



Dê um UP na sua aplicação

<https://about.me/esdrasbb>

Um pouco sobre mim:

- Baiano, mas sem sotaque
- Voluntário na ABPQ
- Desenvolvedor web a mais de 10 anos
- Full stack developer
- Moviliano



A **Movile** é a empresa por trás das apps que fazem sua vida mais fácil!

The logo for sympla, featuring the word "sympla" in a lowercase, blue, rounded font.



The logo for Leiturinha, featuring the word "Leiturinha" in a colorful, playful font.



Vivo Meditação

The logo for RAPIDO, featuring the word "RAPIDO" in a bold, grey, uppercase font with a stylized orange "O", and the website "rapiddo.com.br" below it.

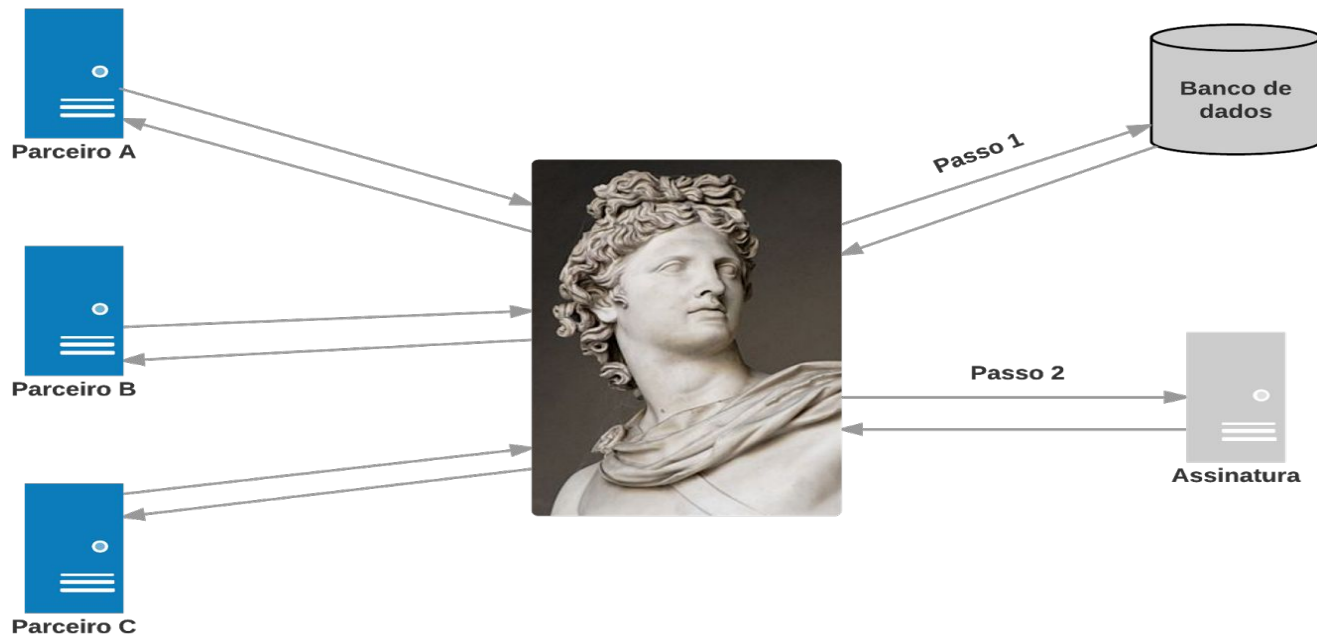
Agenda

Objetivos

- Apresentar um cenário real onde foi aplicada a solução do hazelcast
- Alguns detalhes e configurações
- Na prática...
 - Como adicionar o hazelcast na sua aplicação
 - Tempo encontrado com o uso do hazelcast em uma aplicação web
- Demo de um grid
- Considerações finais

Senta que lá vem a história...

Primeira versão do Apolo

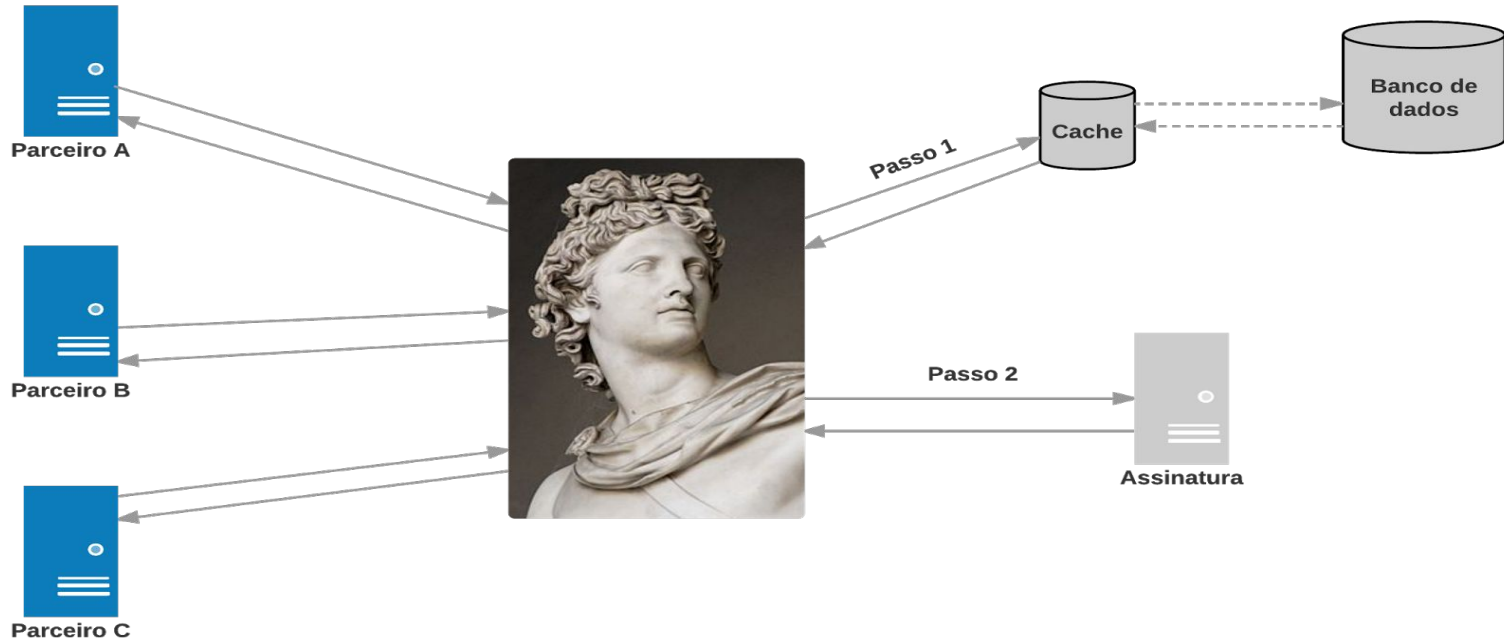


<http://apolo.com.br/assina?serviceName=Playkids&Operadora=Oi&telefone=5585912341234>

Vamos dar um UP!!!

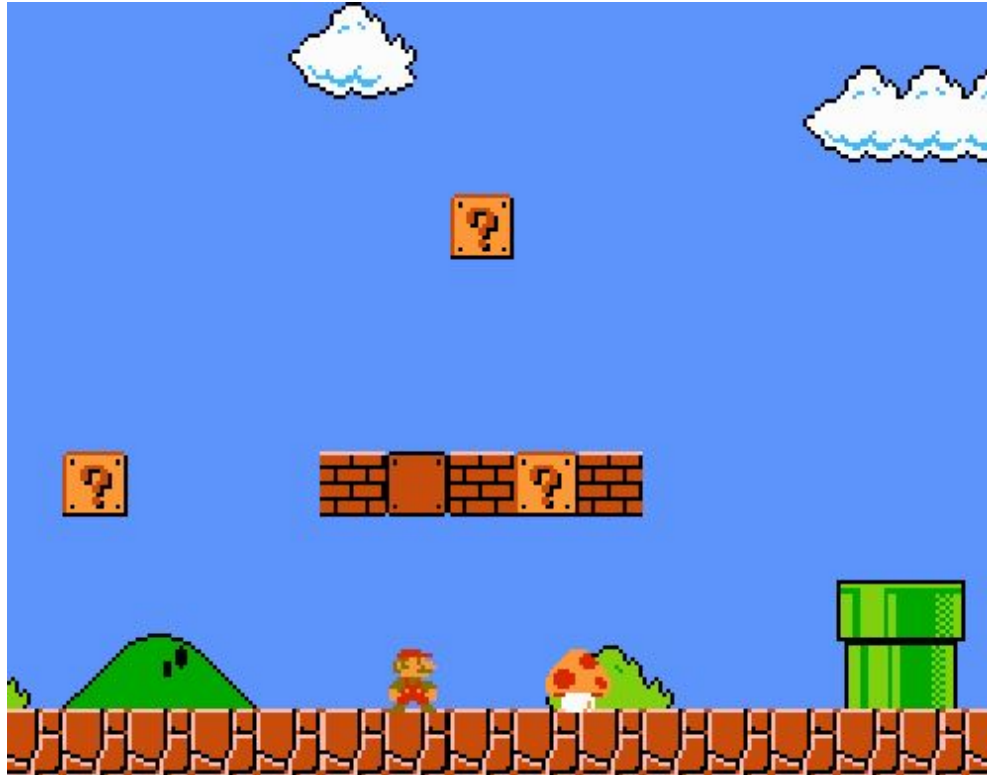


Segunda versão do Apolo

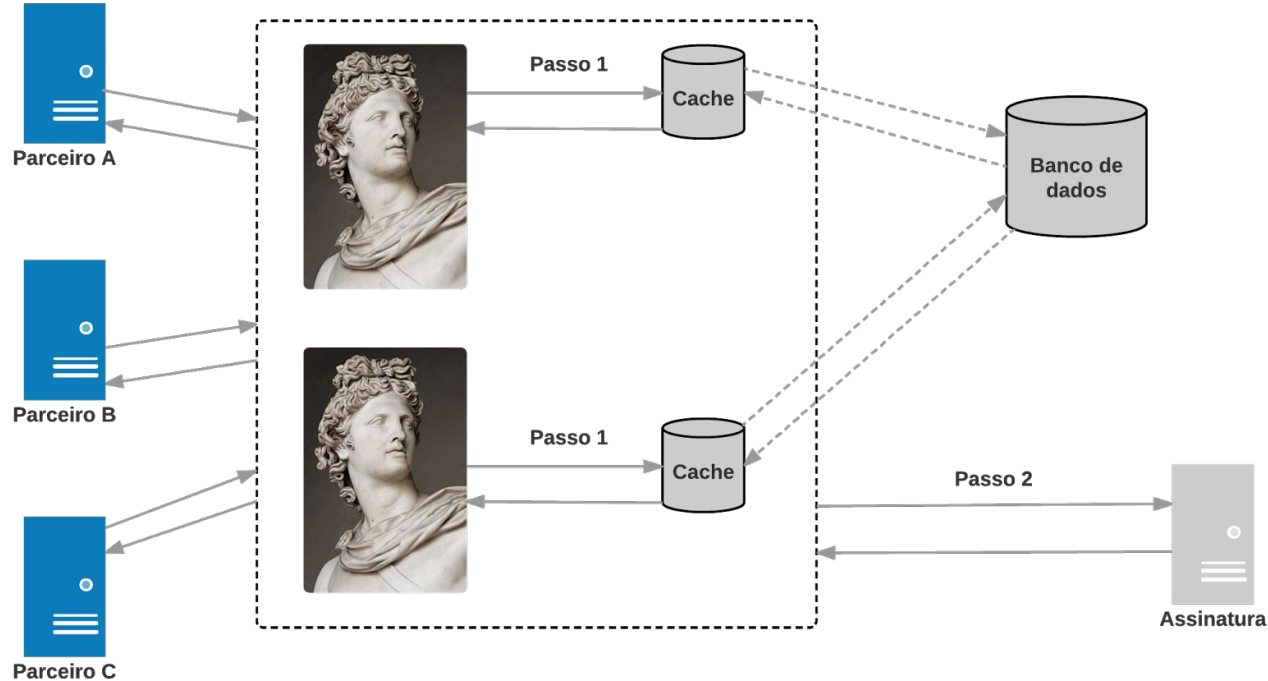


<http://apolo.com.br/assina?serviceName=Playkids&Operadora=Oi&telefone=5585912341234>

Vamos dar um UP!!!



Terceira versão do Apolo

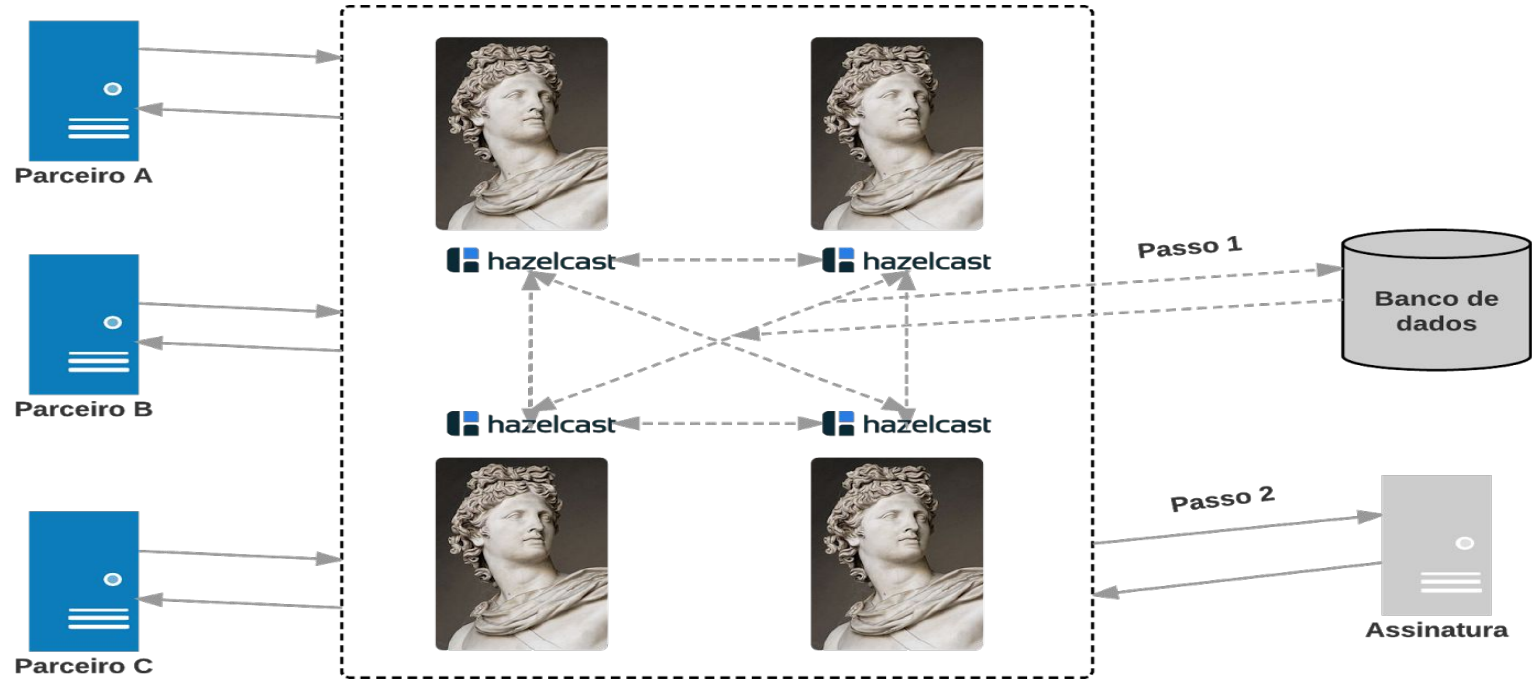


<http://apolo.com.br/assina?serviceName=Playkids&Operadora=Oi&telefone=5585912341234>

Vamos dar um UP!!!



Versão final



<http://apolo.com.br/assina?serviceName=Playkids&Operadora=Oi&telefone=5585912341234>

Hazelcast em detalhes...

O que é?

Hazelcast is an open source in-memory data grid based on Java.

Quem usa?



Mais detalhes do Hazelcast

- Ajustes finos na configuração
 - Tamanho máximo de registros no cache (max-size)
 - Política de exclusão de registros (eviction-policy)
 - LRU: Least Recently Used - Menos recentemente usado
 - LFU: Least Frequently Used - Menos frequentemente usado
 - NONE: Ignora a configuração de tamanho máximo
 - Tempo de vida (time-to-live-seconds) de cada elemento dentro do cache
 - Tempo máximo esperando (max-idle-seconds)
- JMX
- Diversos Clients: Java, .NET, C++, Python, Node.js, Scala e Clojure
- Collections: Sets, Lists, Maps
- Generic Session Replication (Tomcat/Jetty/Generic)

Na prática...

Como adicionar ao seu projeto?

```
<parent>
<groupId>org.springframework.boot</groupId>
<artifactId>spring-boot-starter-parent</artifactId>
<version>1.5.4.RELEASE</version>
<relativePath/>
</parent>
...
<dependency>
<groupId>com.hazelcast</groupId>
<artifactId>hazelcast</artifactId>
<!-- Version is managed by Spring Boot starter -->
</dependency>
```

```
@Configuration
public class HazelcastConfiguration {
    @Bean
    public Config hazelCastConfig() {
        return new Config()
            .setInstanceName("hazelcast-instance")
            .addMapConfig(
                new MapConfig()
                    .setName("city")
                    .setEvictionPolicy(EvictionPolicy.LRU)
                    .setTimeToLiveSeconds(300));
    }
}
```

```
@SpringBootApplication
@EnableCaching
public class Application {
    public static void main(String[] args) {
        SpringApplication.run(Application.class, args);
    }
}
```

Na prática...

Aplicação didática em spring boot + hazelcast + postgres para consultar estados e cidades.


Endpoints:

- /estado/all → todos os estados cadastrados
- /cidade/{siglaEstado} → lista de cidade pela sigla do estado.
- /clear → limpa todos os dados do cache

Na prática...


/estado/all

```
2017-08-12 14:52:55.049 INFO 19002 --- [nio-8080-exec-5] com.javace.javou.service.EstadoService : Executing: EstadoService.getAll();
Hibernate: select estado0_.id as id1_1_, estado0_.nome as nome2_1_, estado0_.sigla as sigla3_1_ from estado estado0_
2017-08-12 14:52:55.071 INFO 19002 --- [nio-8080-exec-5] com.javace.javou.service.CidadeService : getEstados call took 22 ms.
2017-08-12 14:53:00.010 INFO 19002 --- [nio-8080-exec-8] com.javace.javou.service.CidadeService : getEstados call took 2 ms.
2017-08-12 14:53:02.665 INFO 19002 --- [nio-8080-exec-9] com.javace.javou.service.CidadeService : getEstados call took 2 ms.
2017-08-12 14:53:04.593 INFO 19002 --- [nio-8080-exec-1] com.javace.javou.service.CidadeService : getEstados call took 2 ms.
```



/cidade/ba → 417 cidades retornadas

```
2017-08-12 15:05:54.877 INFO 20495 --- [nio-8080-exec-9] com.javace.javou.service.CidadeService : Executing: CidadeService.findBySigla(estado("ba"));
2017-08-12 15:05:54.878 INFO 20495 --- [nio-8080-exec-9] com.javace.javou.service.EstadoService : Executing: EstadoService.getAll();
Hibernate: select estado0_.id as id1_1_, estado0_.nome as nome2_1_, estado0_.sigla as sigla3_1_ from estado estado0_
Hibernate: select cidade0_.id as id1_0_, cidade0_.id_estado as id_estad3_0_, cidade0_.nome as nome2_0_ from cidade cidade0_ left outer join estado estado1_
2017-08-12 15:05:54.981 INFO 20495 --- [nio-8080-exec-9] com.javace.javou.service.CidadeService : getCidadeByEstado call took 104 ms.
2017-08-12 15:05:59.719 INFO 20495 --- [nio-8080-exec-1] com.javace.javou.service.CidadeService : getCidadeByEstado call took 11 ms.
2017-08-12 15:06:02.831 INFO 20495 --- [nio-8080-exec-3] com.javace.javou.service.CidadeService : getCidadeByEstado call took 11 ms.
2017-08-12 15:06:04.987 INFO 20495 --- [nio-8080-exec-5] com.javace.javou.service.CidadeService : getCidadeByEstado call took 12 ms.
```



Demo

```
./console.sh
INFO: [172.17.0.1]:5701 [dev] [3.8.4] [172.17.0.1]:5701 is STARTED
hazelcast[default] > ago 12, 2017 10:55:02 AM com.hazelcast.internal.cluster.ClusterService
INFO: [172.17.0.1]:5701 [dev] [3.8.4]

Members [4] {
  Member [172.17.0.2]:5701 - 267ca8c8-061e-41c7-a478-3638ce7b1024
  Member [172.17.0.3]:5701 - bdac1adb-24c8-4c15-b534-109bc254adbc
  Member [172.17.0.1]:5701 - 965484bb-ee0b-4e66-9b66-8bf73626c2a1 this
  Member [172.17.0.1]:5702 - 774c3938-6445-4bd1-bf93-5895408b6f10
}

ago 12, 2017 10:55:02 AM com.hazelcast.nio.tcp.InitConnectionTask
INFO: [172.17.0.1]:5701 [dev] [3.8.4] Connecting to /172.17.0.1:5702, timeout: 0, b
ind-any: true
ago 12, 2017 10:55:02 AM com.hazelcast.nio.tcp.TcpIpConnectionManager
INFO: [172.17.0.1]:5701 [dev] [3.8.4] Established socket connection between /172.17
.0.1:5702 and /172.17.0.1:5702

hazelcast[default] > m.get 1
Javou#11
hazelcast[default] >

./console.sh 83x22
INFO: [172.17.0.1]:5702 [dev] [3.8.4] Cluster version set to 3.8
ago 12, 2017 10:55:02 AM com.hazelcast.nio.tcp.TcpIpConnectionManager
INFO: [172.17.0.1]:5702 [dev] [3.8.4] Established socket connection between /172.17
.0.1:5702 and /192.168.0.20:54790
ago 12, 2017 10:55:02 AM com.hazelcast.nio.tcp.TcpIpConnectionManager
INFO: [172.17.0.1]:5702 [dev] [3.8.4] Established socket connection between /172.17
.0.1:5702 and /172.17.0.3:47118
ago 12, 2017 10:55:02 AM com.hazelcast.internal.cluster.ClusterService
INFO: [172.17.0.1]:5702 [dev] [3.8.4]

Members [4] {
  Member [172.17.0.2]:5701 - 267ca8c8-061e-41c7-a478-3638ce7b1024
  Member [172.17.0.3]:5701 - bdac1adb-24c8-4c15-b534-109bc254adbc
  Member [172.17.0.1]:5701 - 965484bb-ee0b-4e66-9b66-8bf73626c2a1
  Member [172.17.0.1]:5702 - 774c3938-6445-4bd1-bf93-5895408b6f10 this
}

ago 12, 2017 10:55:04 AM com.hazelcast.core.LifecycleService
INFO: [172.17.0.1]:5702 [dev] [3.8.4] [172.17.0.1]:5702 is STARTED
hazelcast[default] > m.put 1 Javou#11
null
hazelcast[default] >

docker run -ti hazelcast/hazelcast 83x22
INFO: [172.17.0.2]:5701 [dev] [3.8.3] Accepting socket connection from /172.17.0.1:
49886
Aug 12, 2017 1:54:56 PM com.hazelcast.nio.tcp.TcpIpConnectionManager
INFO: [172.17.0.2]:5701 [dev] [3.8.3] Established socket connection between /172.17
.0.2:5701 and /172.17.0.1:49886
Aug 12, 2017 1:55:02 PM com.hazelcast.internal.cluster.ClusterService
INFO: [172.17.0.2]:5701 [dev] [3.8.3]

Members [4] {
  Member [172.17.0.2]:5701 - 267ca8c8-061e-41c7-a478-3638ce7b1024 this
  Member [172.17.0.3]:5701 - bdac1adb-24c8-4c15-b534-109bc254adbc
  Member [172.17.0.1]:5701 - 965484bb-ee0b-4e66-9b66-8bf73626c2a1
  Member [172.17.0.1]:5702 - 774c3938-6445-4bd1-bf93-5895408b6f10
}

Aug 12, 2017 1:55:02 PM com.hazelcast.internal.partition.impl.MigrationManager
INFO: [172.17.0.2]:5701 [dev] [3.8.3] Re-partitioning cluster data... Migration que
ue size: 271
Aug 12, 2017 1:55:07 PM com.hazelcast.internal.partition.impl.MigrationThread
INFO: [172.17.0.2]:5701 [dev] [3.8.3] All migration tasks have been completed, queu
es are empty.

docker run -ti hazelcast/hazelcast 83x22
INFO: [172.17.0.3]:5701 [dev] [3.8.3] Connecting to /172.17.0.1:5701, timeout: 0, b
ind-any: true
Aug 12, 2017 1:54:52 PM com.hazelcast.nio.tcp.TcpIpConnectionManager
INFO: [172.17.0.3]:5701 [dev] [3.8.3] Established socket connection between /172.17
.0.3:49459 and /172.17.0.1:5701
Aug 12, 2017 1:55:02 PM com.hazelcast.internal.cluster.ClusterService
INFO: [172.17.0.3]:5701 [dev] [3.8.3]

Members [4] {
  Member [172.17.0.2]:5701 - 267ca8c8-061e-41c7-a478-3638ce7b1024
  Member [172.17.0.3]:5701 - bdac1adb-24c8-4c15-b534-109bc254adbc this
  Member [172.17.0.1]:5701 - 965484bb-ee0b-4e66-9b66-8bf73626c2a1
  Member [172.17.0.1]:5702 - 774c3938-6445-4bd1-bf93-5895408b6f10
}

Aug 12, 2017 1:55:02 PM com.hazelcast.nio.tcp.InitConnectionTask
INFO: [172.17.0.3]:5701 [dev] [3.8.3] Connecting to /172.17.0.1:5702, timeout: 0, b
ind-any: true
Aug 12, 2017 1:55:02 PM com.hazelcast.nio.tcp.TcpIpConnectionManager
INFO: [172.17.0.3]:5701 [dev] [3.8.3] Established socket connection between /172.17
.0.3:47118 and /172.17.0.1:5702
```

Considerações finais

Fácil configuração

Simples de usar

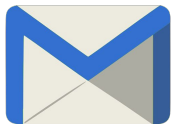
Solução para cache distribuído

Diversas features e ajustes finos

Multi client (Node, .Net, Python e outros)

MUITO OBRIGADO!!!

Contato:



esdras.barreto@gmail.com

Códigos e slide da apresentação:



<https://github.com/esdrasbb/javou11>