



THE 12 FACTOR APP

*DevOps Tactics to make
apps cloud-ready*



THE TWELVE-FACTOR APP

“Agile Manifesto for DevOps”

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I. Codebase

One codebase tracked in revision control, many deploys

II. Dependencies

Explicitly declare and isolate dependencies

III. Config

Store config in the environment

IV. Backing services

Treat backing services as attached resources

V. Build, release, run

Strictly separate build and run stages

VI. Processes

Execute the app as one or more stateless processes

VII. Port binding

Export services via port binding

VIII. Concurrency

Scale out via the process model

IX. Disposability

Maximize robustness with fast startup and graceful shutdown

X. Dev/prod parity

Keep development, staging, and production as similar as possible

XI. Logs

Treat logs as event streams

XII. Admin processes

Run admin/management tasks as one-off processes

“I believe the common denominator of the Universe is not harmony, but *chaos*, *hostility* and *murder*.”

- Werner Herzog,
“Grizzly Man”



Photo Credit: jbach via Wikimedia Commons

Pets are... problematic.

You know their name.

They remember you.

They are special.

They have specific care
& feeding instructions.

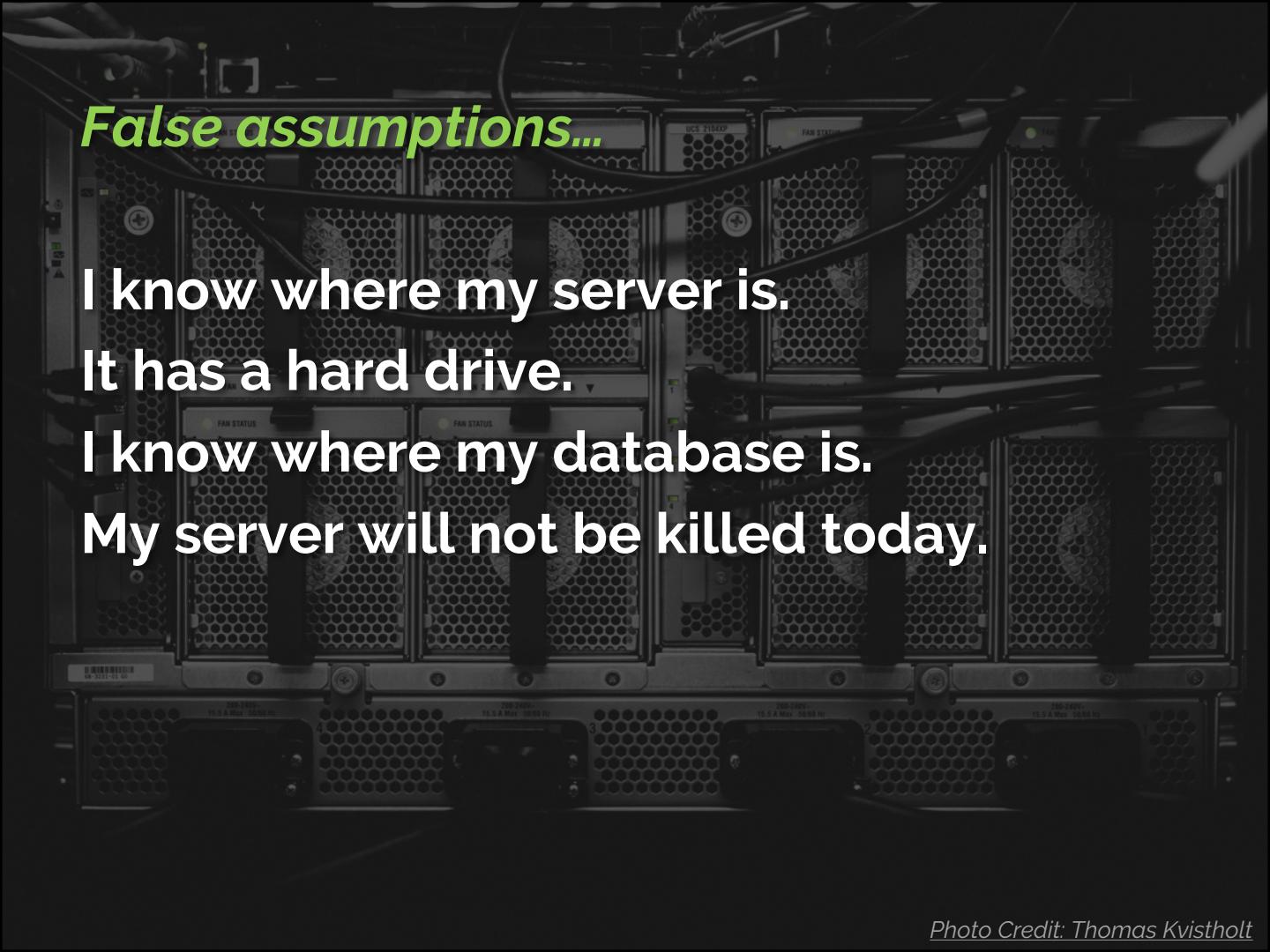
**You would prefer
not to kill them.**

Livestock, not pets.



- ✓ Numbered, not named
- ✓ Interchangeable
- ✓ Designed to be raised and managed
- ✓ Lifecycle serving a purpose

Photo Credit: Kriss MacDonald

A dark server rack filled with server units and power supplies. The units have ventilation grilles and small status indicator lights. Some labels like "FAN STATUS" and "UCS 2104XP" are visible.

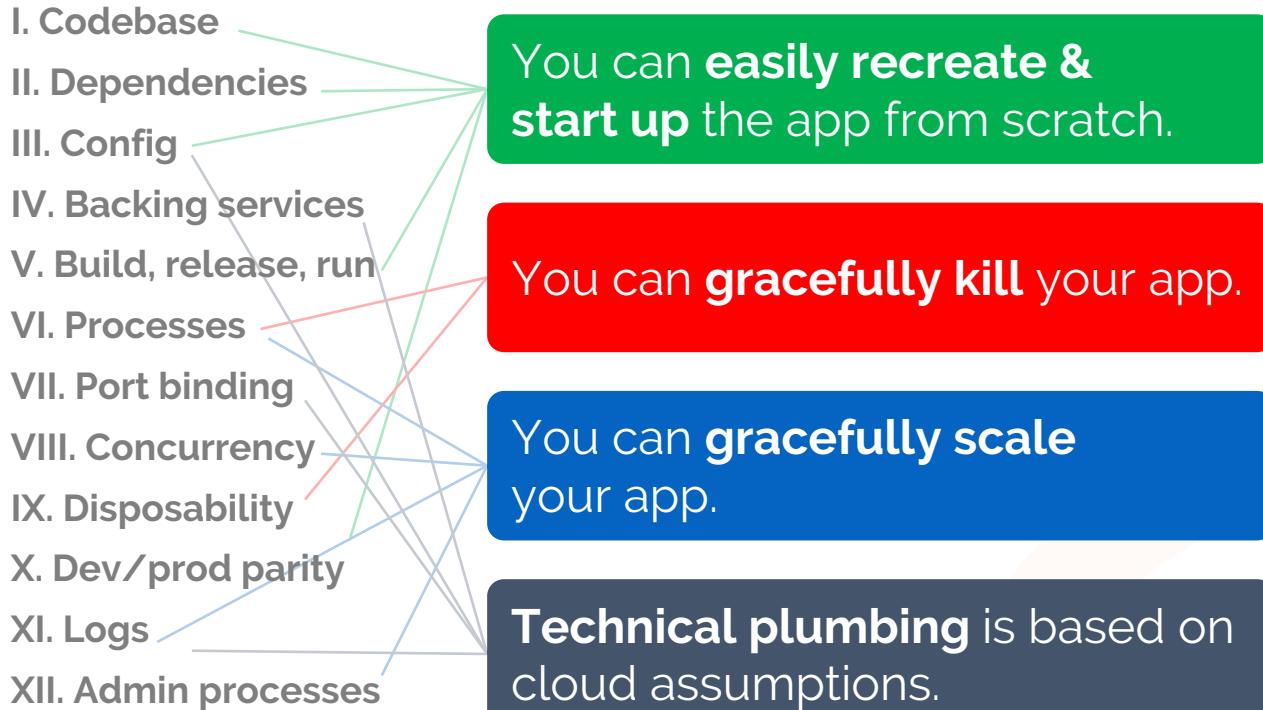
False assumptions...

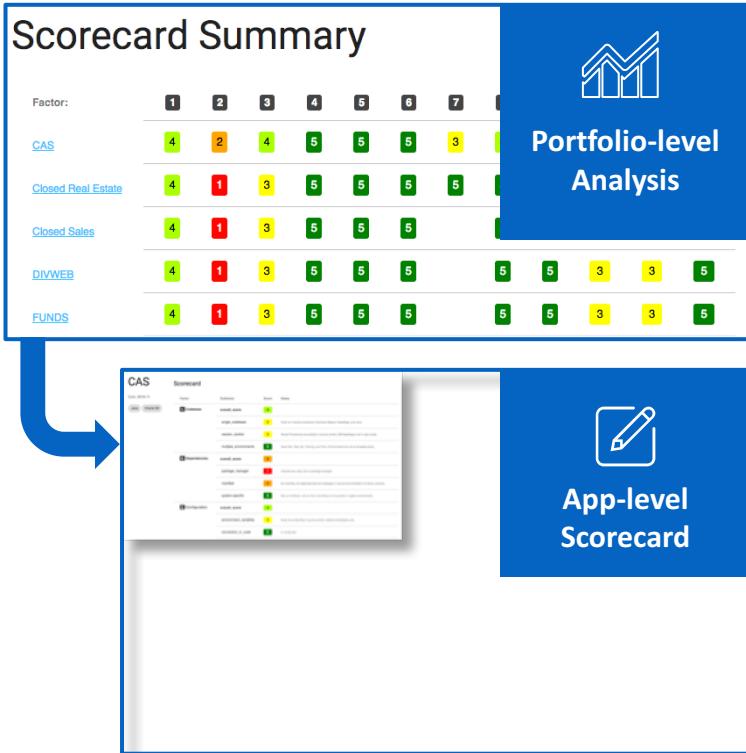
I know where my server is.

It has a hard drive.

I know where my database is.

My server will not be killed today.





Example usage:

We've used the 12 factors as a framework for application cloud enablement.

12factor.net

the source

stsiinc.com

slides, additional articles

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THANK YOU

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