re:Invent

NOV. 27 - DEC. 1, 2023 | LAS VEGAS, NV

FSI301-R

Architecting critical multi-Region, active/active financial systems

Eugene Istrati

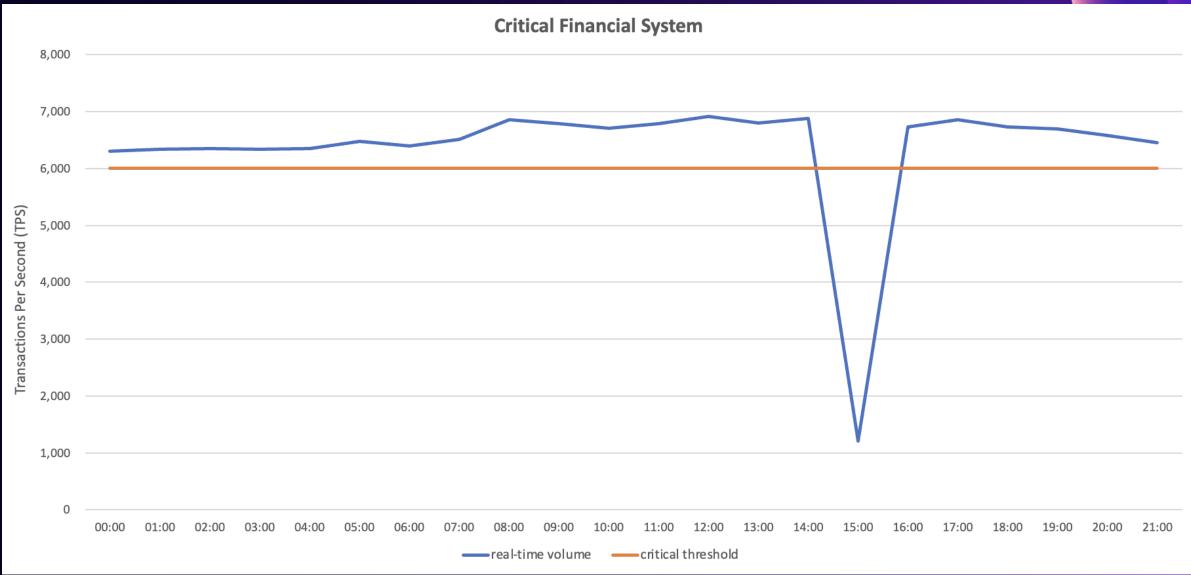
(he/him)
Global Solutions Architect,
AWS for Financial Services
Amazon Web Services

Jack lu

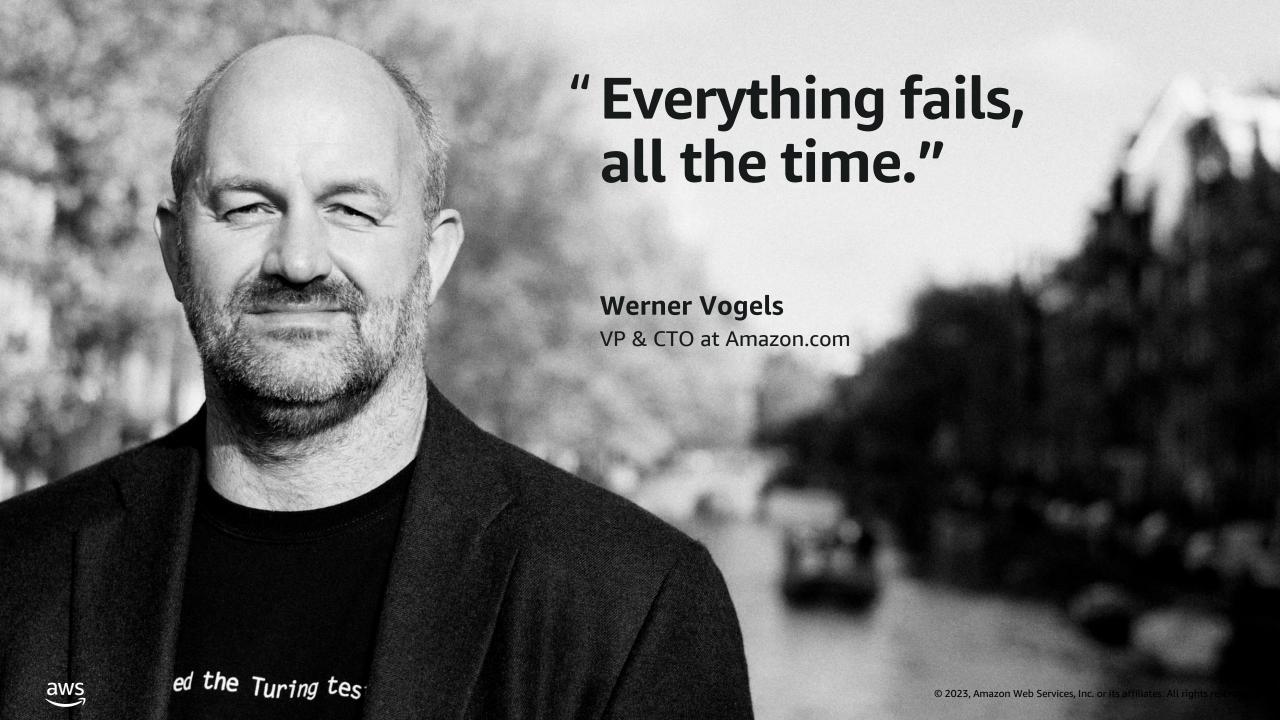
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Global Solutions Architect,
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Amazon Web Services



Critical financial systems nightmare

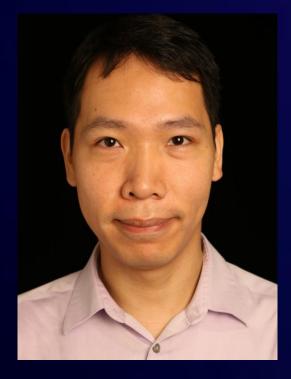






Today's speakers





Eugene Istrati (he/him) Global Solutions Architect, AWS for Financial Services

Jack lu (he/him) Global Solutions Architect, AWS for Financial Services



1. Mental model for resilience



Mental model for resilience

ABILITY OF A WORKLOAD TO RECOVER FROM INFRASTRUCTURE OR SERVICE DISRUPTIONS

The mental model

High availability

Resistance to common failures through design and operational mechanisms



Core services, design goals to meet availability goals

Disaster recovery

Returning to normal operations within specific targets for more rare but highly impactful failures



Backup and recovery, data bunkering, managed Recovery Point Objective (RPO) and managed Recovery Time Objective (RTO)

Continuous improvement

CI/CD, code refinement, operational testing, observability/monitoring

2. Disaster recovery patterns



Disaster recovery patterns

active/passive

Backup and restore

Pilot light

Warm standby

Multi-site active/active

RPO/RTO: Hours

- Lower-priority use cases
- Provision all AWS resources after event
- Restore backups after event
- Cost: \$

RPO/RTO: Tens of minutes

- Data live
- Services idle
- Provision some AWS resources and scale after event
- Cost: \$\$

RPO/RTO: Minutes

- Always running, but smaller
- Business critical
- Scale AWS resources after event
- Cost: \$\$\$

RPO/RTO: Real-time

- Zero downtime
- Near-zero data loss
- Mission-critical services
- Cost: \$\$\$\$

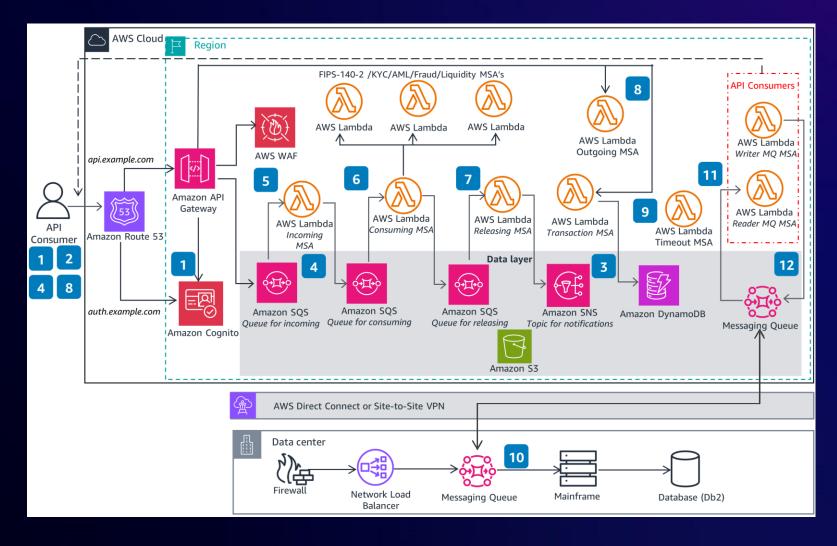


3. Multi-Region active/active pattern deep dive

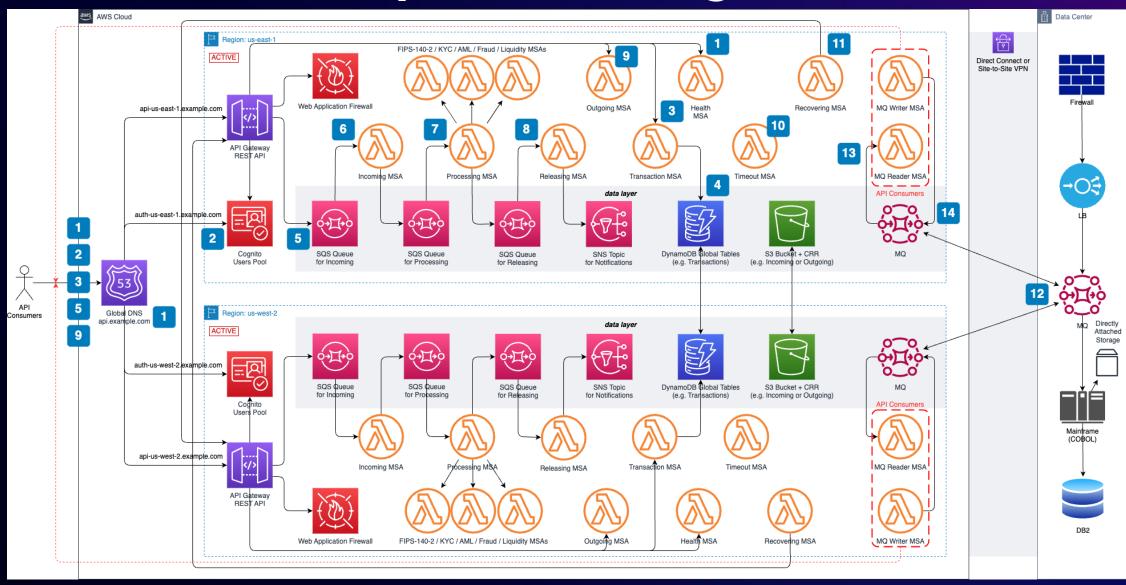


Architecture example: Single-Region deployment

AWS SOLUTION GUIDANCE: ISO 20022 MESSAGING WORKFLOWS ON AWS



Architecture example: Multi-Region active/active



Keep learning

OR CODES TO OTHER AWS RE:INVENT 2023 MULTI-REGION PRESENTATIONS



ARC401-R | Multi-Region or single-Region? Considerations and architectures



FSI313-R | Build highly resilient multi-Region databases for financial services



BOA204-R | Hands-on with multi-Region architectures

Thank You!



Please complete the session survey in the mobile app

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