



Sabre

Path to Microservices

Rajadurai Krishnamoorthy
Principal, Software Architect



Sabre®

Monolithic Architecture



Application is too large and complex



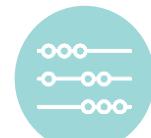
Application start up is very slow



Deploy the full application every time



Continuous deployment is difficult



Barrier to adopting new technologies



Difficult to scale



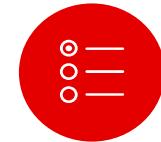
Microservices Architecture



Single Responsibility Principle



Independent DURS



Explicitly Published Interface



Smart Endpoints & Dumb
Pipes

From Monolithic to Microservices

- 1 Inter Service Communication
- 2 Distributed logging
- 3 Transaction Spanning
- 4 Finding root cause
- 5 Cyclic dependencies between services
- 6 Health Monitoring
- 7 Testing can become challenging



INTER SERVICES COMMUNICATIONS

API Versioning

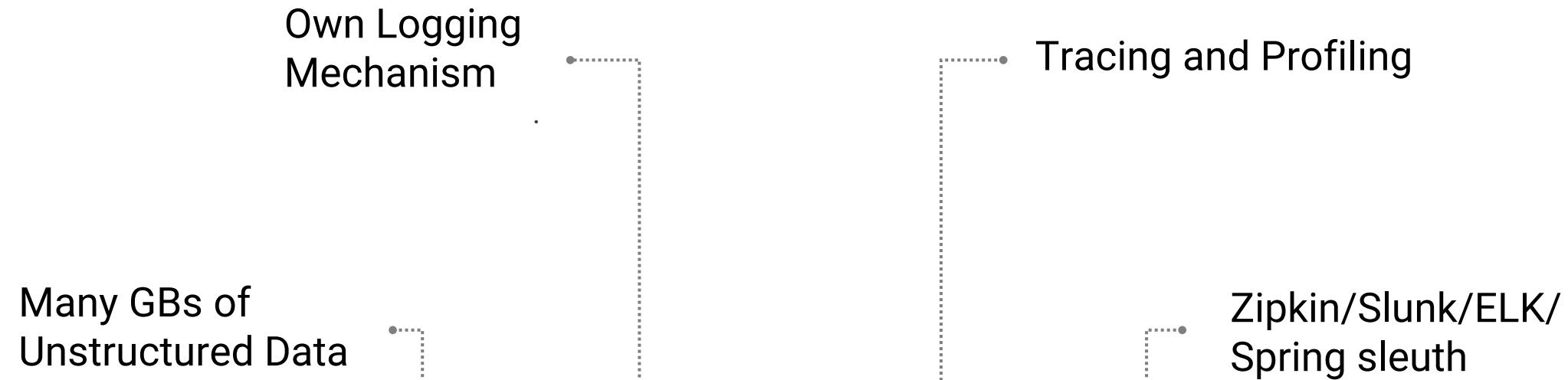
Session Management

Service Registry

Transition Failures

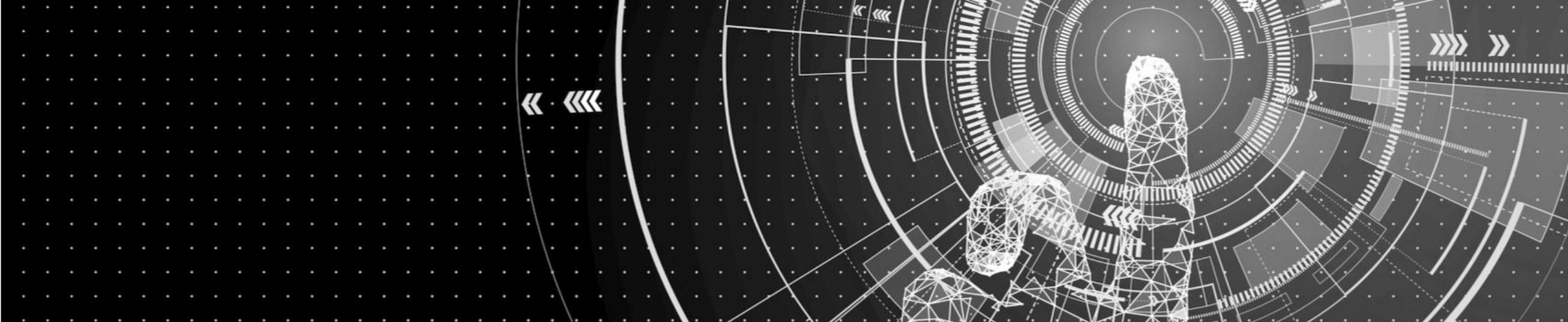
Rollbacks

Distributed Logging



Transaction Spanning

Distributed transactions



Finding Root Cause



Problematic service



Pull out all the data
– Stack trace,
variable values



Data about unusually
high processing times



Deploy the change with
more loggers



Centralized root cause
detection tool

CYCLIC DEPENDENCIES BETWEEN SERVICES

Vulnerable to distributed stack overflow errors

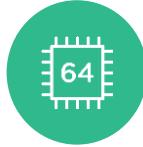
Certain transaction might be stuck in loop



Health Monitoring



What to monitor?



Different technologies



Live on different machine/container



Centralized logging and monitoring



Requires bigger investment and planning



Testing Can Become Challenging

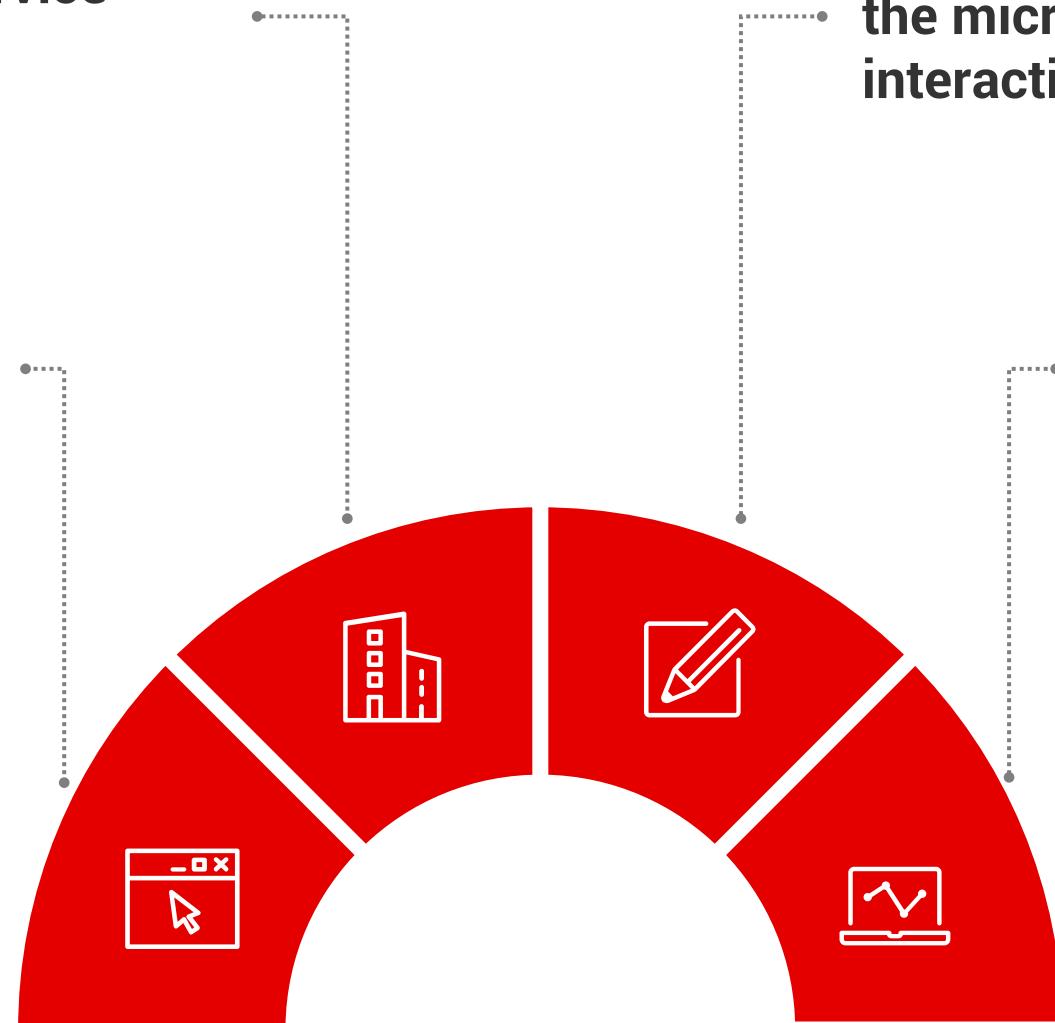


**Individual microservice
testing**

Dynamic environment

**Indistinct behaviors from
the microservices
interactions**

**Forward / Backward
compatibility testing**



Sabre[®]

GREAT INDIAN **DEVELOPER** SUMMIT



2019™

Conference : April 23-26, Bangalore



Register early and get the best discounts!



www.developersummit.com



@greatindiandev



bit.ly/gidslinkedin



facebook.com/gids19



bit.ly/saltmarchyoutube



flickr.com/photos/saltmarch/