



— SCALING —

WEBPACK

— TO THOUSANDS OF —

CONCURRENT BUILDS

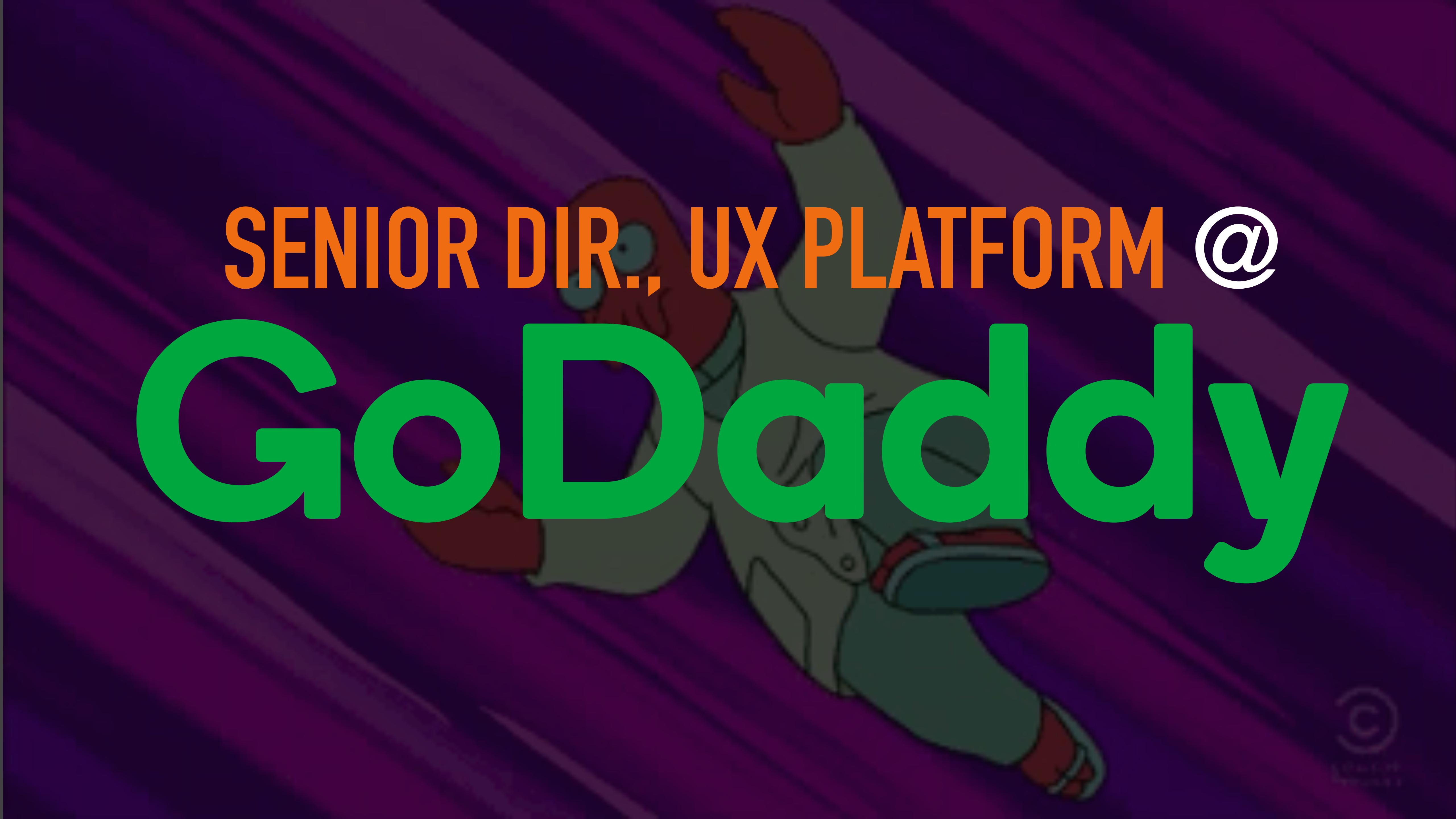


WHY, HELLO THERE

CHARLIE HERE

A scene from The Lion King showing Simba and Nala. Simba is on the left, looking slightly down and to the right with a thoughtful expression. Nala is on the right, looking towards Simba with a gentle expression. They are both orange lions with brown manes. The background is a dark, hazy blue.

— Just —
Who am I?



SENIOR DIR., UX PLATFORM @

Godaddy

BOARD MEMBER, NODE.JS FOUNDATION

FORMERLY FOUNDER at NODEJITSU

SENIOR DIR., UX PLATFORM @

Godaddy

@INDEXZERO

GITHUB

TWITTER

SO WHAT'S ALL THIS THEN?

What am I going to talk about?

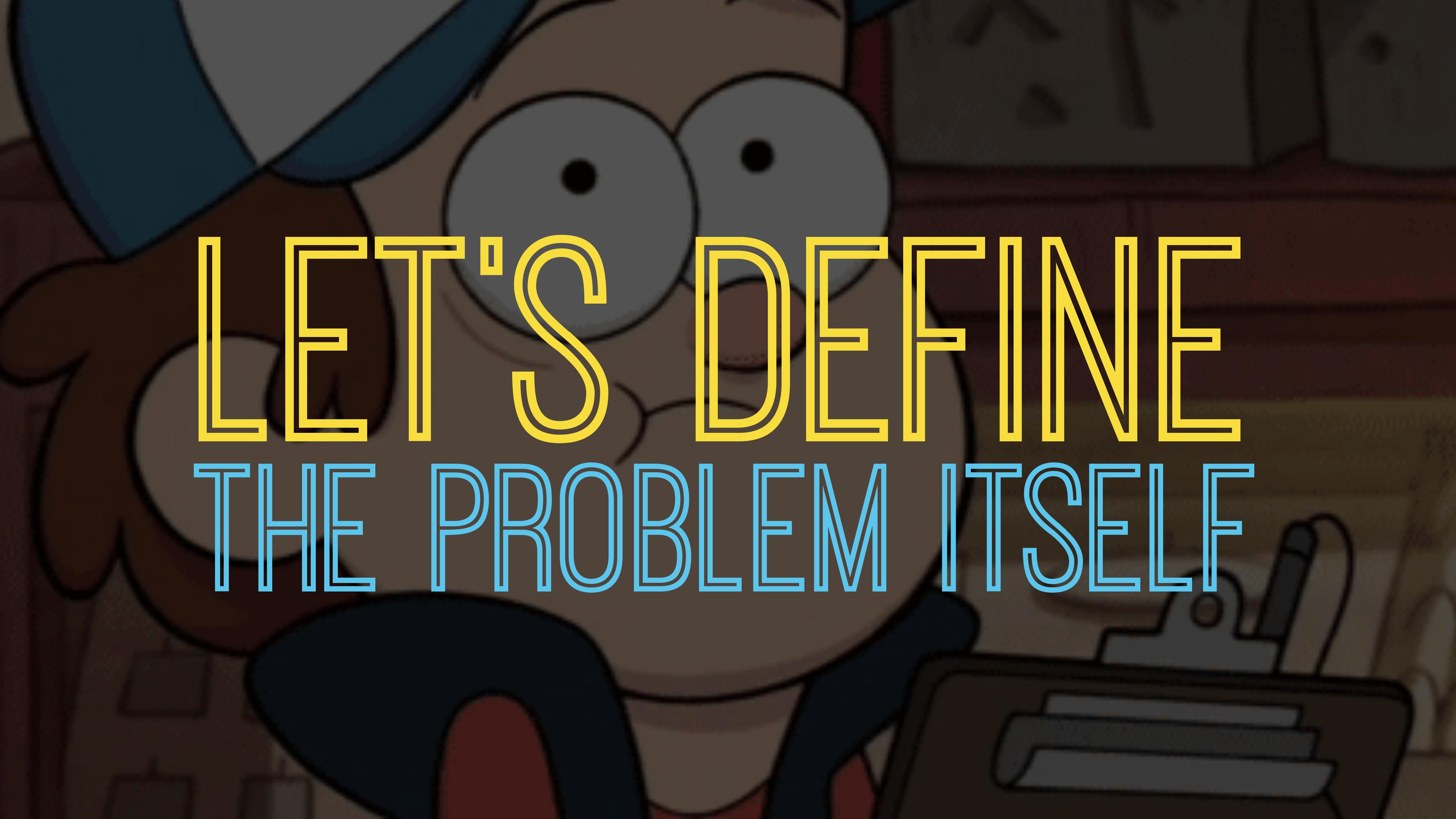
1 Define the problem

2 Webpack it up, webpack it in

3 Initial solutions & naive approaches

4 DNS & HTTP Starvation

5 Putting it all together

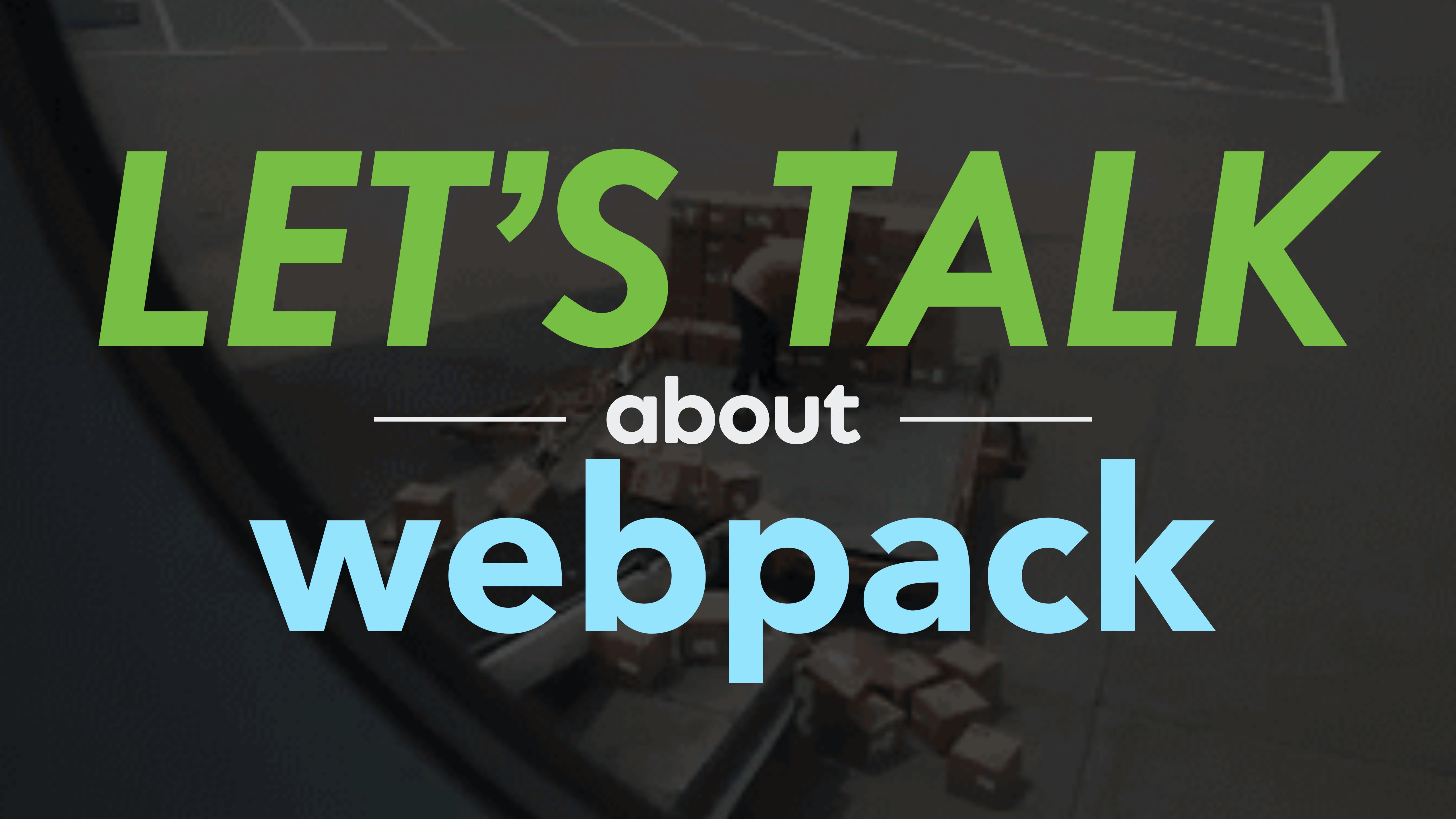


LET'S DEFINE
THE PROBLEM ITSELF

WEBPACK

— as a —

service

A dark, atmospheric image of a city skyline at night, with a bridge in the foreground.

LET'S TALK
— about —
webpack

Z CRUSH
OHNSON CO. ANNANDALE, MN (612) 27

YOUR
CODE



“WEBPACK”

YOUR
CODE





BUNDLE

BUNDLE

BUNDLE

BUNDLE



BUNDLE

→ Of course —

there is more

BUNDLE

— under the covers —

BUNDLE

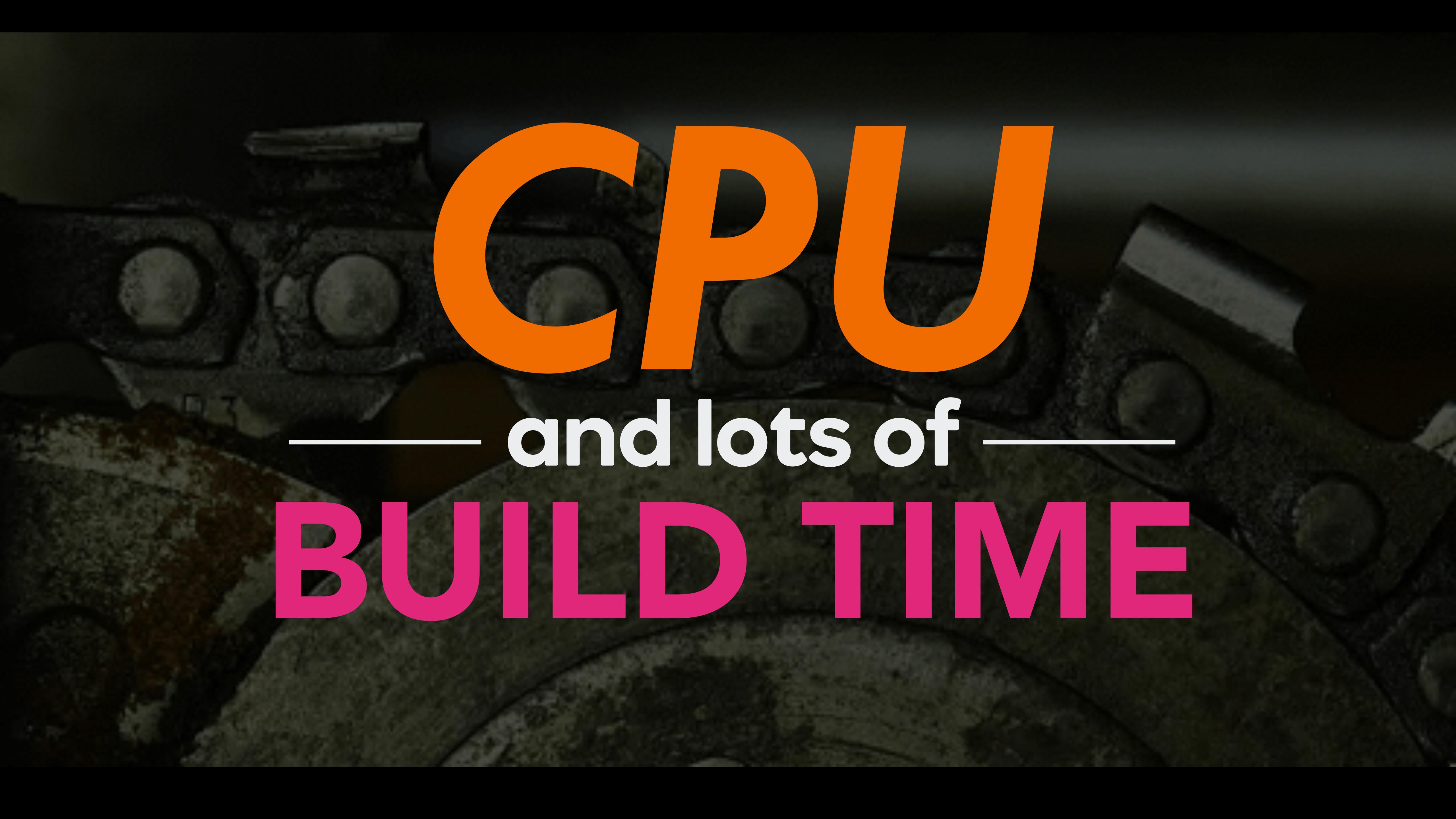
→

BUNDLE

FILE S

—written—

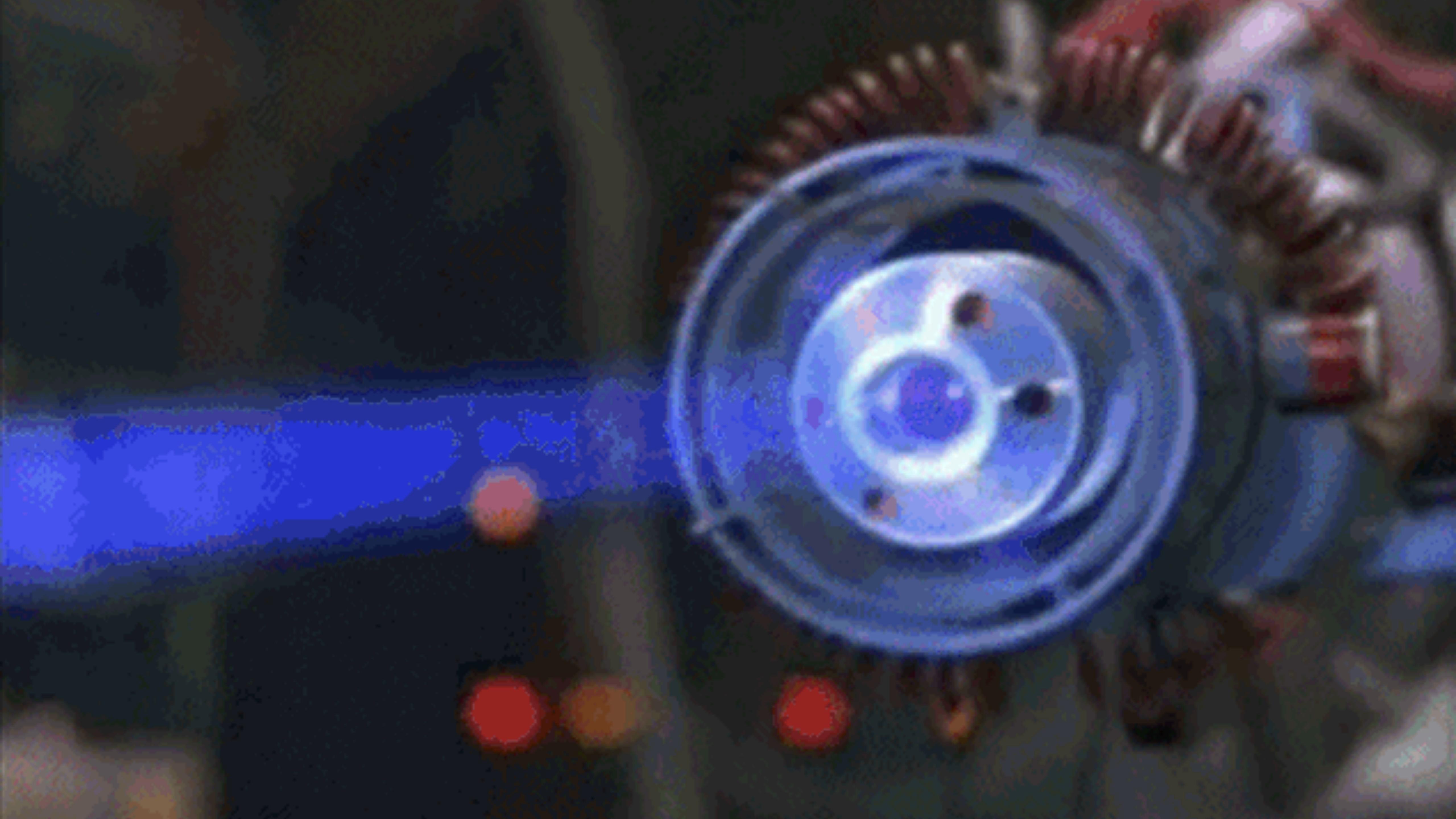
TO DISK



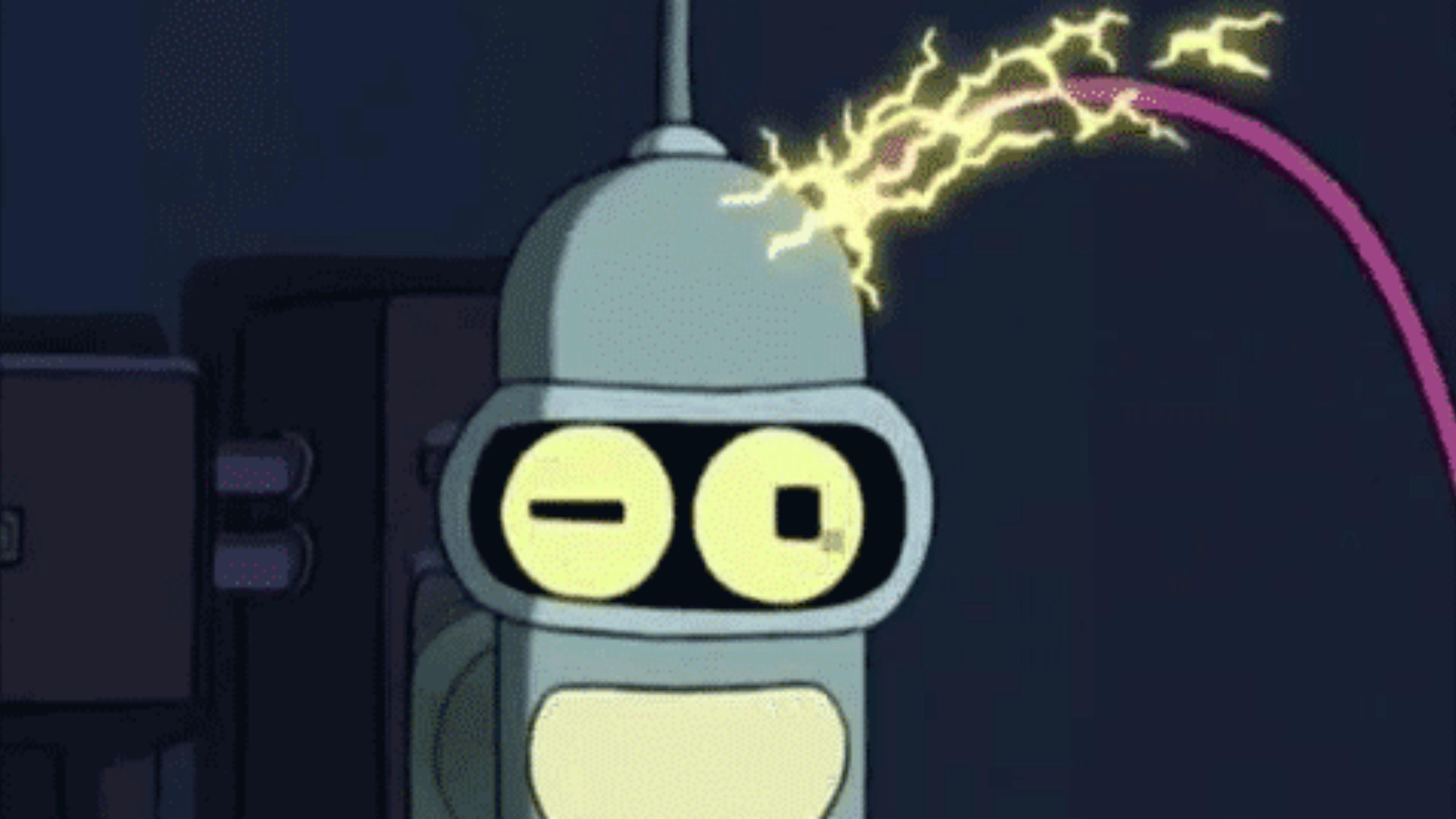
CPU

— and lots of —

BUILD TIME



MINIFICATION



CONFIG

lots of

CONFIG



— DEVELOPERS —

WANT

— THE —

THE HOMER CAR



HELL



HELL

— is other people's —
webpack.config.js

DEFINITELY LOST

LET'S GET BACK
TO THE PROBLEM ITSELF

WEBPACK

— as a —

service

10

It must
— be very —
reproducible



— Store —

npm install

— output —

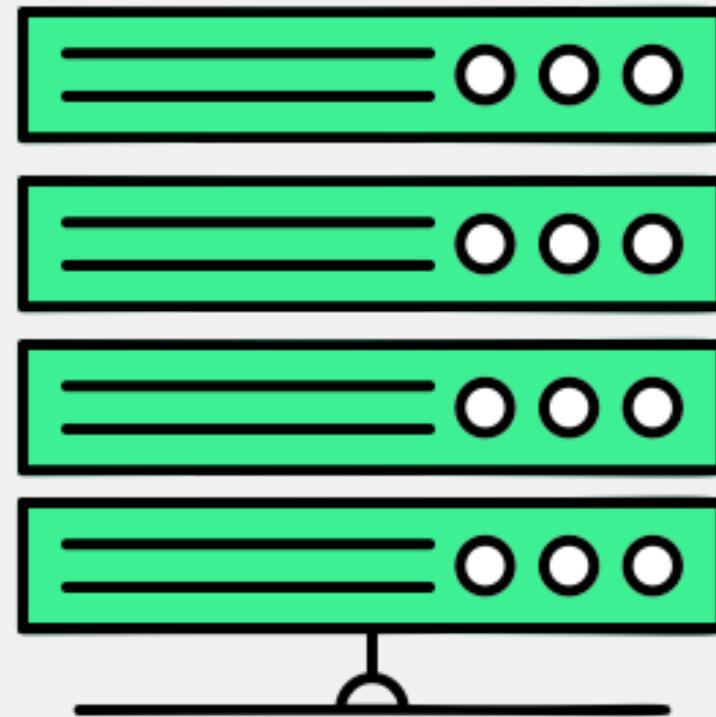
as a tarball



Your code



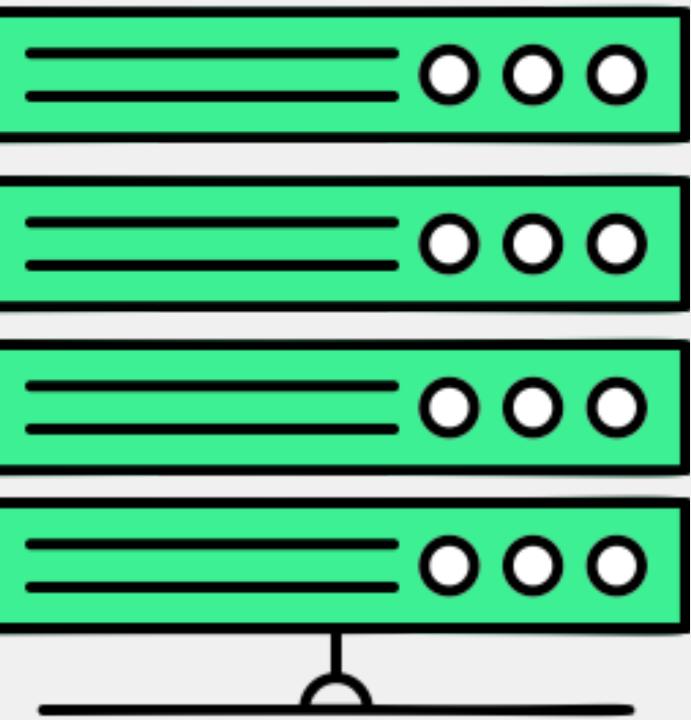
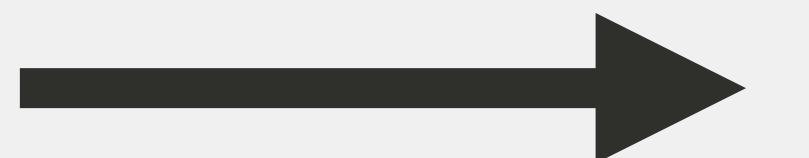
Your code



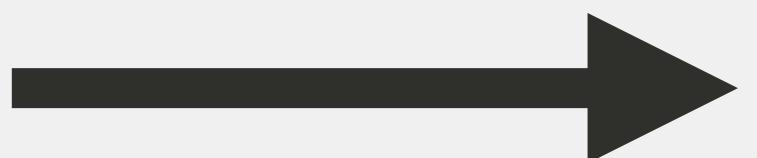
npm install



Your code



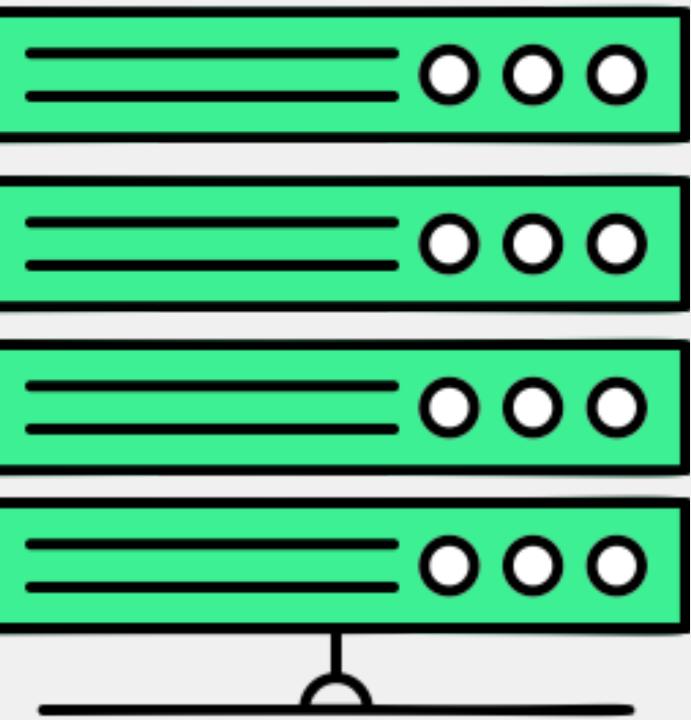
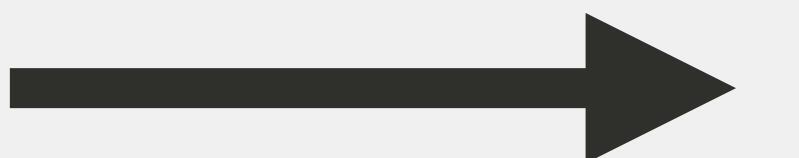
npm install



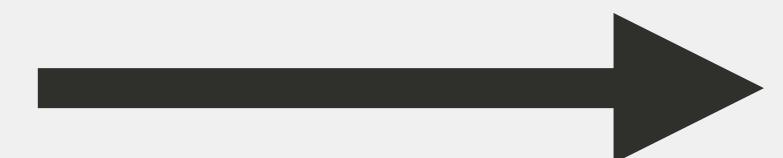
store tarball



Your code



npm install



store tarball

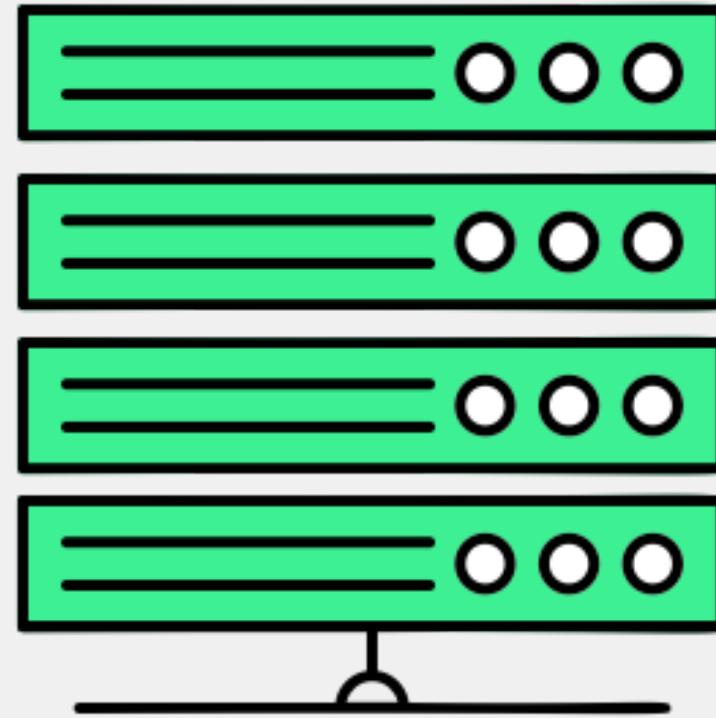


fetch tarball





Your code



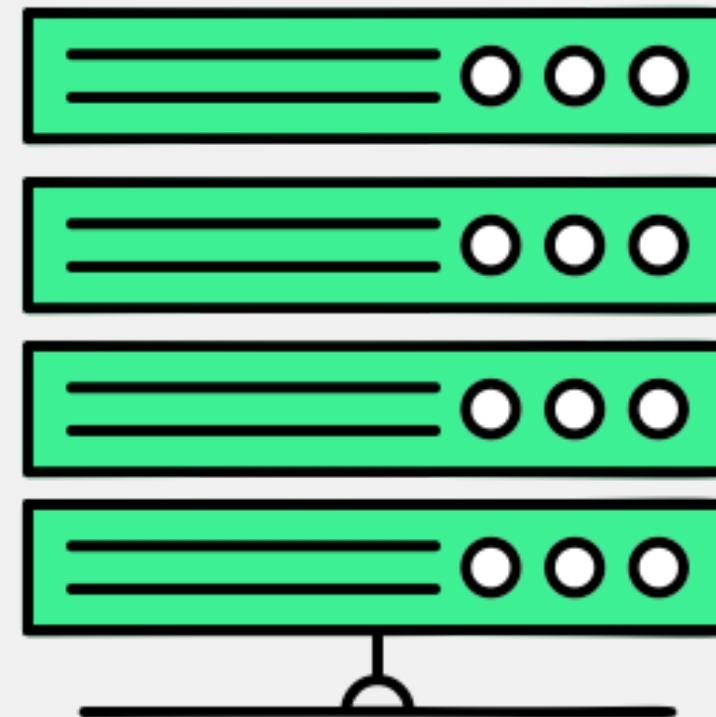
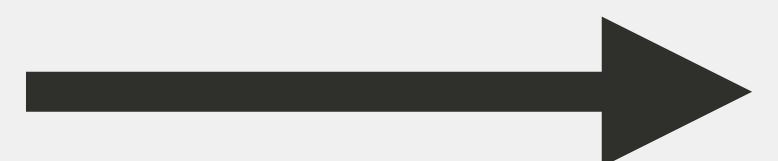
npm install



store tarball



fetch tarball

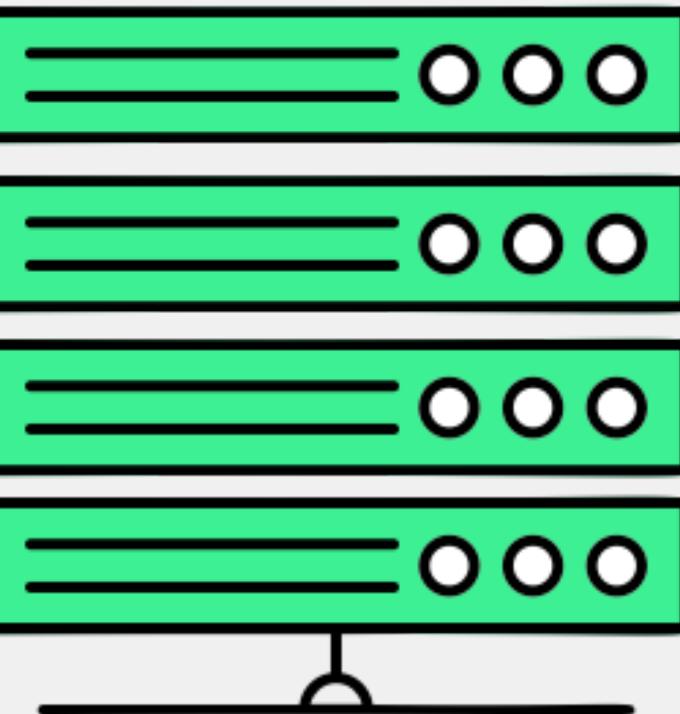
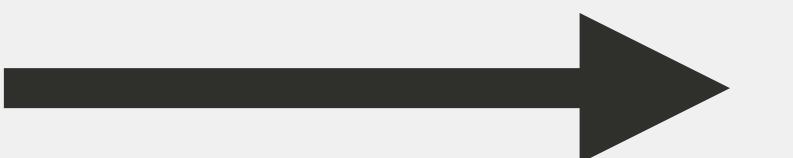


webpack

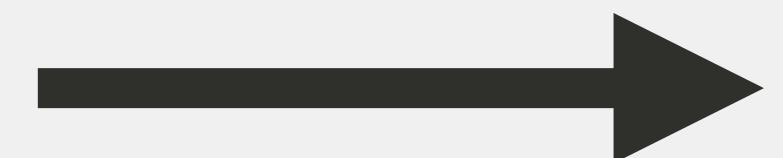




Your code



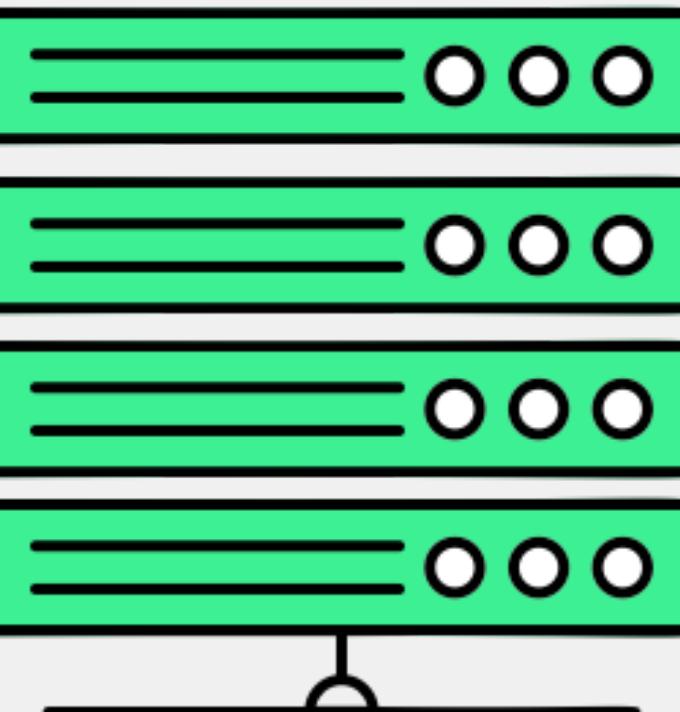
npm install



store tarball



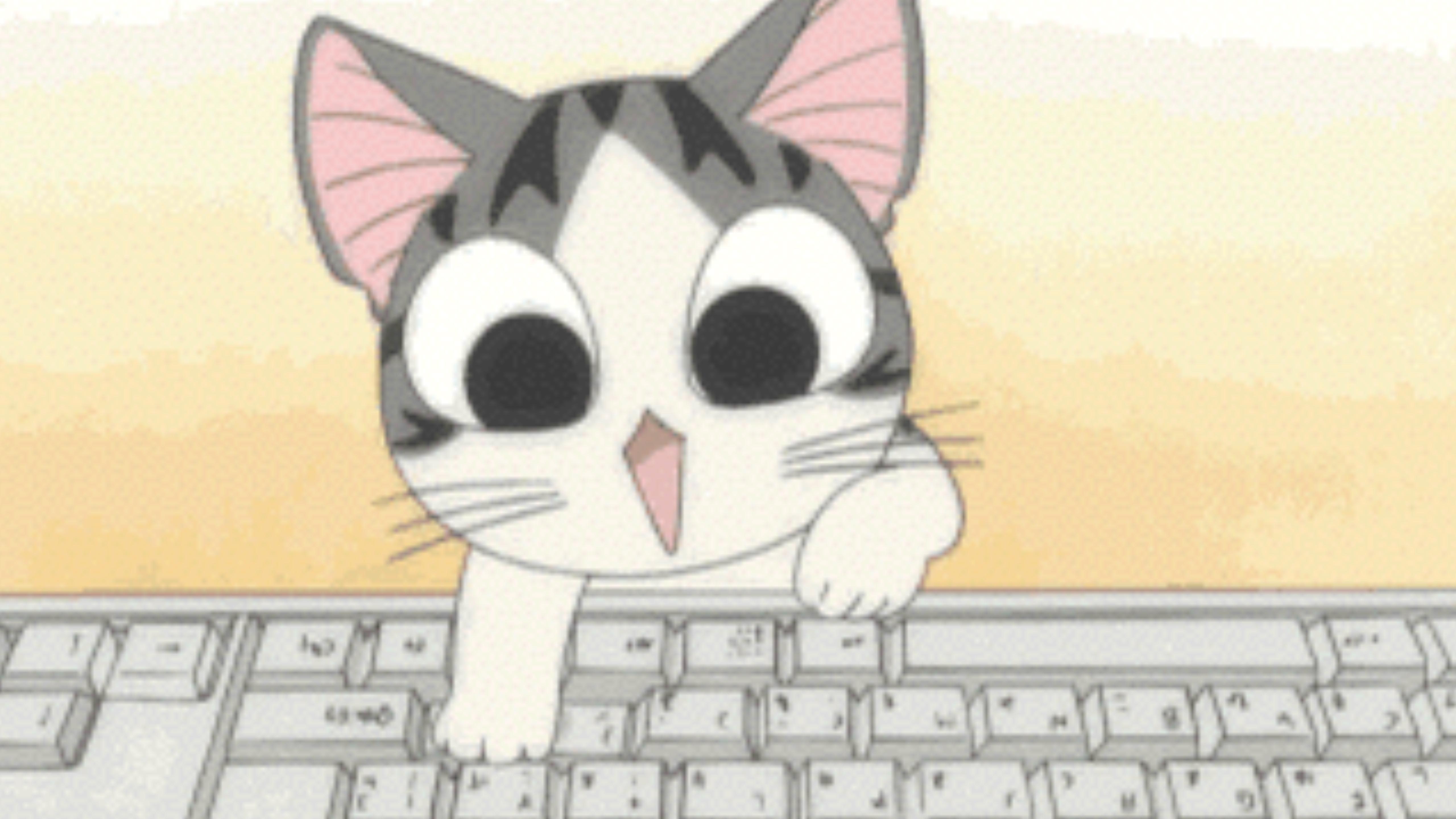
fetch tarball



webpack



store files



— But what —
npm run build
— output —
should we store?



A dark, grainy photograph of a person in a lab coat, seen from the side and back. They are holding a test tube in their right hand. In the background, there are various pieces of laboratory equipment, including a balance scale and some glassware.

THE FIRST OF
MANY SMALL QUESTIONS

PROTIP! LEARN HOW THIS WORKS

NPM PUBLISH PAYLOAD

```
npm install registry-mock -g
```

```
./registry-echo
```



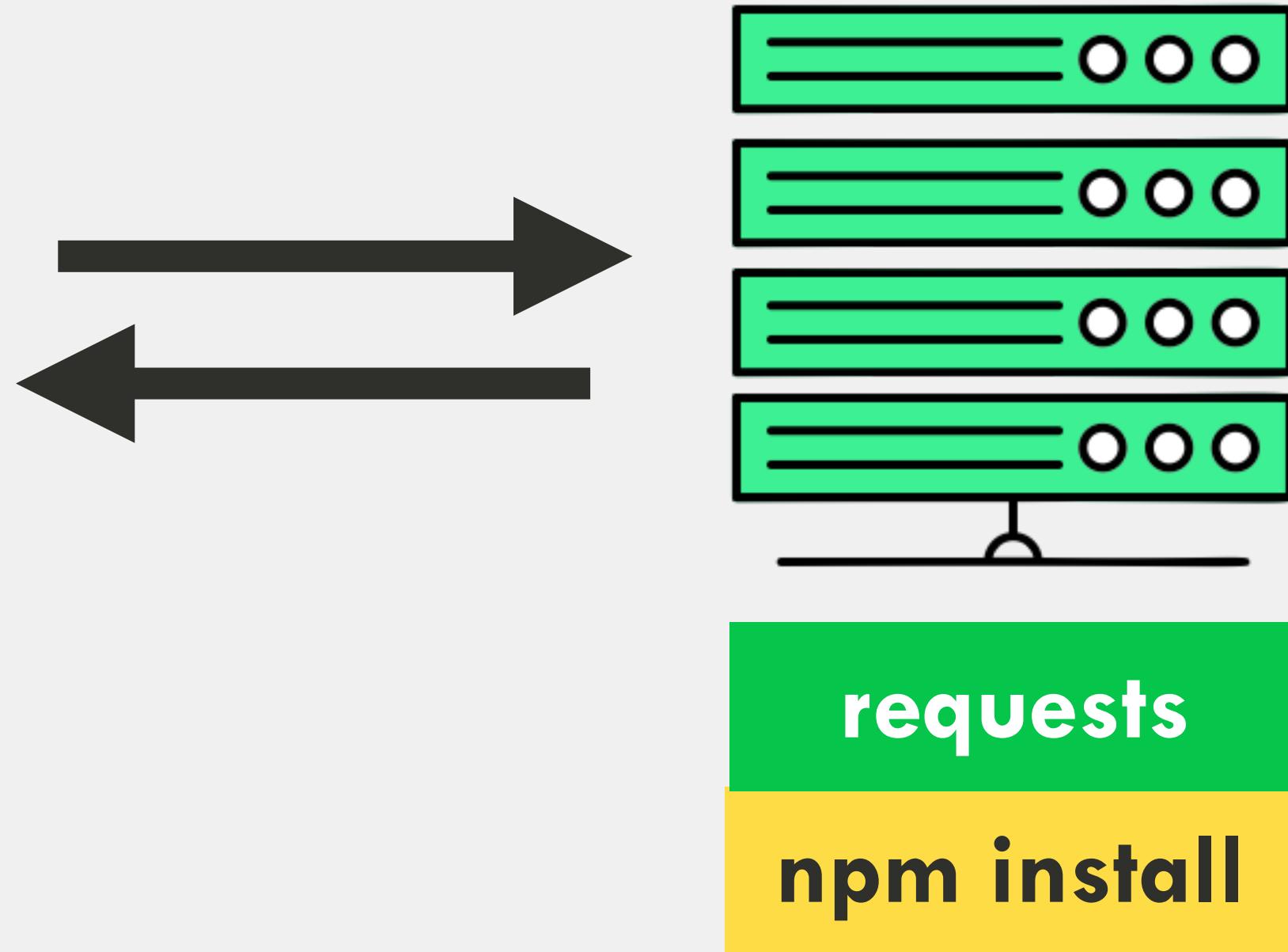
— consider —
a *naive*
solution



Your computer

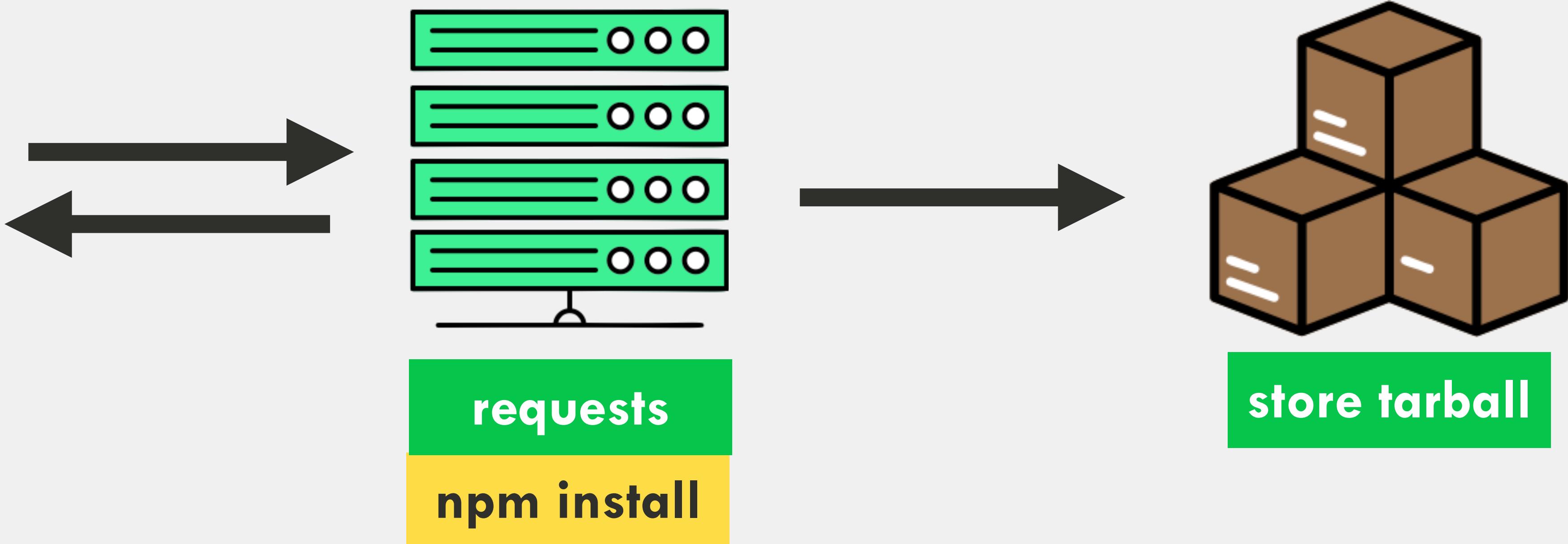


Your computer



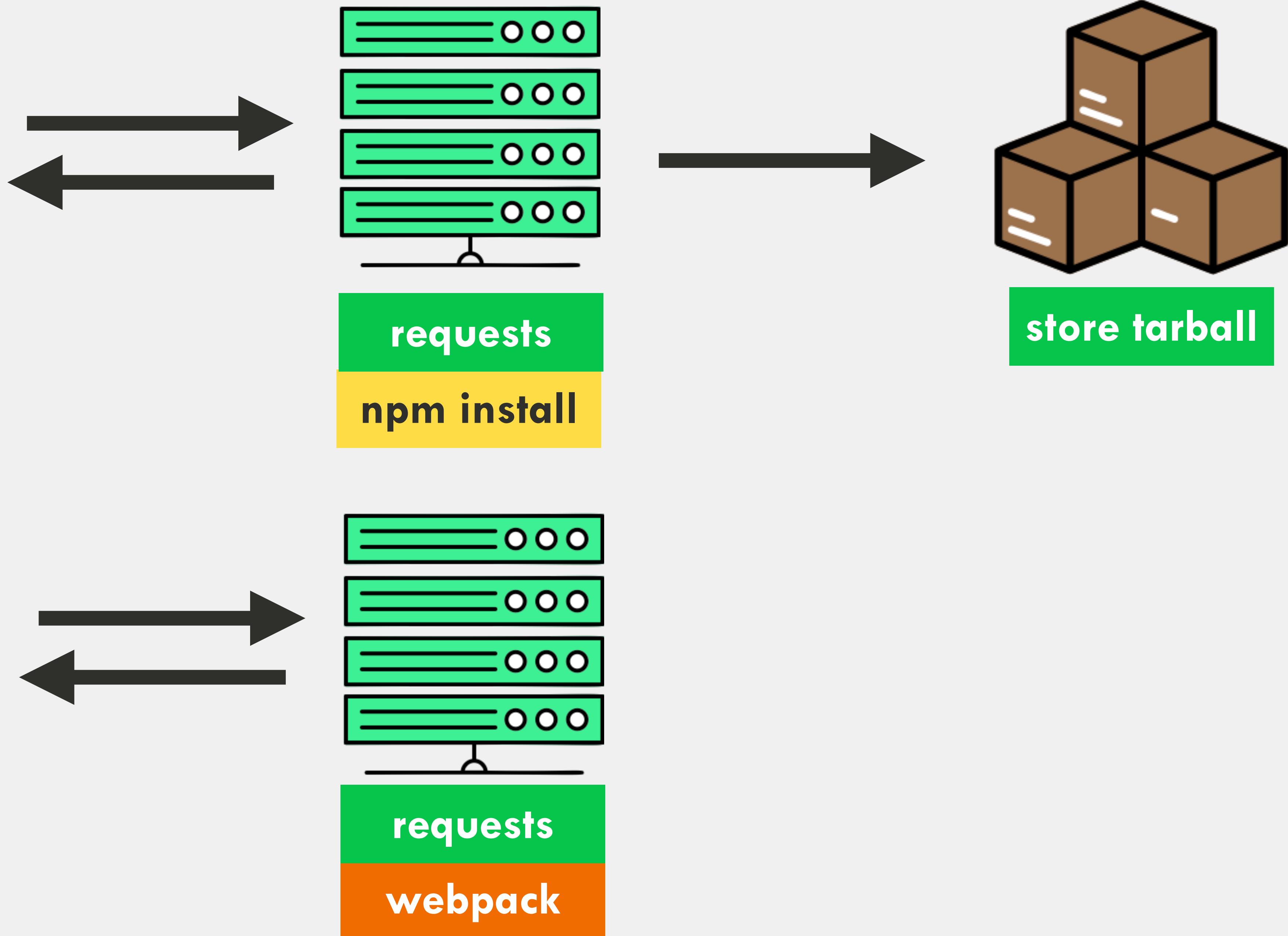


Your computer



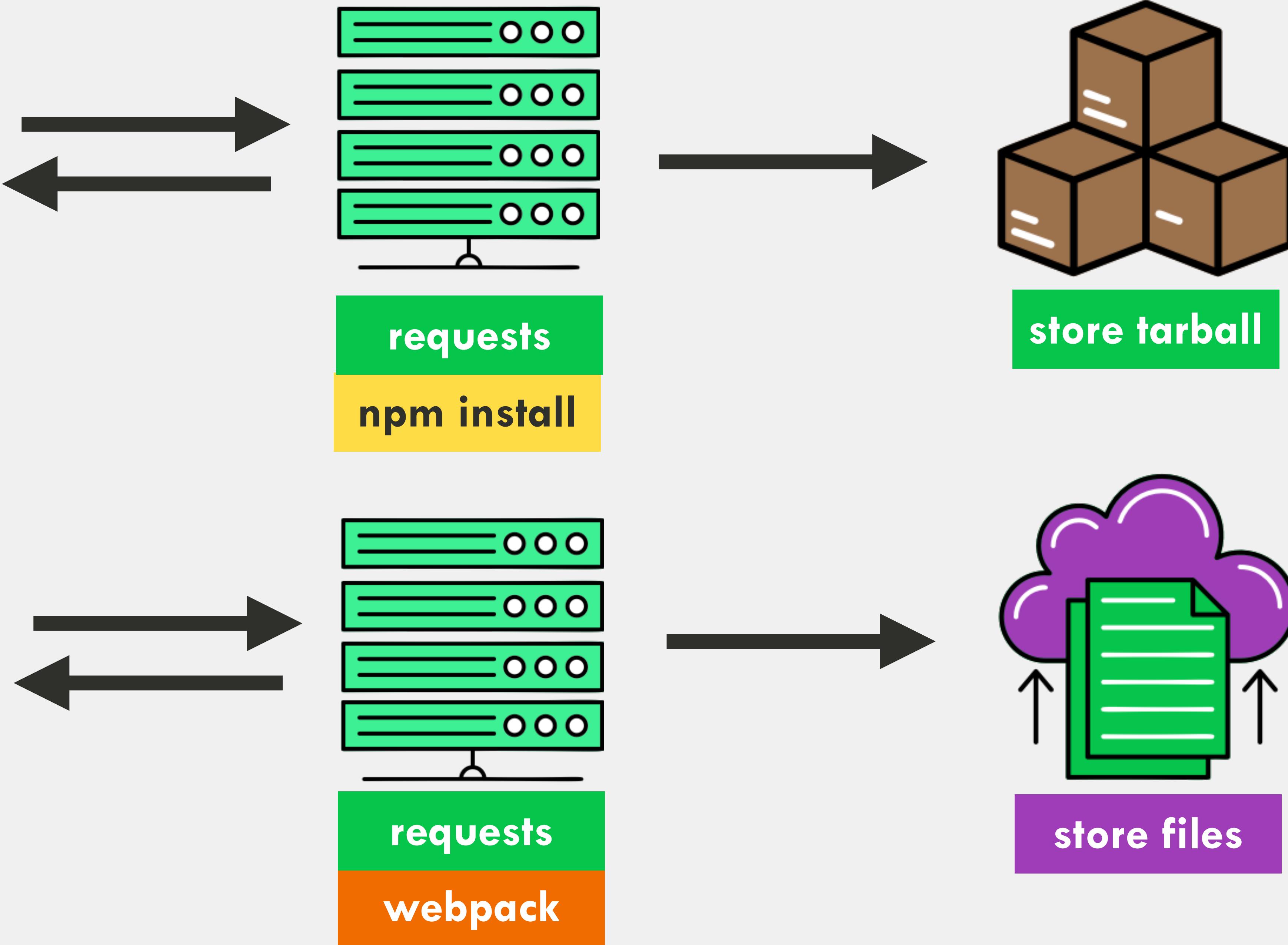


Your computer





Your computer



— if only —

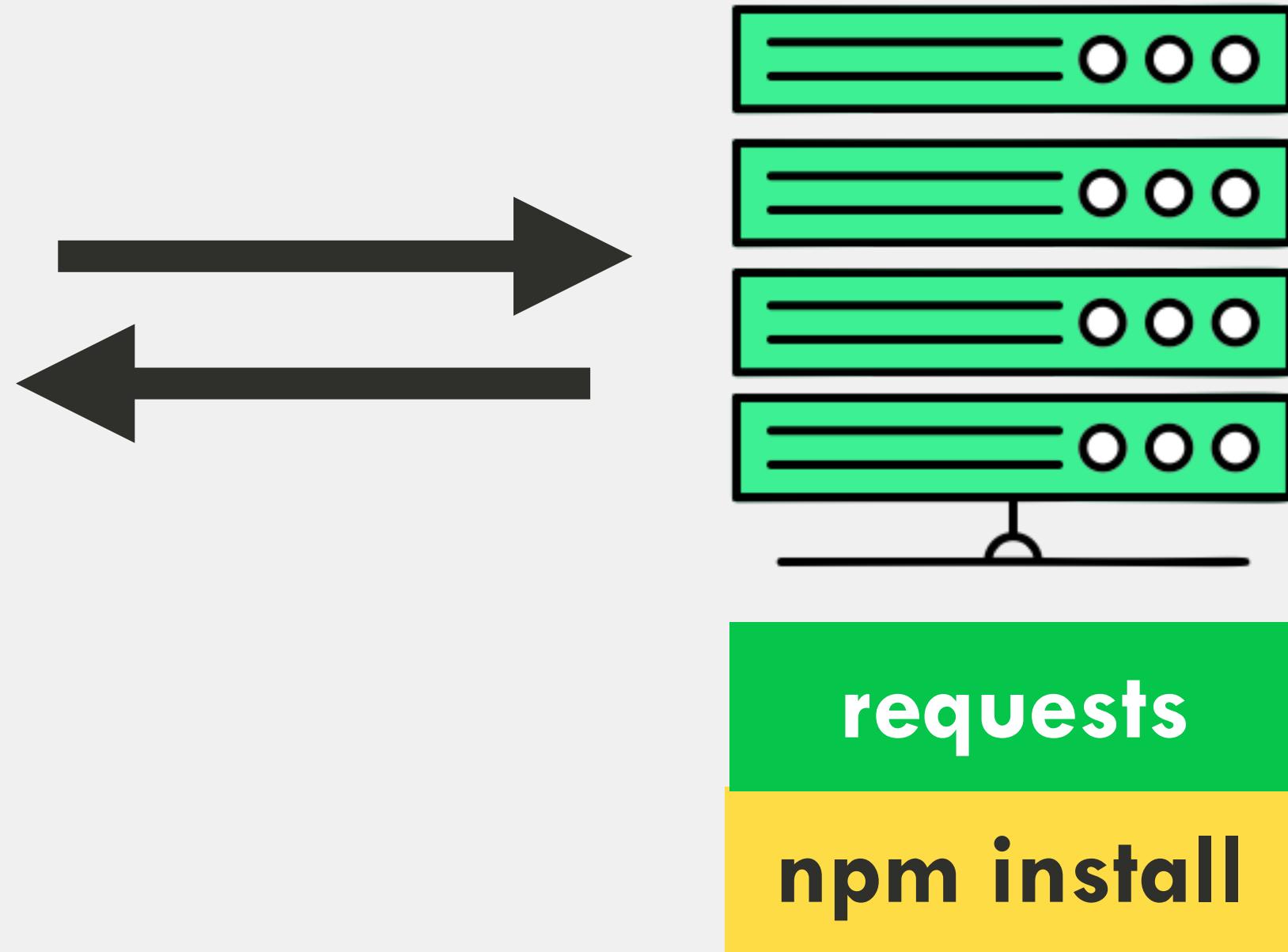
**it was that
simple**



Your computer

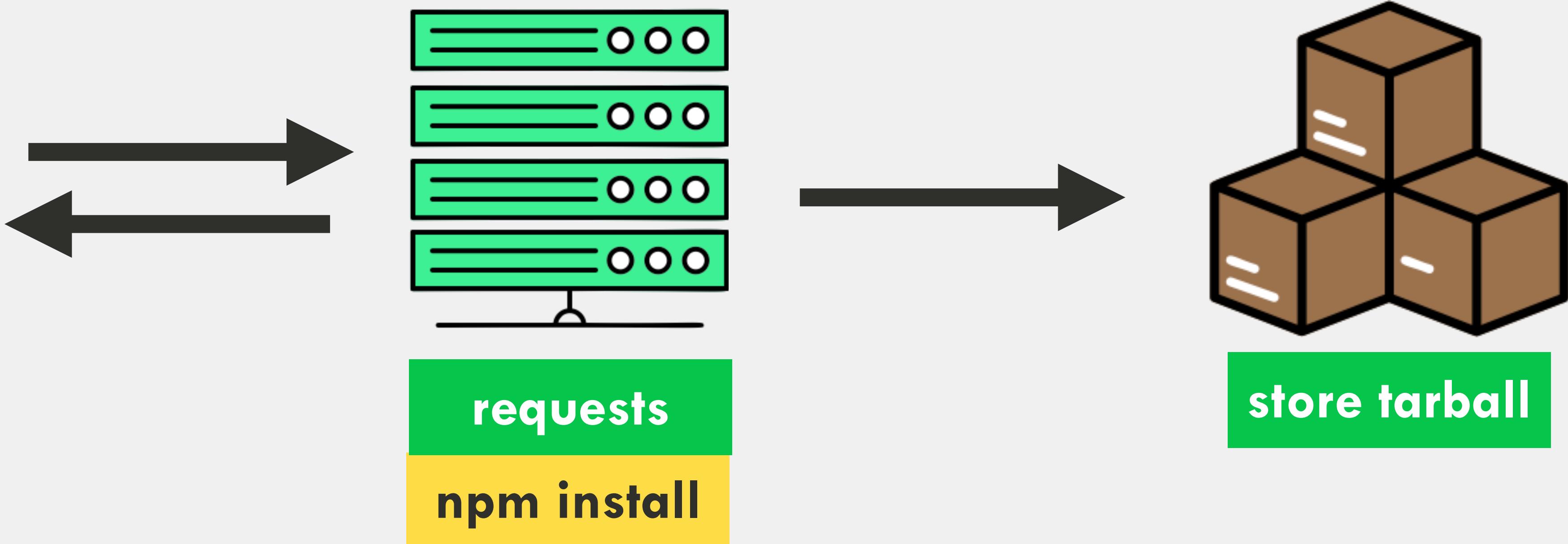


Your computer



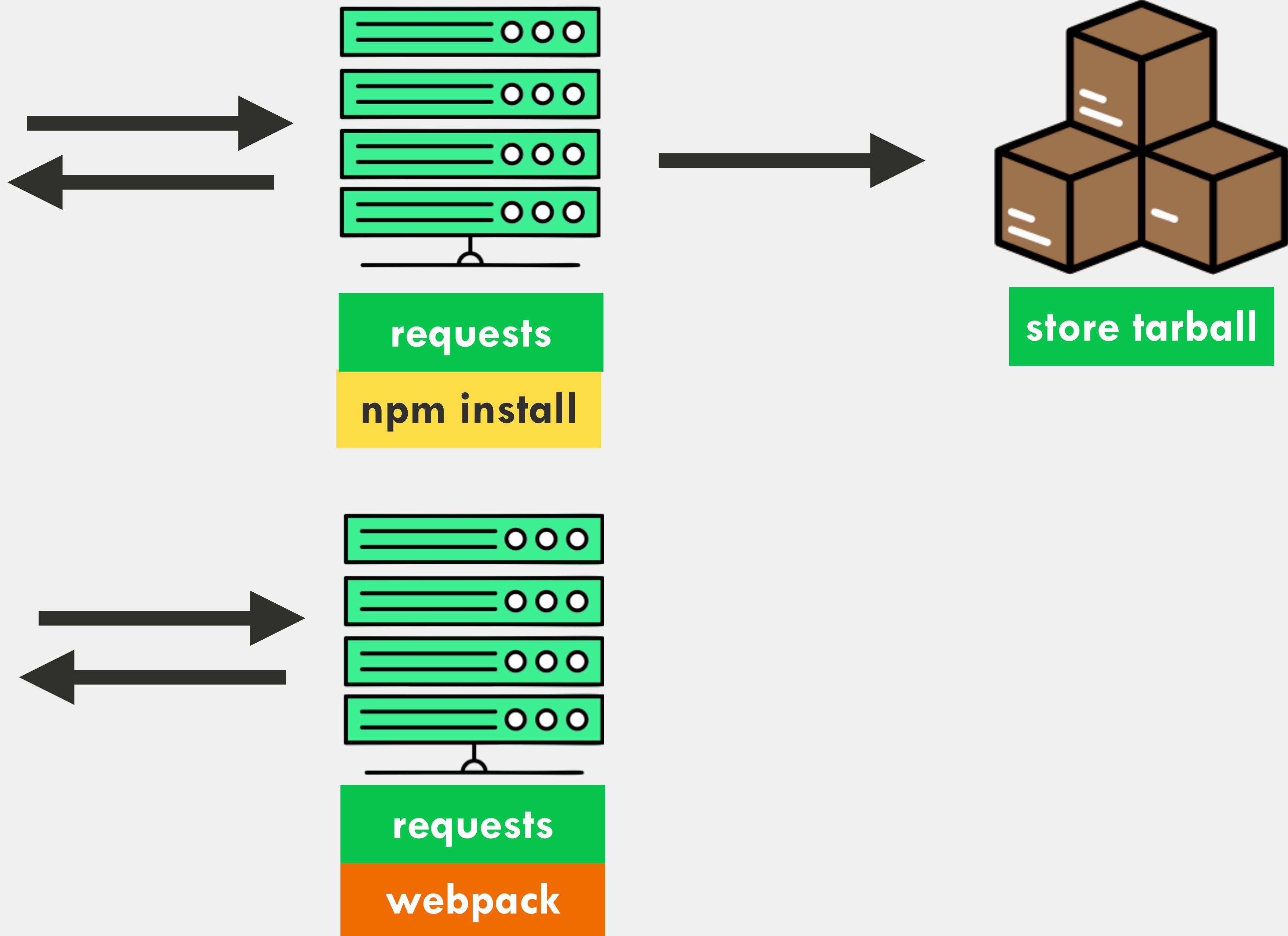


Your computer



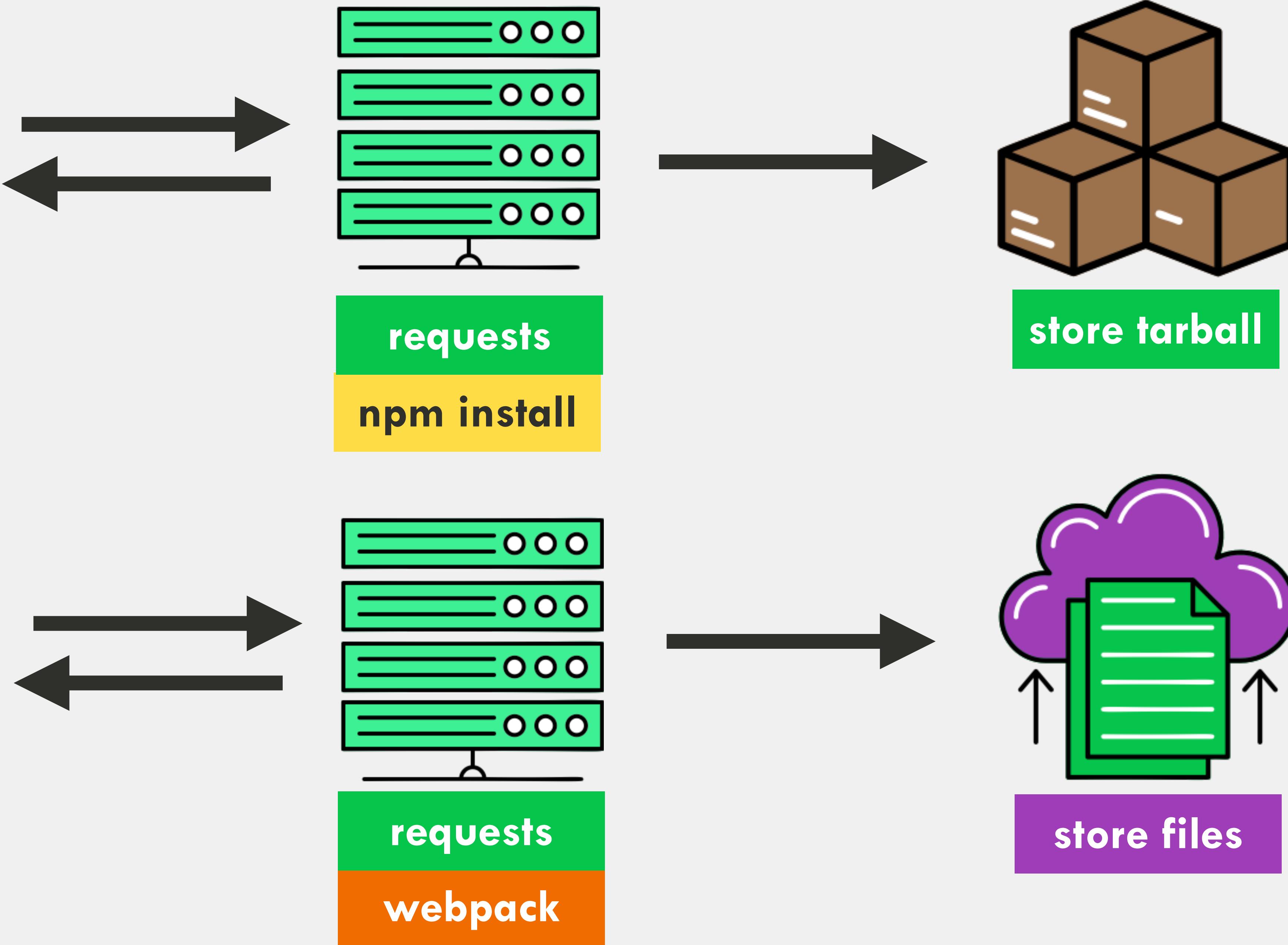


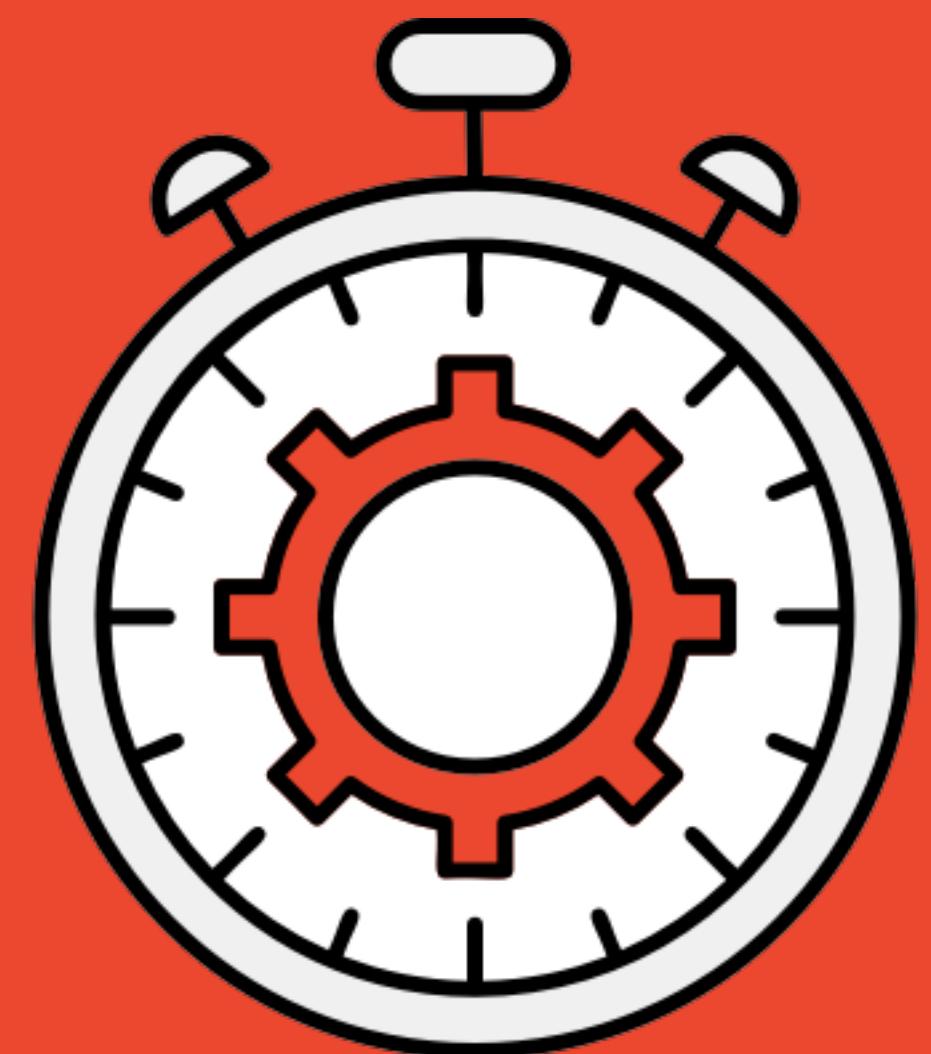
Your computer



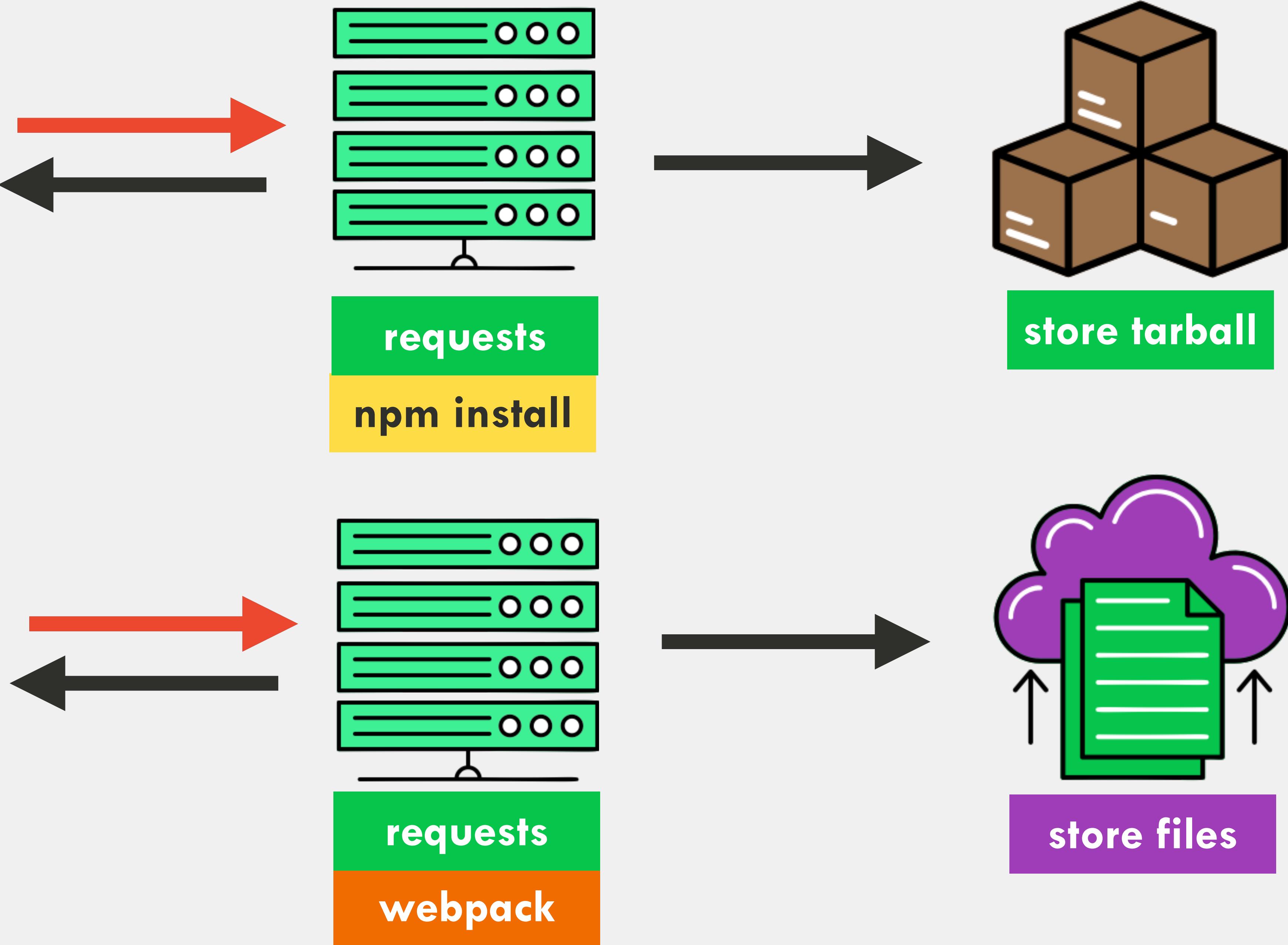


Your computer





DNS Caching



CONSIDER

— it at —

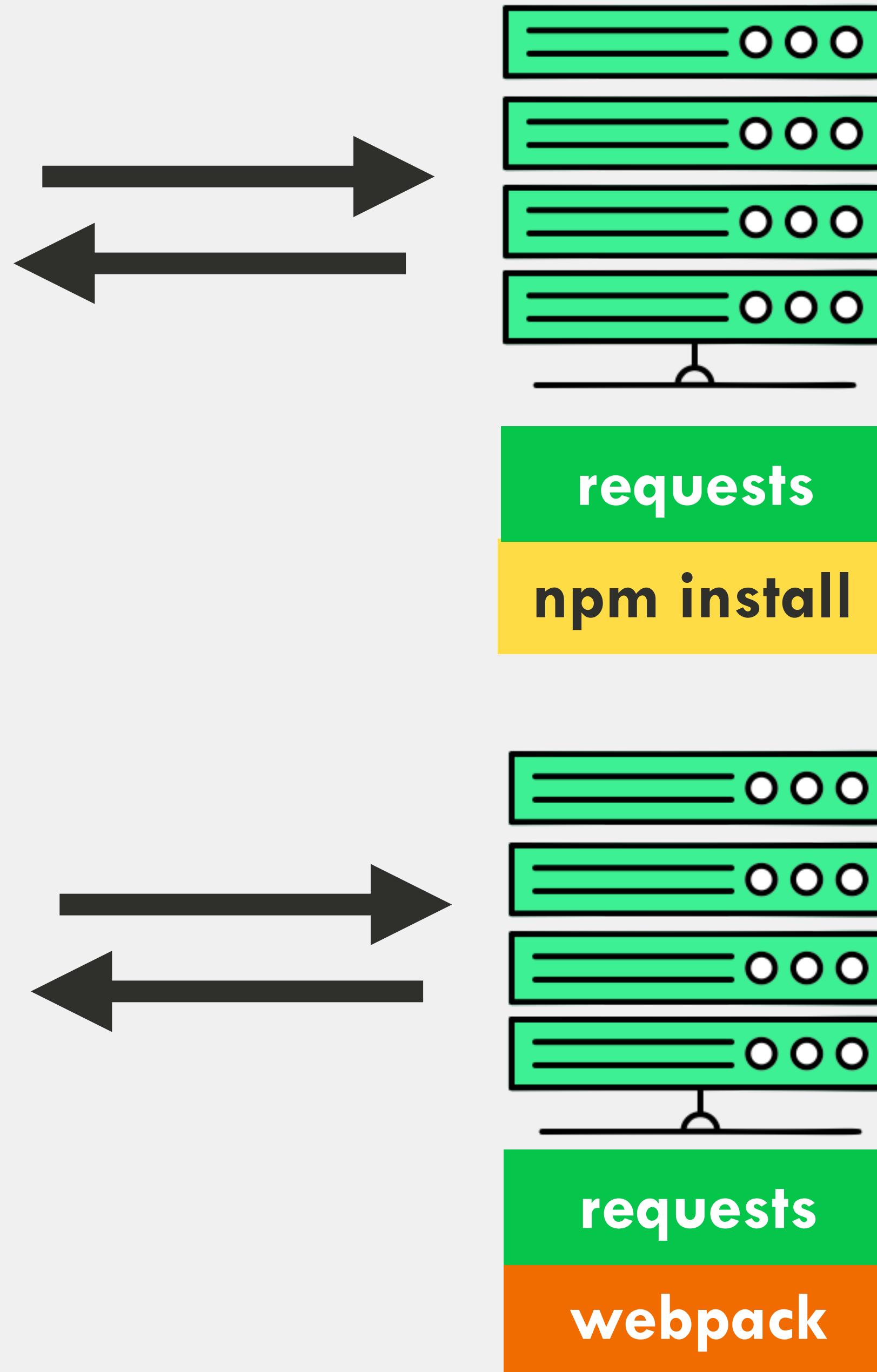
scale



**Everyone's
computer**

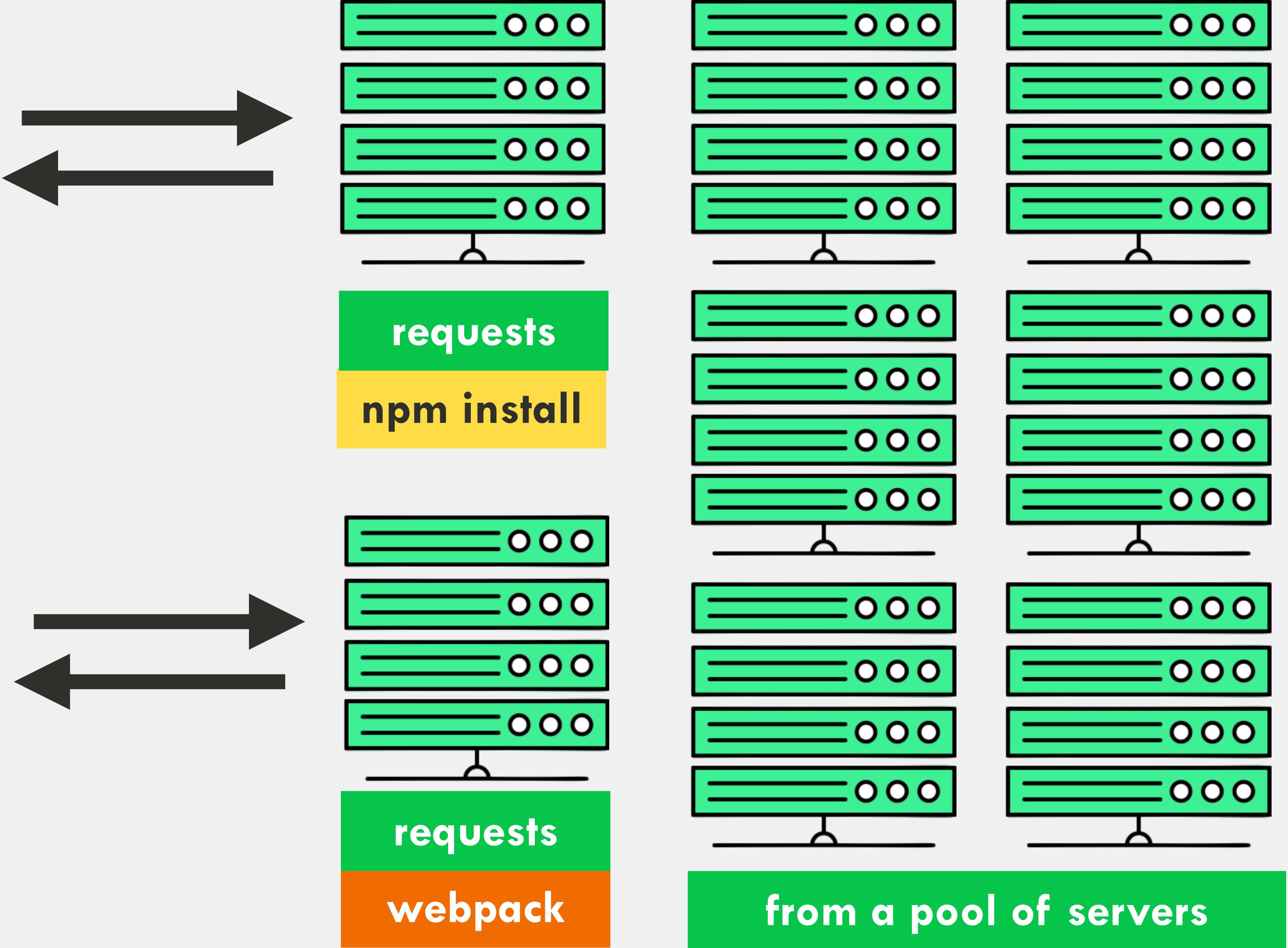


**Everyone's
computer**



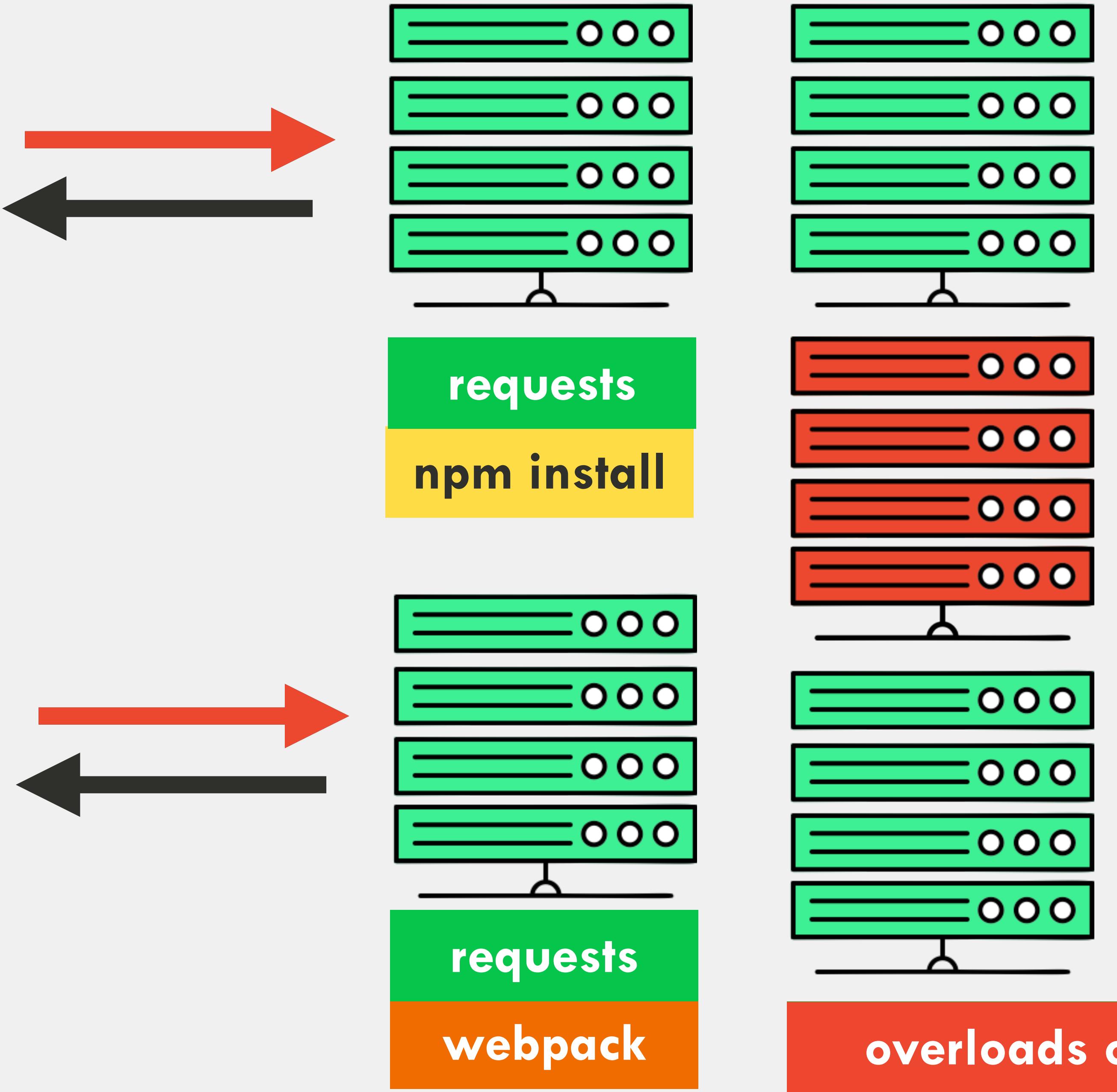


Everyone's
computer

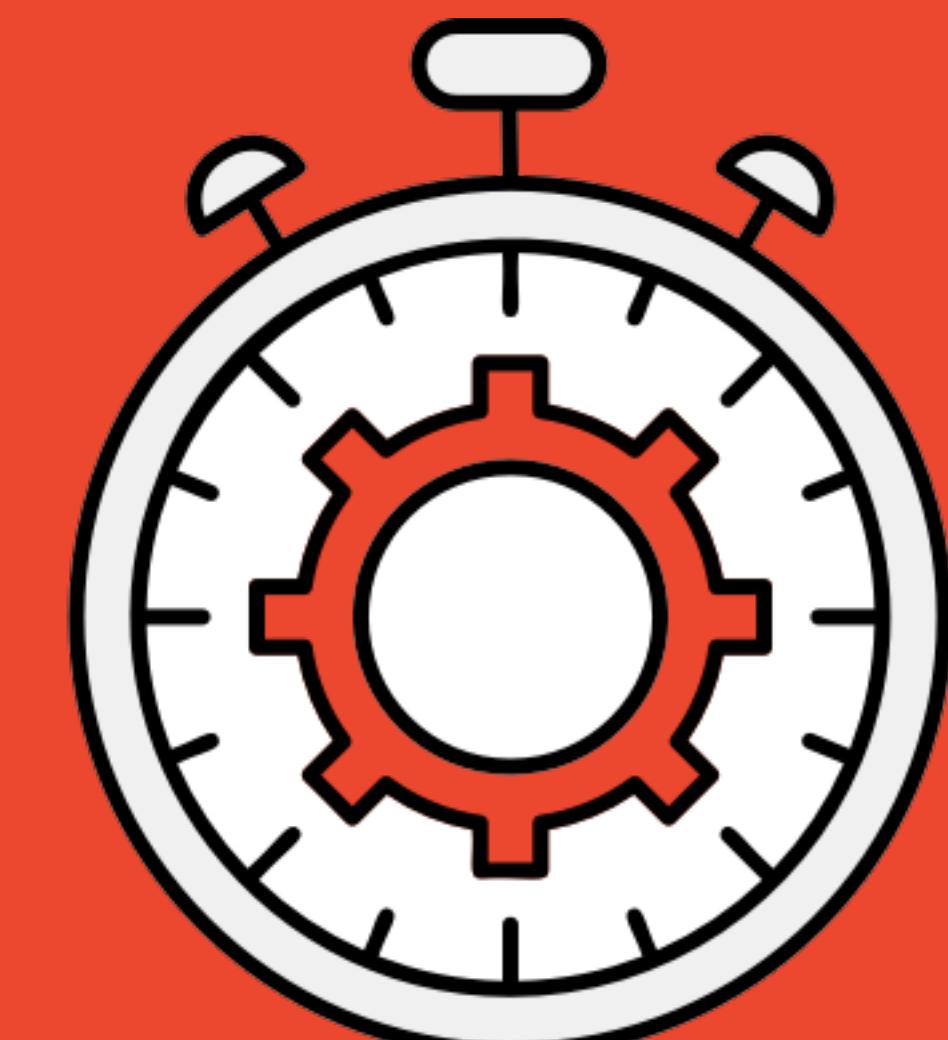




Everyone's
computer



overloads one machine



DNS Caching

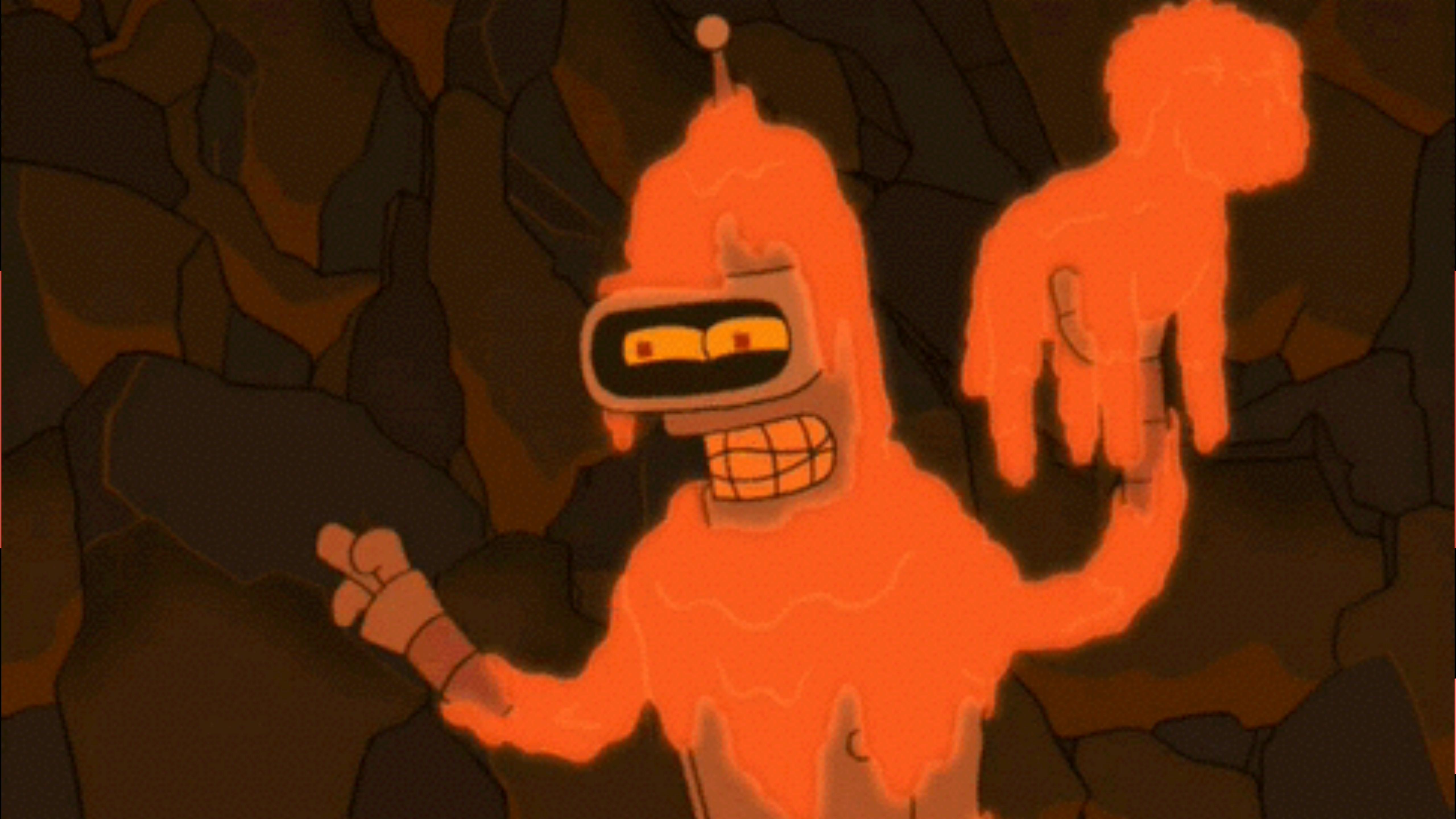


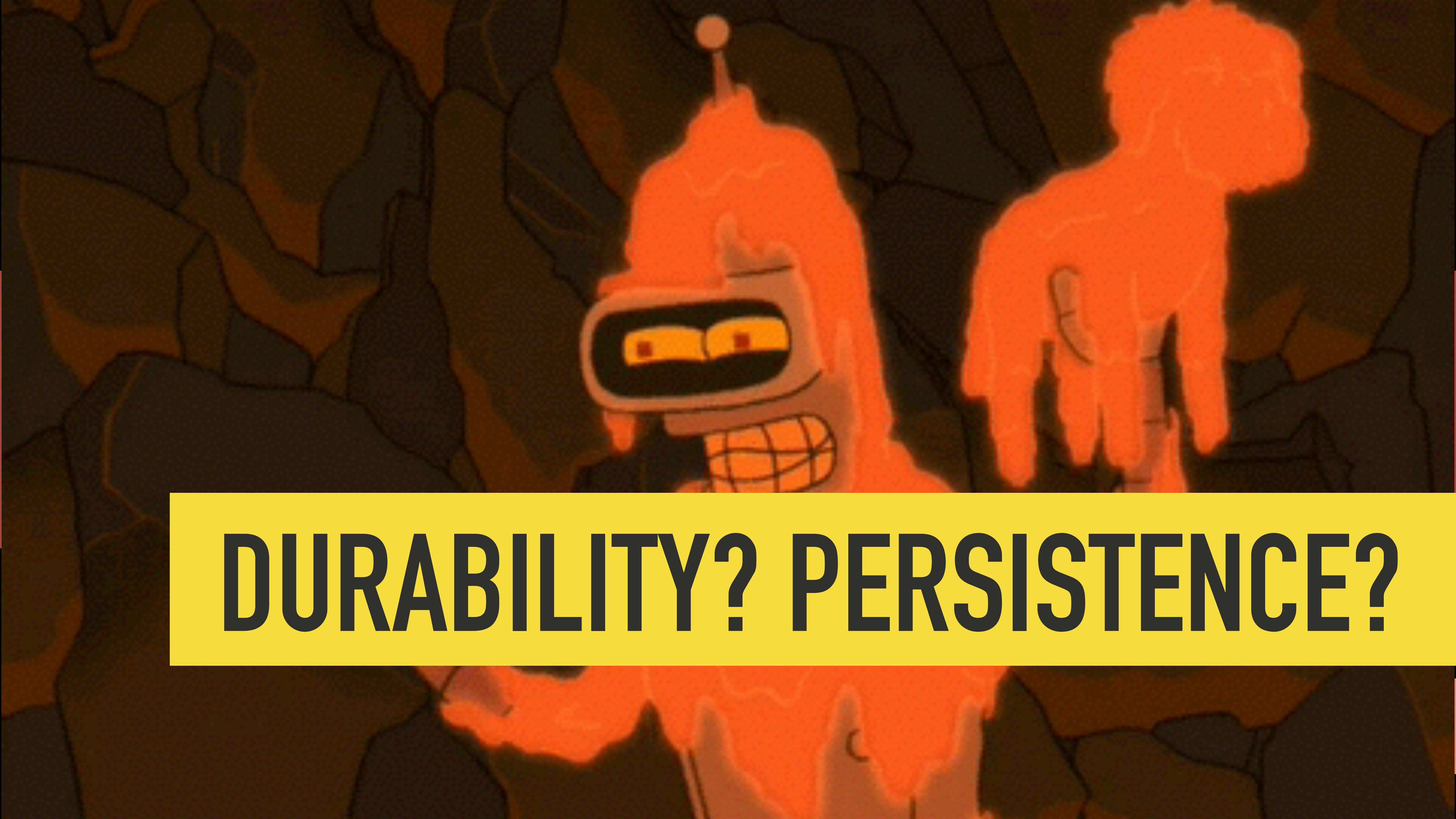


STARVATION

— what —
**about
queues?**

* CHATTERING *





DURABILITY? PERSISTENCE?

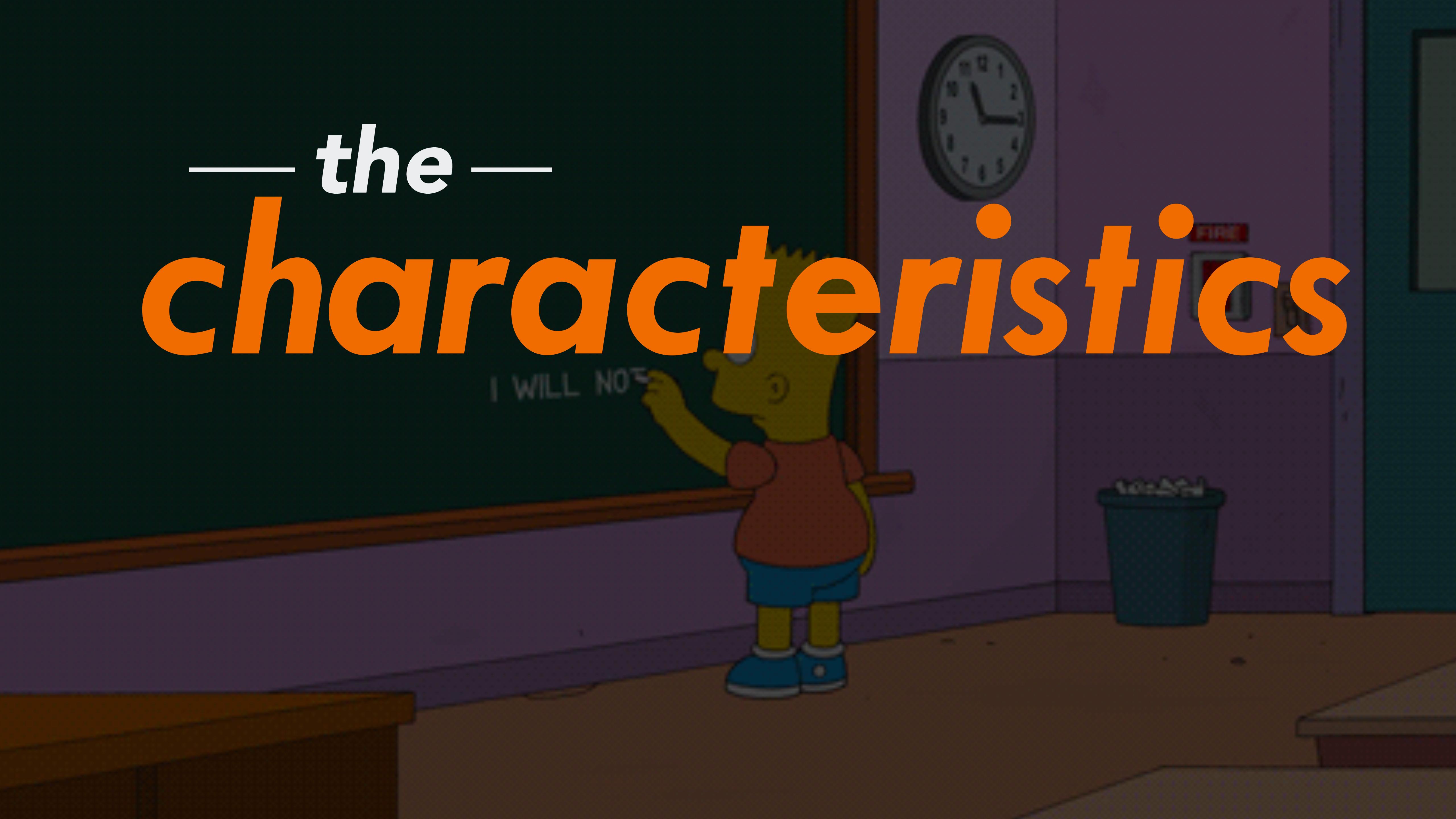


DELIVERY GUARANTEES?

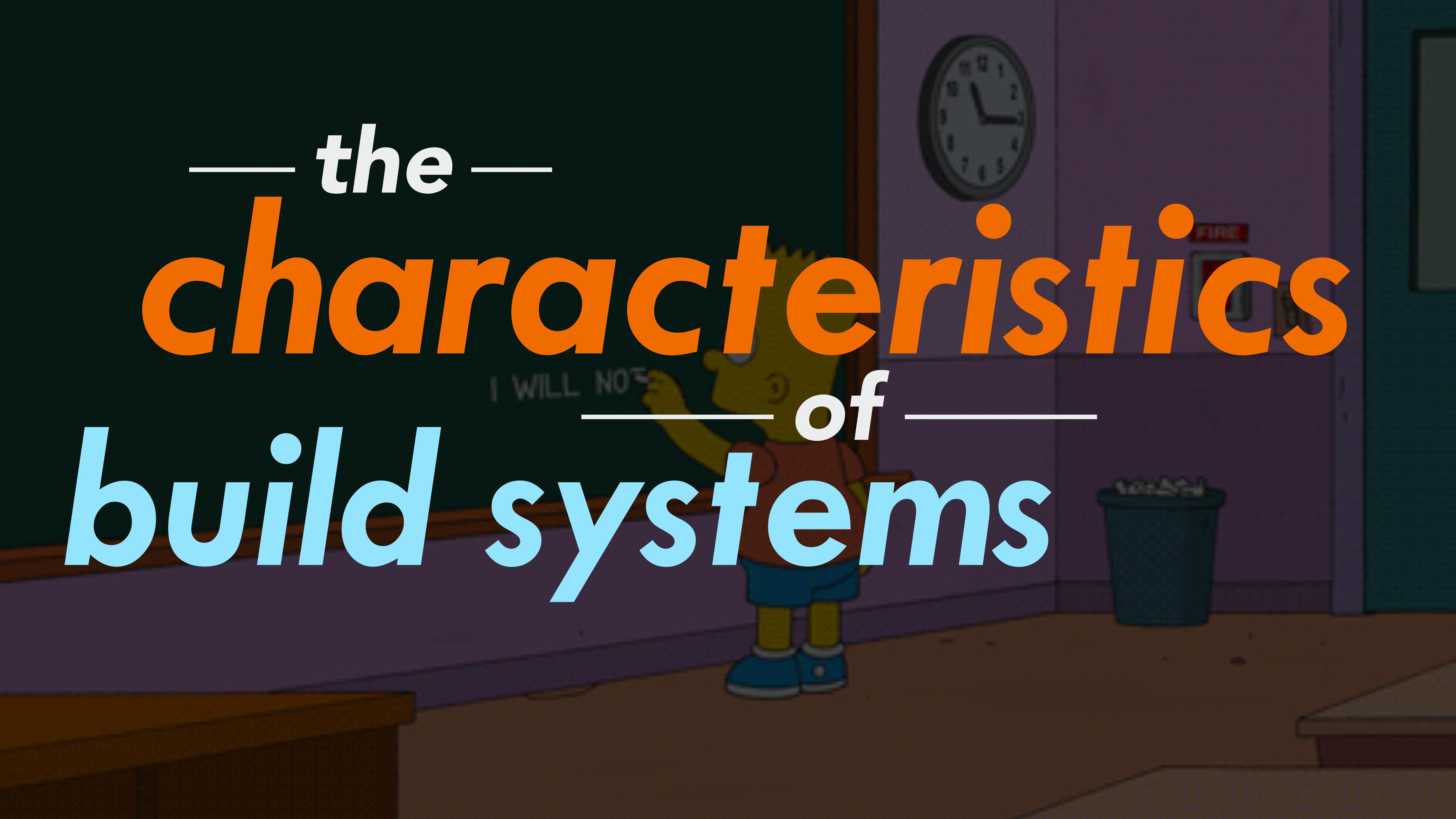
DURABILITY? PERSISTENCE?

IN ORDER? OUT OF ORDER?

— the — **characteristics**



— the — **characteristics** — of — **build systems**



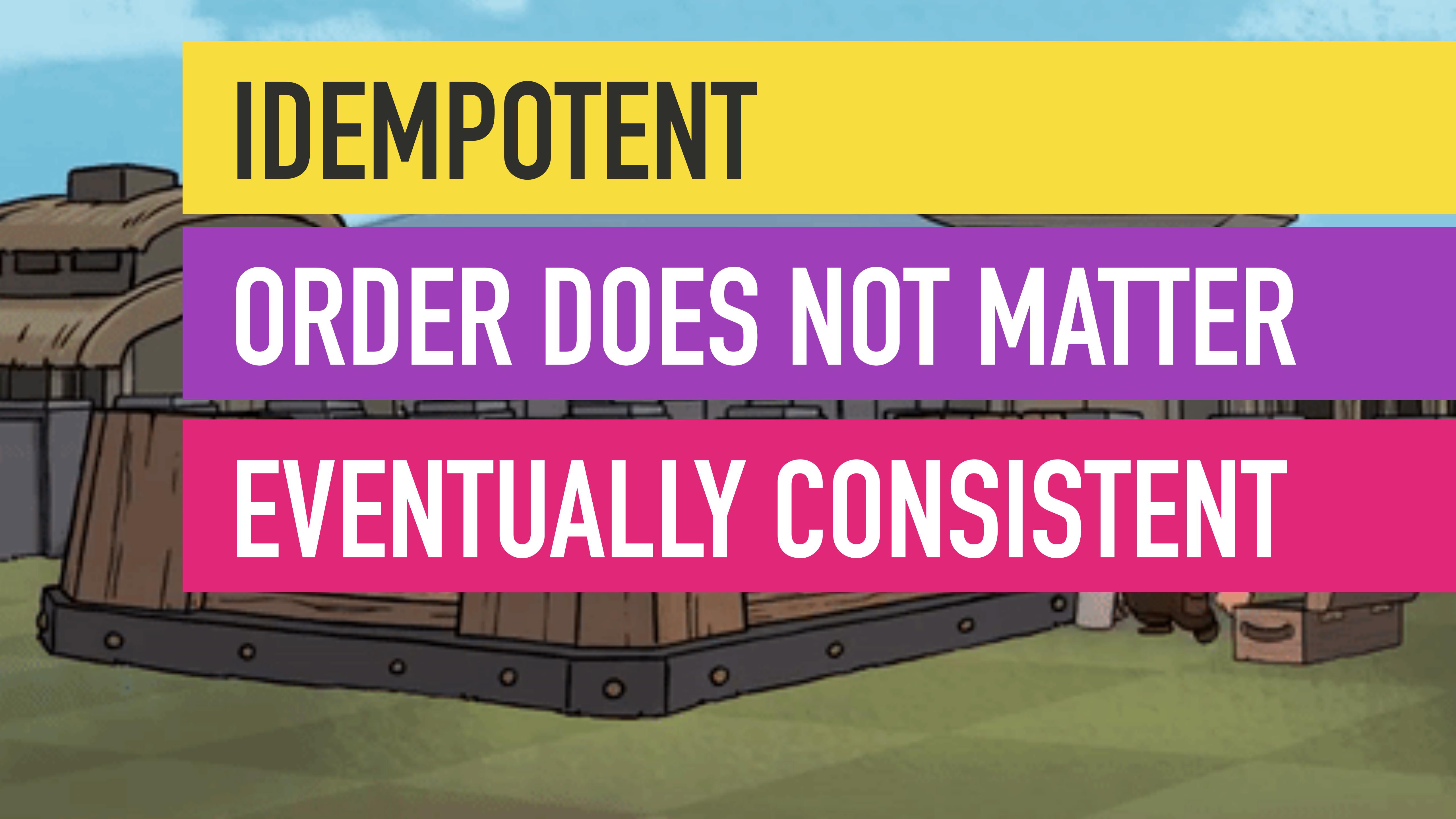
IDEMPOTENT



IDEMPOTENT

ORDER DOES NOT MATTER

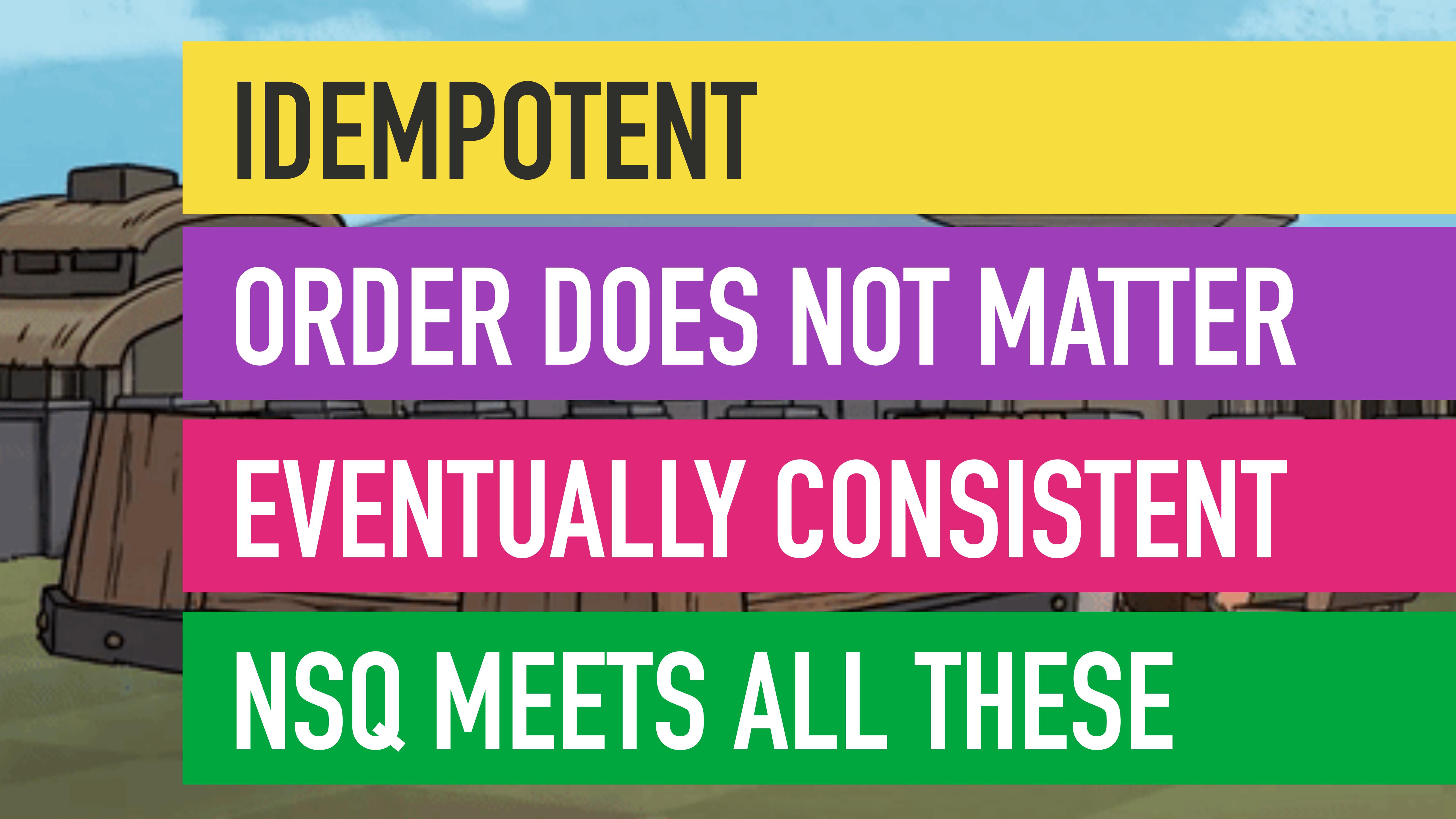


A cartoon-style illustration of a train engine and several wooden shipping crates on a track. The train engine is brown with a black smokestack and a headlight. It is pulling several brown wooden crates. The background is a simple blue sky and green ground.

IDEMPOTENT

ORDER DOES NOT MATTER

EVENTUALLY CONSISTENT



IDEMPOTENT

ORDER DOES NOT MATTER

EVENTUALLY CONSISTENT

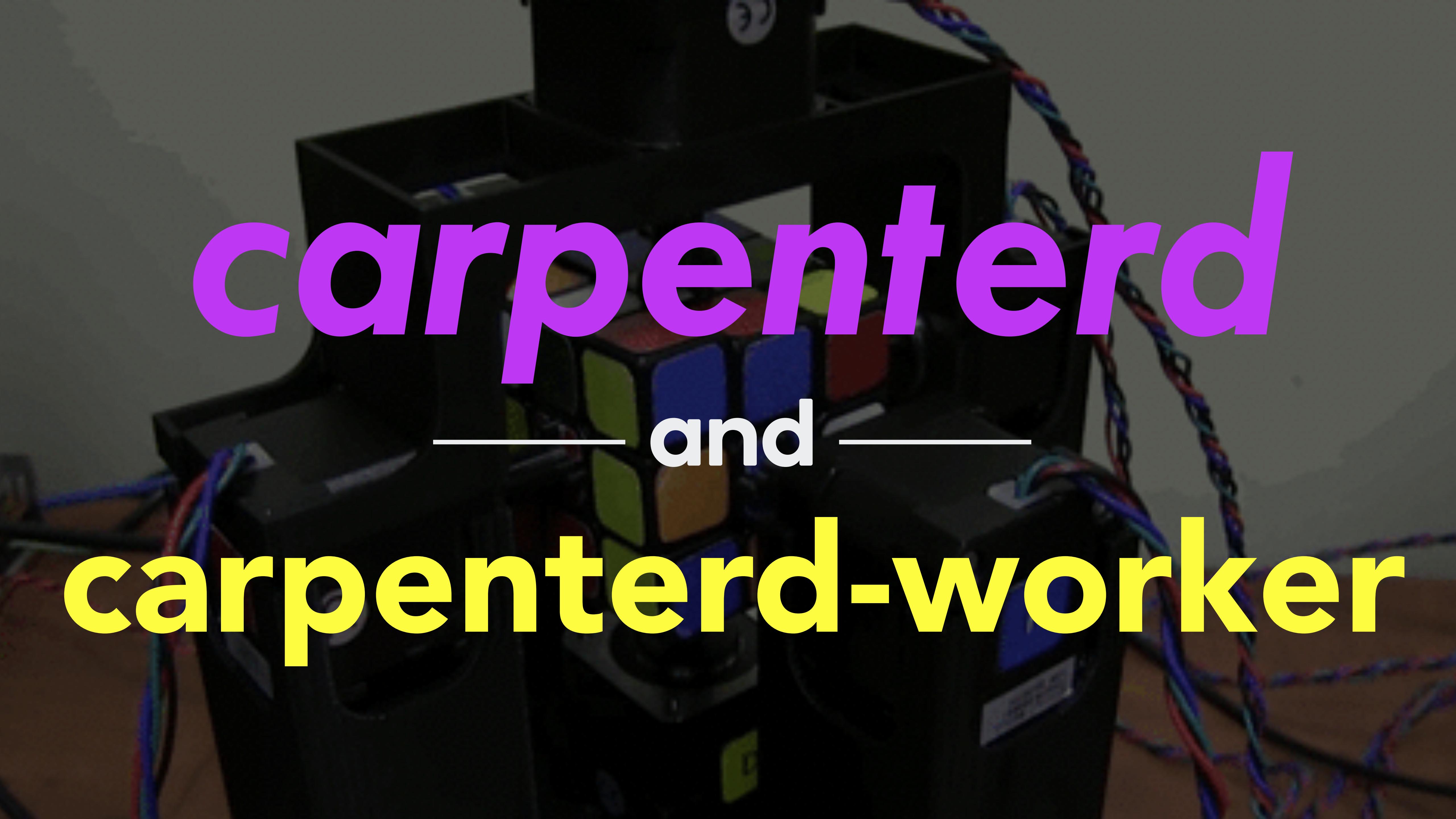
NSQ MEETS ALL THESE



PUTTING
— it all —
together

Warehouse.ai

lessons from PROD



carpenterd

— and —

carpenterd-worker



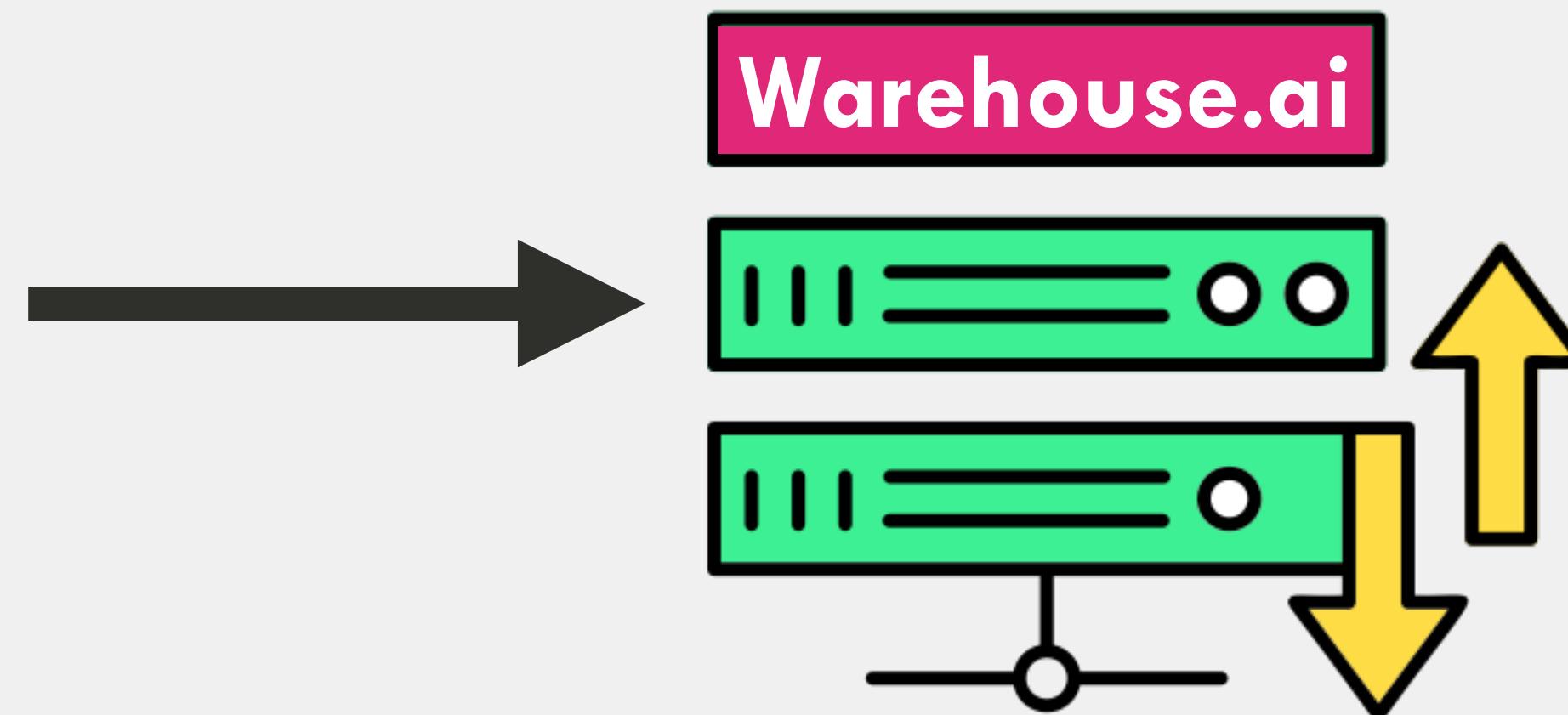
Your computer

npm publish



Your computer

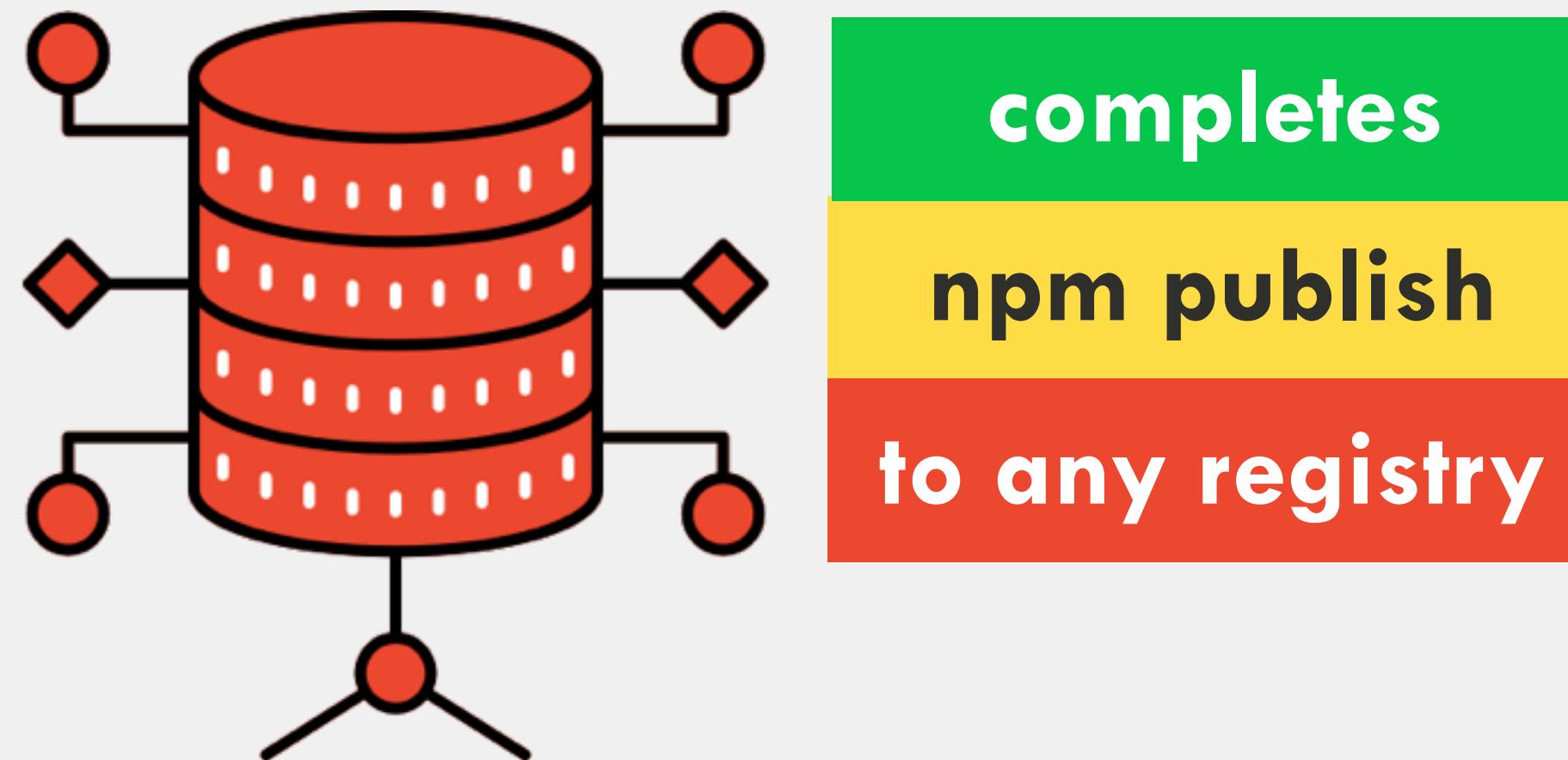
npm publish



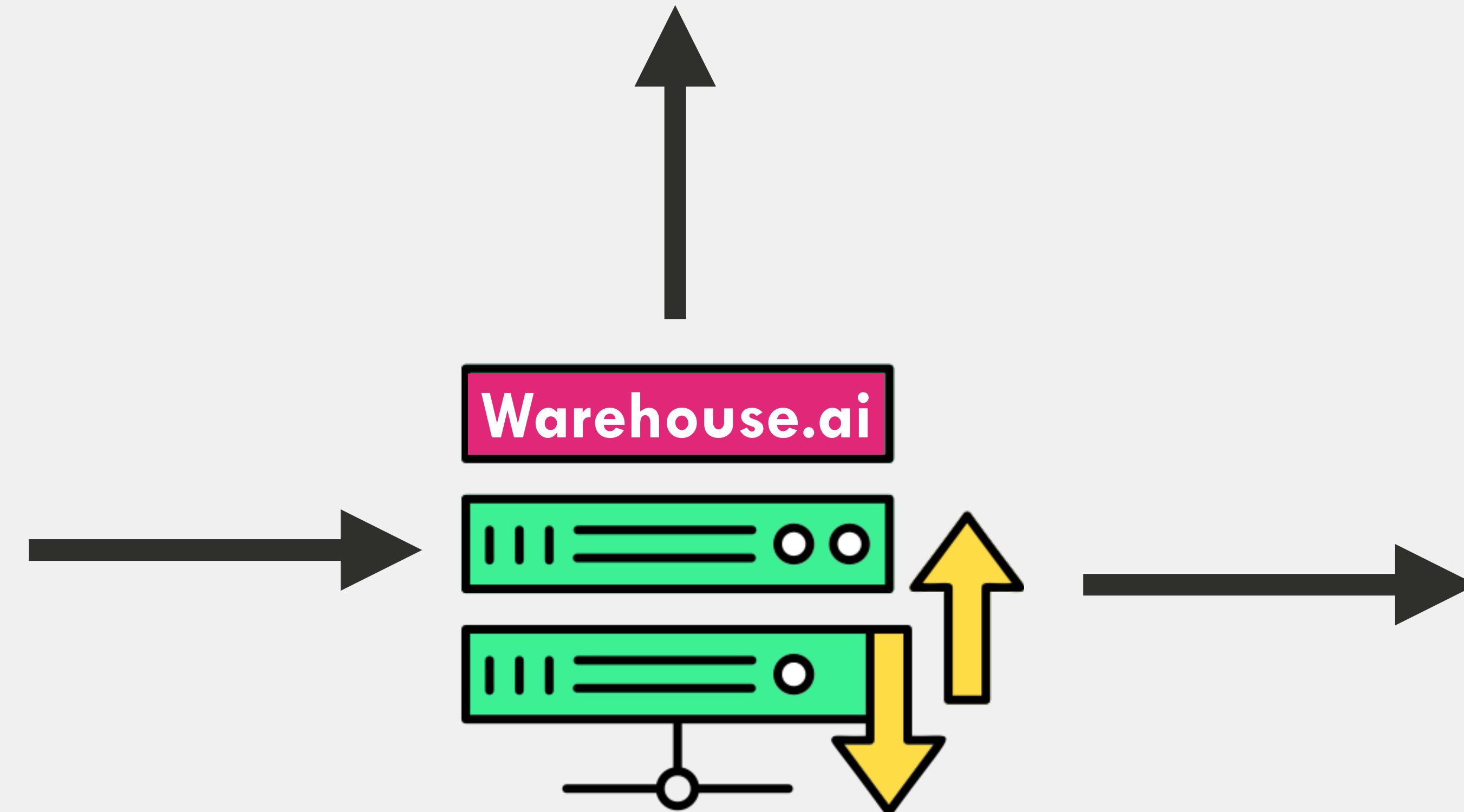


Your computer

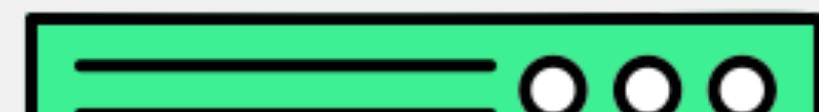
npm publish



completes
npm publish
to any registry

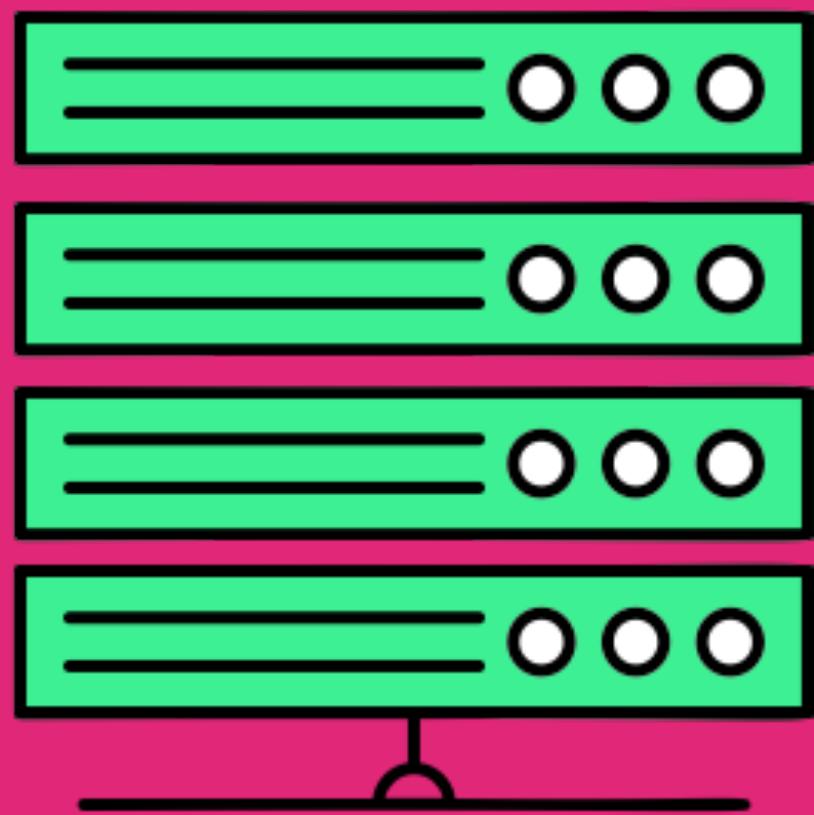


carpenterd



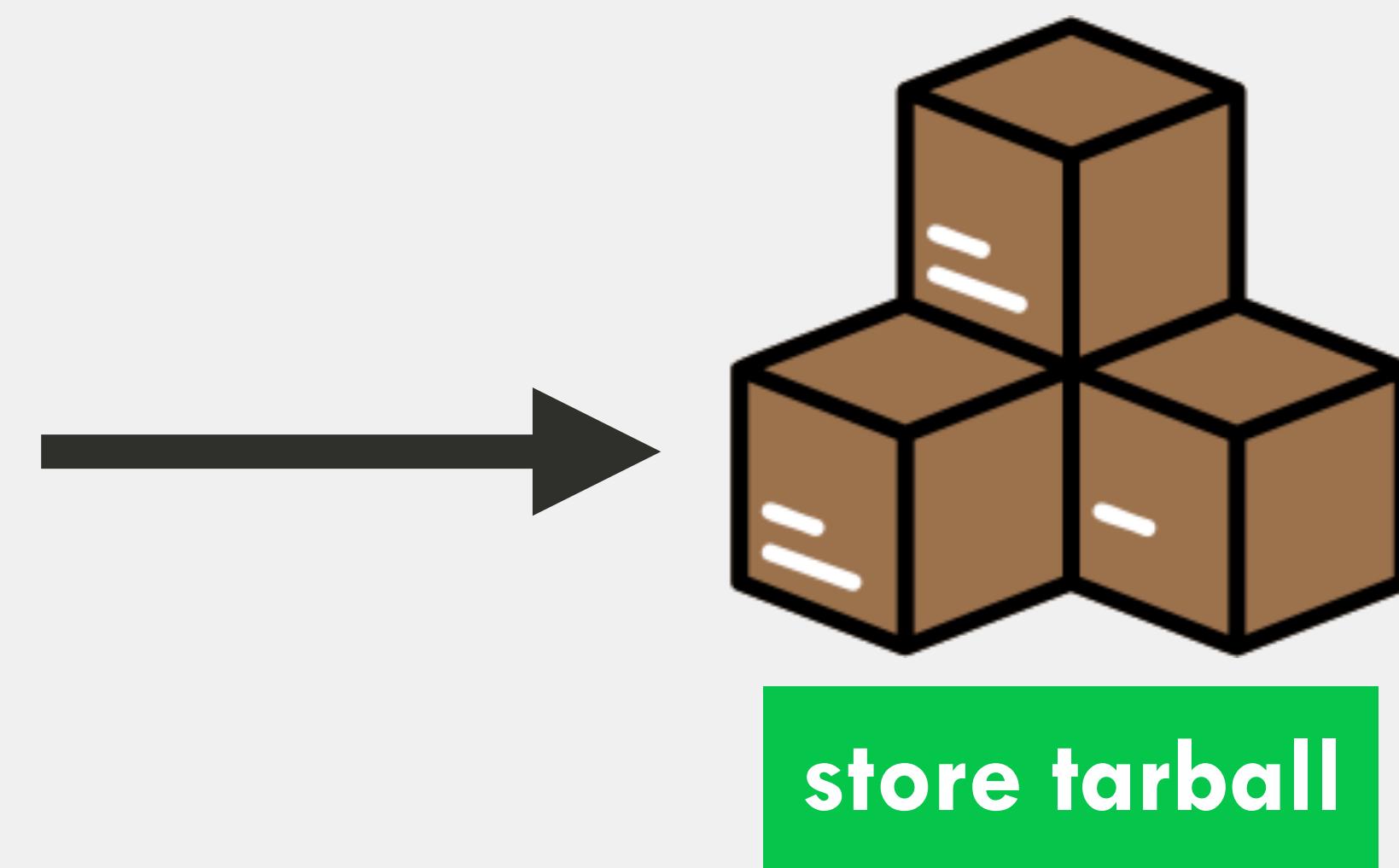
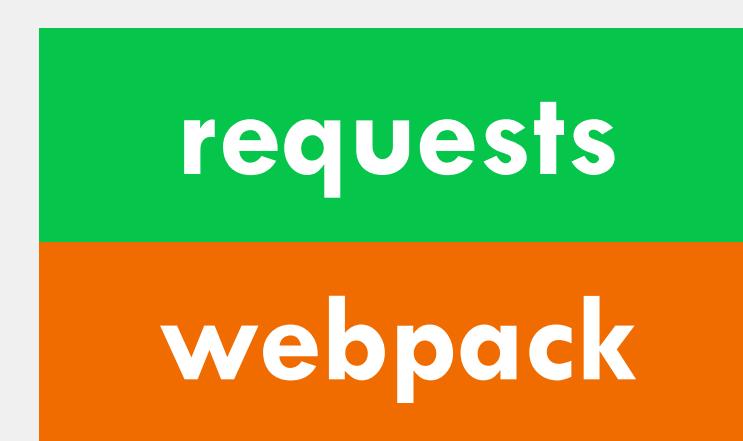
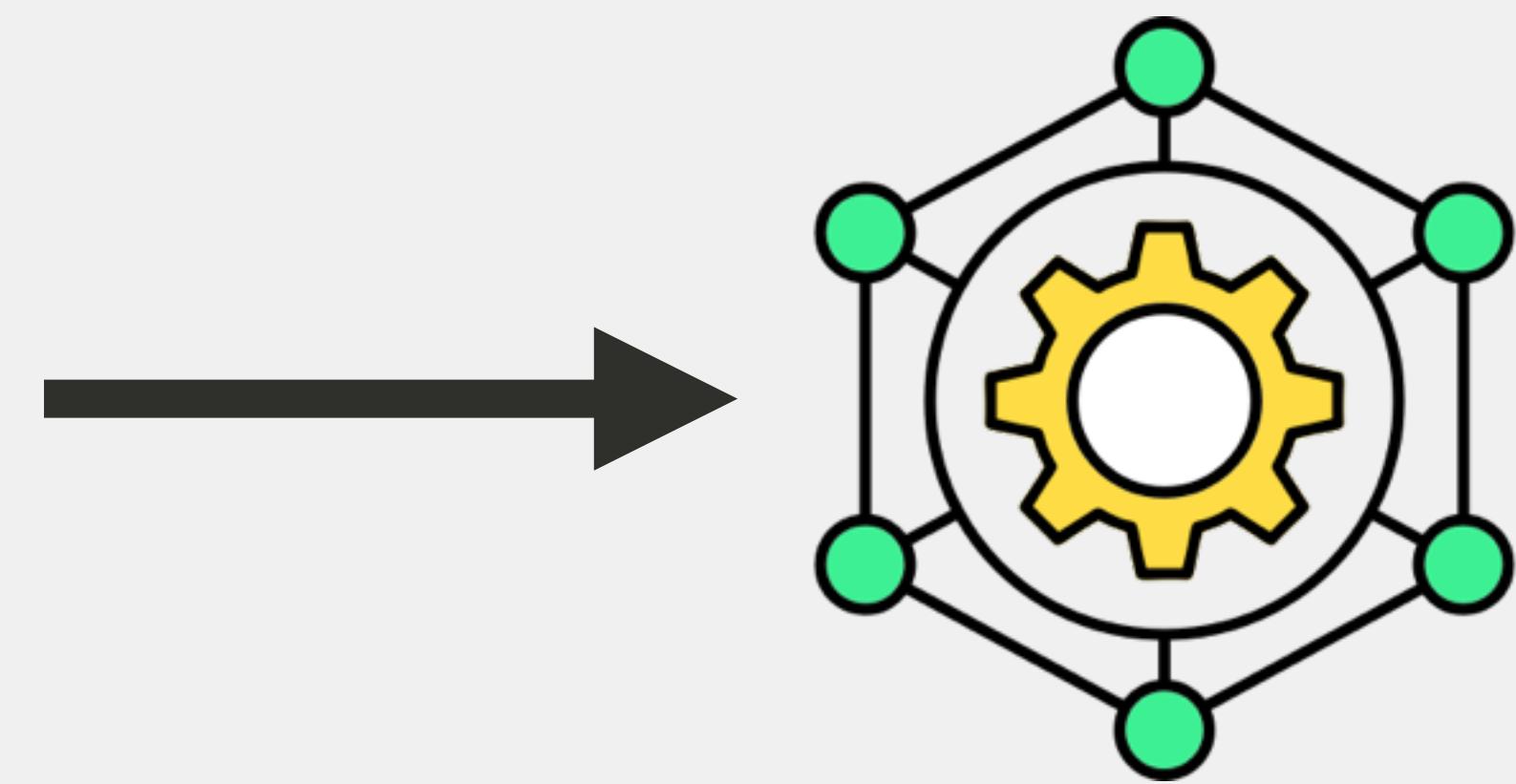
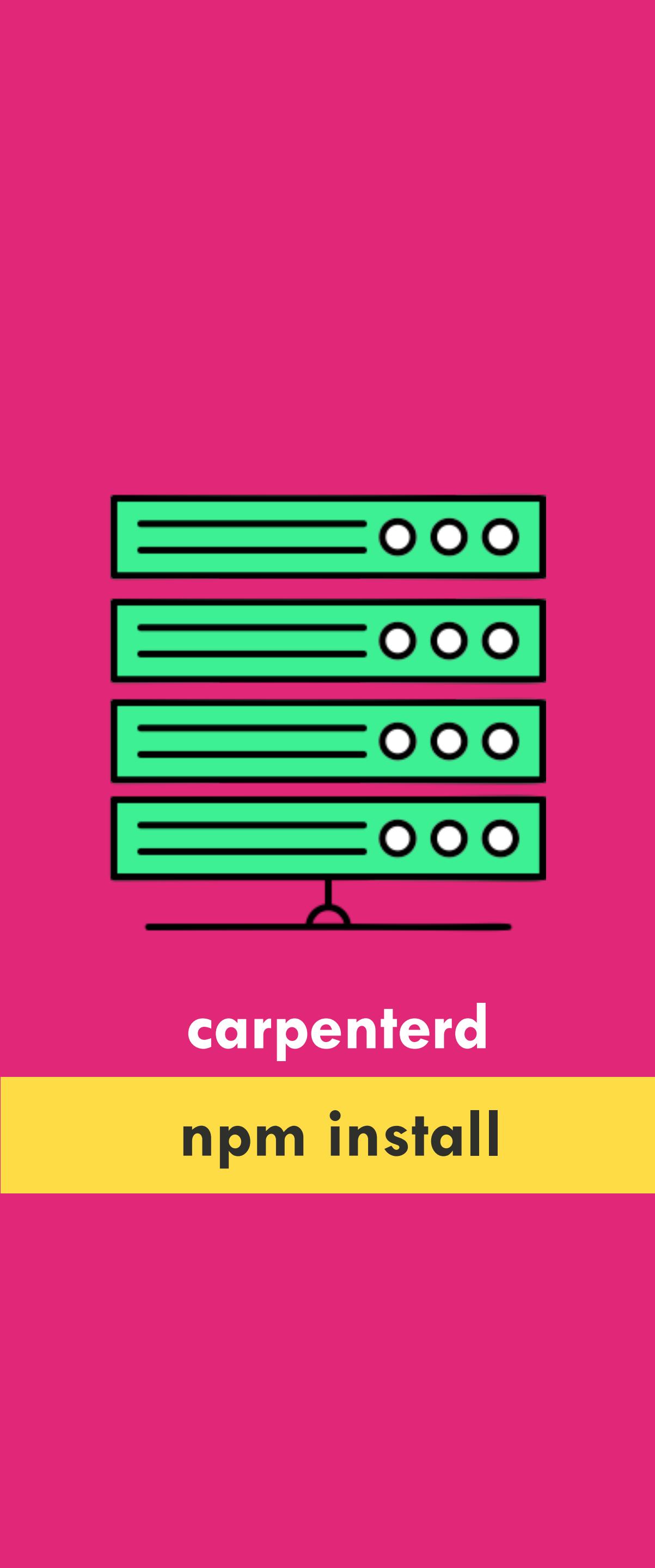
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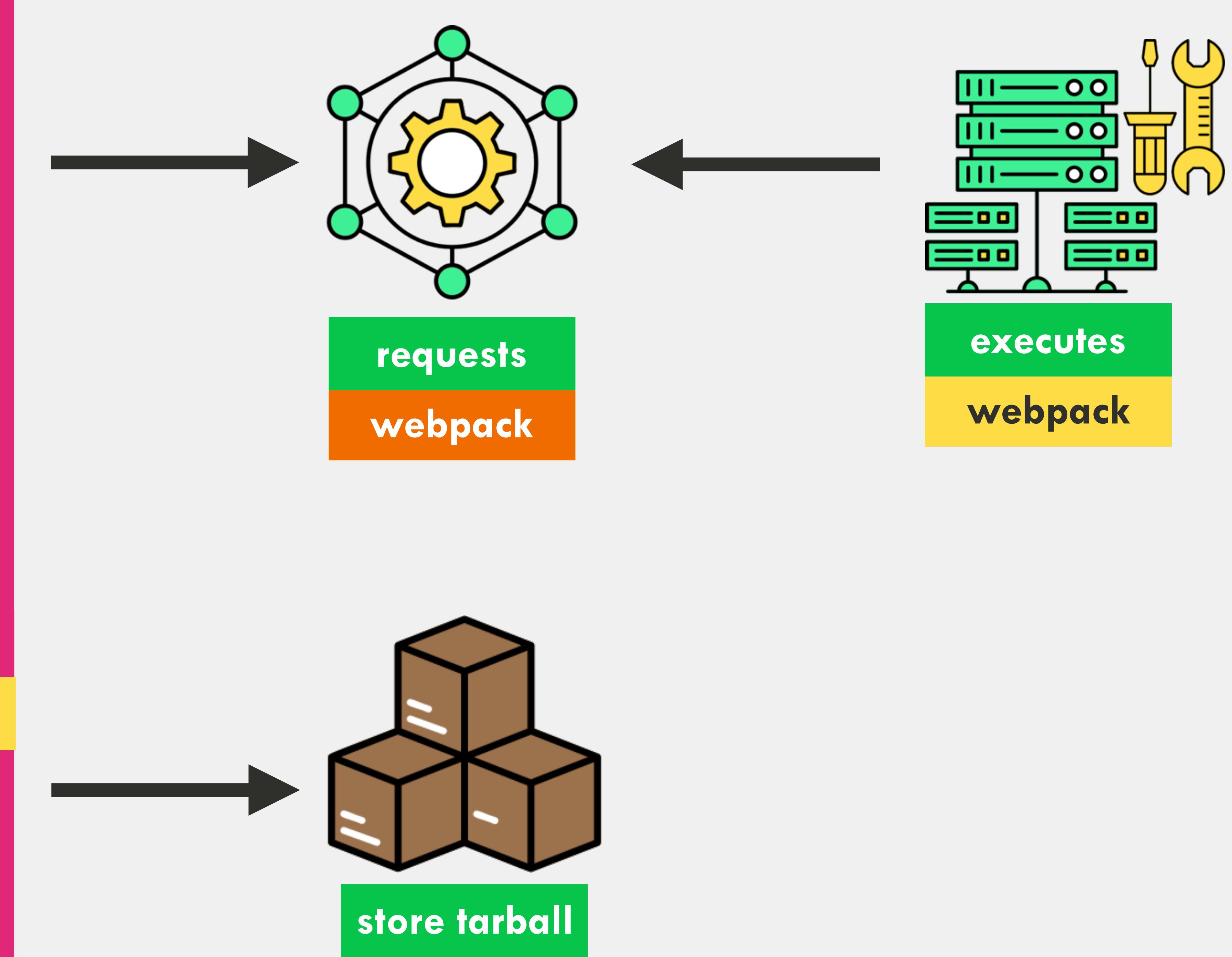
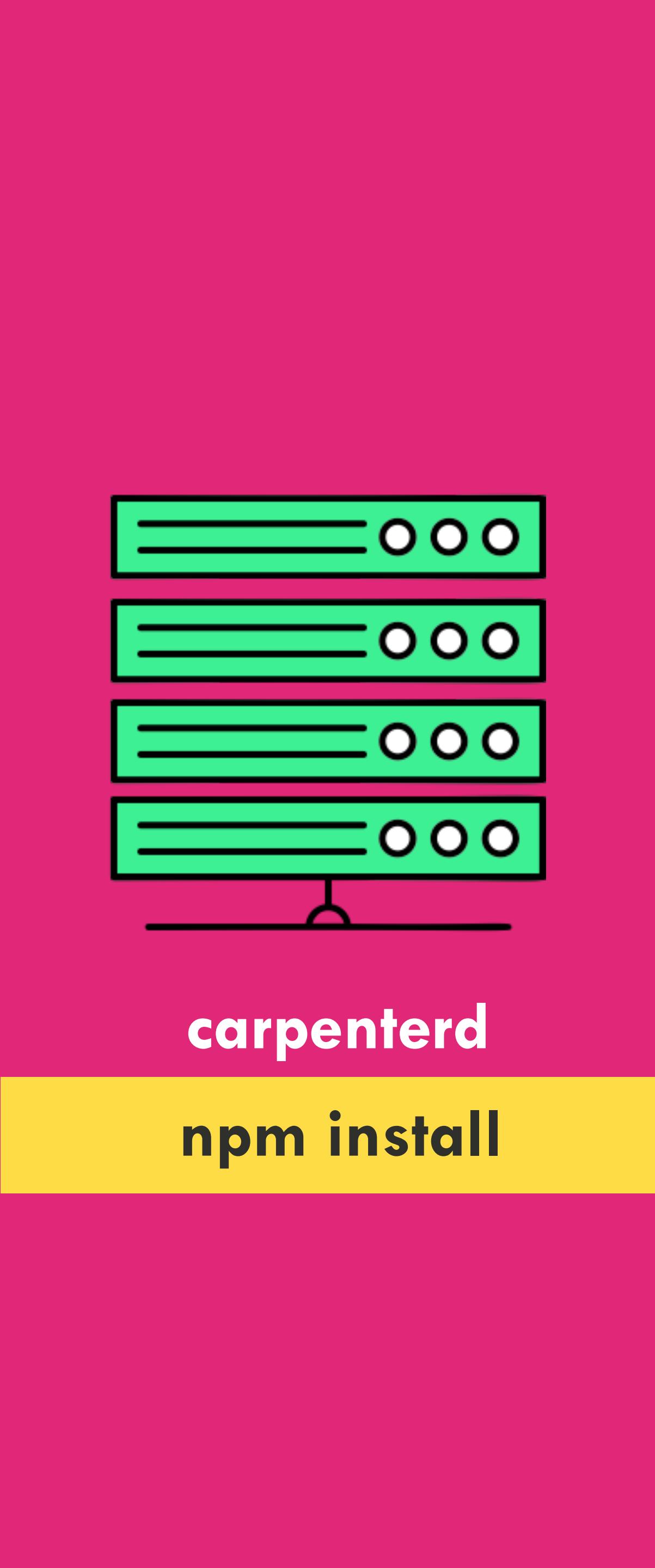
npm install

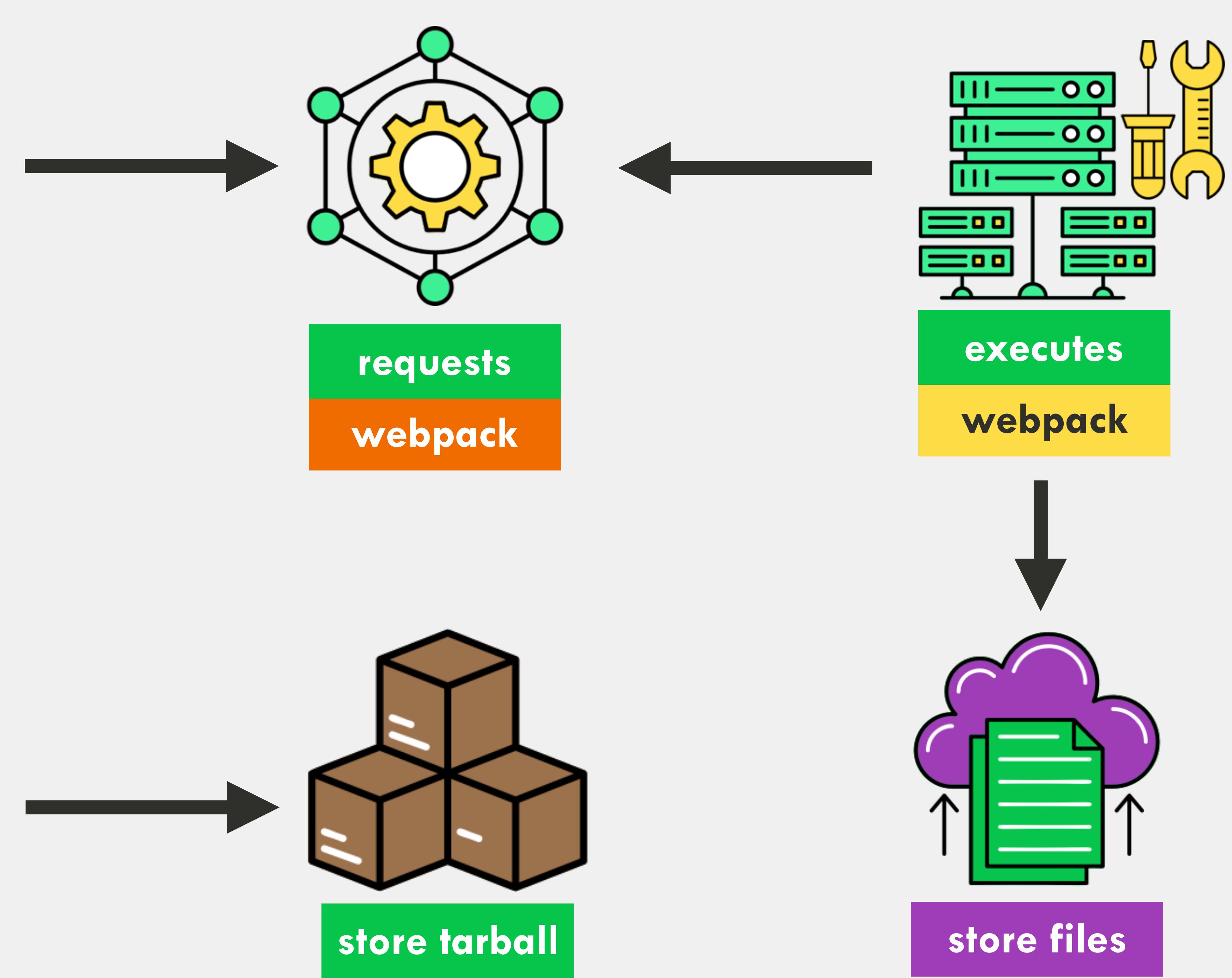
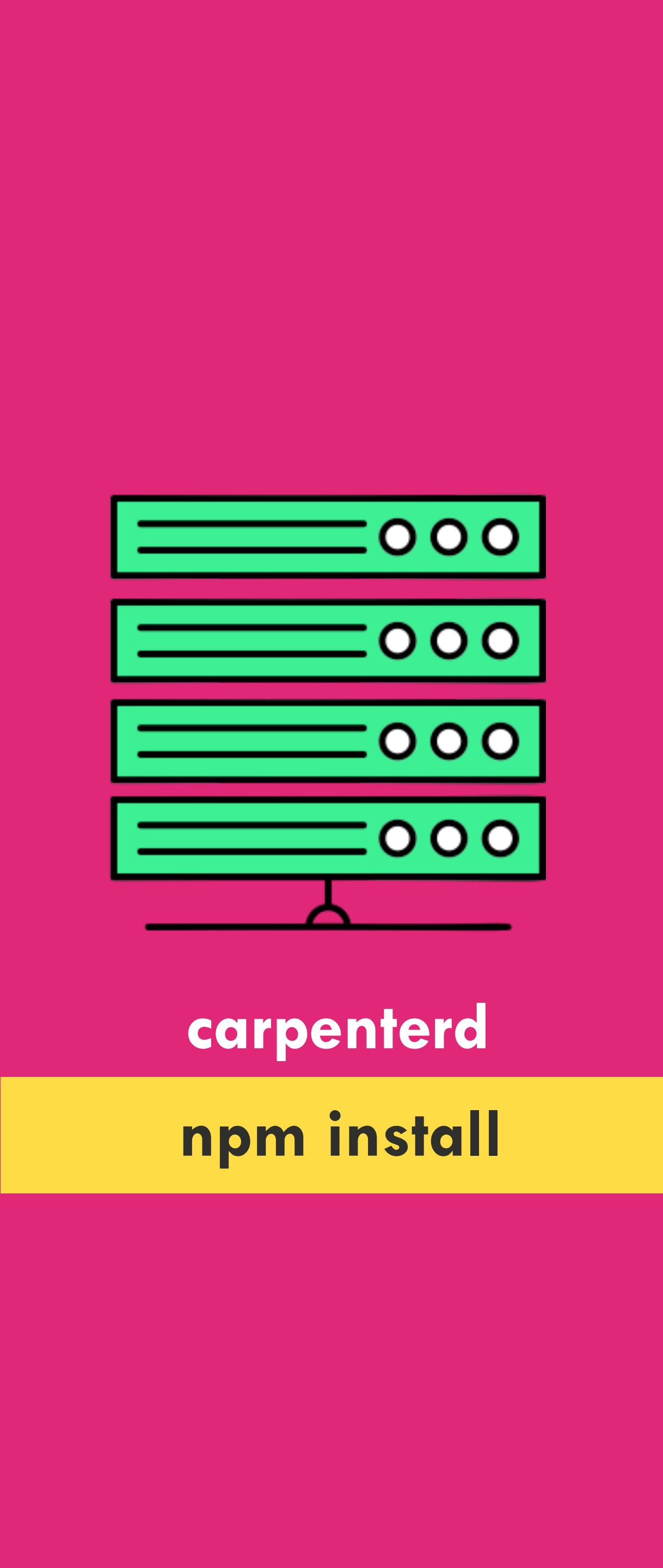


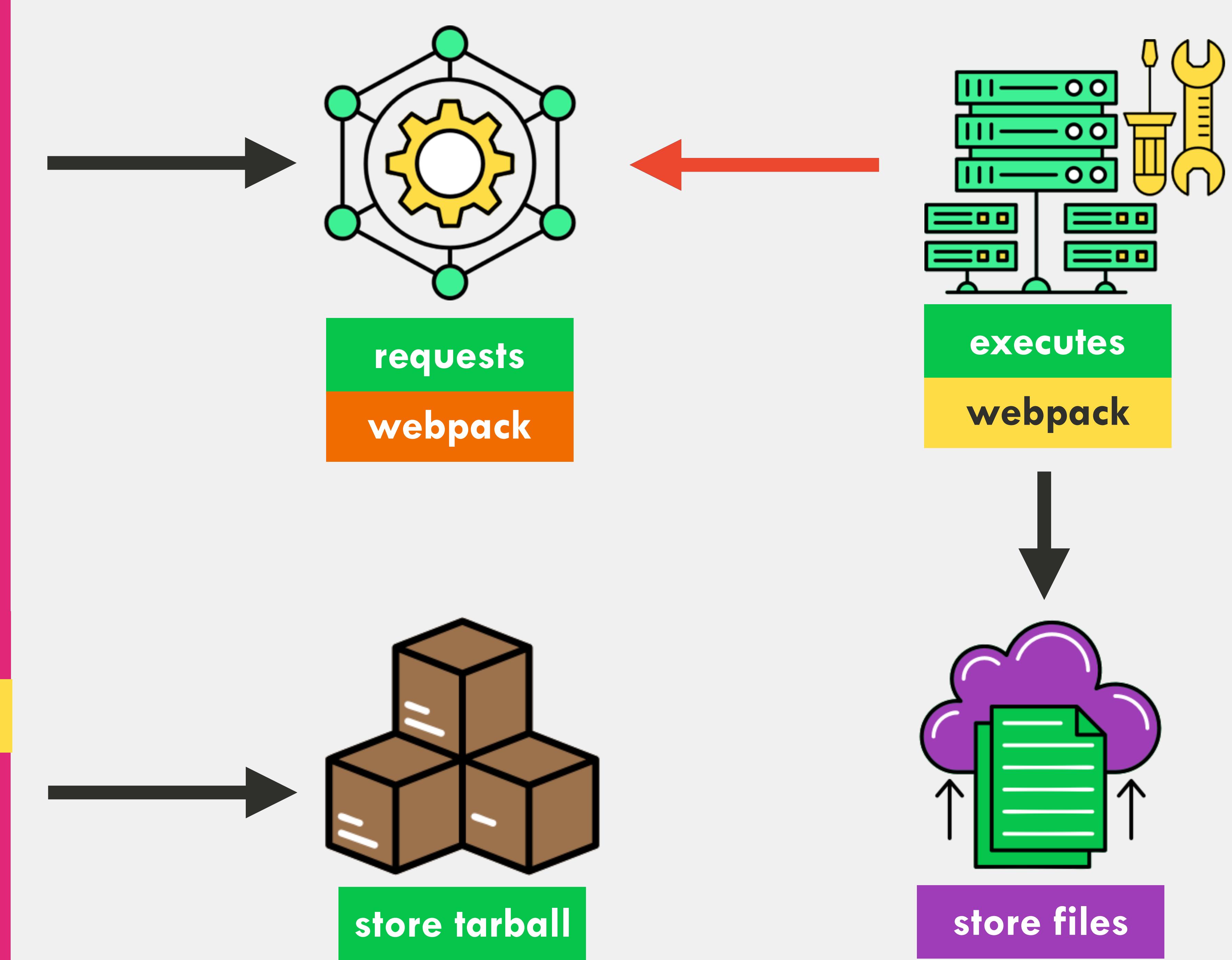
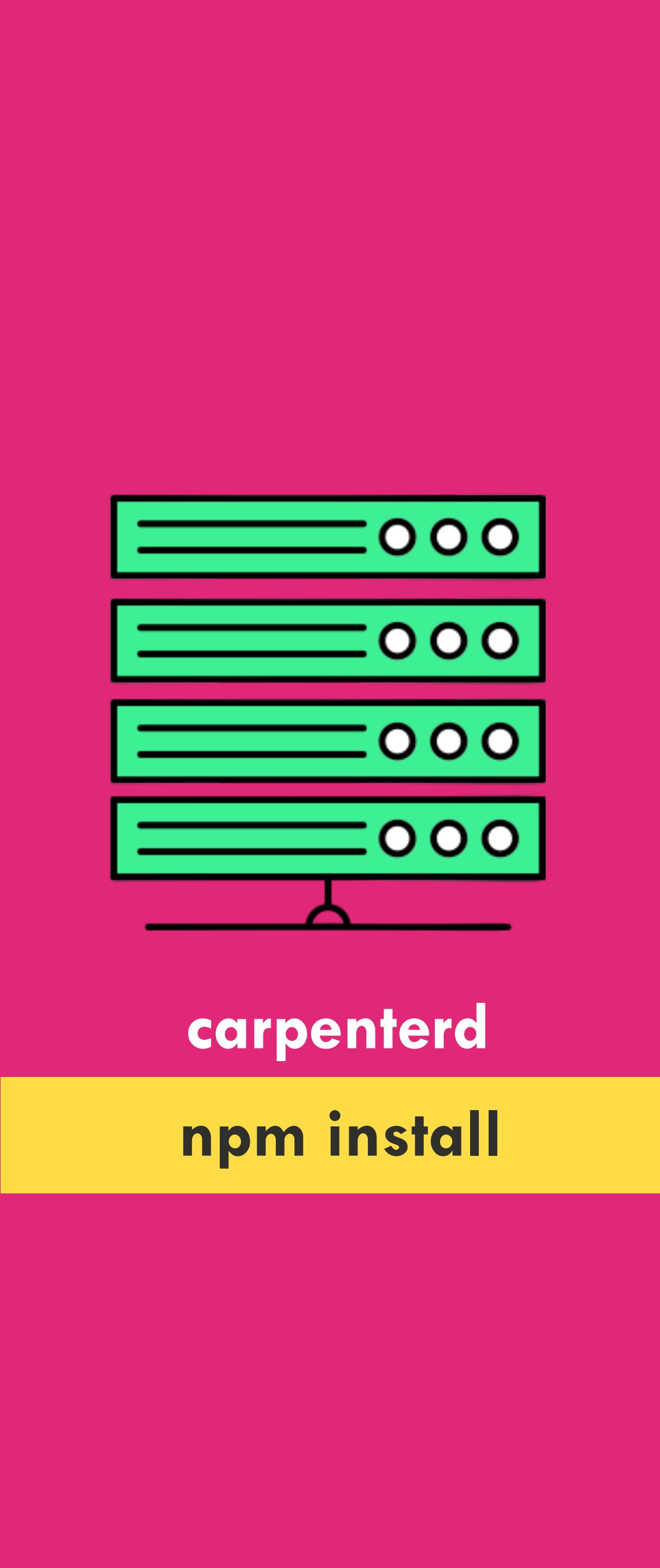
carpenterd

npm install

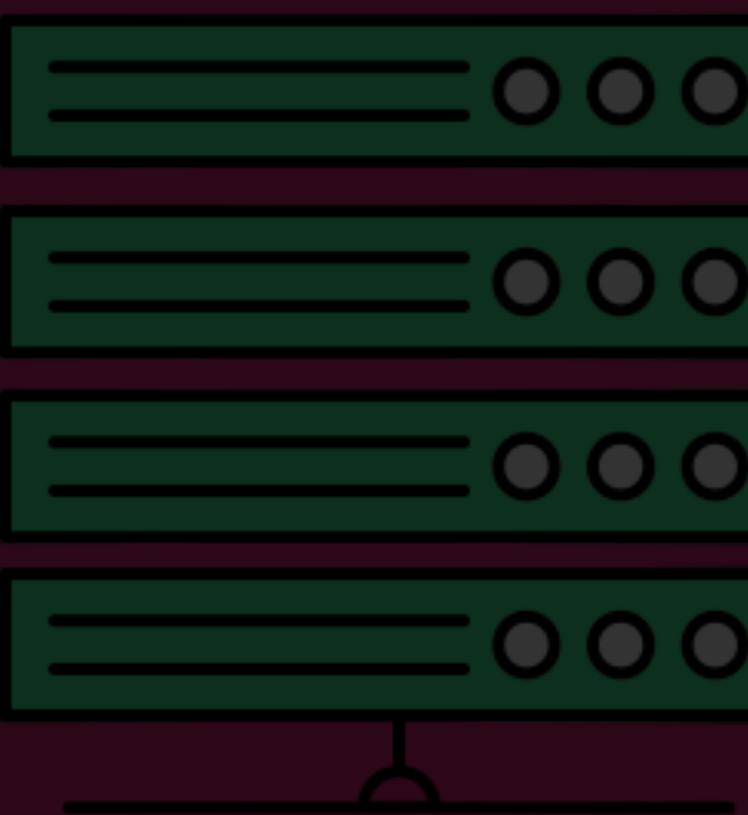






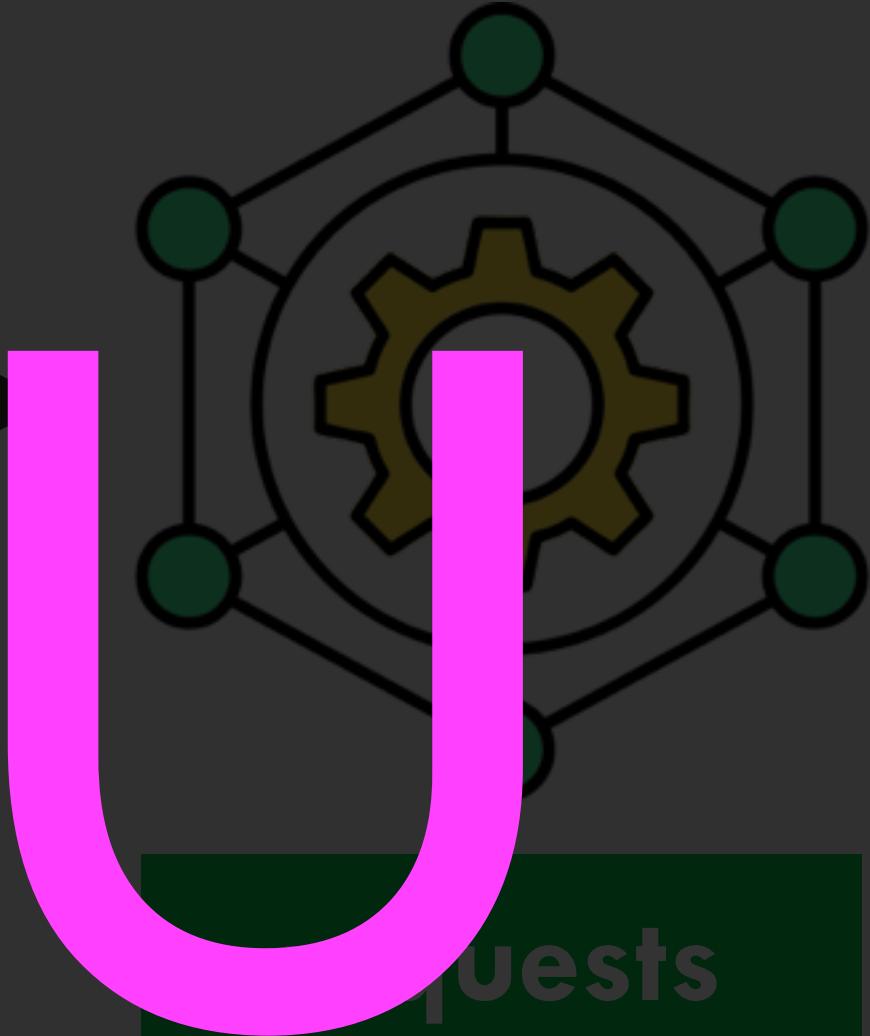


PULL
don't
PUSH



carpenterd

npm install



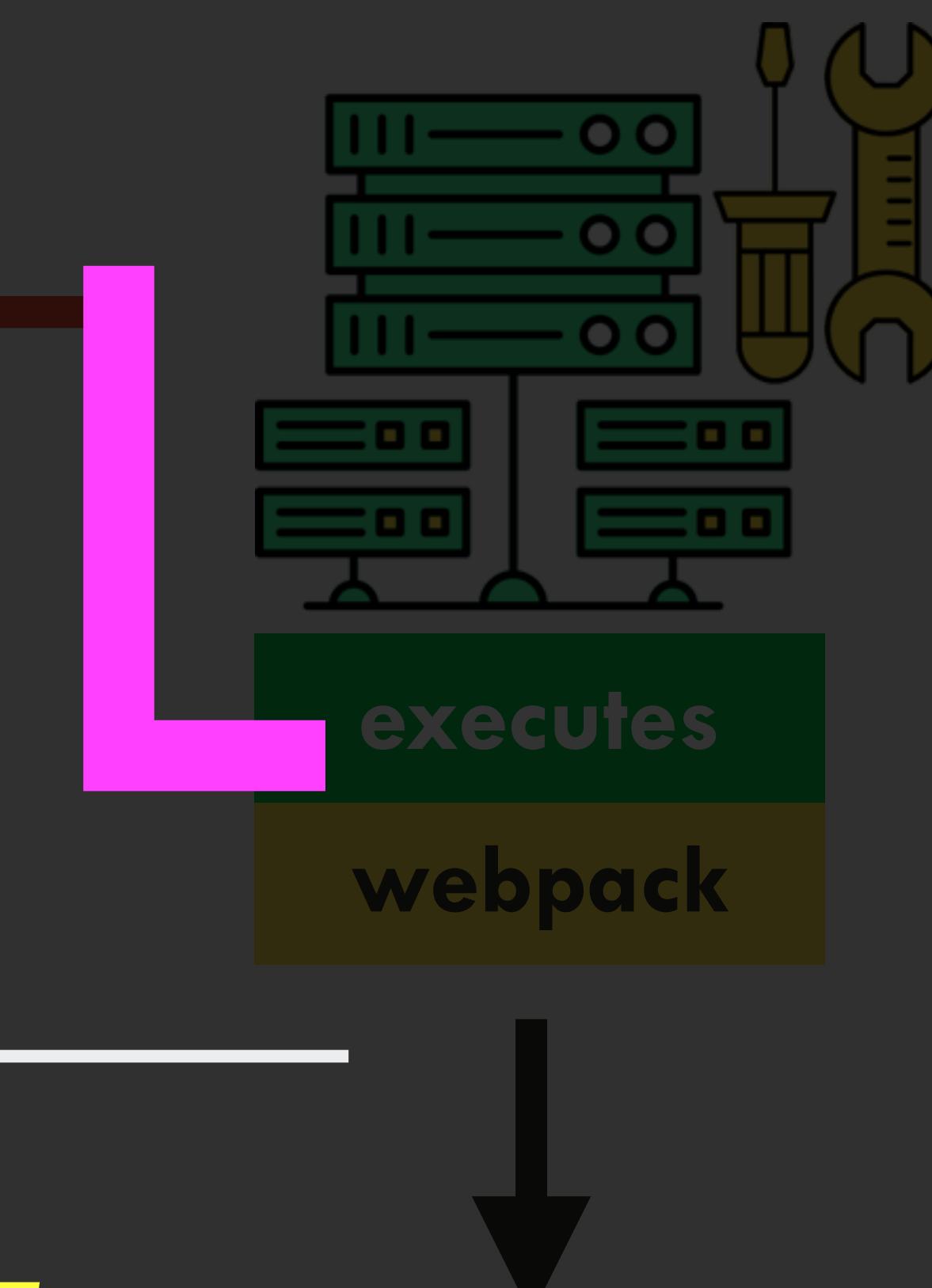
quests

webpack

don't



store tarball



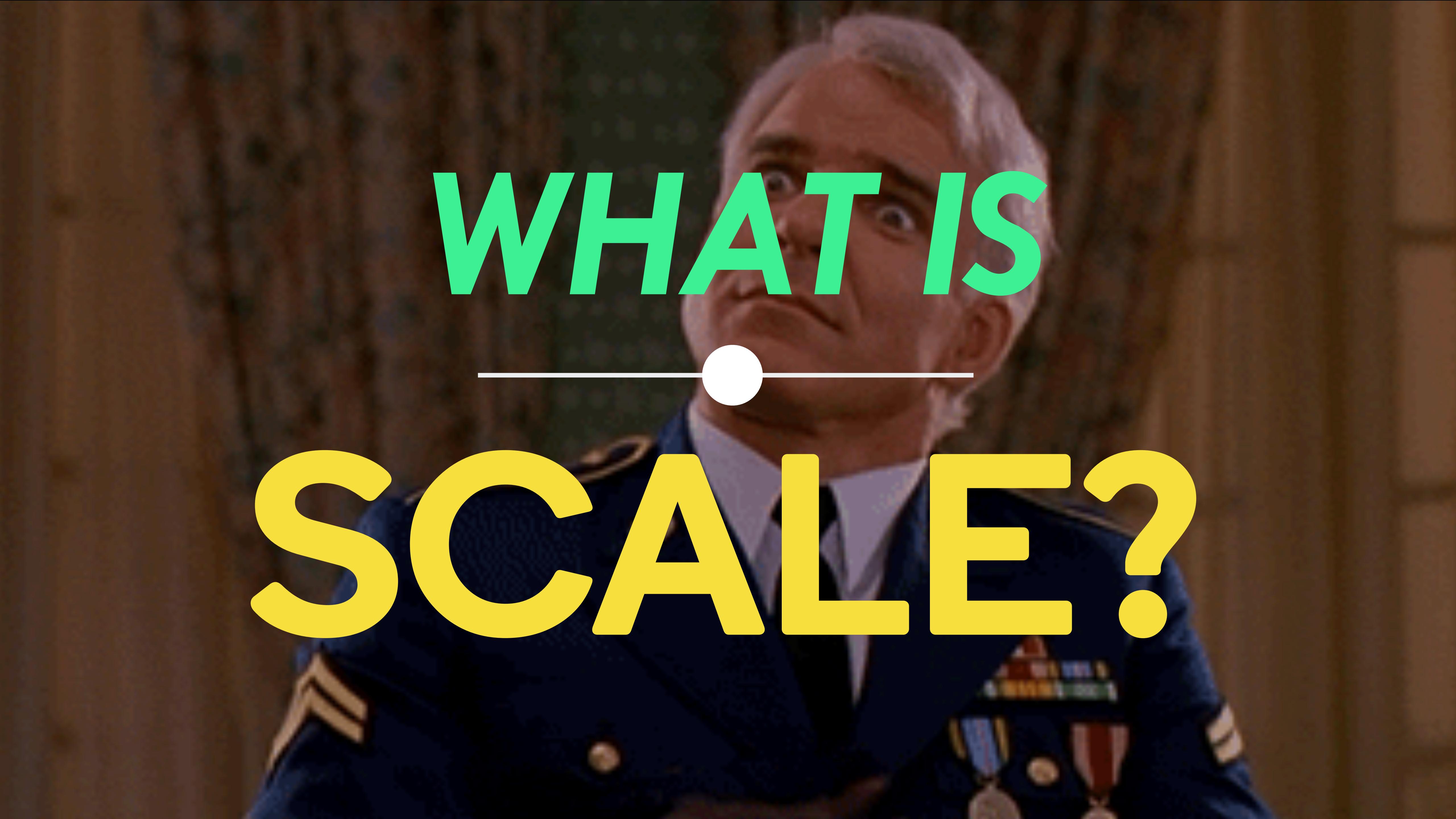
store files



FUTURES

My God, it's the future.



A man in a dark military uniform with a high collar and insignia on the shoulders is looking upwards with a surprised or shocked expression. His mouth is slightly open, and his eyes are wide. The background is a dark, textured wall.

WHAT IS
—
SCALE?

A person in a red vest is swimming in a large body of water, with many other swimmers visible in the background. The water is slightly choppy, and the overall scene is somewhat hazy.

— Handling —
spikes within
— system workload —

...WRAPPING UP...





...WRAPPING UP...

[GITHUB.COM/GODADDY/WAREHOUSE.AI](https://github.com/godaddy/warehouse.ai)

[GITHUB.COM/GODADDY/CARPENTERD](https://github.com/godaddy/carpenterd)

[GITHUB.COM/WAREHOUSEAI](https://github.com/warehouseai)

SPECIAL THANKS TO JARRETT CRUGER

GEOFF WALL, MICHAEL LUTHER, AND

ALL CONTRIBUTORS!



MAY THE SOURCE BE WITH YOU

ICONS CREATED BY DINOSOFT LABS FROM THE NOUN PROJECT