

UNIVERSITÀ DEGLI STUDI DI MILANO
DIPARTIMENTO DI INFORMATICA

Mole.io

Relatore
Prof. Ernesto Damiani

Correlatore
Emanuele DelBono

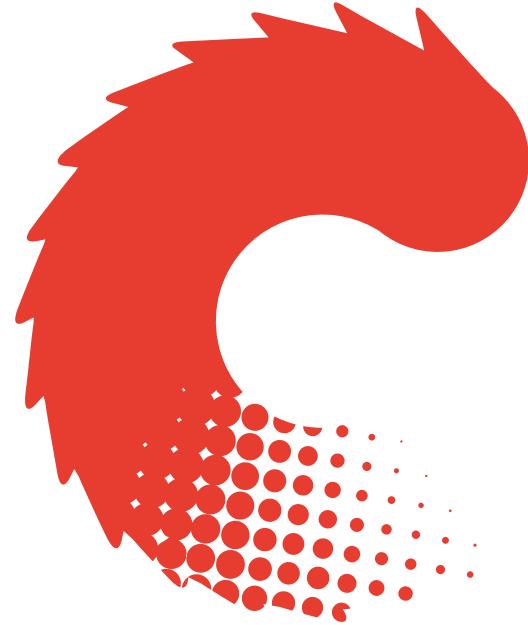
Federico Gandellini
Matr. 703156

UN SISTEMA
PER LA GESTIONE
CENTRALIZZATA
DEI LOG APPLICATIVI

ANNO ACCADEMICO 2012/2013

Corso di Laurea Magistrale in Scienze e Tecnologie dell'Informazione

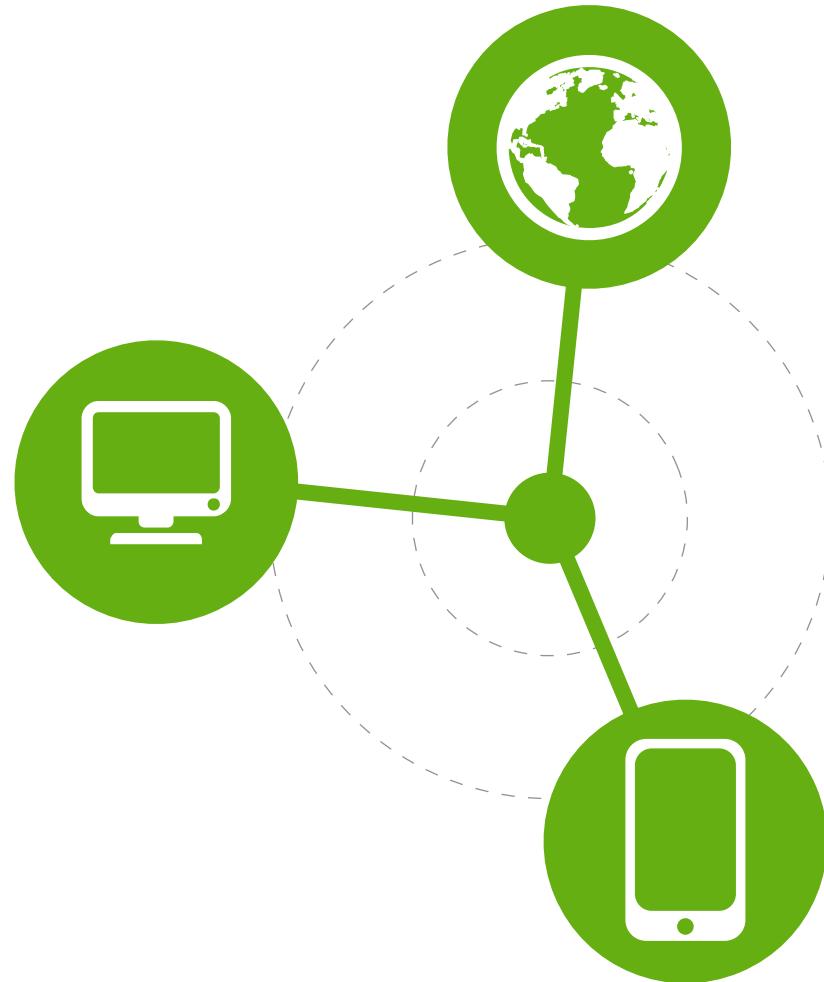
COMPANY



C O D I C E P L A S T I C O



COMPANY



Applications

Requirements

Monitor customer installations across the Italian country

Reverse workflow

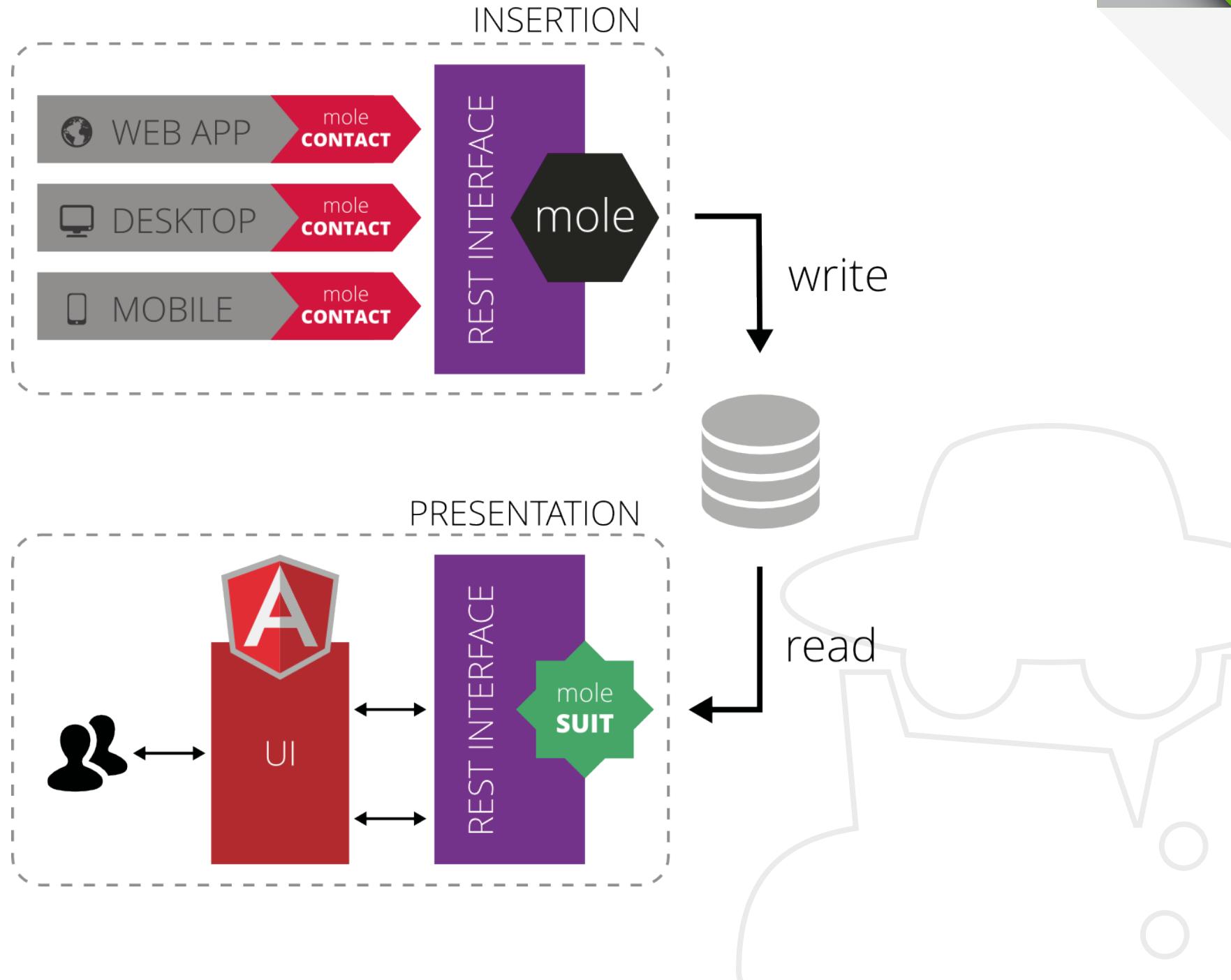
Centralization of app statuses



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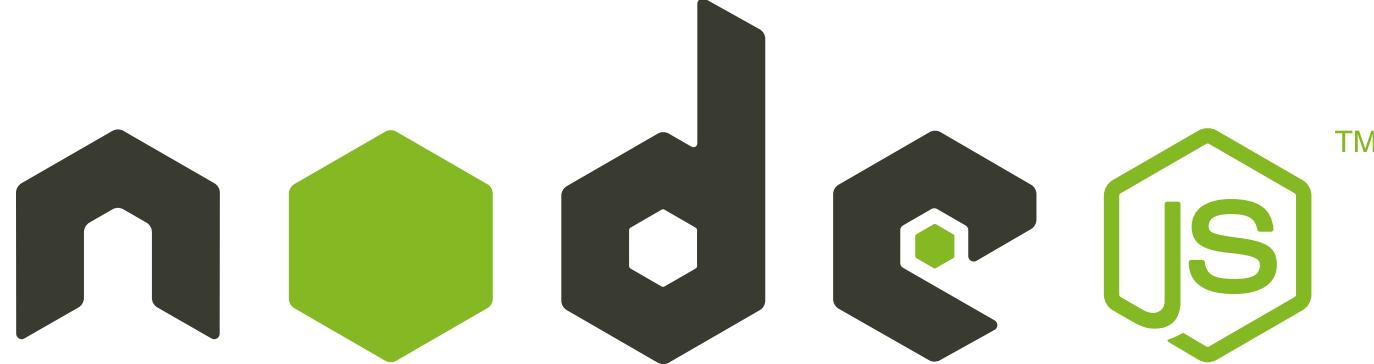


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TECHNOLOGY



Server-side JavaScript Framework

**HIGH
PERFORMANCES**

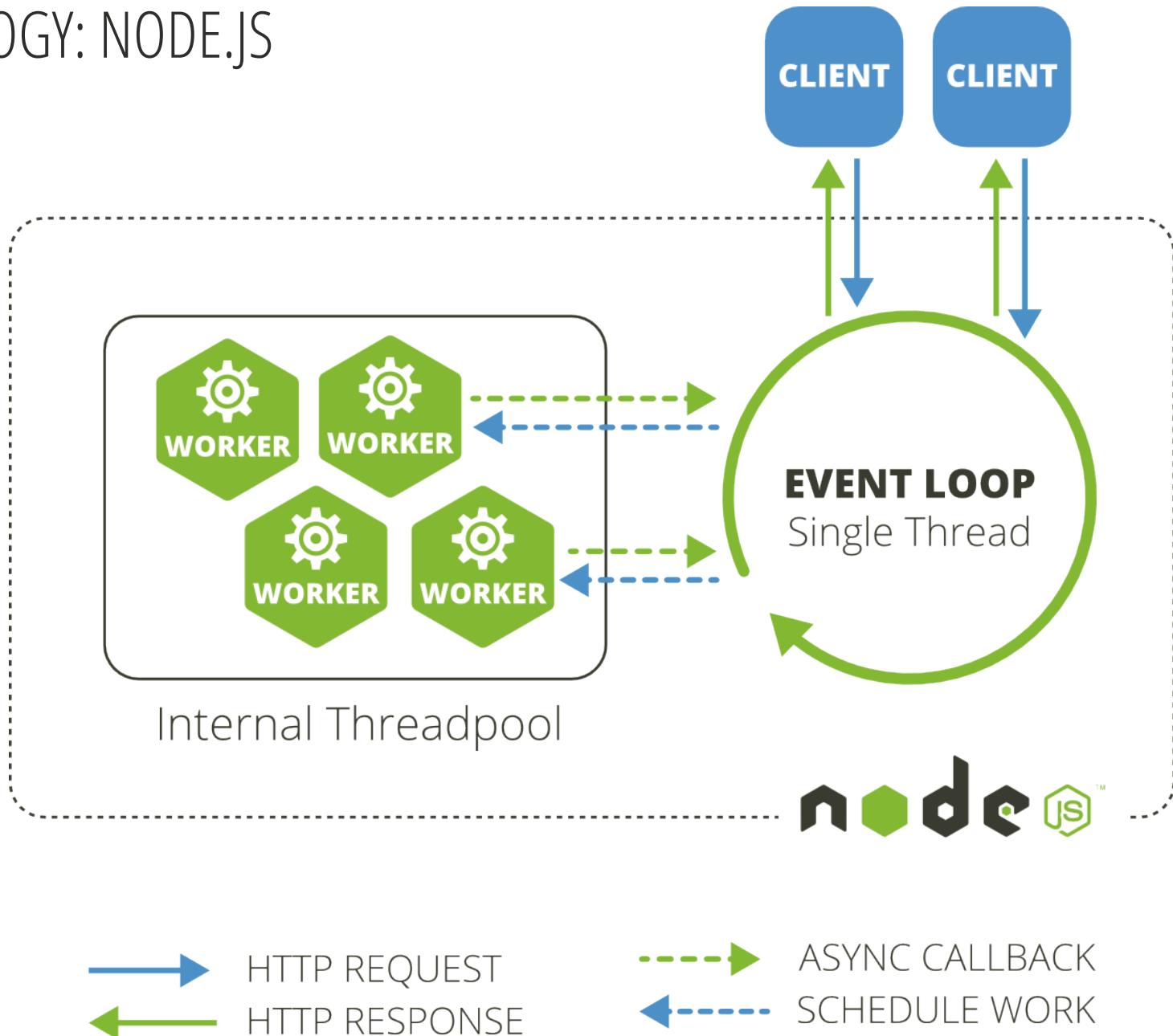
**SMALL
FOOTPRINT**

**ASYNC
(BY DESIGN)**

**EVENTED
I/O**

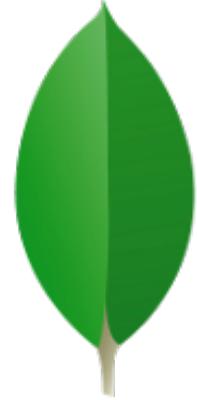


TECHNOLOGY: NODE.JS





TECHNOLOGY: MONGODB



mongoDB

NoSQL Schema-less DBMS

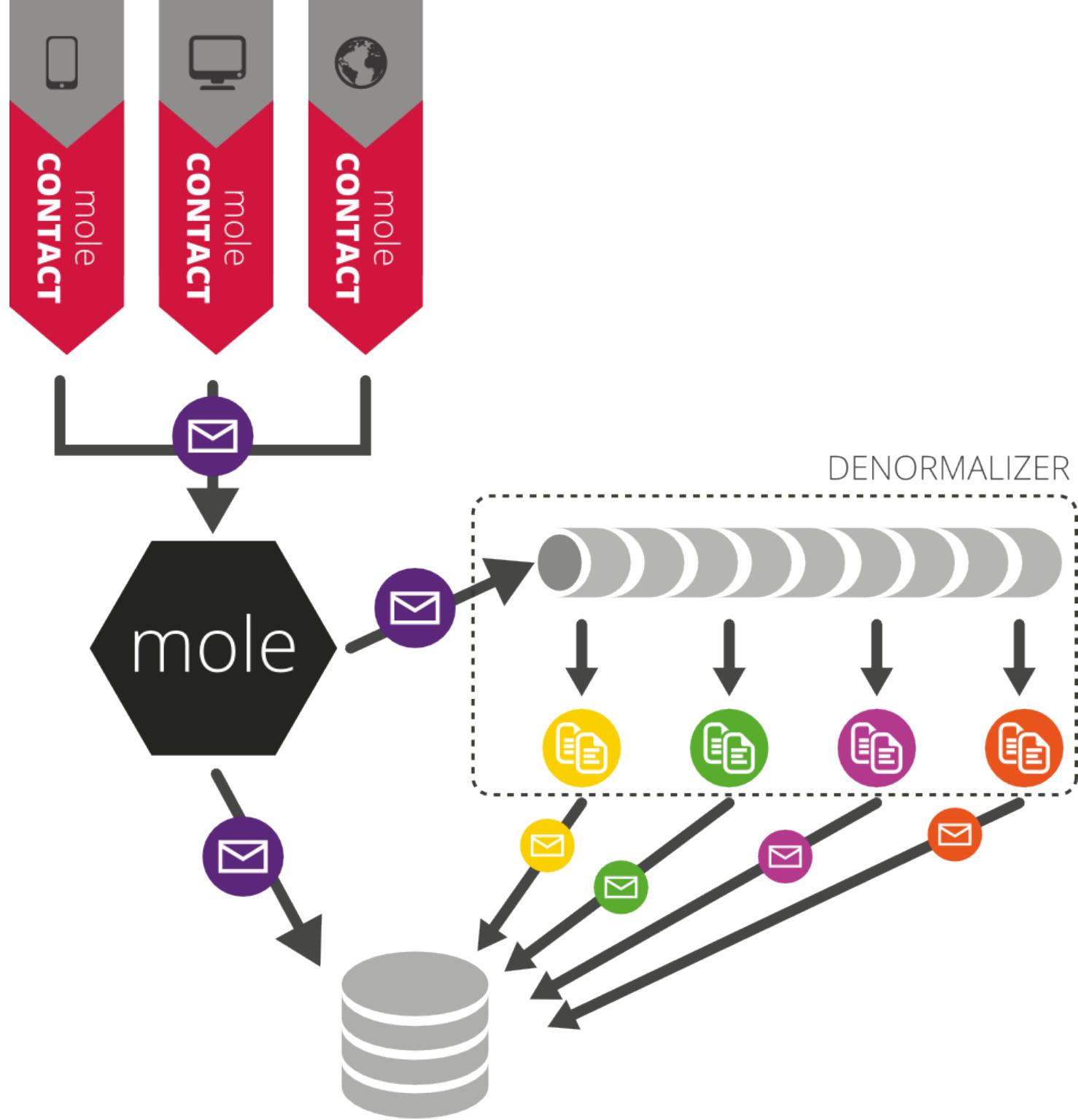
UNSTRUCTURED
DATA

**EASY
SCALING
SHARDING**

**HIGH
AVAILABILITY
REPLICASET**

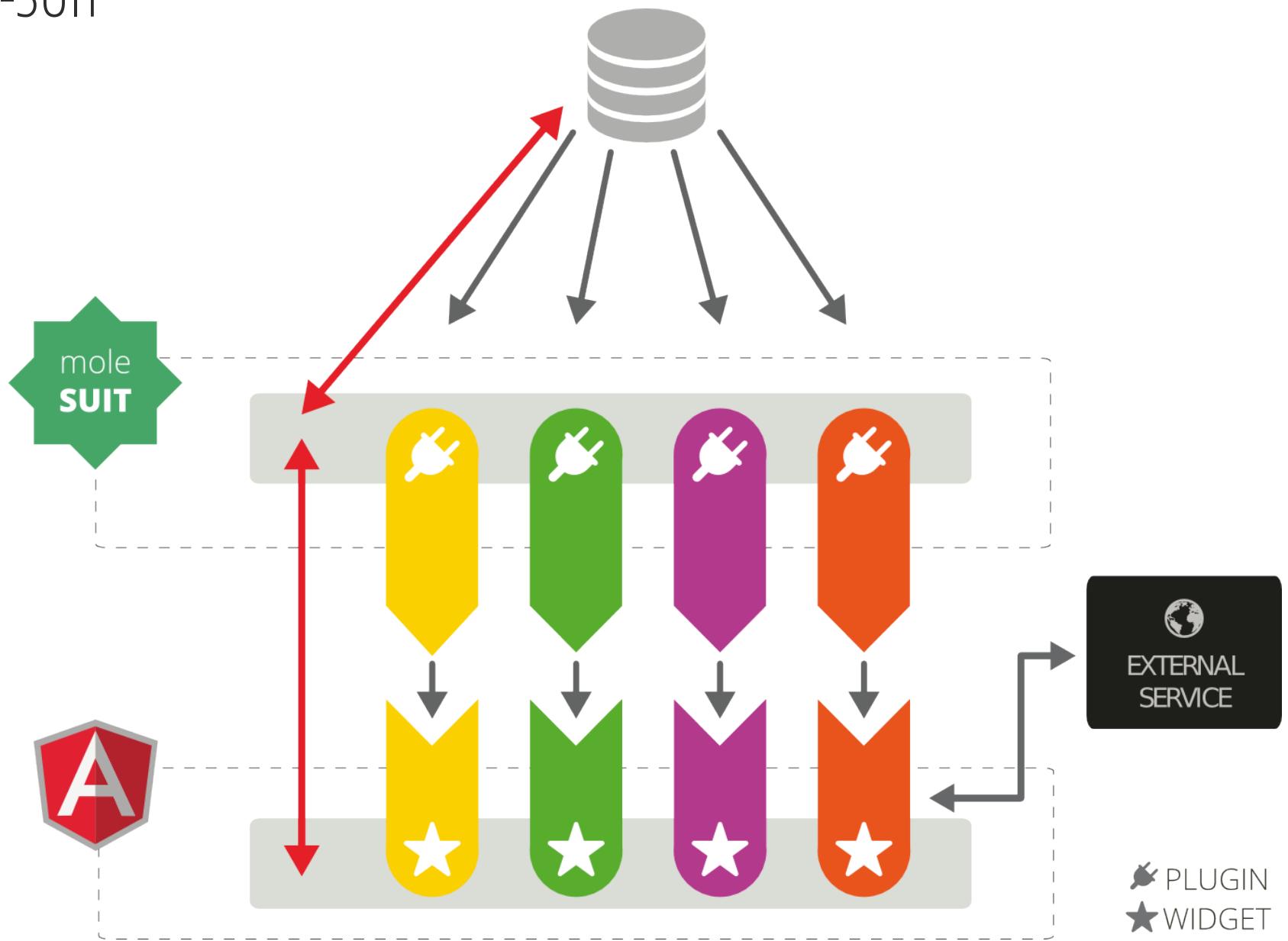


MOLE





MOLE-SUIT





WORKFLOW - 1/6



mole.io

Is something strange happening in your app? You need a mole to find out more!

 Sign in with Twitter



WORKFLOW - 2/6

 gandellinux ▾

Vuoi autorizzare mole.io - dev a usare il tuo account?

Questa applicazione **potrà**:

- Leggere i Tweet dalla tua cronologia.
- Vedere chi segui.

Autorizza app **Annulla**

Questa applicazione **non potrà**:

- Seguire nuove persone.
- Aggiornare il tuo profilo.
- Pubblicare Tweet dal tuo account.
- Accedere ai tuoi messaggi diretti.
- Vedere la tua password di Twitter.

Puoi revocare l'accesso a qualsiasi applicazione in qualsiasi momento dal [pannello Applicazioni](#) nella tua pagina delle Impostazioni.

Autorizzando un'applicazione continui ad essere soggetto ai [Termini di Servizio di Twitter](#). In particolare, alcune informazioni sull'uso verranno condivise con Twitter. Per saperne di più, leggi la nostra [Informativa sulla Privacy](#).



WORKFLOW - 3/6

mole.io Sources gandellinux +

Add Source

Source Name +

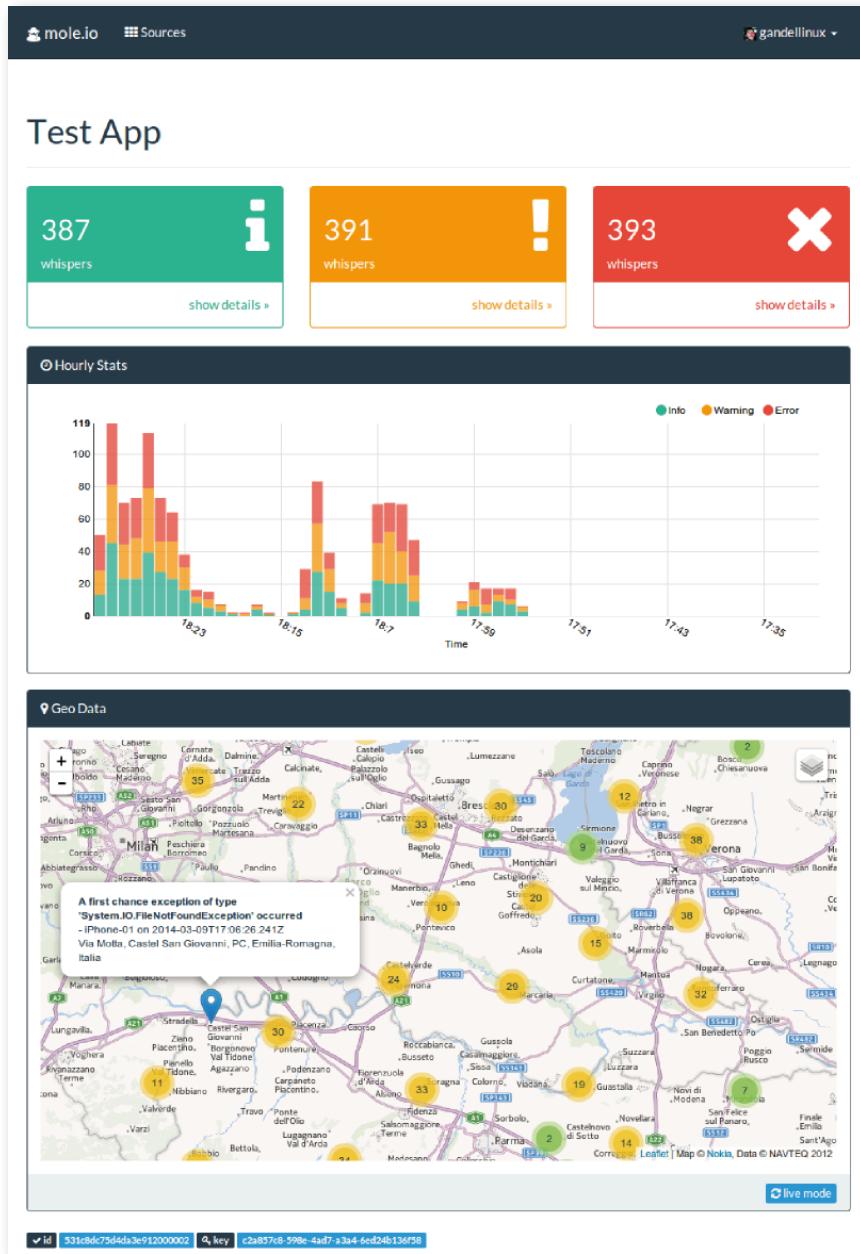
Test App

0 whispers

✓ 531c8dc75d4da3e912000002
✖ c2a857c8-598e-4ad7-a3a4-6ed24b136f58



WORKFLOW - 4/6



SUMMARY WIDGET

STATS WIDGET

GEO WIDGET



WORKFLOW - 5/6

mole.io Sources gandellinux ▾

Clustered whispers from

Whispers	Last Received	Sender	Message
64	Sun, Mar 9 2014 18:30:24	iPhone-02	System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()
64	Sun, Mar 9 2014 18:30:18	Nexus-01	System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()
69	Sun, Mar 9 2014 18:30:18	Lumia-01	System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()
63	Sun, Mar 9 2014 18:30:19	Lumia-02	System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()
68	Sun, Mar 9 2014 18:30:23	Nexus-02	System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()
65	Sun, Mar 9 2014 18:30:21	iPhone-01	System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()



WORKFLOW - 6/6

mole.io Sources

Nexus-01

64 / 64

← Older Older →

Main Data

X

Sent from Nexus-01
Sent on Sun, Mar 9 2014 18:30:18

System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()

Geo Data

Lat: 45.23175787973783 Lon: 9.940515441447415

Additional Data

ip	222.132.235.92
email	Eleanore@rosella.name
os	android

Raw Data

```
{
  "time": "2014-03-09T17:30:18.244Z",
  "sender": "Nexus-01",
  "severity": 2,
  "message": "System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()",
  "ip": "222.132.235.92",
  "email": "Eleanore@rosella.name",
  "os": "android",
  "geo": {
    "lat": 45.23175787973783,
    "lon": 9.940515441447415
  },
  "_id": "531cd52aa683a2f82b00093c"
}
```

Main Data

X

Sent from
Sent on Sun, Mar 9 2014 18:30:18

System.NullReferenceException: Object reference not set to an instance of an object. at App.Main()

Geo Data

64 / 64

← Older Newer →

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}
```



BENCHMARK

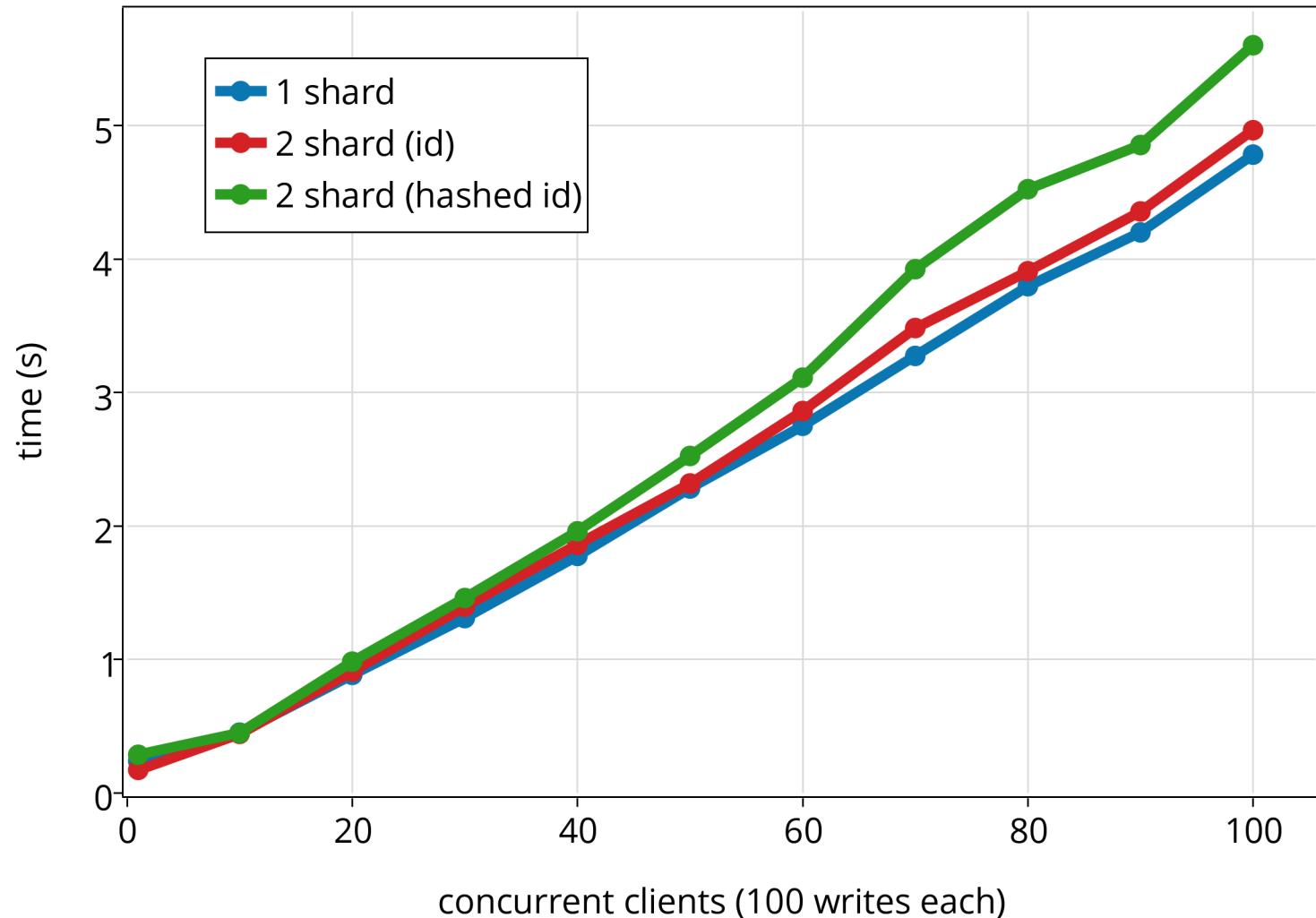
TESTED MongoDB
INSERTION

1 TO **100** CLIENTS
SMALL AND BIG
DOCS

3 VM
3 SHARDING
POLICIES
AVERAGE
OVER **3** RUNS



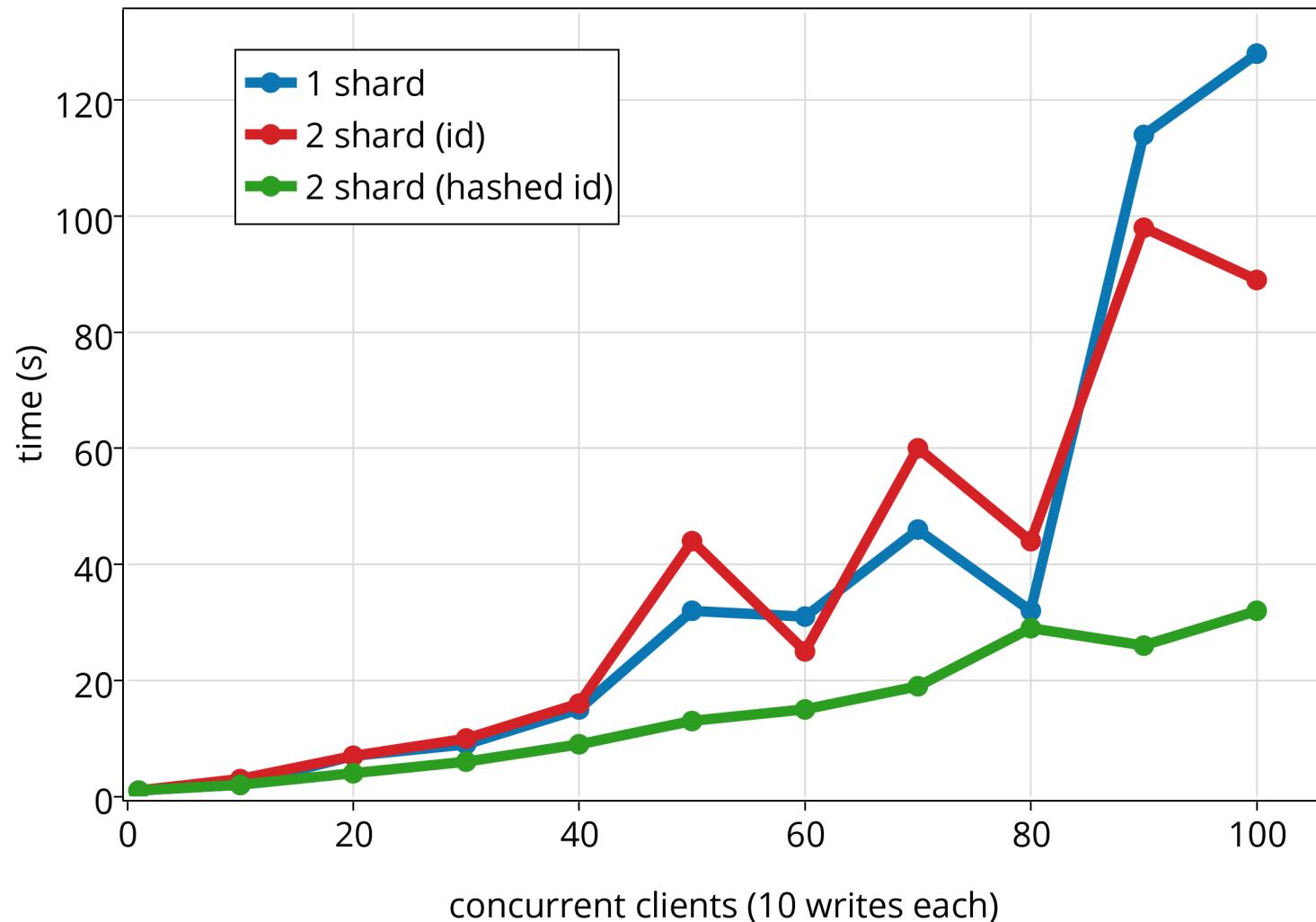
BENCHMARK



SMALL
DOCS



BENCHMARK



BIG
DOCS



RECAP & FURTHER DEVELOPMENTS

BETTER CLIENTS
SUPPORT AND INCREASE
OF PRODUCT VALUE

IMPROVED
PERSONAL SKILLS

GREAT TOOLS

MORE TEST

MORE MOLE-CONTACT

MORE DENORMALIZER

QUERY LANGUAGE

MOBILE APP

PUSH NOTIFICATION



Questions?



Thanks!

