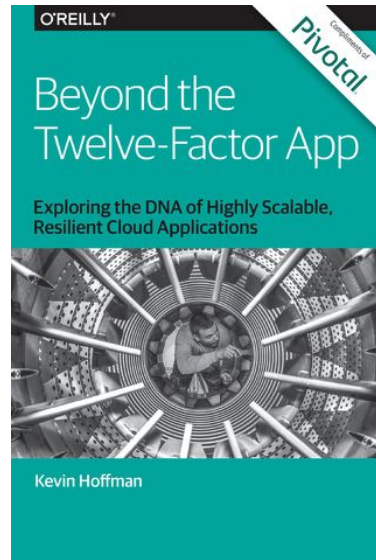
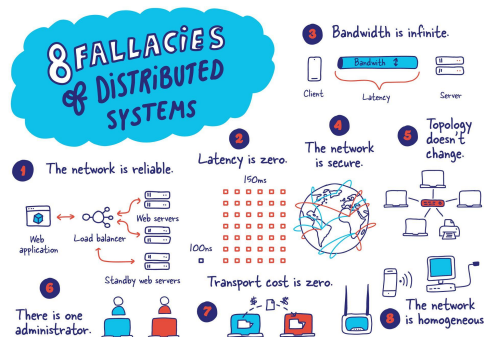


Developing Web Apps

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Developing Web Apps

- A methodology for building web apps described [here](#) - **read it**, there's no slides!
- Croatia translation available [here](#).
- Good video explanation: [Twelve Factor App Methodology Explained](#)
- If you want to know more:
 - [Fallacies of Distributed Systems](#) ([video](#))
 - [A pattern language for microservices](#) ([video](#), [more videos](#))
 - [Beyond the Twelve-Factor App](#)



Twelve Factor App

- **Codebase:** one codebase tracked in revision control, many deploys (git)
- **Dependencies:** explicitly declare and isolate dependencies (requirements.txt)
- **Config:** store config in the environment (export DB_PASS=secret)
- **Backing services:** treat backing services as attached resources (DB, cache, ...)
- **Build, release, run:** strictly separate build and run stages (CI, CD)
- **Processes:** execute the app as one or more stateless processes (persist data)
- **Port binding:** export services via port binding (127.0.0.1:8080)
- **Concurrency:** scale out via the process model (ELB)
- **Disposability:** maximize robustness with fast startup and graceful shutdown
- **Dev/prod parity:** keep development, staging, and production as similar as possible
- **Logs:** treat logs as event streams (Elastic Stack: Elasticsearch, Kibana, Logstash)
- **Admin processes:** run admin/management tasks as one-off processes (e.g. DB migration script: docker run -it --rm myapp python manage.py migrate)