

# Understanding high performance caching with SSL

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# About me

- ➡ Film school graduate with a mathematics degree
- ➡ Became a magazine writer and editor
- ➡ Had to get content on the Web
- ➡ Slid from print editorial to online
- ➡ Led development teams
- ➡ Started building sites
- ➡ Learned to do real programming
- ➡ Became interested in Drupal
- ➡ Fell in love with Drupal and was hired by Zivtech

# What we'll cover

- Caching basics
- Drupal Performance
- Reverse Proxy Caches
- SSL termination
- Varnish
- Pound
- Simple Demo
- Proxy vs Reverse Proxy (maybe)

# Drupal is kind of slow

There I said it...

# Drupal is kind of slow

Drupal gives tremendous power and flexibility but there is always an associated cost.

Drupal's core systems provide layers of caching to help.

# Drupal is kind of slow

```
webadmin@gamma:/var/www/drupal_demo$ drush cc
Enter a number to choose which cache to clear.
[0] : Cancel
[1] : all
[2] : drush
[3] : theme-registry
[4] : menu
[5] : css-js
[6] : block
[7] : module-list
[8] : theme-list
[9] : registry
```



# A human analogy...





# A human analogy...

You've got an office, many files, many clients, each with different needs.

People keep calling and asking for information. Each request requires you to dig around in some more papers for an answer.

# A human analogy...

Soon, you're putting people on hold as you service requests. Clients are getting angry.

You've even gone so far as to put common information on sticky notes but you still need to find them when asked.

# So what do you do?

Get a secretary...



# Meet your secretary

Your secretary has a great memory  
(much better than yours).

Answers the phone when clients call.

At first, doesn't know anything about  
the office. Bugs you a lot.

# Meet your secretary

**What are  
your hours?**

**I don't know.  
Let me find out.**



# Meet your secretary

10am to 6pm.

What are our  
hours?



# Meet your secretary

After hearing an answer to a question can just answer the question again the next time from memory.

**What are  
your hours?**

**10am to 6pm.**



# A human analogy...

In this setup, you, the person in the messy office, are Web server (Apache).

Your secretary with that brilliant memory, that's the reverse-proxy cache.



# A real setup

Apache and PHP do the heavy lifting.

**Varnish** is the reverse-proxy cache.

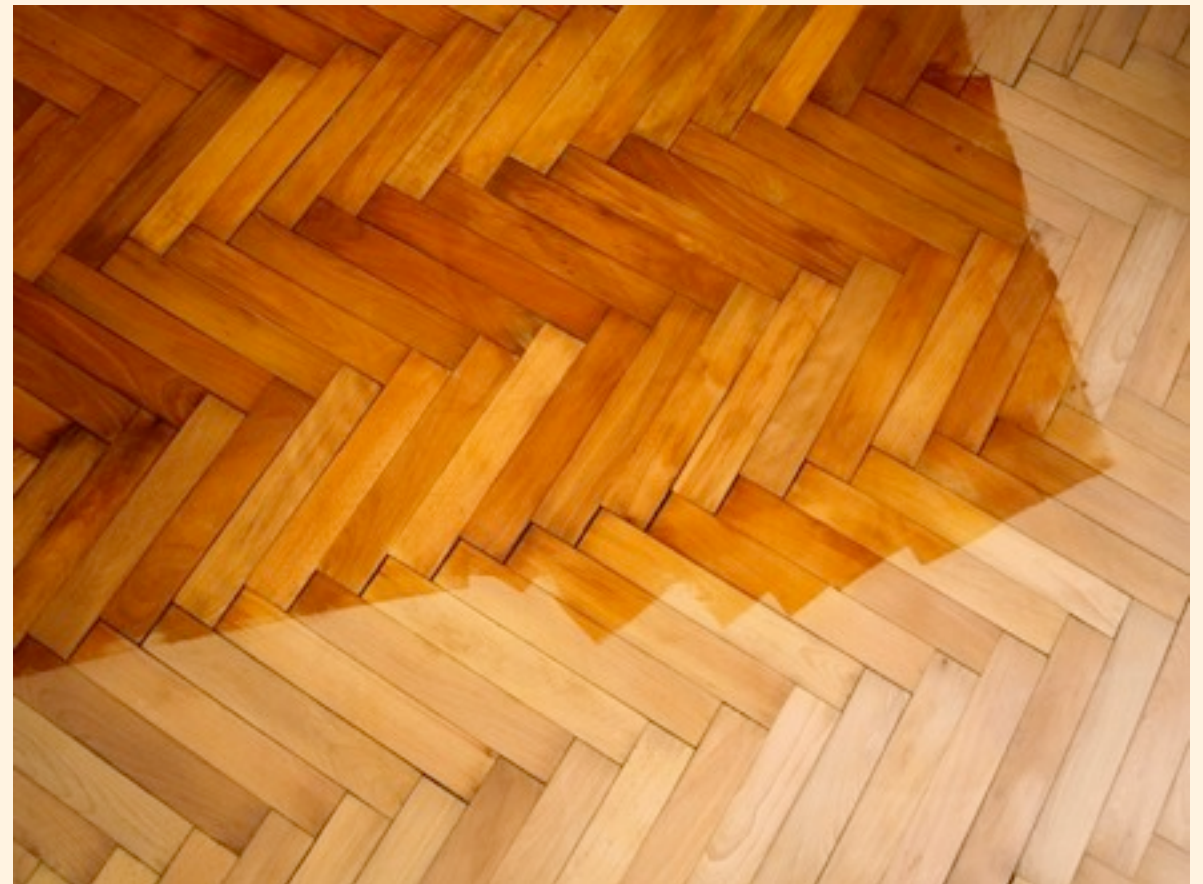
# Varnish

A reverse-proxy  
HTTP accelerator

Popular among  
Drupal devs

Smart configuration,  
very flexible

not this



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Rubber Dragon [flickr.com/photos/rubberdragon/](https://www.flickr.com/photos/rubberdragon/)

# Varnish

Standard package on many Linux variants

Custom configuration language (vcl files)

Speaks HTTP, knows HTTP, loves HTTP



# Varnish

Varnish is a quick solution to improve the responsiveness of your site for most users.

Let's change topic for a moment.



# Security is a feature

Your site is an investment.

- time
- money
- resources

The trust of your users is an asset.



# Security is a feature

The Internet is a scary place.

At least we have good crypto.

Crypto doesn't solve everything.

But it solves a lot...





# Security is a feature

SSL everywhere is worth considering.

The overhead isn't much (potentially negligible on a big Drupal site).



# Back to the analogy...

We can think of HTTP and HTTPS as two different languages.

Consider HTTP as English and HTTPS as French.

Let's say you want to start doing business with French speakers.



# But your secretary doesn't speak French

This isn't going to  
work so well.

If all your calls are in  
French she'll be no  
help at all.

Pouvez-vous  
m'aider?

Uhhhh...  
**CONNECTION REFUSED**



# Varnish

Yeah Varnish doesn't handle SSL termination (i.e. it doesn't speak HTTPS)

and it's not going to.



# That's cool.

## Other things do

**Pound** is another reverse proxy tool that handles SSL termination

Somewhat lacking in documentation and sparky how-to guides on the Internet



I made this logo up

# Pound

Handles load balancing

Can remove servers that fail  
from rotation

Can send requests for static files  
to a different physical server (or  
server service like **lighttpd**)



I made this logo up

# Pound

“Pound does not access the hard-disk at all (except for reading the certificate file on start, if required) and should thus pose no security threat to any machine.”

I liked this quote from the Pound Web site at <http://www.apsis.ch/pound>



I made this logo up

# Pound is your new translator

Fluent in both French  
and English

Can pass messages  
from your French  
callers to your brainy  
secretary.

Pouvez-vous  
m'aider?

La France est un  
pays merveilleux

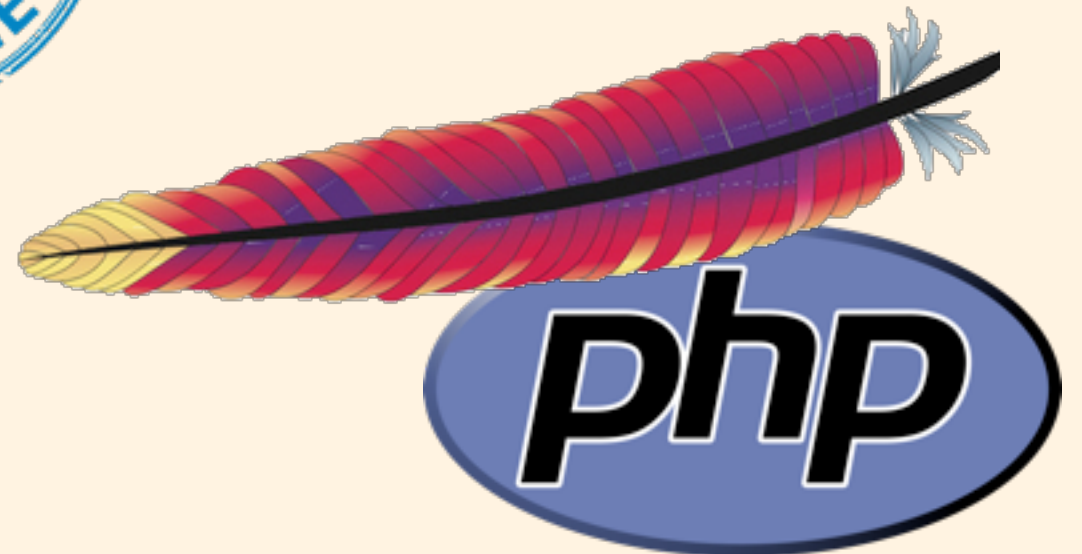


# Your new office setup





# Your new office setup





# Requests look like this

À quelle heure  
vous ouvrez?



What time do  
we open?



What time do we open?



I don't know.  
I have it stored  
here  
somewhere.  
Hang on...

10 heures



10 am.



10 am.



merci

# And often like this

À quelle heure  
vous ouvrez?

merci



10 heures

What time do  
we open?

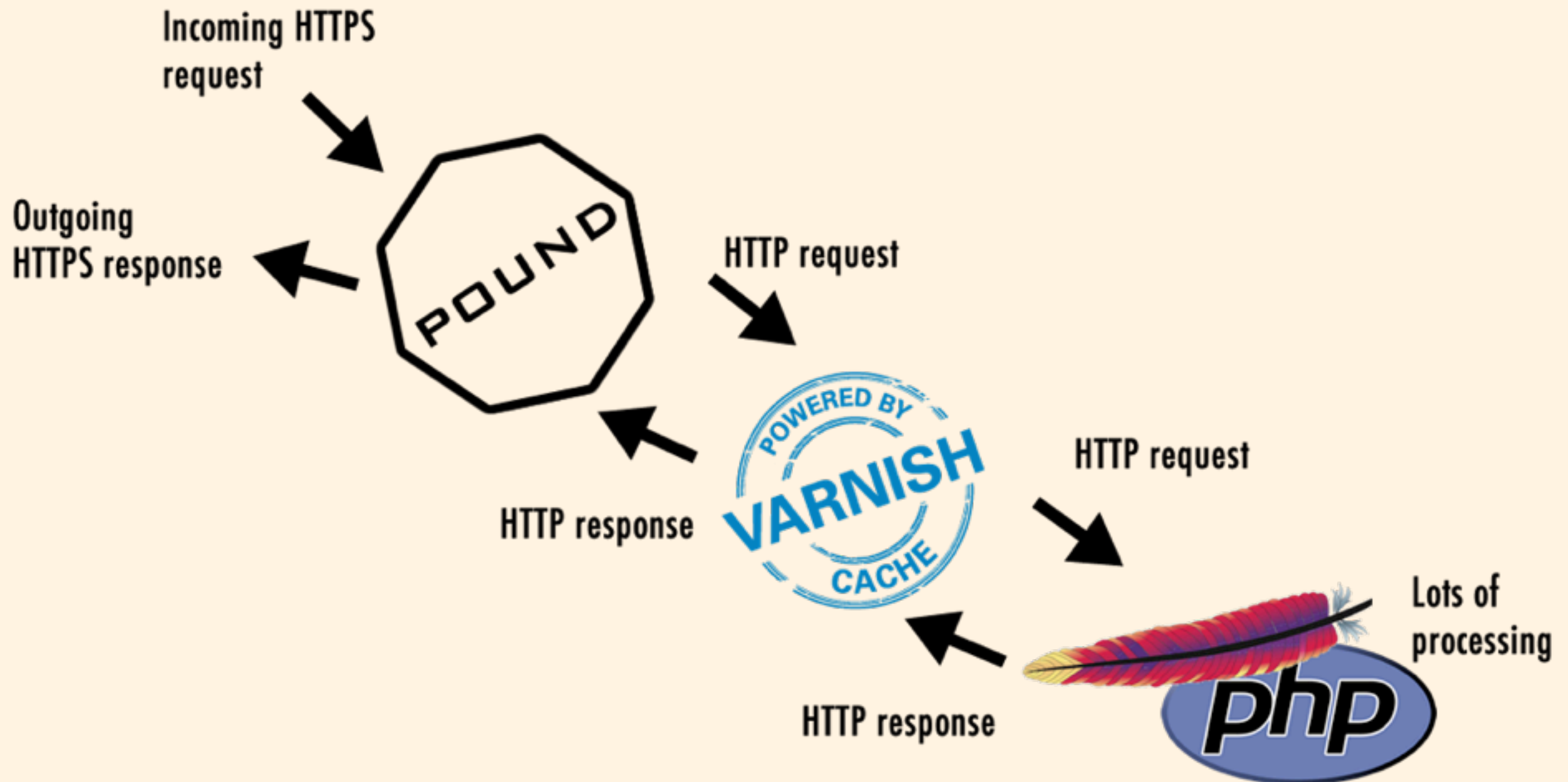


10 am.

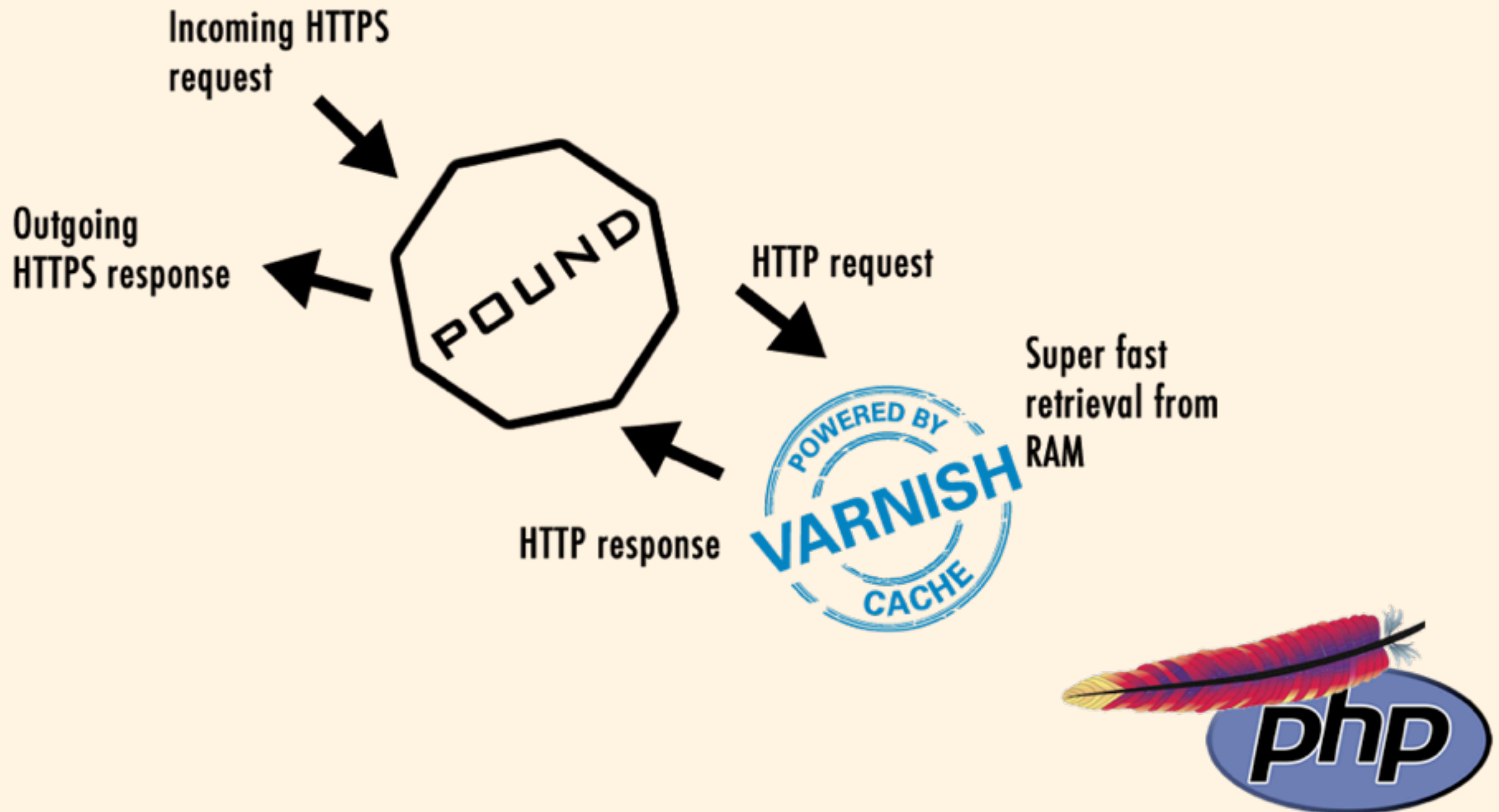
I'm leisurely  
running cron



# In reality...



# In reality...



# Time for a demo

Because talk is cheap...

# Thank You

Do you have questions?

