



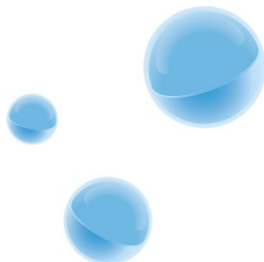
# VARNISH

Makes Websites Fly

# Cache Invalidation, Grace, Saint mode et cetra

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# Cache Invalidation

- ▶ Instantly removed?

  - ▶ `purge;`

- ▶ Update before removal?

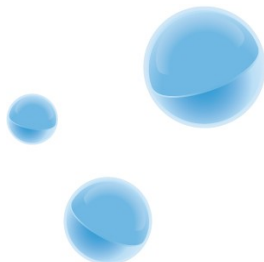
  - ▶ `set req.hash_always_miss = true;`

- ▶ Invalidate based on a regular expression?

  - ▶ `ban obj.http.x-url ~ /blatti/*.css`

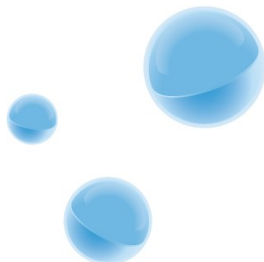


Photo by: Sasan Geranmehr (cc-by-sa)



# Bans

- ▶ Invalidate objects
- ▶ Instantly added – no blocking
- ▶ Ban on (almost) anything!
- ▶ Ban lurker
- ▶ Ban from VCL
- ▶ Ban from CLI

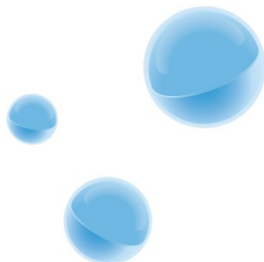


# Purge examples

```
if (req.request == "PURGE") {  
    purge("req.http.Cache-Channel ~" req.url);  
    error 200 "Purge added."  
}
```

```
if (req.request == "PURGE" && client.ip ~ purgers) {  
    purge("req.http.Cache-Channel ~" req.url);  
}
```

```
$ varnishadm -T localhost:6082 purge req.url == /
```

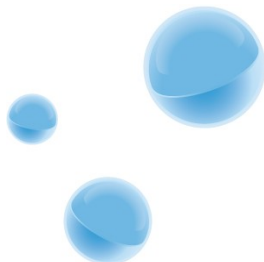


# Ban examples

```
if (req.request == "BAN") {  
    ban("req.http.Cache-Channel ~" req.url);  
    error 200 "Ban added."  
}
```

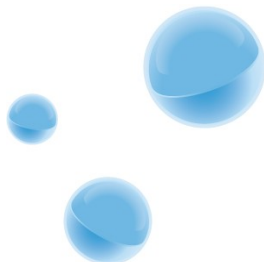
```
if (req.request == "BAN" && client.ip ~ baners) {  
    ban("req.http.Cache-Channel ~" req.url);  
}
```

```
$ varnishadm -T localhost:6082 ban req.url == /
```



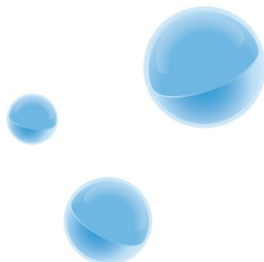
# Core Grace Mechanics

- ▶ A graced object is an object that has expired, but is still kept in cache
- ▶ Grace mode is when Varnish uses a graced object
- ▶ There is more than one way Varnish can end up using a graced object.
- ▶ `req.grace` defines how long an overdue an object can be for Varnish to still consider it for grace mode.
- ▶ `beresp.grace` defines how long past the `beresp.ttl`-time Varnish will keep an object
- ▶ `req.grace` is often modified in `vcl_recv` based on the state of the backend.



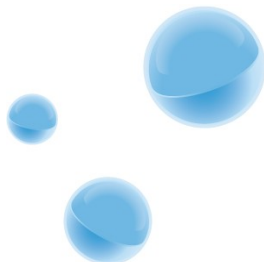
# Triggering Grace mode

- ▶ Backend request already in progress?  
Grace mode!
- ▶ Backend sick? Grace mode!
- ▶ Object black listed from all backends by  
saint mode? Grace mode!



# Saint mode

- ▶ “We need a name that no-one will *think* they understand so everyone is forced to read the documentation?”
- ▶ “beresp.snow-man?” “beresp.siberia?”
- ▶ A method of black listing a single object for a single back end.
- ▶ Compliments health checks.



# Contact information



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