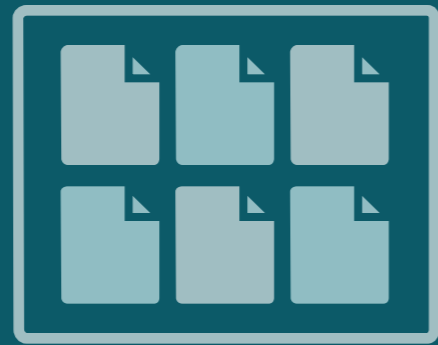


THE TWELVE-FACTOR APP METHODOLOGY

A METHODOLOGY FOR
BUILDING SOFTWARE-AS-
A-SERVICE APPS

CODEBASE

**ONE CODEBASE TRACKED
IN REVISION CONTROL,
MANY DEPLOYS**



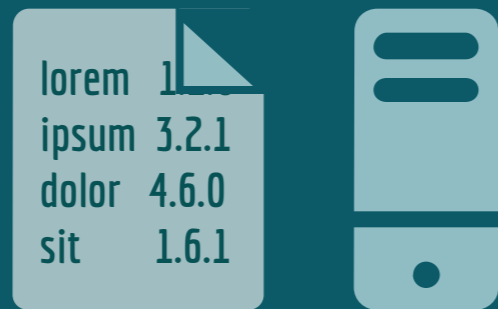
CODEBASE



DEPLOYMENTS

DEPENDENCIES

**EXPLICITLY DECLARE AND
ISOLATE DEPENDENCIES**



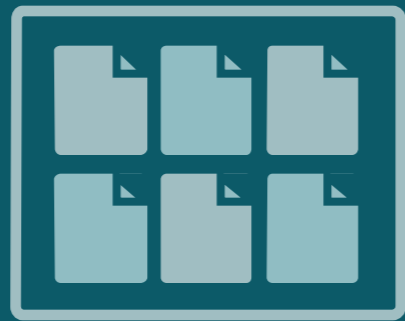
DECLARE



ISOLATE

CONFIG

STORE CONFIG IN THE ENVIRONMENT



```
db_user=...  
db_pswd=...  
  
api_url=...
```



BACKING SERVICES

**TREAT BACKING SERVICES
AS ATTACHED RESOURCES**



`postgresql://localhost/test?user=fred&password=secret`



`smb://myserver.mydomain.com/Sharepoint/catpics`



`https://api.authenticator.com:9876/app/97yt6772`



BUILD, RELEASE, RUN

**STRICTLY SEPARATE BUILD
AND RUN STAGES**



BUILD



RELEASE



RUN

PROCESSES

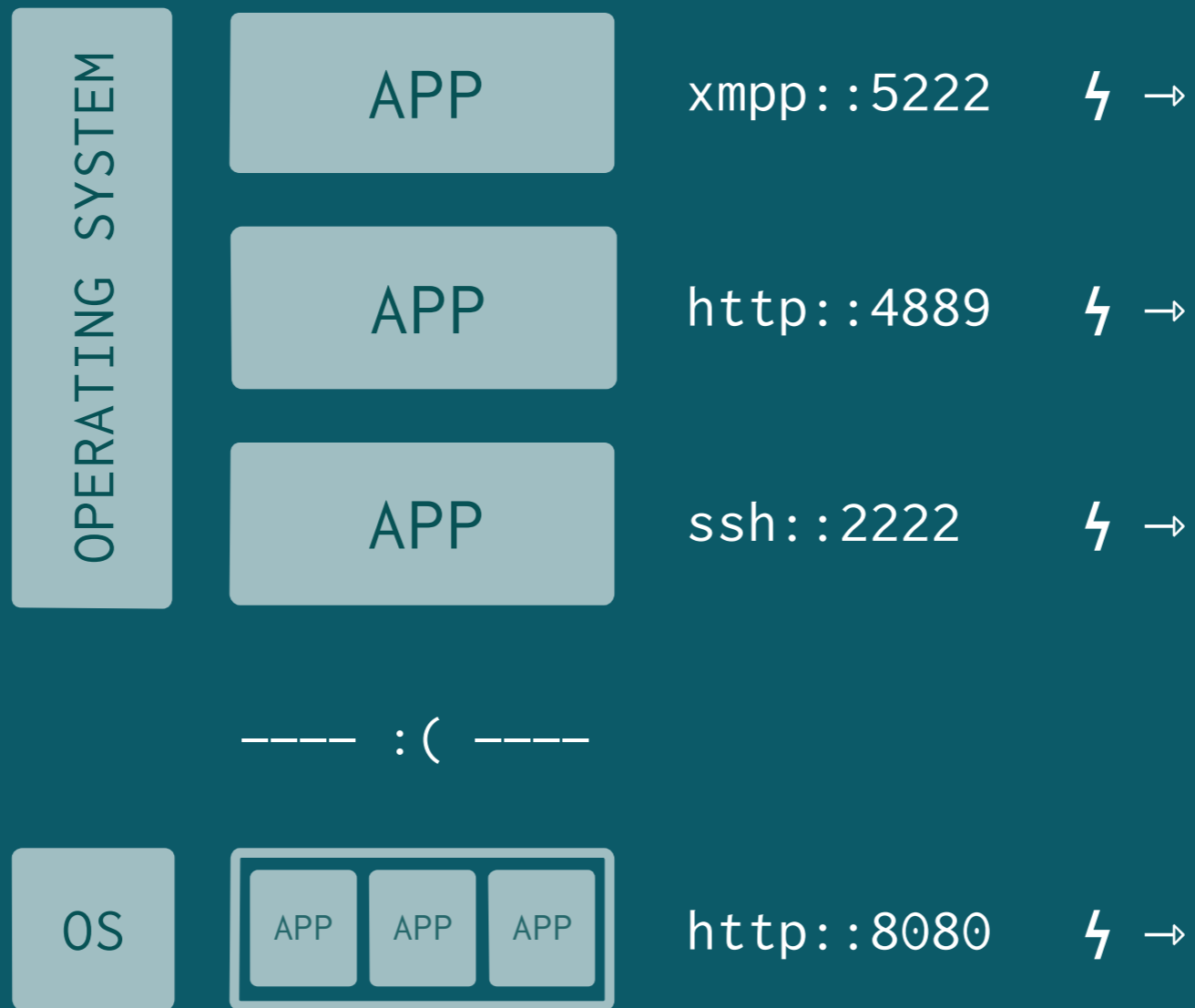
**EXECUTE THE APP AS ONE
OR MORE STATELESS
PROCESSES**

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* ITS A STATE JOKE

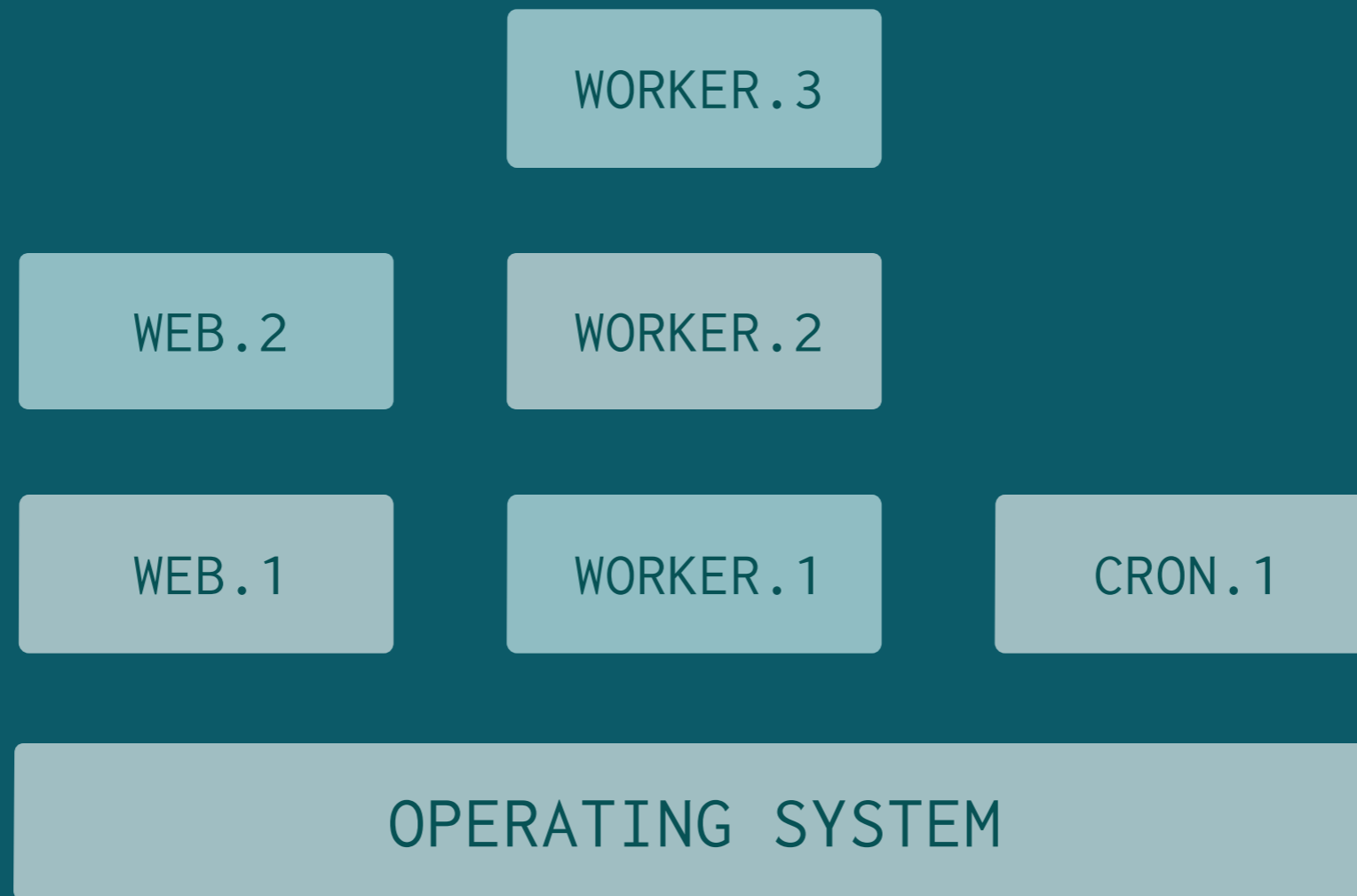
PORT BINDING

**EXPORT SERVICES VIA
PORT BINDING**



CONCURRENCY

**SCALE OUT VIA THE
PROCESS MODEL**



DISPOSABILITY

**MAXIMIZE ROBUSTNESS
WITH FAST STARTUP AND
GRACEFUL SHUTDOWN**



APP

x_x

APP

APP

x_x

DEV/PROD PARITY

**KEEP DEVELOPMENT,
STAGING, AND PRODUCTION
AS SIMILAR AS POSSIBLE**

OSX
APACHE
MYSQL



DEV

CENTOS
APACHE
MARIADB



STAGE

REDHAT
NGINX
ORACLE



PROD

BUILDING AN EVEN MORE PERFECT ASSHOLE PARADE

LOGS

**TREAT LOGS AS EVENT
STREAM**

APP. 1

APP. 2



ADMIN PROCESSES

**RUN ADMIN/MANAGEMENT
TASKS AS ONE-OFF
PROCESSES**



db:migrate ⚡ →



lein repl ⚡ →



<http://12factor.net>