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Nash Tech.

About me

Thang Chung

- Technical Manager at NashTech, Microsoft Azure MVP
- Experience: ~16 years in the software consult, design, and development area, in both outsourcing and product companies
- Expertise on cloud computing, cloud-native platform, serverless, WebAssembly/WASI
- Creator of Vietnam Microservices Group on Facebook
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- **1. Problems with software applications nowadays**
- 2. Solution for software applications design
- **3. Demo: Application with Dapr on AKS**

01

Problems with software applications nowadays

Moving fast...



Software architecture evolution



02

Solution for software applications design

"I wanted to change the world. But I have found that the only thing one can be sure of changing is oneself." - The Brave New World - Aldous Huxley

Evolutionary Architecture

"An evolutionary architecture supports guided, **incremental change** as a first principle across multiple dimensions."



Design software for evolution

- Enforce high cohesion and loose coupling
- Encapsulate domain knowledge
- Use asynchronous messaging
- Don't build domain knowledge into a gateway
- Expose open interfaces
- Design and test against service contracts
- Abstract infrastructure away from domain logic
- Offload cross-cutting concerns to a separate service
- Deploy services independently

Anatomy of typical software architecture (1/2)



Anatomy of typical software architecture (2/2)



Internal application evolution



External application evolution



Application architecture for evolution on Azure



Dapr APIs





03

DEMO: Application with Dapr on AKS



https://github.com/thangchung/coffeeshop-on-dapr

The coffeeshop - high level architecture





References

- https://www.bcs.org/articles-opinion-and-research/insight-technology-and-cpd-in-businessanalysis
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