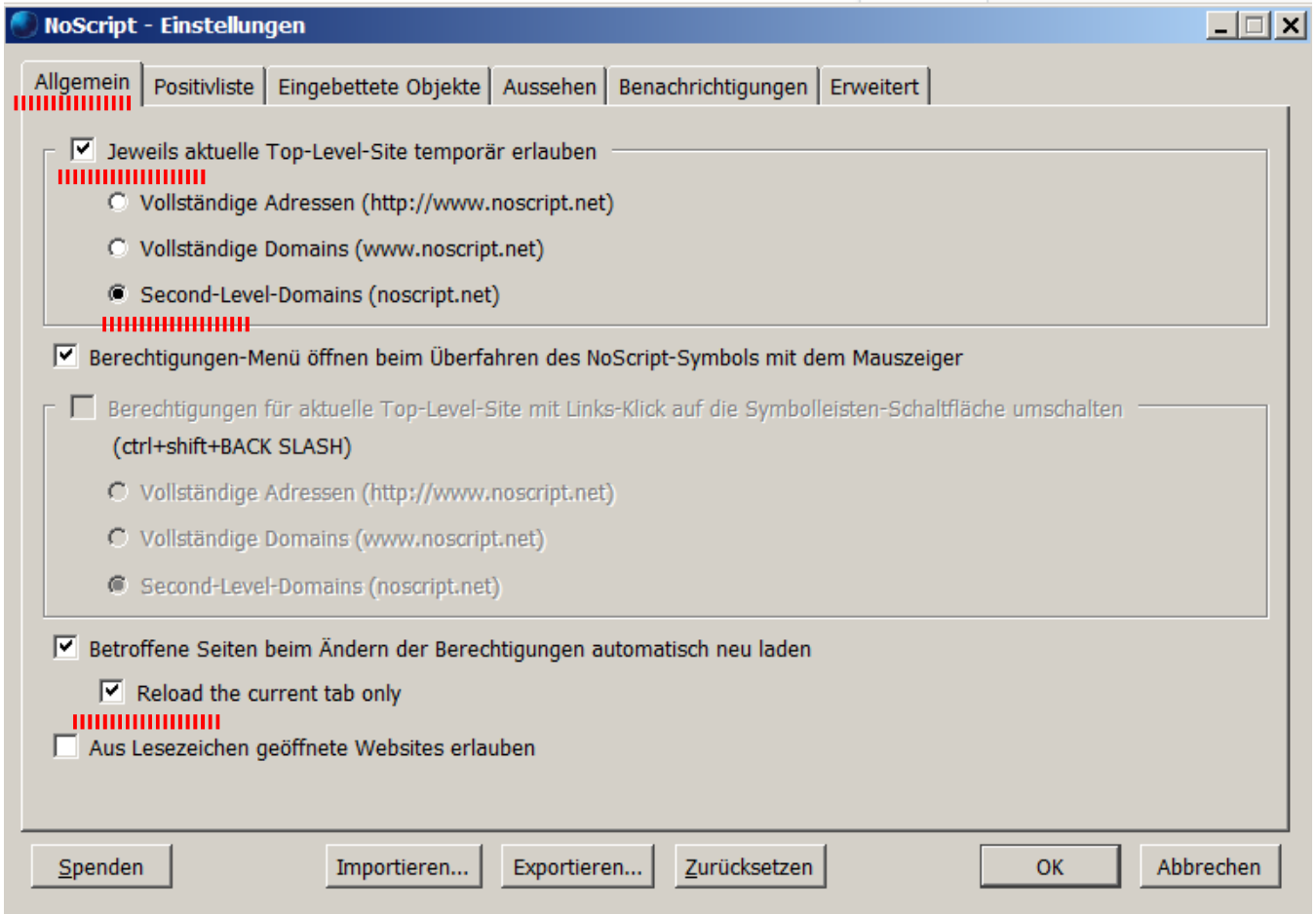
  block at site1.eu connection to google.com, facebook.com, tracker1.de, tracker2.at, ...

  uBlock (default filter lists, more available)

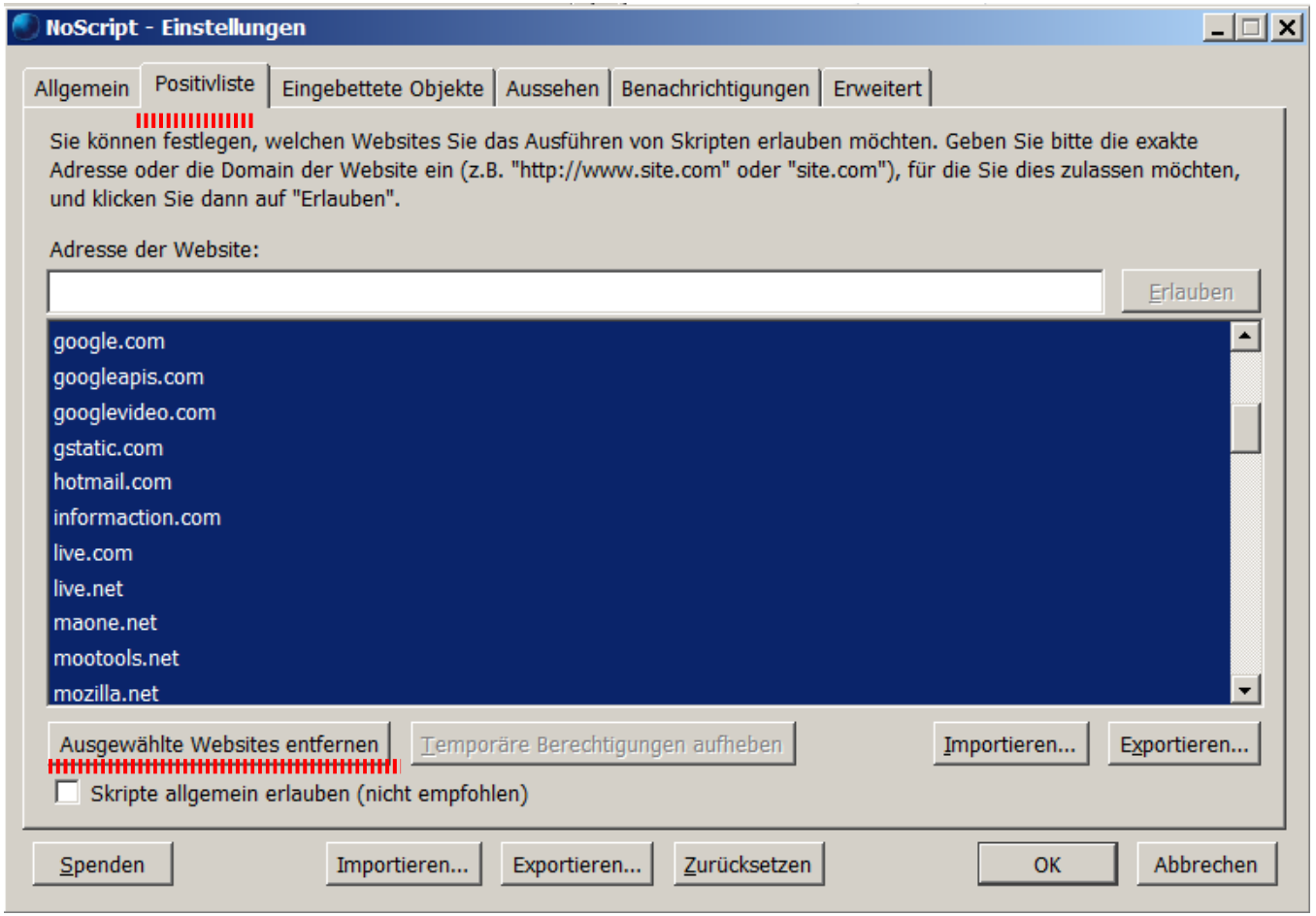
Setup NoScript



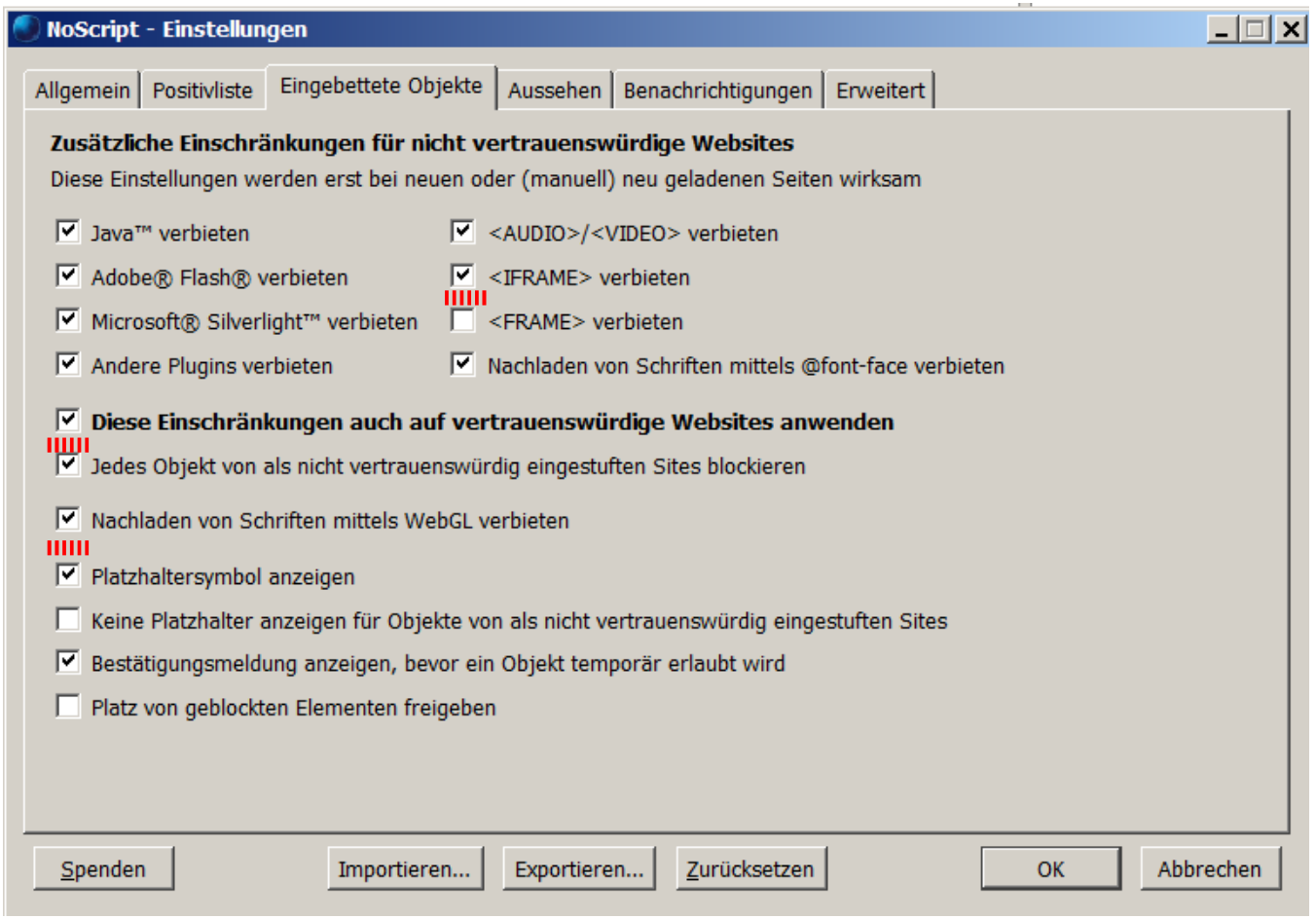
Allow JS from 1st and 2nd party (site1.eu, prefix/site1.eu, site1.eu/subsite1, ...)



Delete 3rd party JS fingerprinters, who bought their place on the NoScript whitelist



Block iframes and WebGL, apply also to manually whitelisted sites.



Now we have got:

- Only search engines, who promise data protection
- No activation of plugins w/o confirmation
- Blocking of all 3rd party cookies
- Storage of cache markers only in RAM
- Deletion of locally stored markers at end of session
- Blocking of 3rd party cache elements (depending on timeliness of filter blacklists)
- Reduced data output to fingerprinters
- Blocking of 3rd party fingerprinters

(+) Acceptable user comfort!

(-) External password manager needed

Sometimes 3rd party JS is necessary

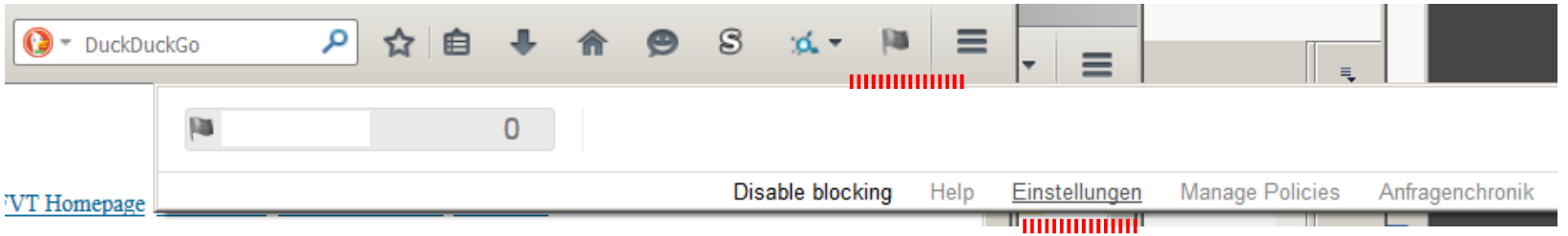
Very seldom: Necessity of 3rd party cookies

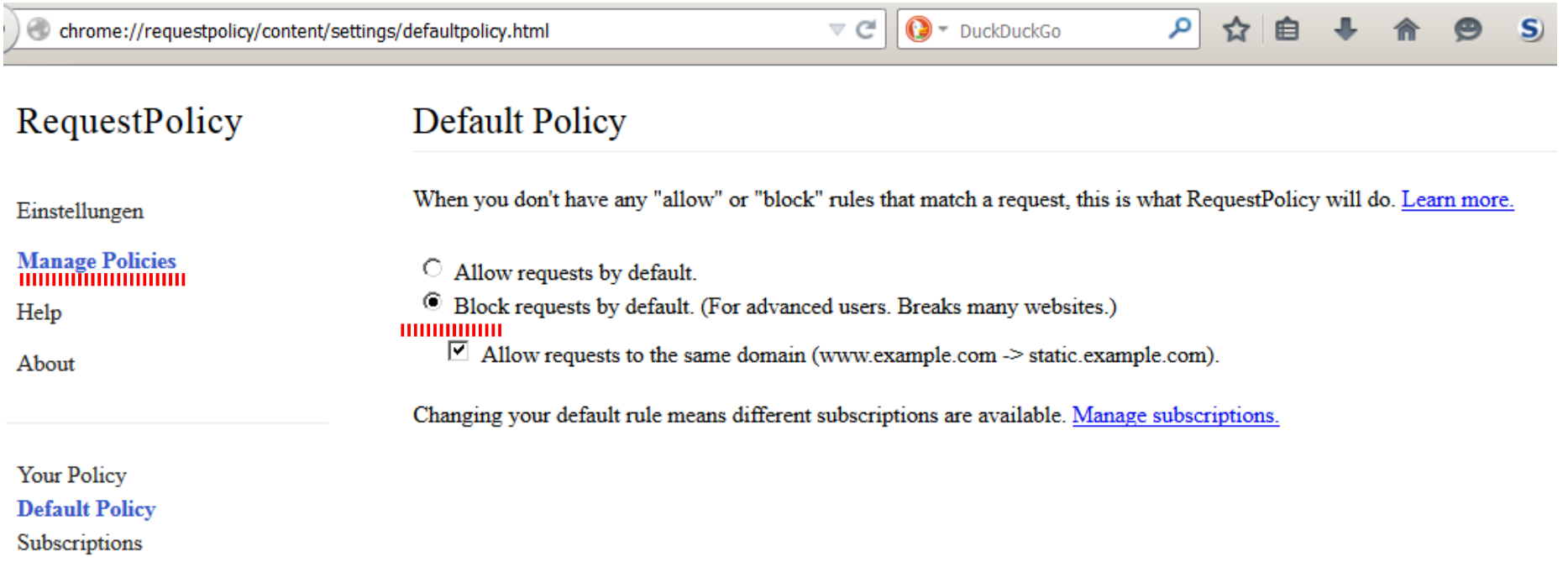
DO! NOT! TRACK! Hardcore *(setting DNT4)*

Masochist setting :-)

- Like before
- Block all cookies
- Block all Javascript
- Turn all plugins off
- Set user agent to v31, the actual ESR (bigger user group)
- Request Policy Contd. instead of uBlock
- Deactivate Request Policie's automatic whitelists
- Block all 3rd party requests by default.
- Stepwise activation of 3rd party requests, cookies and Javascript (manual whitelisting)

Setup Request policy





RequestPolicy

Einstellungen

Manage Policies

Help

About

Your Policy

Default Policy

Subscriptions

Subscription Policies

Subscription policies are sets of rules maintained by us with help from the community. These rules are updated automatically a
minimize website breakage while blocking requests that impact your privacy.

Usability

- [ ] Allow destinations that belong to the same organization as the origin webpage
- [ ] Allow requests that are needed for websites to work properly
- [ ] Allow requests for embedded content such as images and videos

Browser

- [ ] Allow requests related to Mozilla and Firefox websites
- [ ] Allow requests that are needed for other extensions to work properly

Manual activation of requests

Wikipedia:Hauptseite

aus Wikipedia, der freien Enzyklopädie
Wechseln zu: Navigation, Suche

Willkommen bei Wikipedia

Wikipedia ist ein Projekt zum Aufbau einer [illegible] 1.808.316 Artikel in deutscher Sprache entstanden.

Geographie · Geschichte · Gesellschaft · Kunst und Kultur · Religion · Sport · Technik · Wissenschaft

Artikel nach Themen · Alphabetischer Index · Artikel nach Kategorien · Gesprochene Wikipedia

Kontakt · Presse · Statistik · Sprachversionen · Mitmachen · Mentorenprogramm

Artikel des Tages

Der **Völkermord an den Armeniern** geschah während des Ersten Weltkrieges unter Verantwortung der jungtürkischen, von der Organisation Komitee für Einheit und Fortschritt gebildeten Regierung des Osmanischen Reichs. Einem der ersten systematischen Genozide des 20. Jahrhunderts fielen bei Massakern und Todesmärschen, die im Wesentlichen in den Jahren 1915 und 1916 stattfanden, je nach Schätzung zwischen 300.000 und mehr als 1,5 Millionen Menschen zum Opfer. Die Angaben zu den getöteten Armeniern während der Übergriffe in den beiden vorangegangenen Jahrzehnten variieren zwischen Zehntausenden und Hunderttausenden. Die Ereignisse, die von den Armeniern selbst mit dem Begriff *Aghet* – „Katastrophe" – bezeichnet werden.

In den Nachrichten

Oskar Gröning • Calbuco • Libor-Skandal

- Im Zuge der Operation Eikonal hat der BND (Logo) bis zu 40.000 Ziele, darunter Politiker und Unternehmen in Deutschland und Westeuropa, ausgespäht und die Erkenntnisse an die National Security Agency weitergeleitet.
- Der ehemalige Staatspräsident Ägyptens Mohammed Mursi wurde durch ein ägyptisches Gericht zu einer Haftstrafe von 20 Jahren verurteilt.
- Ein Flüchtlingsboot im Mittelmeer mit mehr als 700 Menschen an Bord kenterte in der Nacht auf den 19. April. Laut dem UNHCR ist dies

Now we have got:

- Standard setting like before
- Maximum protection from 3rd party tracking:
  only necessary 3rd party request are allowed
- Maximum protection from 1st party tracking:
  cookies and JS (evil fingerprinters!) only active, when allowed
- A big anonymity group: Firefox ESR users w/o JS and w/o cookies

(+) highest privacy and security, home-grown!

(-) a really, really bad user experience

=> Play around. Find you own compromise!