Chapter 11
Managing Infrastructure and Environments

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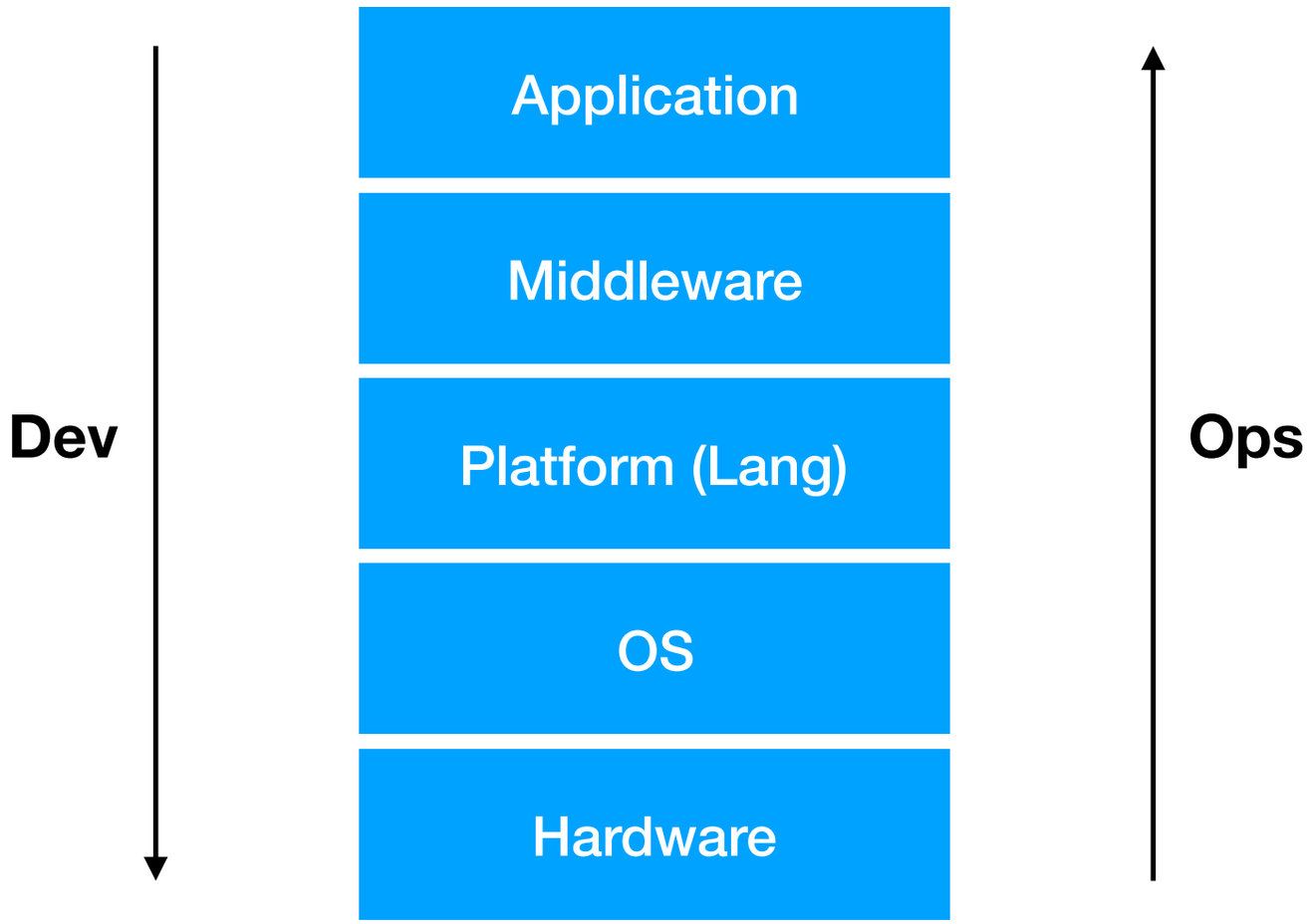
這是一本 2010 年出版

的書，所以...

Perspective



How’s your platform/ middleware worked?

- single processor or multi processor
- single thread or multi thread
- blocking I/O or non-blocking I/O
- GC
- crash / restart / reload

Managing Infrastructure Services

- CPU
- Memory
- Disk
    - File System

Managing Infrastructure Services

- Network
  - DNS
  - DHCP
  - CIDR
  - Routing
  - Firewall
  - ACL

Multihomed Systems

"Multihoming is the practice of connecting a host or a computer network to more than one network. This can be done in order to **increase reliability or performance**."

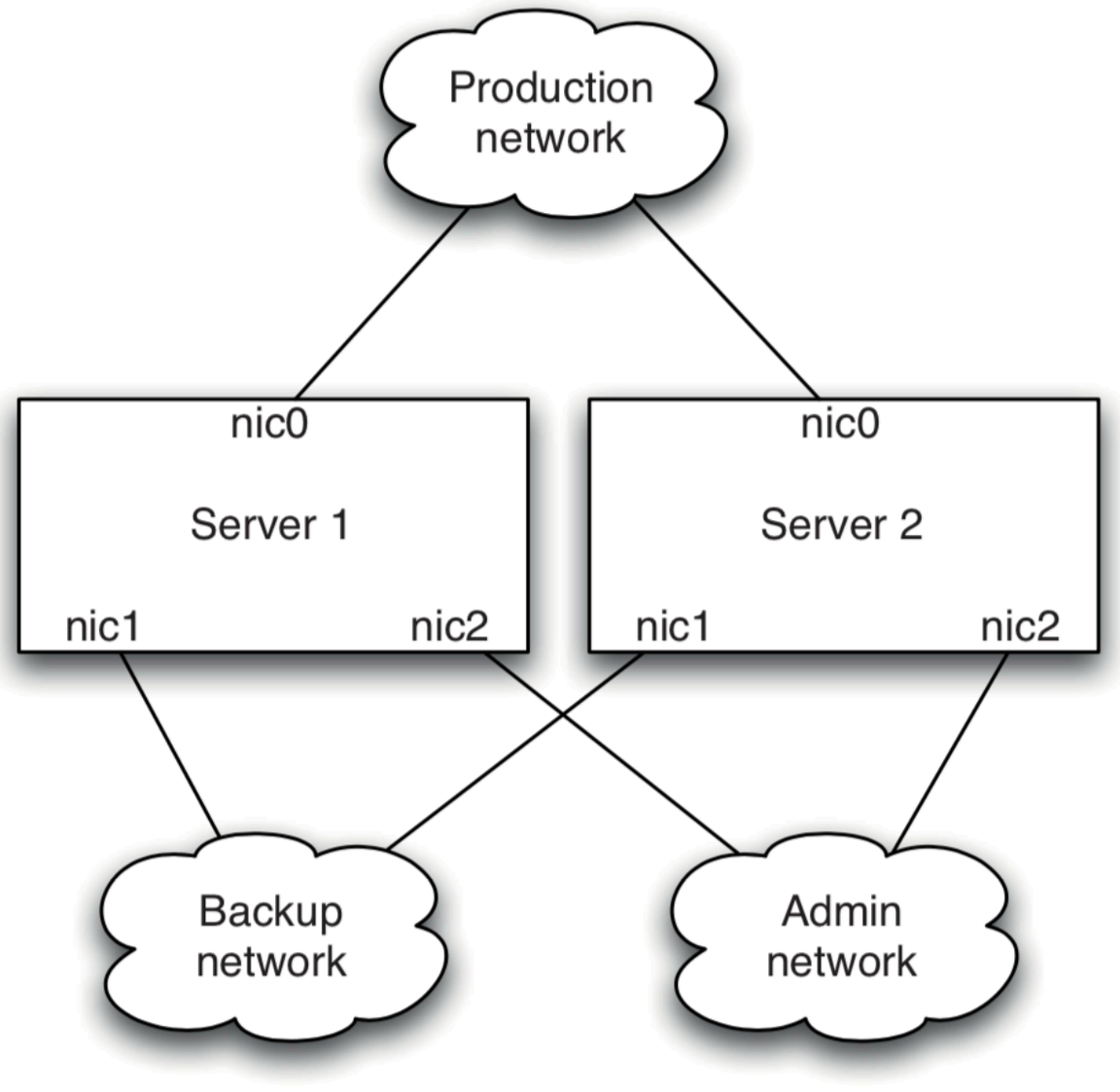


Figure 11.3 *Multihomed servers*

Virtualization

- Managing Virtual Environments
  - Vagrant
  - Chef / Puppet / Ansible
- Virtual Environments and the Deployment Pipeline
- Highly Parallel Testing with Virtual Environments
  - Difference OS

Deployment Pipeline

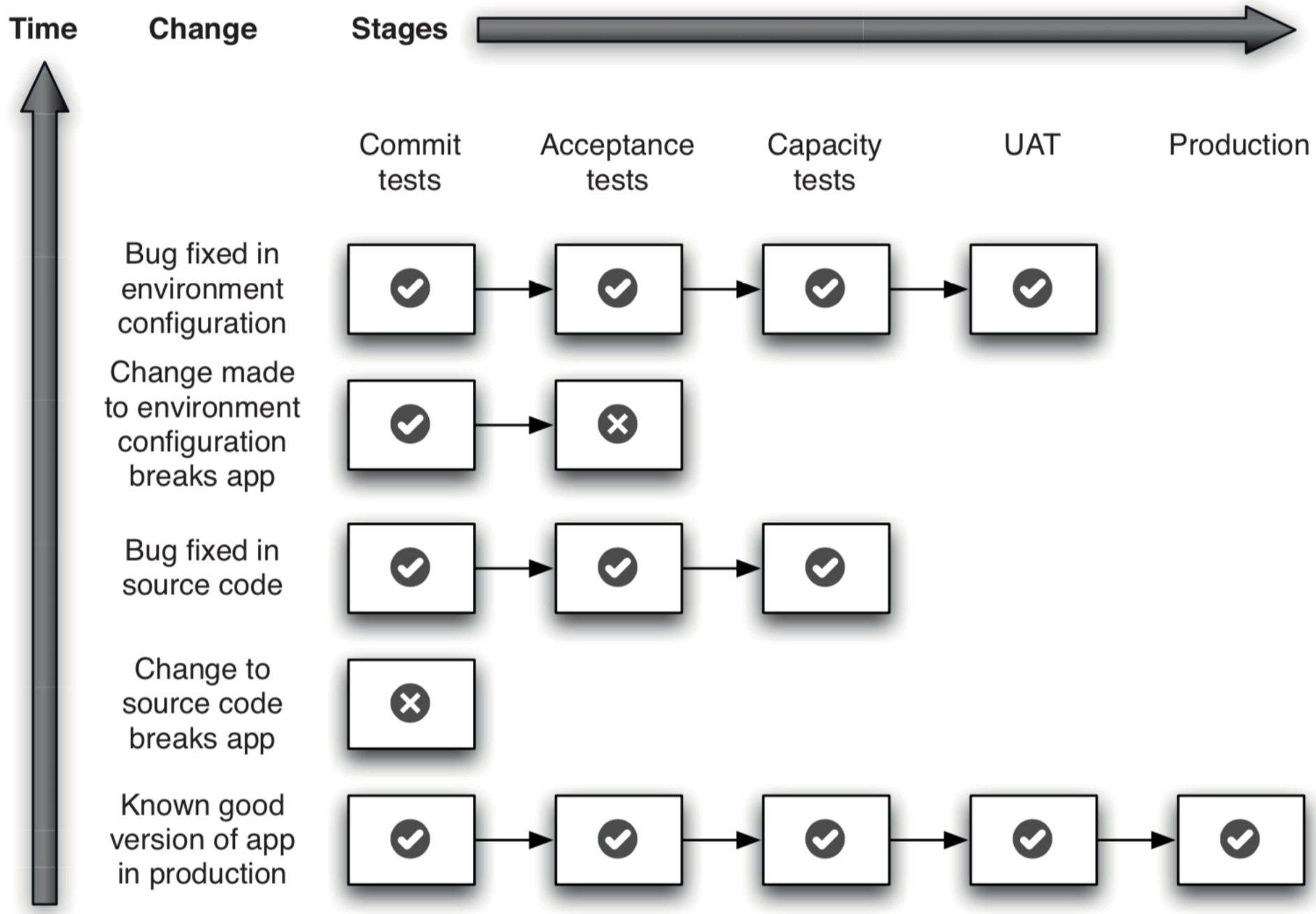


Figure 11.7 *Changes passing through the deployment pipeline*

Monitoring Infrastructure and Applications

- Collecting Data
- Logging
    - ELK / Graylog / Splunk
- Creating Dashboards (metrics)
- Behavior-Driven Monitoring (?)
    - Behavior Driven Development

Cloud Computing

- 雲端上的基礎設施
- 雲端上的平臺
  - IaaS / PaaS / SaaS / FaaS / Everything as a Service
- ~~不存在普遍適用~~ (One Size Doesn’t Have to Fit All)
  - Hybrid cloud
  - On-premises integrate with cloud
- 對雲端計算的批評

Cloud Computing

- What do we want?
  - Availability
  - Reliability
  - Scalability
  - Tons of SaaS integration
- Infrastructure as Code
  - CloudFormation / Terraform

Cloud-Native

- 12 Factor
- Horizontal scalability
- Pets vs Cattle

Containerization...