### aws re: Invent

#### ARC202-R

### Architecting for the cloud

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#### Agenda

- Design for failure and nothing fails
- Build security in every layer
- Leverage different storage options
- Implement elasticity
- Think parallel
- Loose coupling sets you free
- Don't fear constraints

## Design for failure and nothing fails





### Design for failure and nothing fails

Redundancy

Detect failure

Durable data storage

Automate multi-data-center resilience

## Build security in every layer





#### Build security in every layer

Defense in depth

Offload security responsibility to AWS

Reduce privileged access

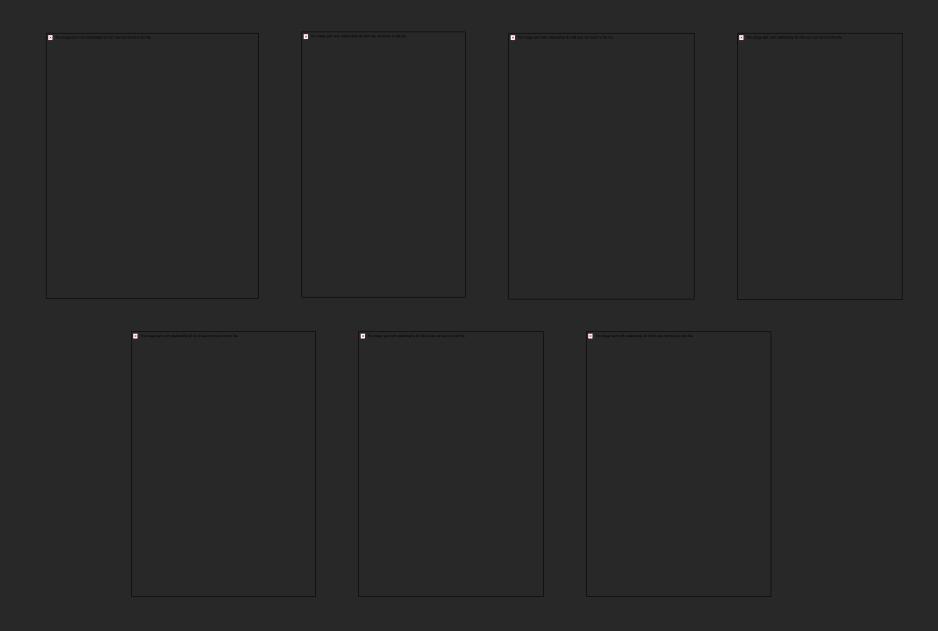
Real-time auditing

### Leverage different storage options





### Leverage different storage options



## Implement elasticity





### Implement elasticity

Bootstrapping or golden Image

Livestock, not pets

Reboot, relaunch = Who cares

# Think parallel





### Think parallel

1 computer for 24 hours = 24 computers for 1 hour

Smoother scaling

Smaller blast radius for failure

Most software has scaling limits separate from hardware

### Loose coupling sets you free





#### Loose coupling sets you free

Well-defined interfaces

Service discovery

Asynchronous unless impossible

Graceful failure

### Don't fear constraints





#### Don't fear constraints

Limits are there for a reason

Functional beats aspirational every time

Plan for what you can deliver

Ship what works

Ship when you can

Iterate, iterate, iterate

# Thank you!

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