

NOSQL GAMES

Patrick Huesler
wooga GmbH

Do you like to

PLAY?







wooga
world of gaming



Monster
World



technical

CHALLENGES

monthly active users

20,543,500

for Diamond Dash

daily active users

3,871,133

for Diamond Dash

backend traffic up to

6,500 RPS

for Monster World

what does mean that for a

DATABASE?

read/write ratio?

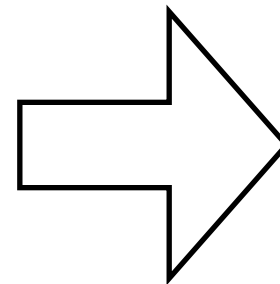
WRITE HEAVY

Wooga's
EVOLUTION
of architecture

Facebook

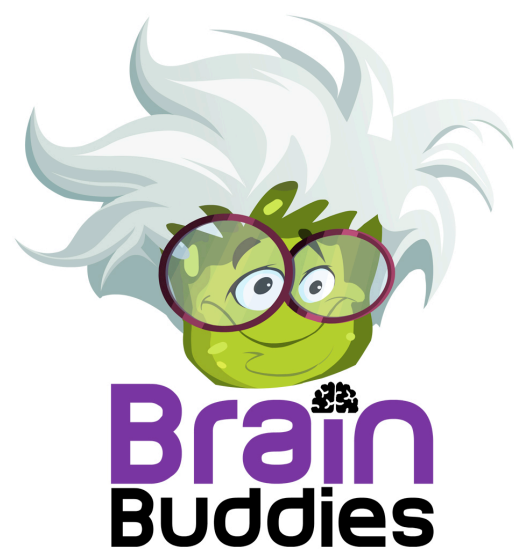
Flash

iOS



Game backend

Reporting



Built with

LAMP

*... well, nginx instead of
apache*

mysql does

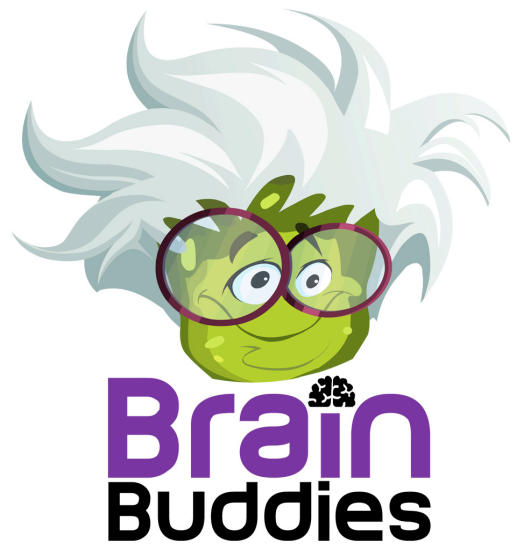
SCALE

for certain

USE GASES

with the right

PEOPLE



To the

CLOUD

Let's use

RAILS

instead of PHP

load balancer

app server

app server

app server

master shard 1

master shard 2

slave shard 2

slave shard 2

long

STORY

short



load balancer

app

app

app

app

app

app

app

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different

USE CASE

arcade games

ARE NOT

farming games

This is

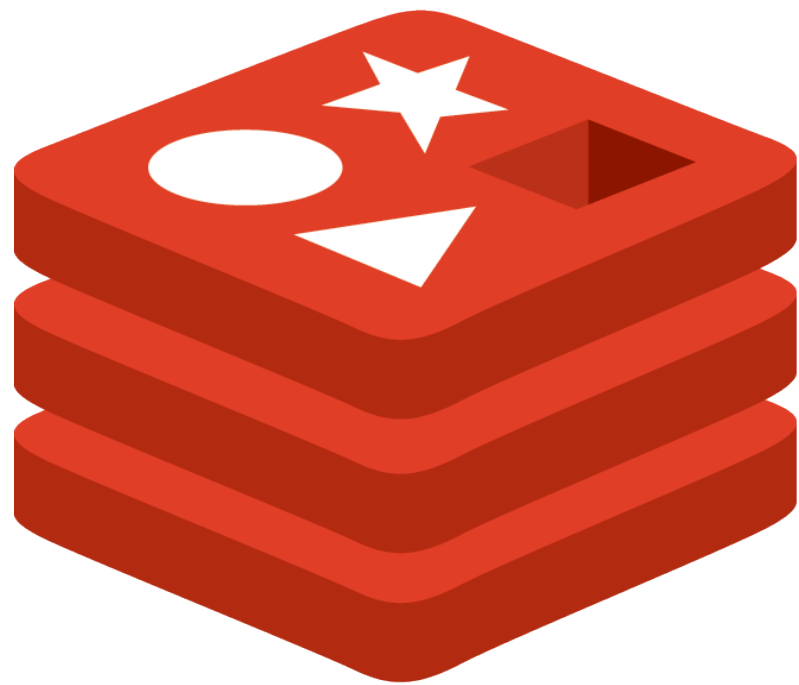
NOT

going to work

but there is

LIGHT

at the end of the tunnel



redis

Move

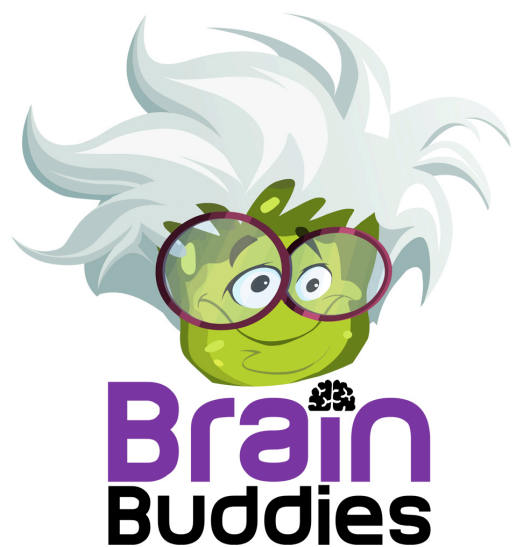
SLOW PARTS

to redis

RINSE AND

REPEAT





back to

DEDICATED

More

BANG

for the buck

Faster

MACHINES

faster

NETWORK

Let's use

REDIS

all the way

```
graph TD; LB[load balancer] --- AS1[app server]; LB --- AS2[app server]; LB --- AS3[app server]; AS1 --- R[redis]; AS2 --- R; AS3 --- R; R --- RS[redis slave];
```

load balancer

app server

app server

app server

redis

redis slave

REDIS

HASH

all is well in

REDIS LAND





MEMORY

LEAKS

how does

BGSAVE

work again?

dumps are
NO LONGER
working



This is

NOT

going to work



Fix it with

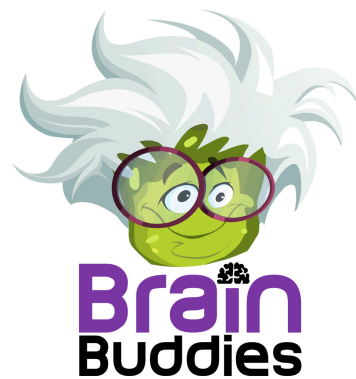
RESTORE ON

DEMAND

Redis

DISK STORE

(never really supported)



Let's go

STATEFUL

no

DATABASE

is faster than no database

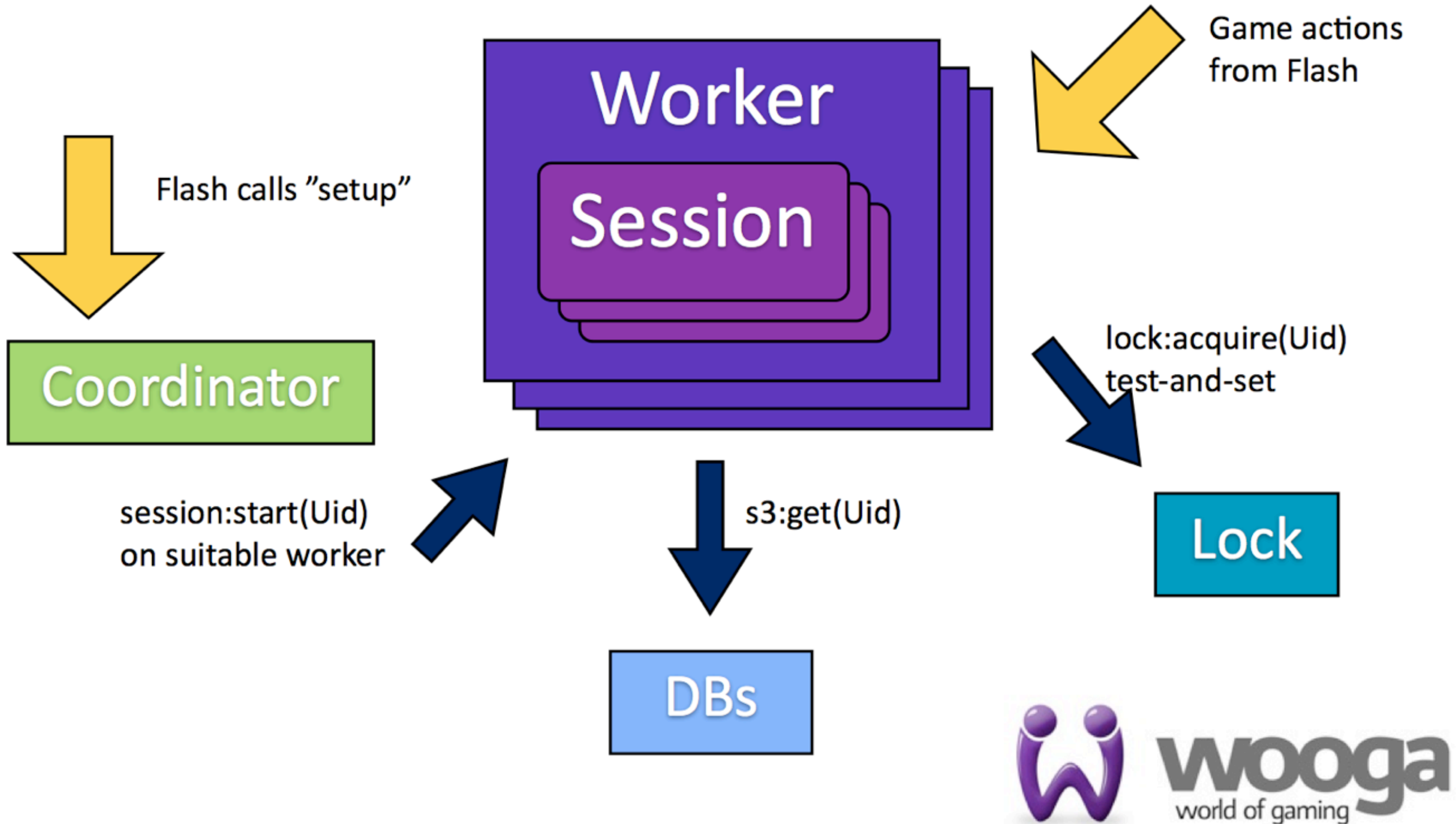
Let's use

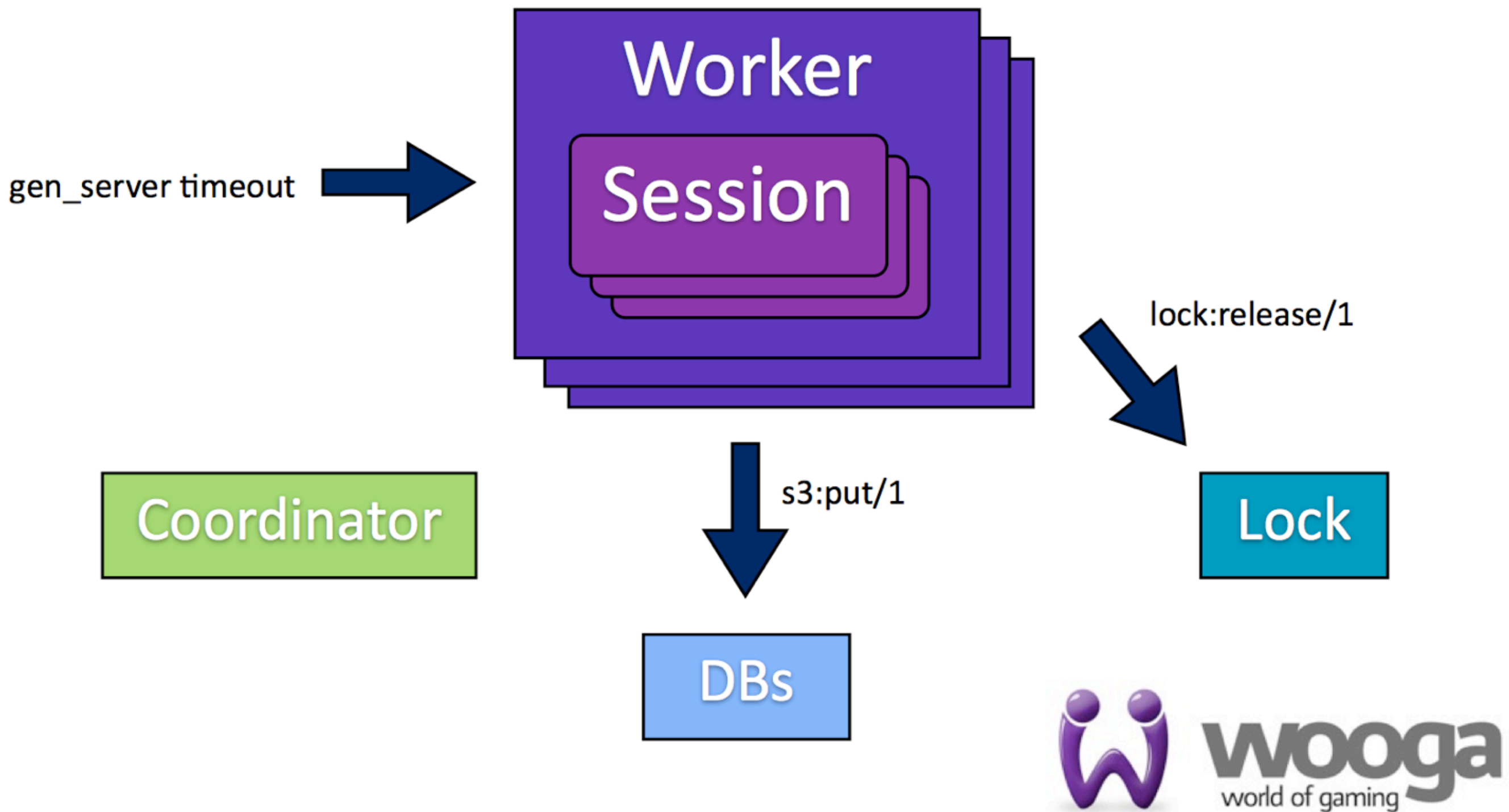
S3

all the way

Let's use

ERLANG







project

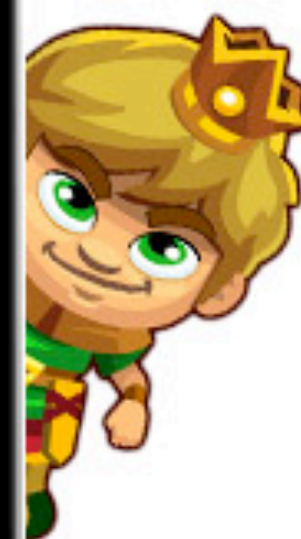
SPARTAN





Magic Land™

ISLAND



it has to be

READY

yesterday

It has to

SCALE

enormously



NODE.JS

What DB

SCALES

without sharding?

what DB has

MASTERLESS

REPLICATION?

ASYNC

SAVING

RIAK

good enough

FOR NOW

good enough

FOR GOOD



POCKET ISLAND

One of the world's most advanced mobile HTML5 games.
And the best thing: it's Open Source.

[Play the Game](#)
[Get Source Code](#)

A long, long time ago ...

Pocket Island, previously launched as Magic Land Island, is Wooga's open source HTML5 project available for all to tinker with and enjoy. Happy coding.

- [Read the Pocket Island Story](#)
- [Play Pocket Island](#)
- [Pocket Island on GitHub](#)

Wanna try Pocket Island on your iPhone4, iPhone 4S or iPad?
Download the game from the AppStore for free:



Available from the
AppStore



life with

RIAK

```
1  {
2      "userId" : 1000000011100,
3      "xp" : 20,
4      "coins" : 400,
5      "cash" : 300,
6      "rooms" : [
7          {
8              "id" : 1,
9              "type" : "x-ray",
10             "status" : "busy"
11          }
12     ]
13 }
14
```



no

SPOF

is plain awesome

bitcask was

SUBOPTIMAL

for our use case

Do not

MAP/REDUCE

over all keys!

dreadful

ULIMIT

the tale of

RIAK ATTACH



Monsters go

MOBILE



Monster World



Coming Soon to the
App Store

An iOS client is

NOT

a flash client

do we need a

DATABASE

at all?

Could we just use

S3

in a stateless architecture?

do we need a

BACKEND

at all?

what if the

CLIENT

writes to

S3?

WOOGA.COM/

JOBS