



# Enabling cache for monitoring application

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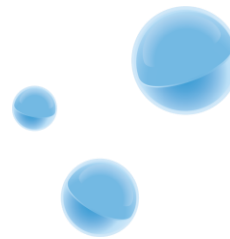


# Outlines

- Deployment model
- Caching technologies + how they fit to monitoring applications
  - Memcached
  - Varnish
- Benchmark
- Configuration
- Conclusion

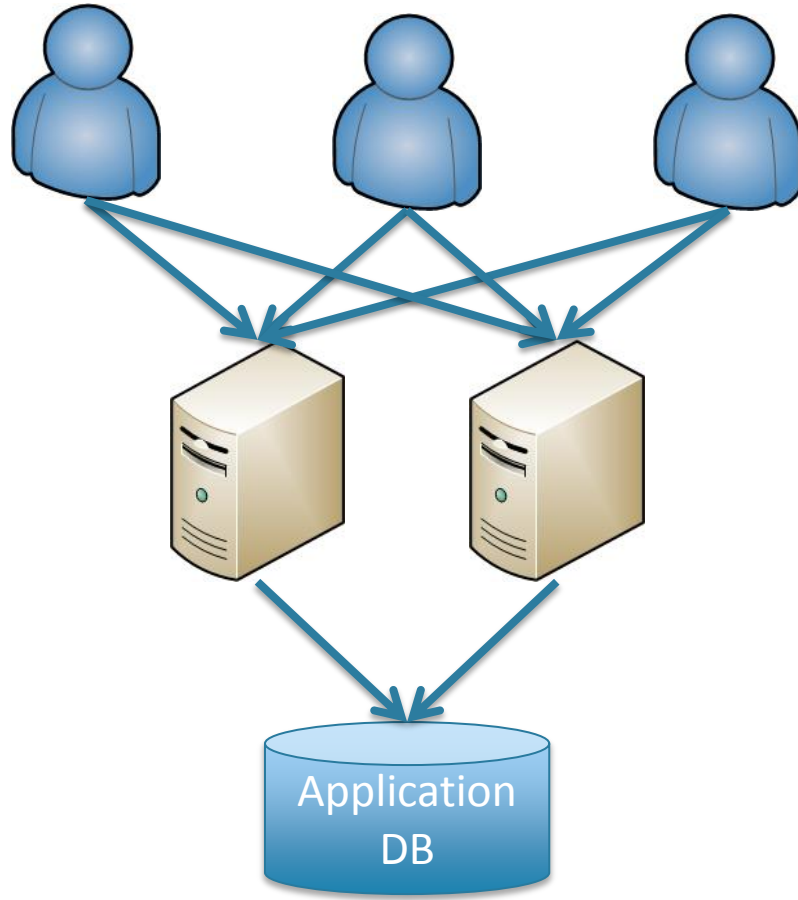
# This presentation is not...

- ...A benchmark between different caching technologies.
- Only two technologies has been tested:
  - Memcached (Backend cache)
  - Varnish (Frontend cache)



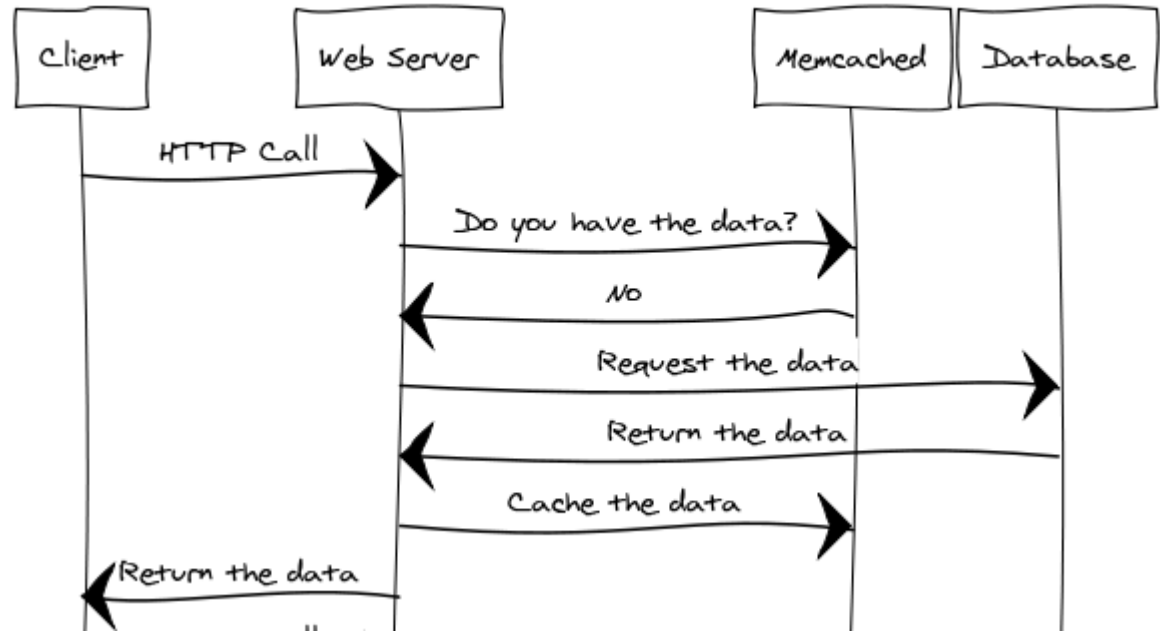
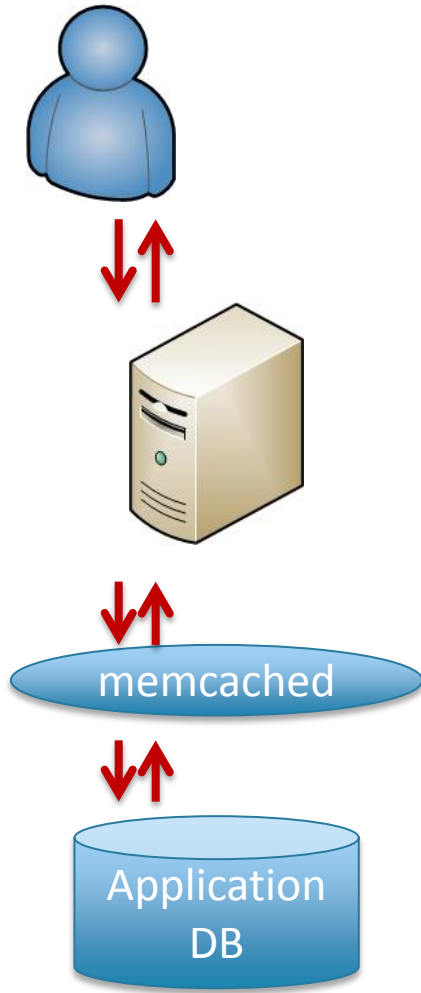
**VARNISH**  
CACHE

# Deployment model of monitoring applications

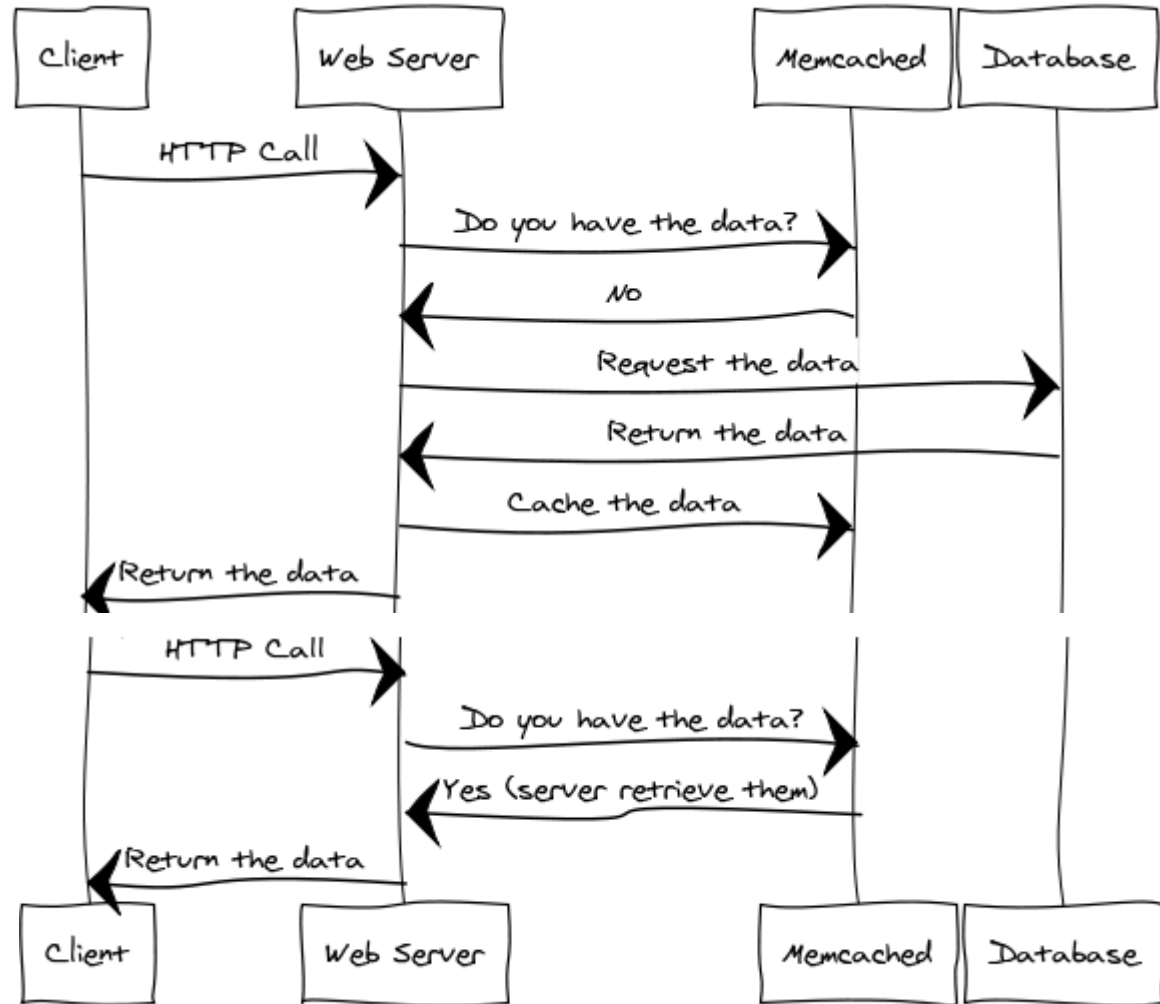
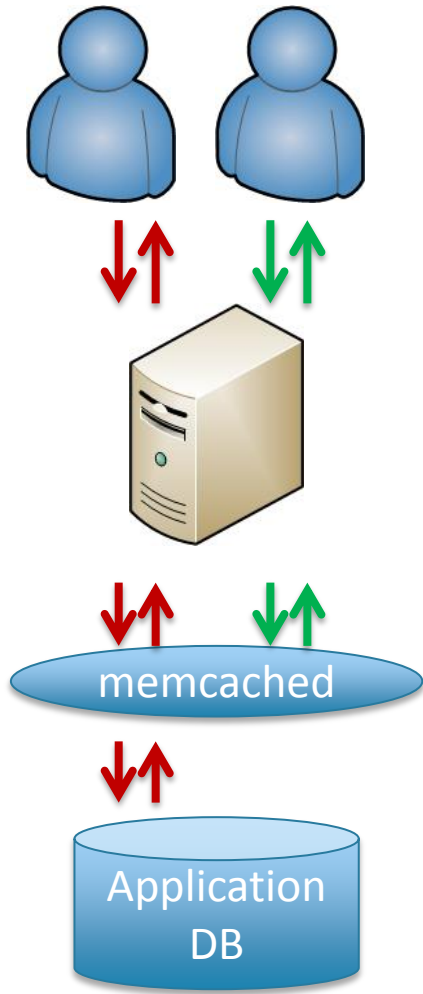


- User request data
  - Using a LB alias
- Request can go on different servers
- Web servers get data from the same DB

# Memcached

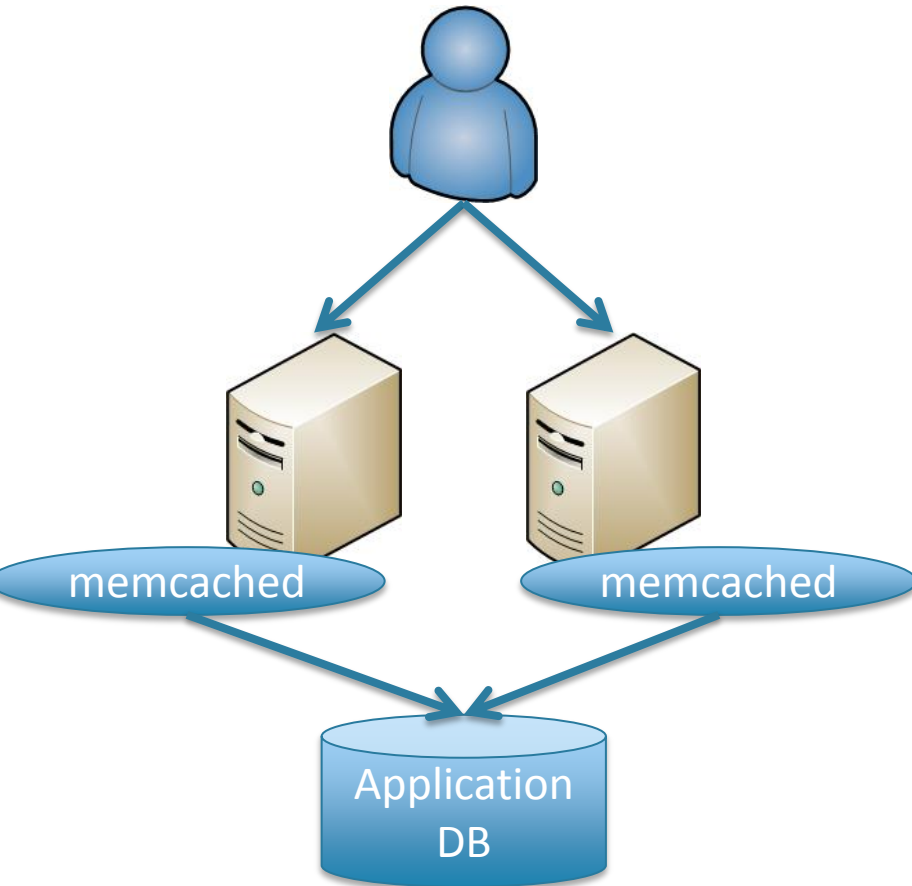


# Memcached



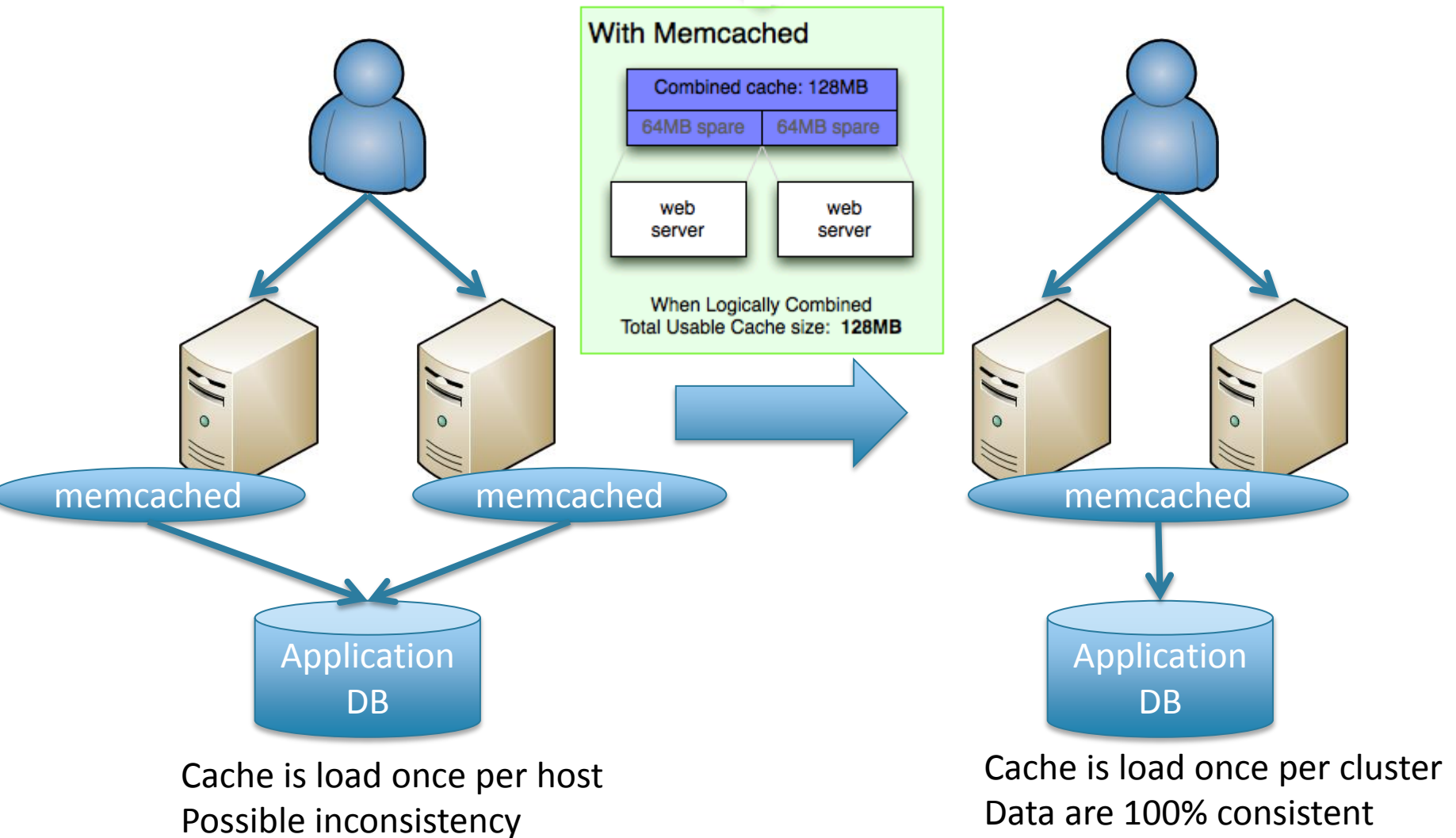
www.websequencediagrams.com

# Consistent and efficient caching



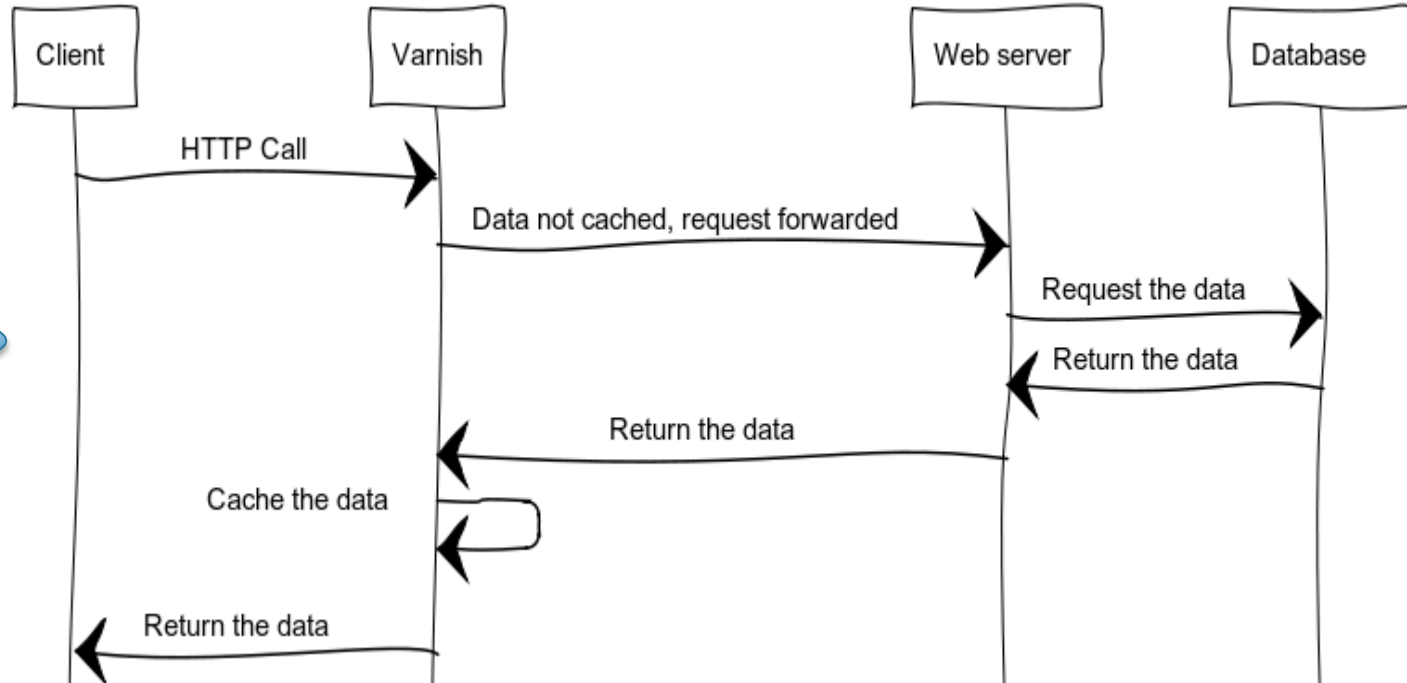
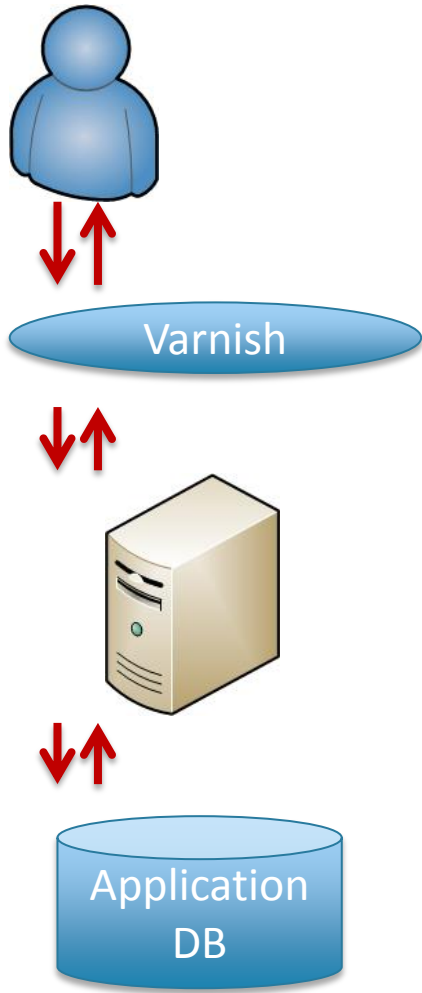
Cache is load once per host  
Possible inconsistency

# Consistent and efficient caching

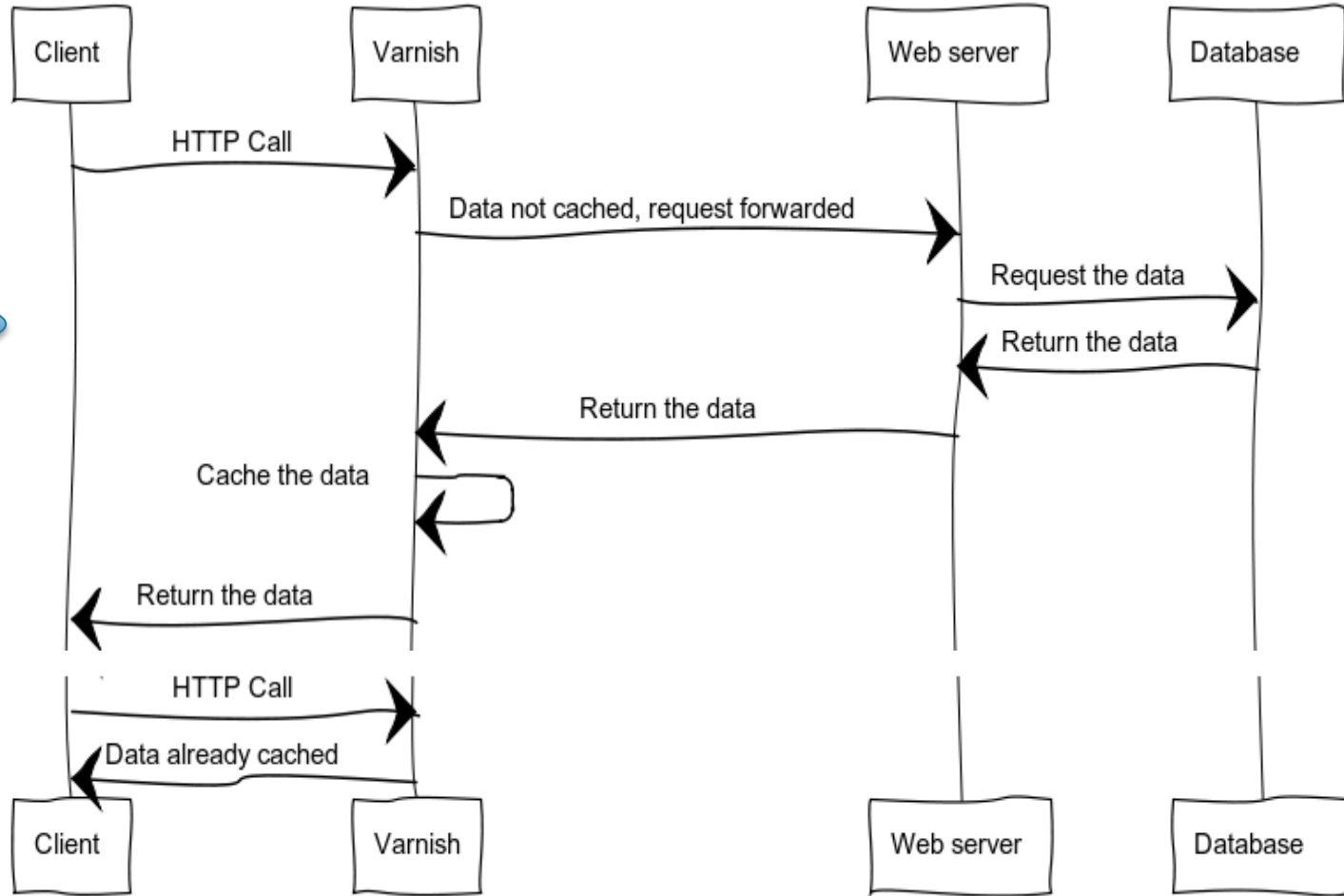
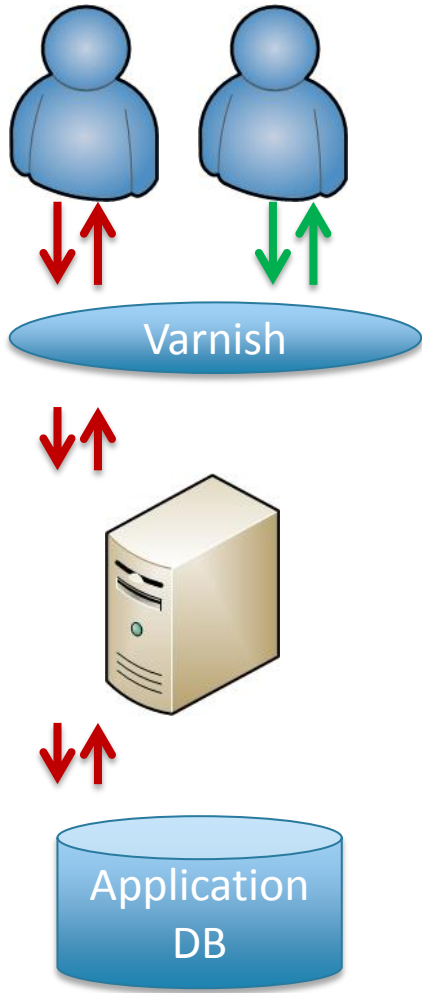




# Varnish

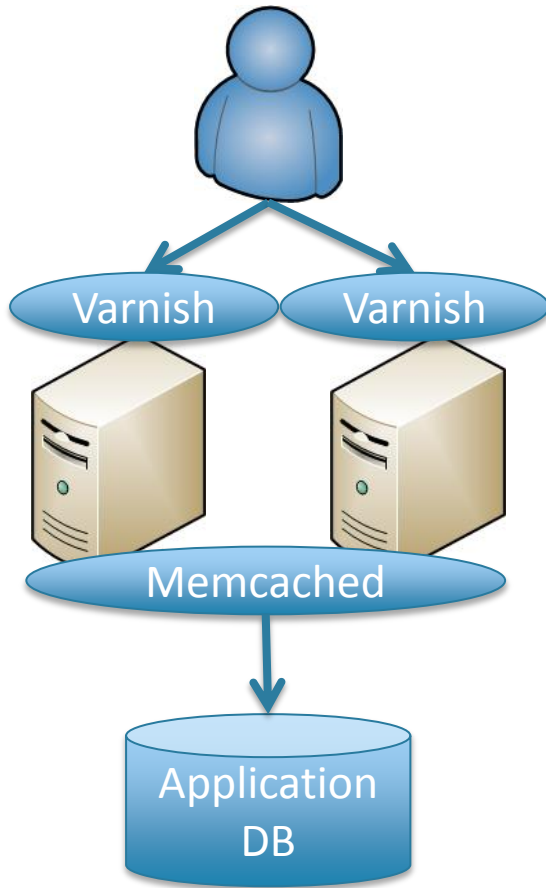


# Varnish



[www.websequencediagrams.com](http://www.websequencediagrams.com)

# Caching proxy



- Less stress on server
- Varnish:
  - Store the whole request
- Memcached:
  - Store data from the DB
  - Guarantee consistency

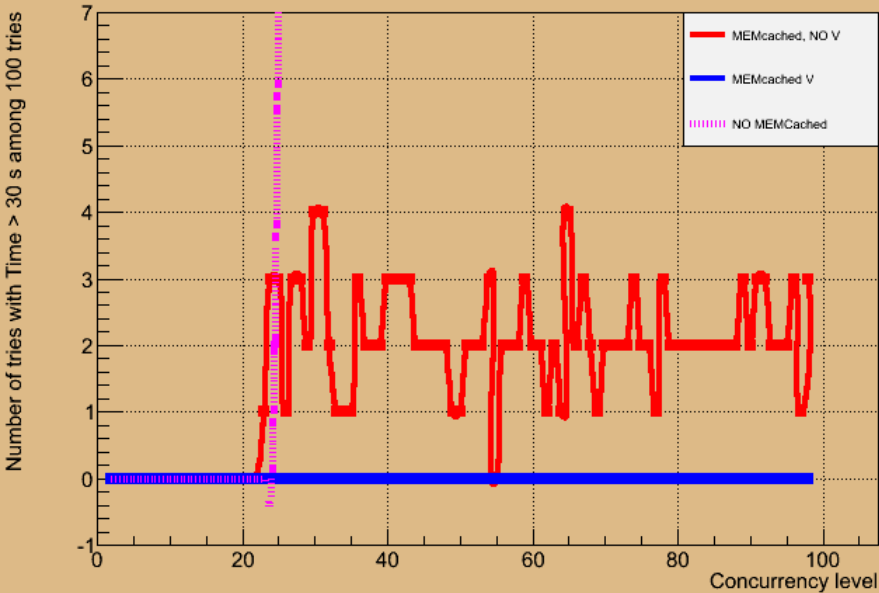
# Benchmark using ab (credits to Olga)

- Bench has been done for the “most popular” query
  - Default page
- Bench specifications:
  - Run 100 requests
  - Variable number of concurrent clients (from 1 to 100)
  - Each request is roughly 10kB of data
  - Average on 100 executions has been kept
- Test 3 scenarios:
  - Without any cache
  - Memcache only
  - Memcache + varnish

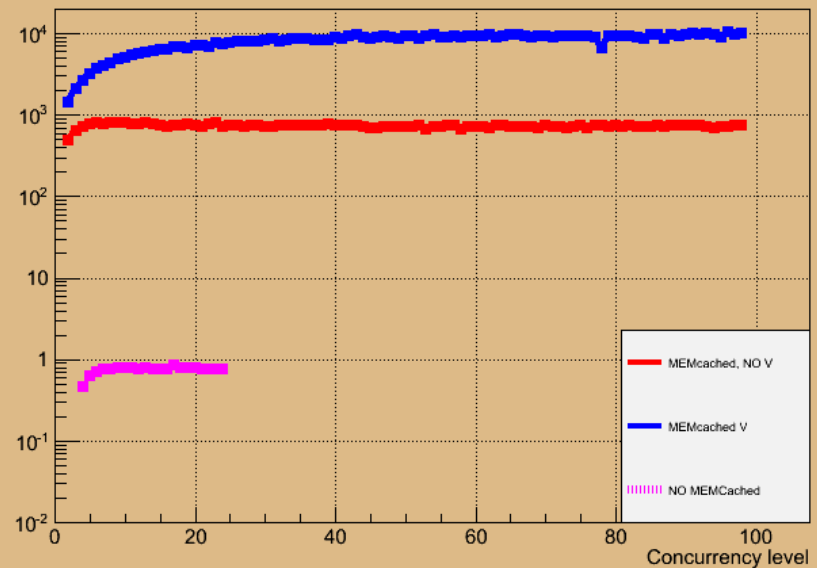
# Benchmark using ab (credits to Olga)

25 concurrent access max without caching

Few failures when only memcached



Varnish improves memcached's performance



# Enabling caching

- Memcached:
  - 0-conf: install the RPM and start the service
  - Comes for “free” with Django apps (decorator)
  - Require development effort for legacy dashboard applications (all actions need to be adapted)
- Varnish:
  - Trivial configuration to run it on port 80 and get httpd on 8080 (or anything else)
  - All HTTP request will be cached

# Conclusion

- Two main caching technologies has been tested:
  - Backend caching and caching proxy
  - Different roles
- Bench are awesome but “useless”:
  - Monitoring apps will never have this load
- Is caching useless then? NO!!!
  - Most popular queries can be pre-cached for allowing fast response.