

**CHEATING GALL'S LAW
HOW WE SPLIT A
MONOLITH
AND LIVED TO TELL THE TALE**

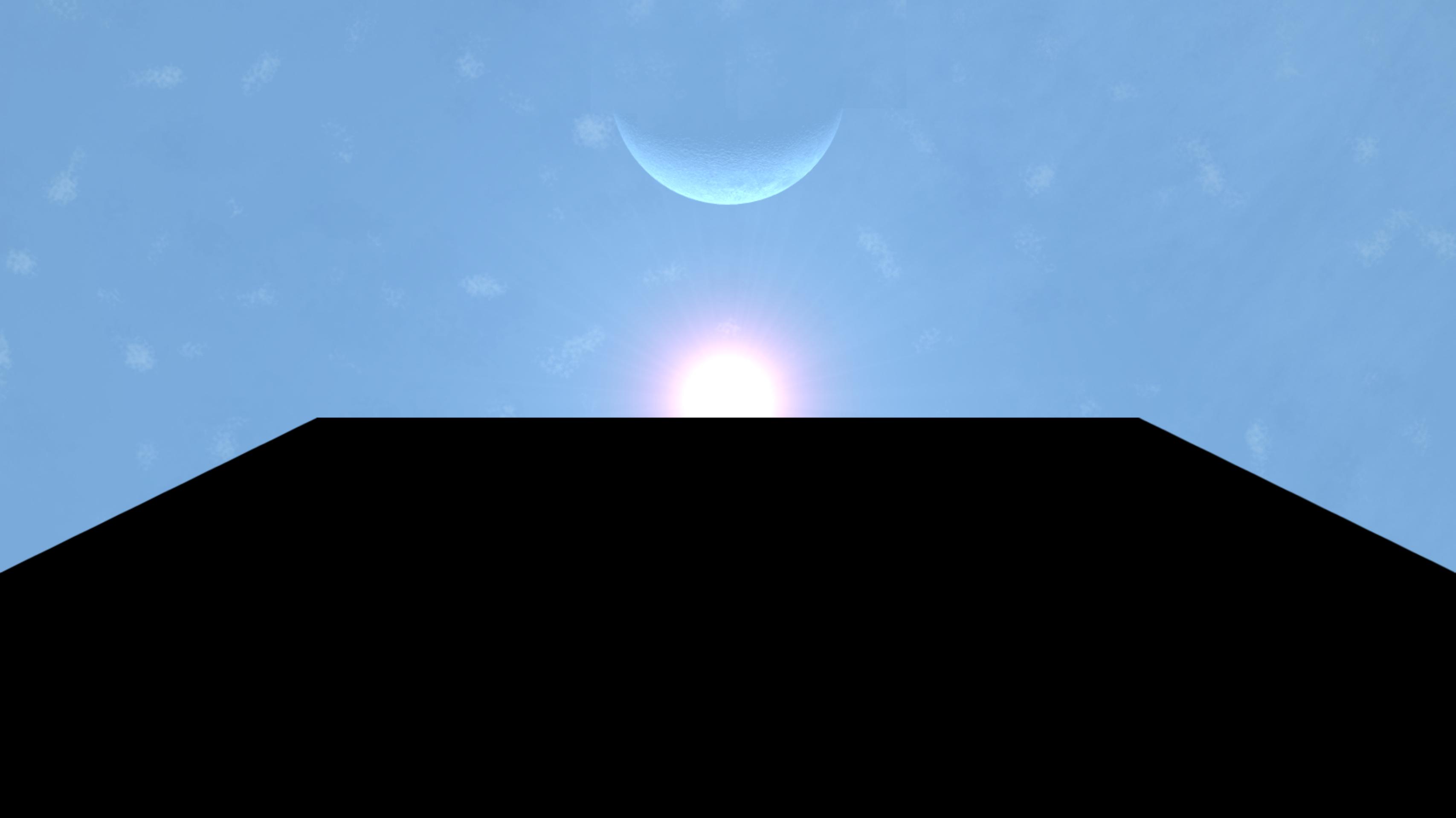


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CTO, 
@ASELDO

GALLO'S LAW
A COMPLEX SYSTEM THAT WORKS IS
INVARIABLY FOUND TO HAVE EVOLVED
FROM A SIMPLE SYSTEM THAT WORKED.

SYSTEMANTICS: HOW SYSTEMS REALLY WORK AND HOW THEY FAIL

**STARTING SIMPLE
OFTEN MEANS STARTING WITH A
MONOLITH**



MONOLITH

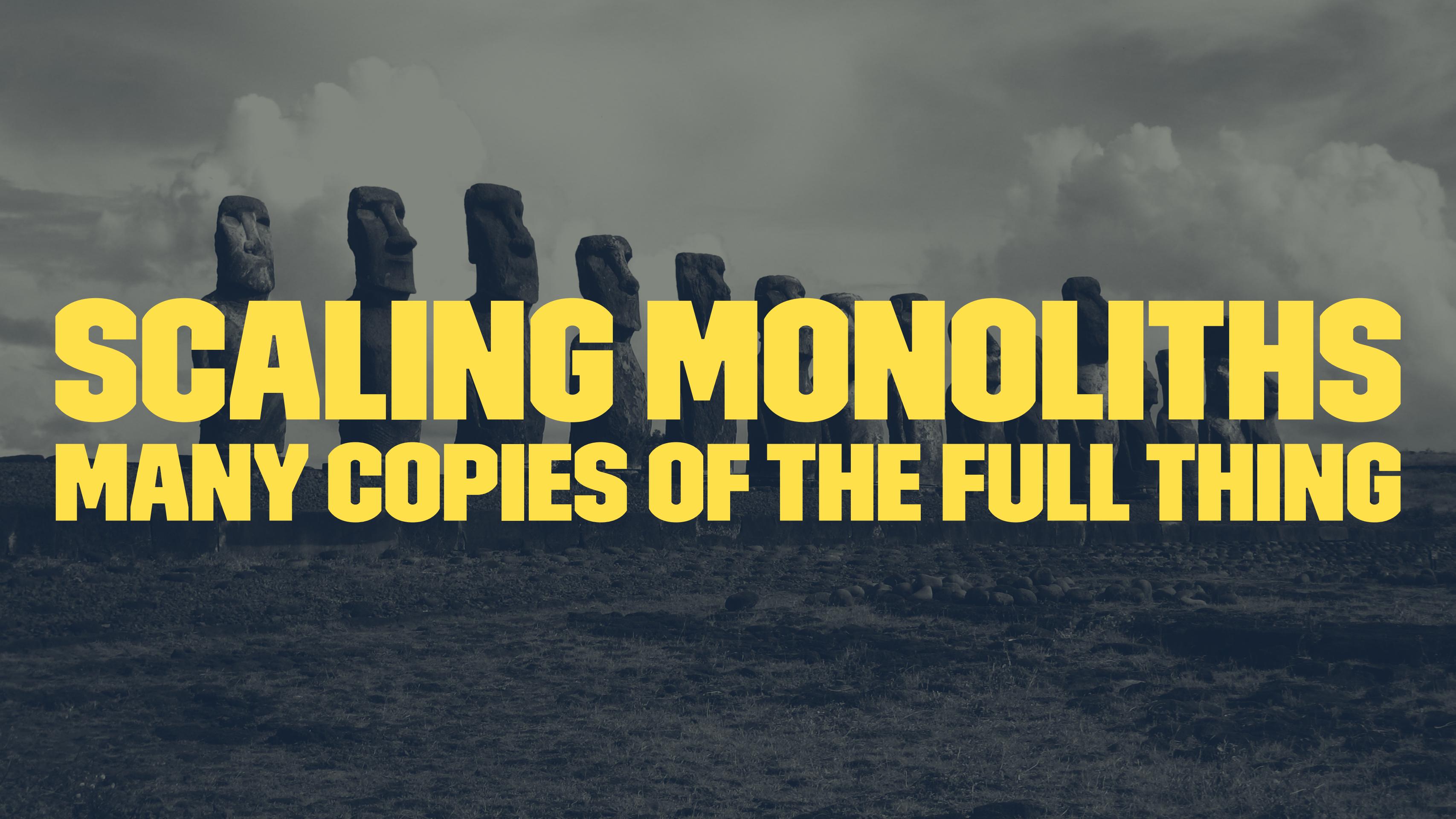
EVERYTHING IN ONE PROCESS

**MONOLITHS
WORK JUST FINE**

**WHATEVER IT TAKES
TO BUILD A SYSTEM
THAT SATISFIES YOUR USERS**

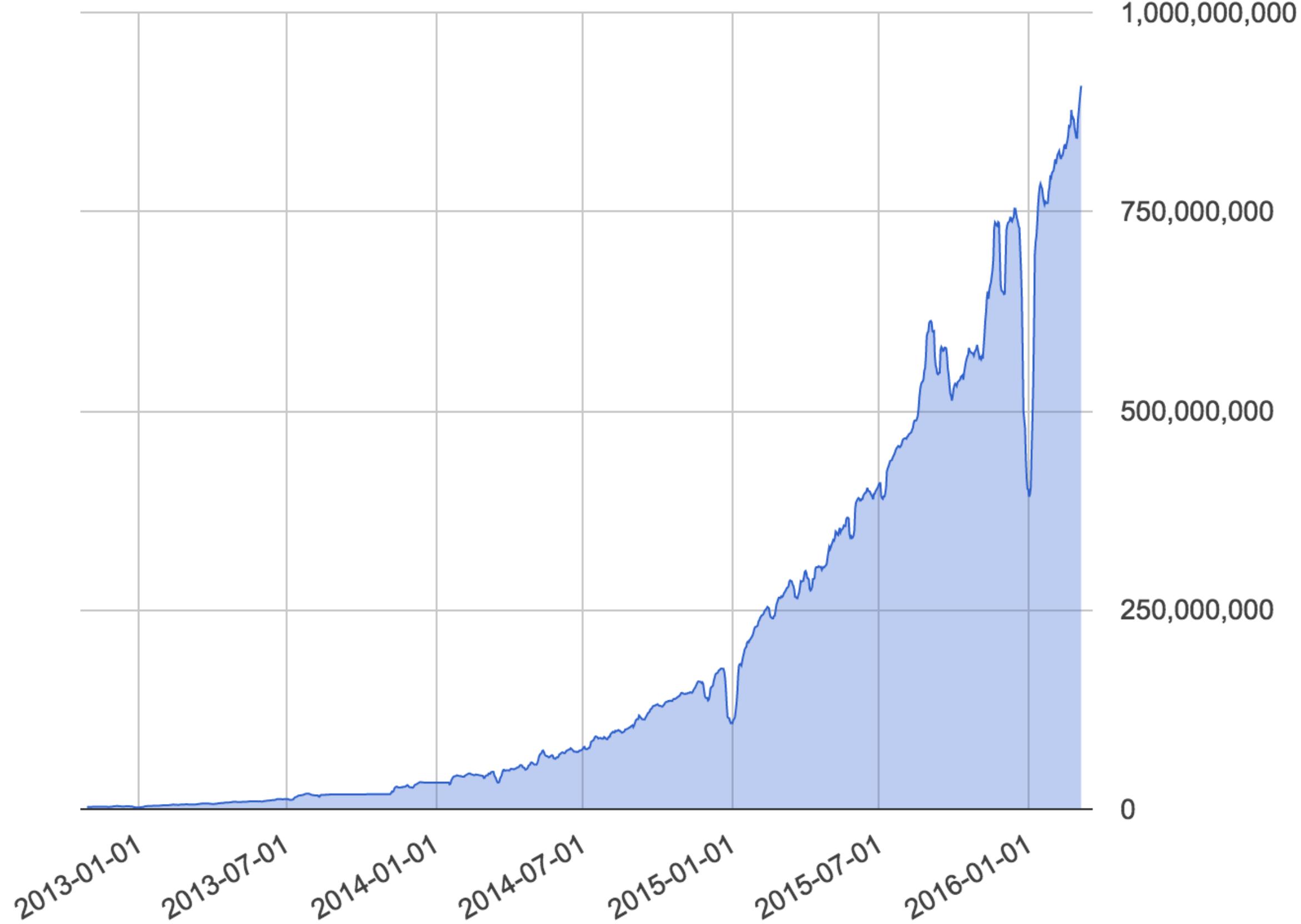
**SUCCESS!
NOW SCALE IT.**



A black and white photograph showing several large, monolithic stone statues (moai) standing in a row on a grassy hillside. The statues are carved from dark rock and have a simple, stylized human form with large heads and no visible arms or hands. They are set against a backdrop of a cloudy, overcast sky.

**SCALING MONOLITHS
MANY COPIES OF THE FULL THING**

Rolling weekly downloads of npm packages



A black and white photograph showing several large stone Moai statues standing in a row on a grassy hillside. The statues are monolithic, carved from a single rock. They have a distinctive style with large, rounded heads and no visible bodies or arms. The background is filled with a dense, cloudy sky.

**EXPONENTIAL MONOLITHS
WERE GOING TO BE EXPENSIVE**

SPLITTING THE MONOLITH

YAY MICROSERVICES?

**YOUR MONOLITH IS COMPLEX.
A SPLIT SYSTEM IS MORE COMPLEX.**

**WHAT DID THAT GALL GUY SAY ABOUT
COMPLEX WORKING SYSTEMS?**

**HOW DO YOU SPLIT
A MONOLITH
SUCCESSFULLY?**

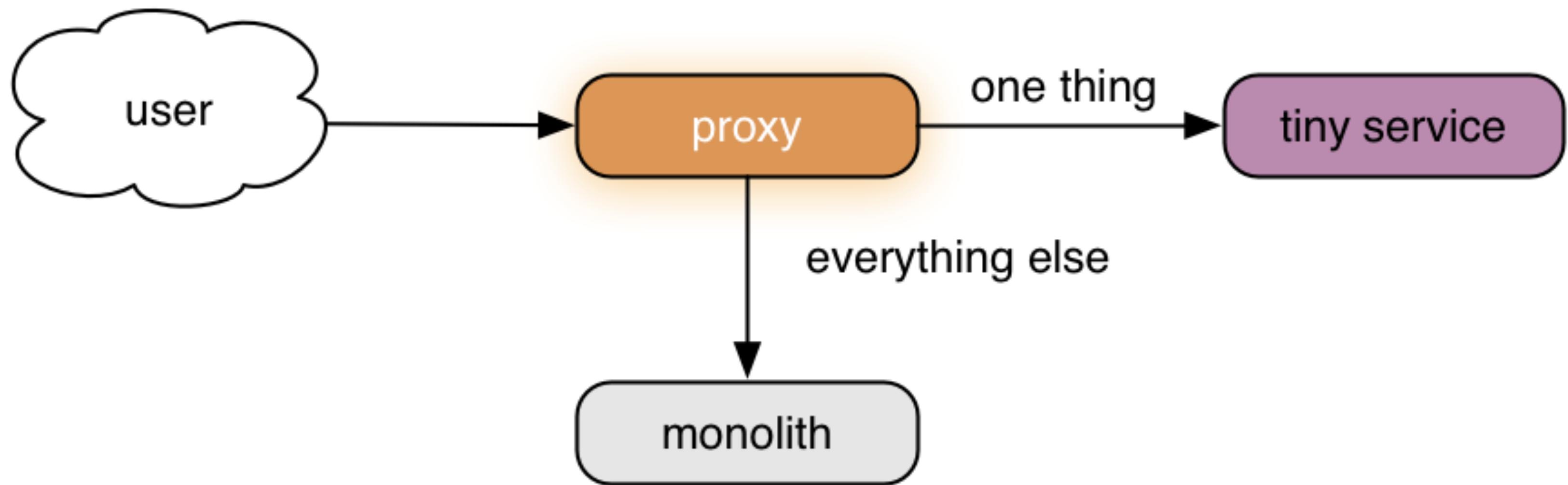
LET'S CHEAT.

**Q: HOW DO YOU CHEAT?
A: BY NOT REWRITING THE WHOLE THING.**

**SLICE OFF A PART OF THE SYSTEM
INTO A MODULE
WITH A CLEARLY-DEFINED INTERFACE**

**THEN WRITE A
SECOND IMPLEMENTATION
OF THAT INTERFACE**

**SEND REQUESTS TO THAT
SECOND IMPLEMENTATION
WITH A PROXY**



NPM'S MONOLITH: EMBEDDED IN COUCHDB

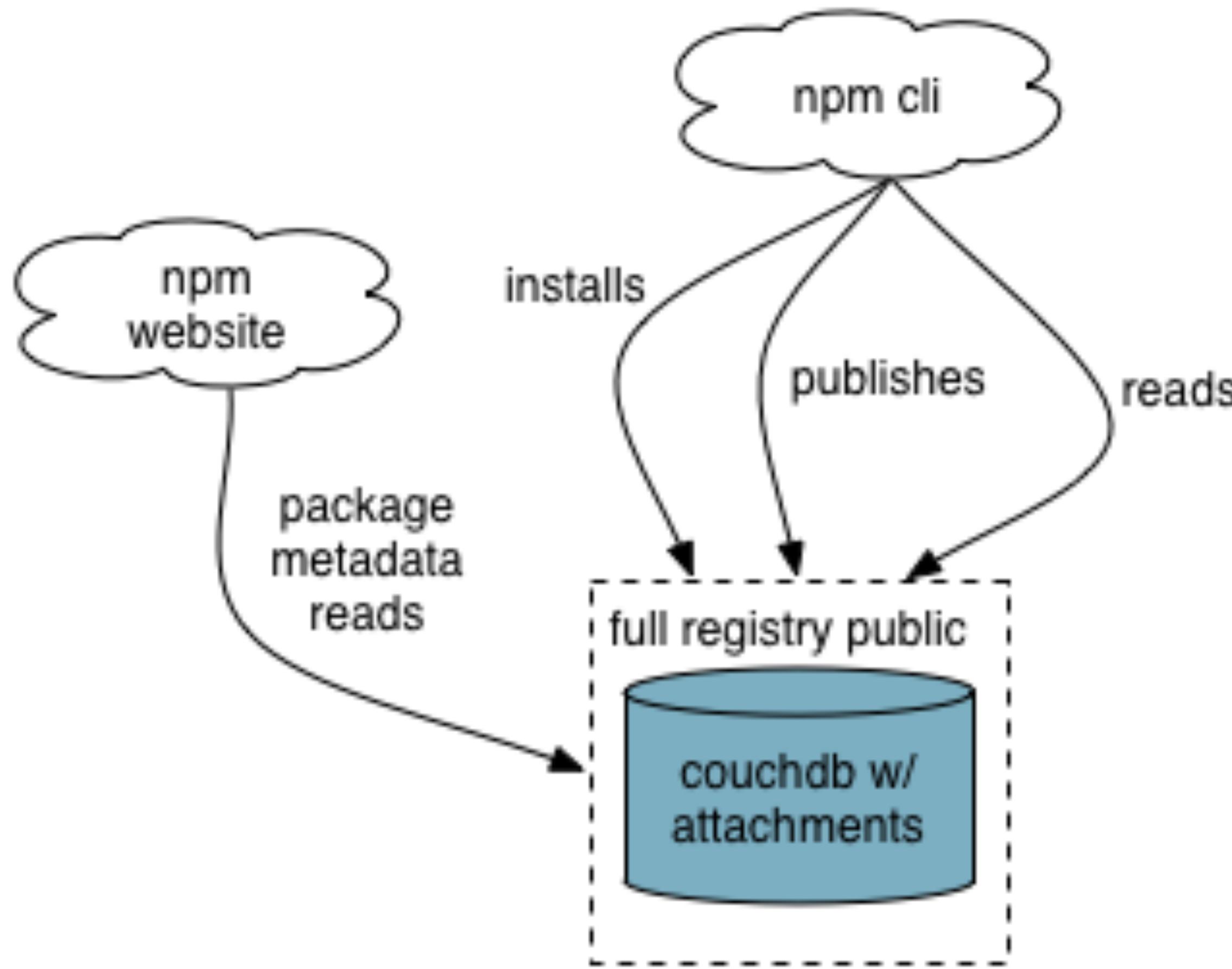
npm
website

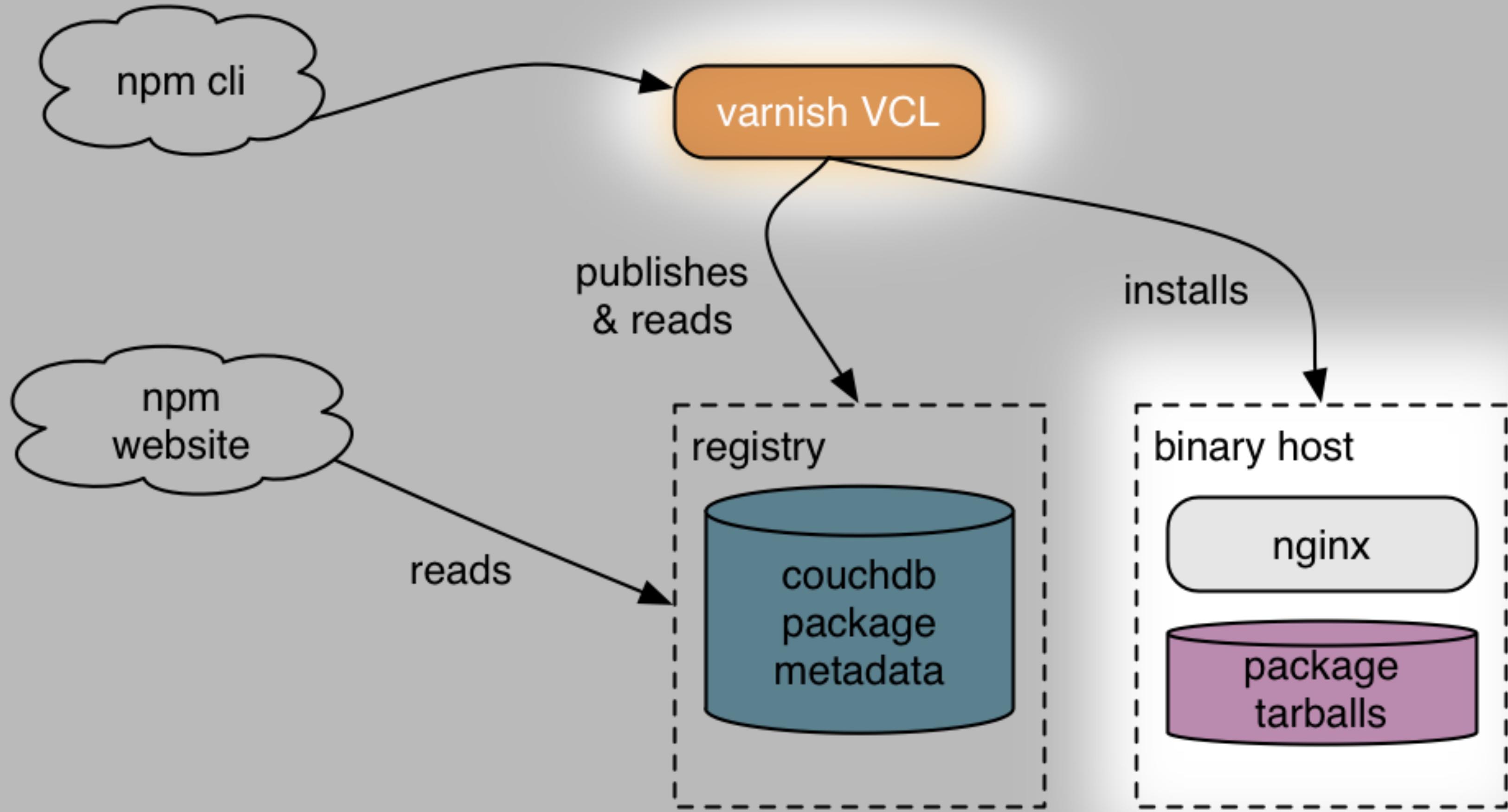
installs

package

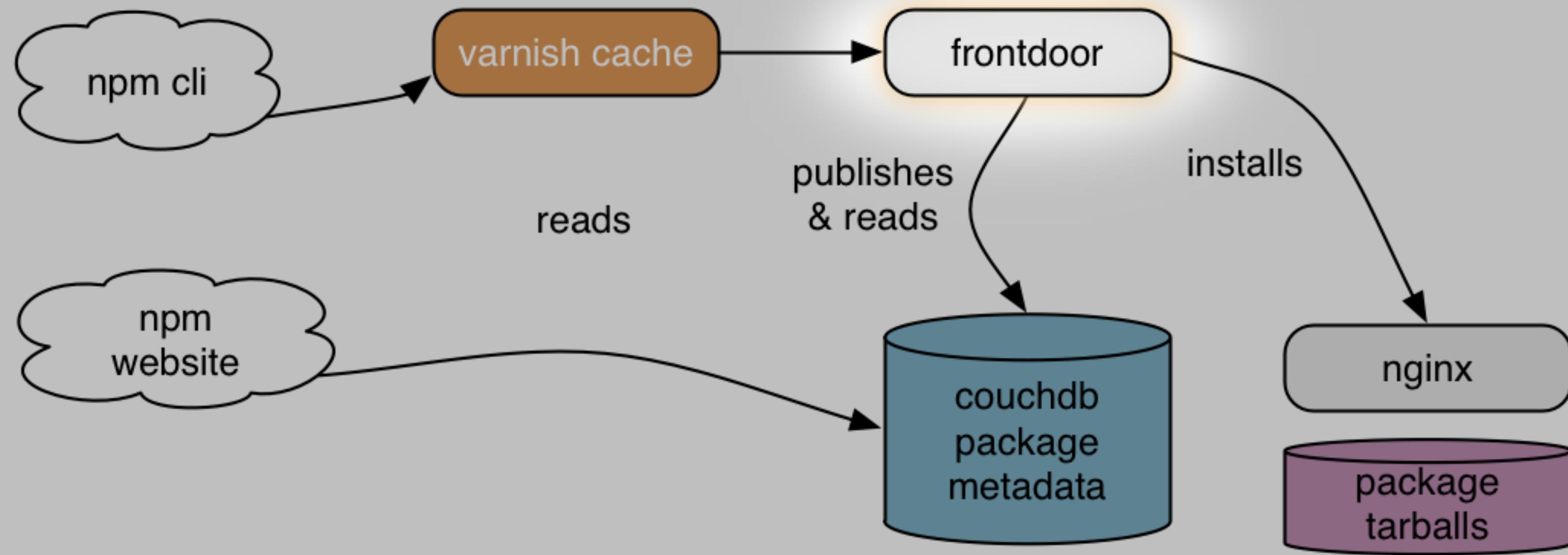
reads

couchdb w/
attachments

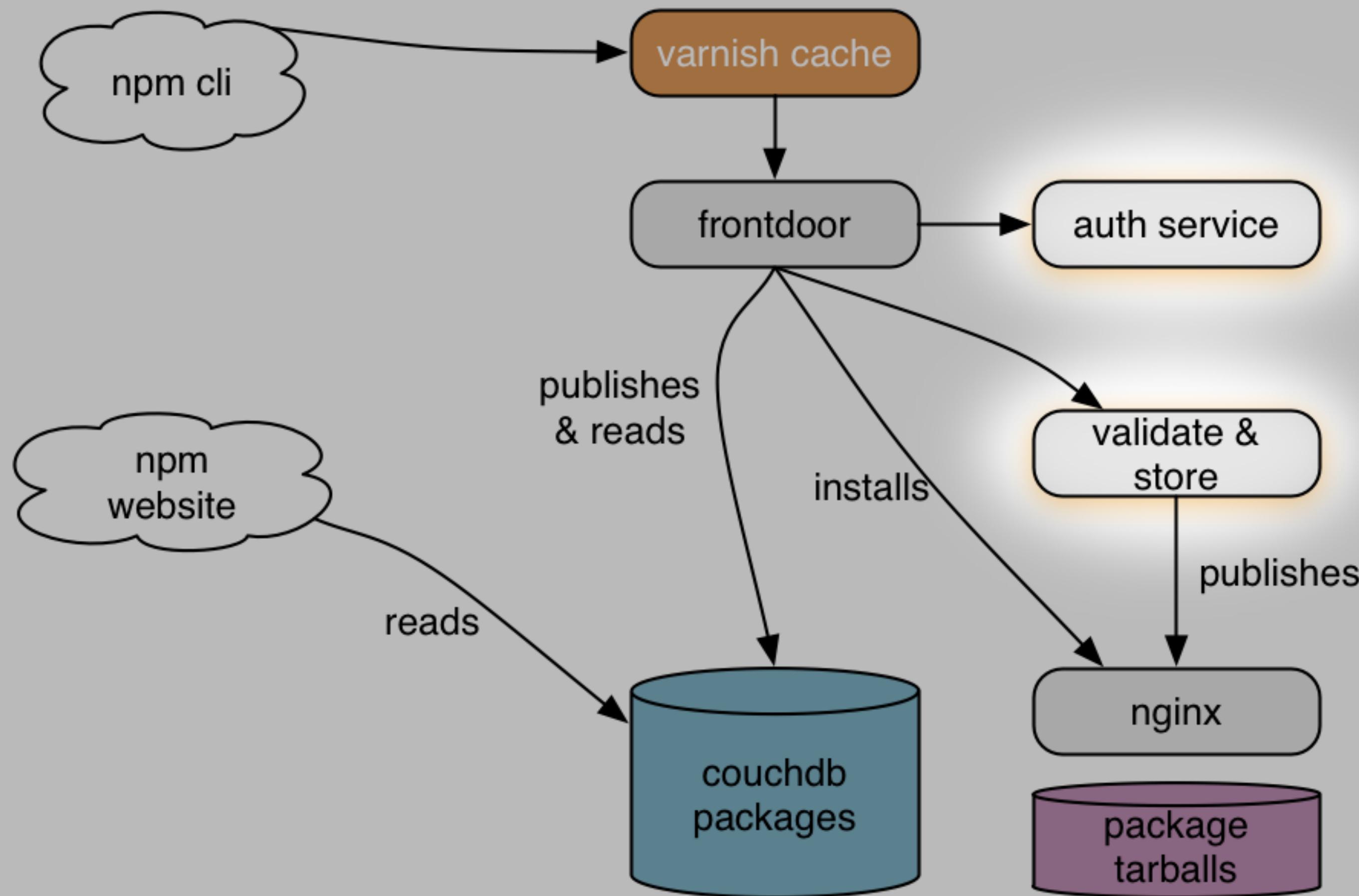




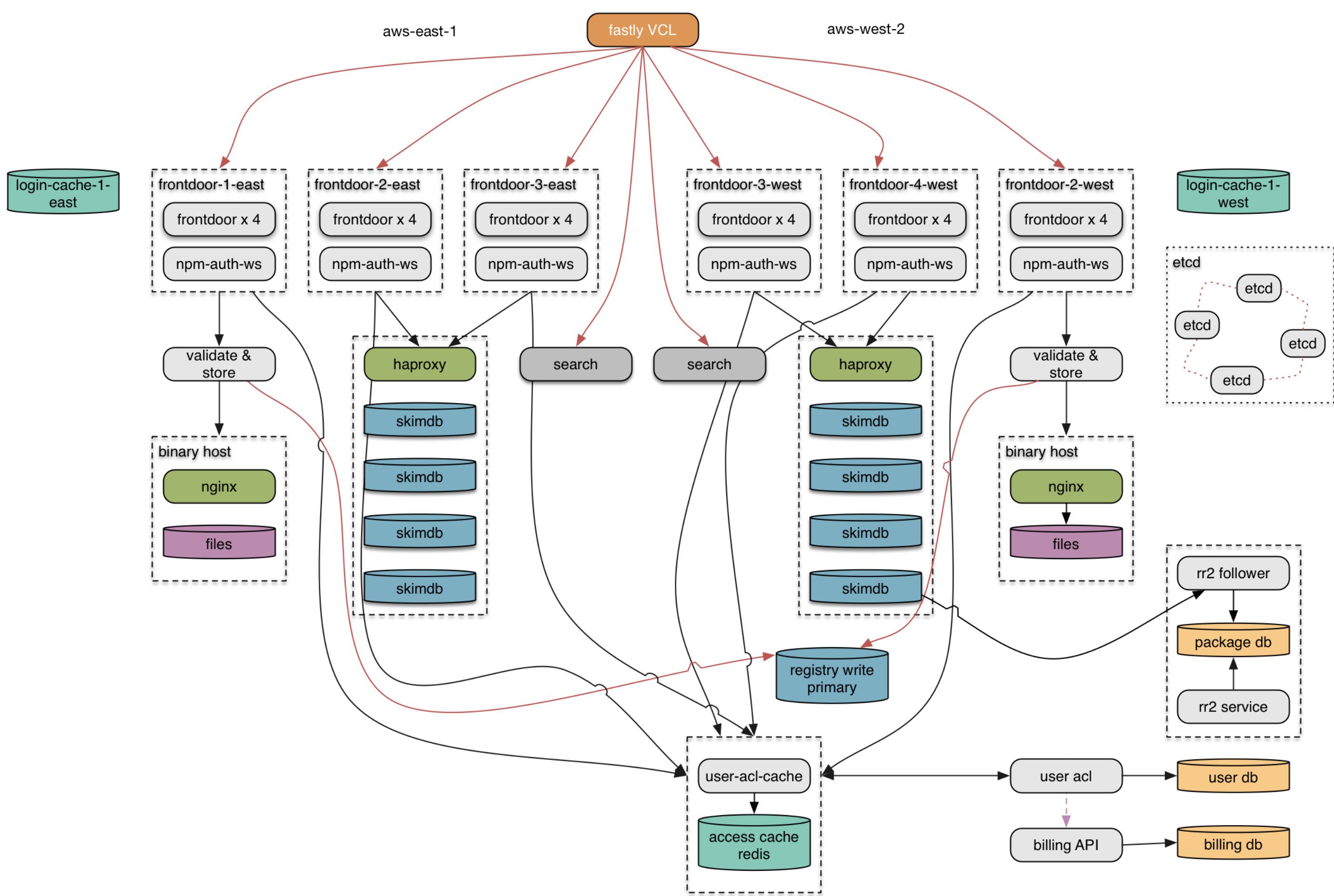
**NOW LET'S MAKE OUR PROXY SMART
REPLACE VARNISH
WITH A MICROSERVICE**

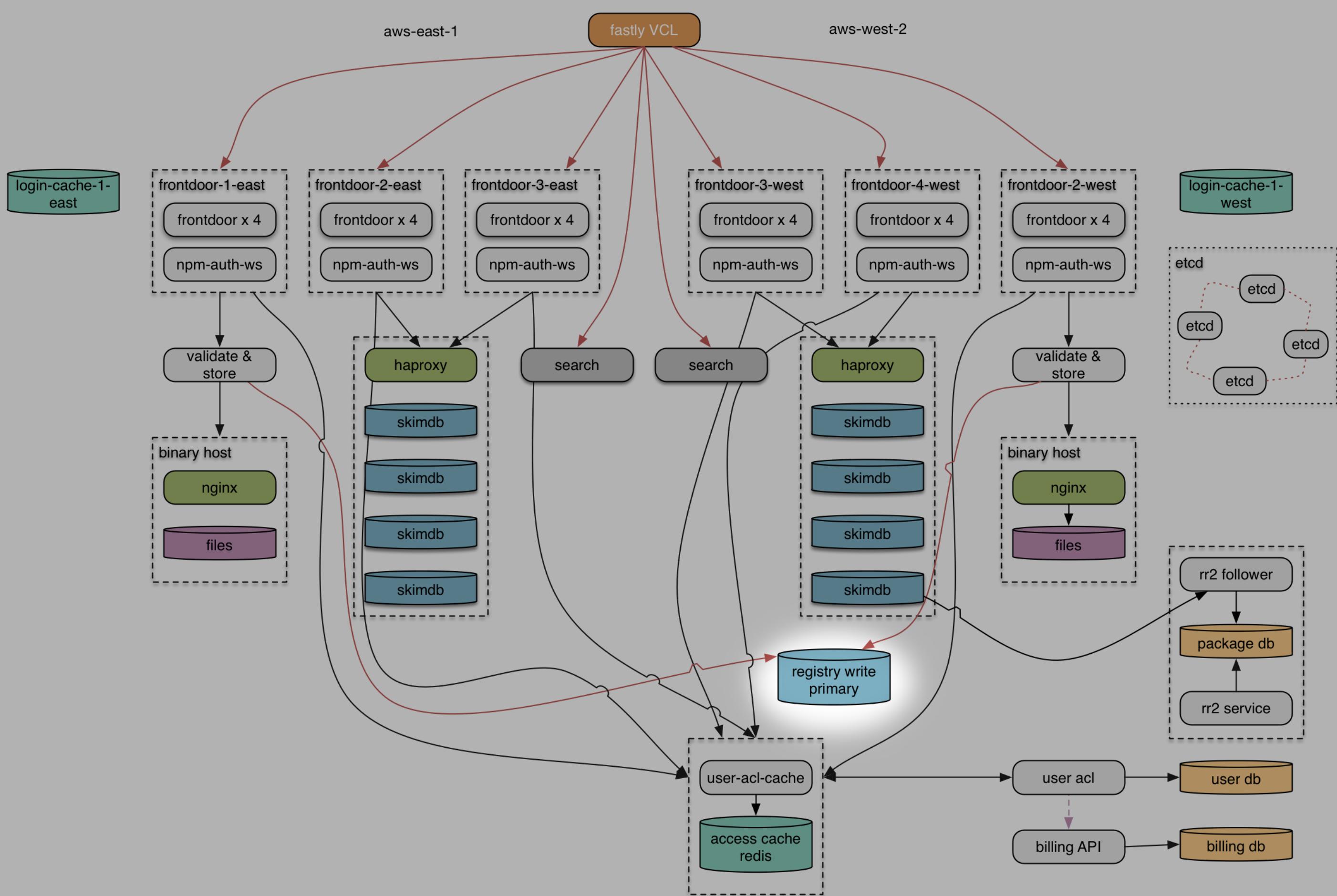


NOW DO IT AGAIN



AND AGAIN





**BEAT GALL'S LAW WITH
MODULARITY
AKA INFORMATION HIDING**

**EACH SERVICE IS A MODULE
A SIMPLE SYSTEM
WHEN VIEWED IN ISOLATION**

**YOU HAVE A WORKING SYSTEM
EVERY STEP OF THE WAY**

**SIMPLE WORKING SERVICE FIRST
SCALE IT LATER**

**RESPECT GALL:
REWRITE IN PIECES**

**USE A PROXY
TO DIVIDE & CONQUER**

BE BOLD

YOU CAN CHANGE YOUR SYSTEM

**NOBODY NOTICED
THAT WE SLOWLY REPLACED
THE ENTIRE NPM REGISTRY**

npm LOVES YOU
npm install -g npm@latest