Containers Change Everything

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My Name is Anne and I am a Late Adopter

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Bare Metal
Strength: Power

Stannis Baratheon

Weakness: Inflexibility, Spin-up Speed, Server Density (=Resource Utilization)

artwork: https://www.facebook.com/graphicck

Virtual Machines
Strength: Flexibility, Agnosticism, Security, Networking

Weakness: Slightly overweight

artwork: https://www.facebook.com/graphicck

Containers
Strength: Lightweight, Fast

Daenerys Targaryen

Weakness: Unseasoned, Security, Networking

Speed!

Backstory

Google, Netflix

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- Lower cost
  - high server density
- Lower maintenance
  - self-healing

70+% Utilization
vs
10-15%

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- $1M/Year Hosting @ 10% Utilization

  - 50% Utilization Saves $800K

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- Cunning Orchestration
  - bin packing
  - fault tolerance
- Clever scaling
  - microscaling

Clever orchestrators: Mesos/Marathon, Kubernetes, Nomad, Swarm

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Clever scaling?
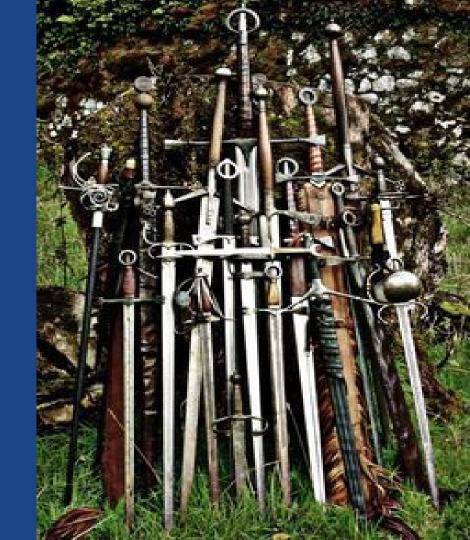
Microservices

Autoscaling->Microscaling

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Realtime

1 sec per slice

- Containers/Docker
- Orchestrators
- Microscalers

- Microservices
- Cattle Not Pets

- Lower cost
  - high server density
- Lower maintenance
  - self-healing
- More than the humanly achievable

Summary

- Containers already won @ Google & Netflix
- Lower maintenance & lower costs
- Ops requirements: Docker (or alternative), orchestrator, microscaling
- Architecture requirements: microservices, cattle not pets

Questions for me?

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Questions for you

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