

# A Hybrid Integration Architecture for the Multi-Cloud Enterprise



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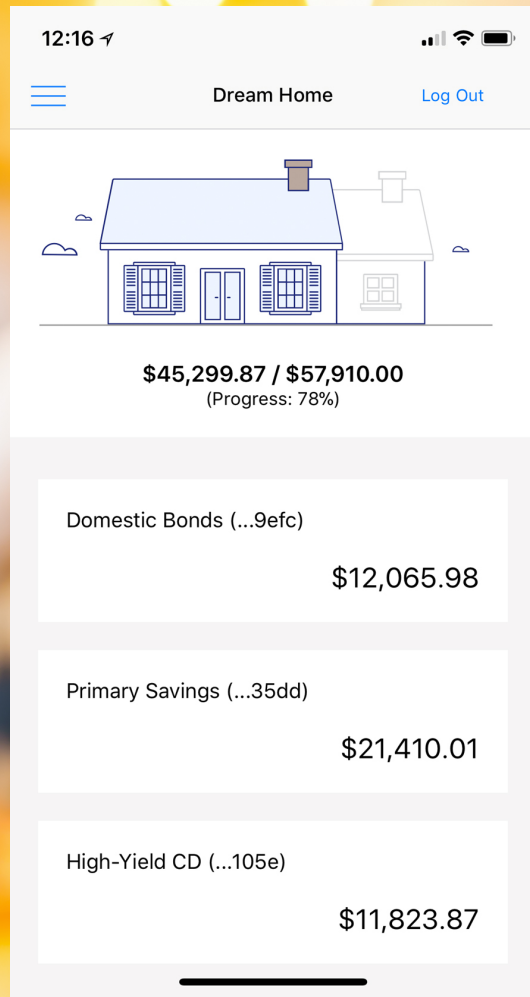
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# 87%

of companies are  
transforming to  
be more  
customer-centric.





# 69%

of “leading-edge”  
companies  
believe augmented  
intelligence is key to  
improved customer  
loyalty

Source: Forbes insights - Industry-Leading Customer Experiences: How to Identify Opportunities, Bridge Silos and Accelerate Result with augmented Intelligence



# 6

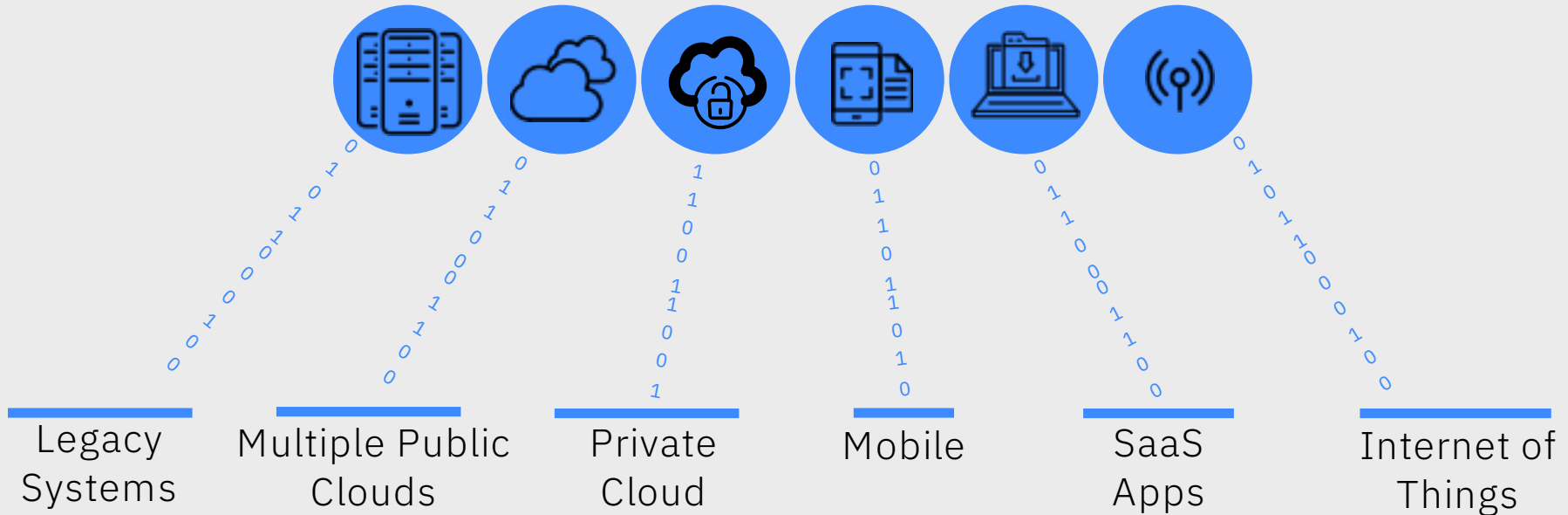
the number of clouds the average enterprise is either using or piloting

Source: <https://www.forbes.com/sites/joemckendrick/2016/02/09/typical-enterprise-uses-six-cloud-computing-services-survey-shows/#69d5a1a4a82b>



**Why Do You  
Need  
Different  
Types of  
Integration?**

# Digital Transformation and Cloud Adoption are leading to data sprawl

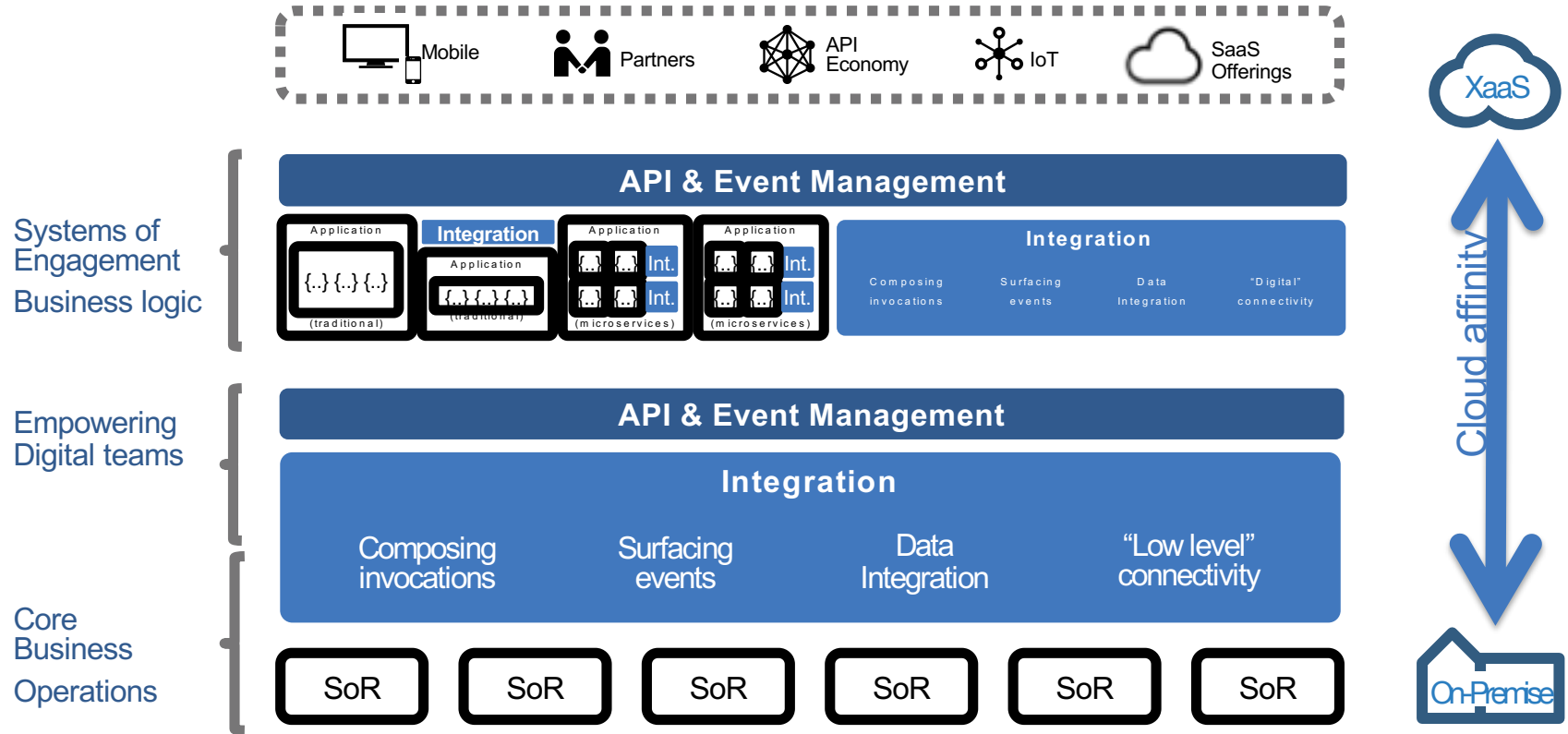




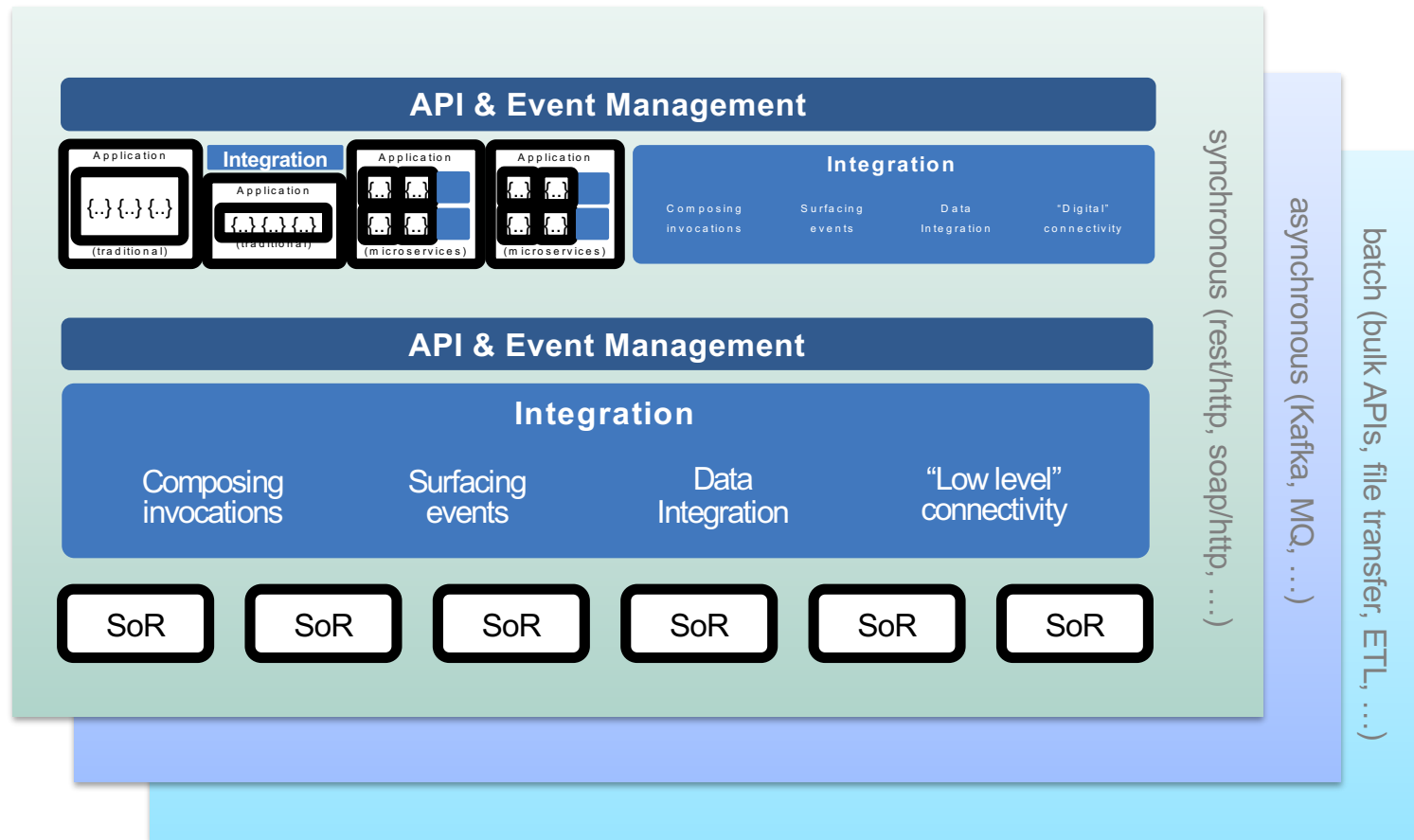


Rethink your  
integration  
architecture

# Hybrid Integration Reference Architecture for Digital Transformation

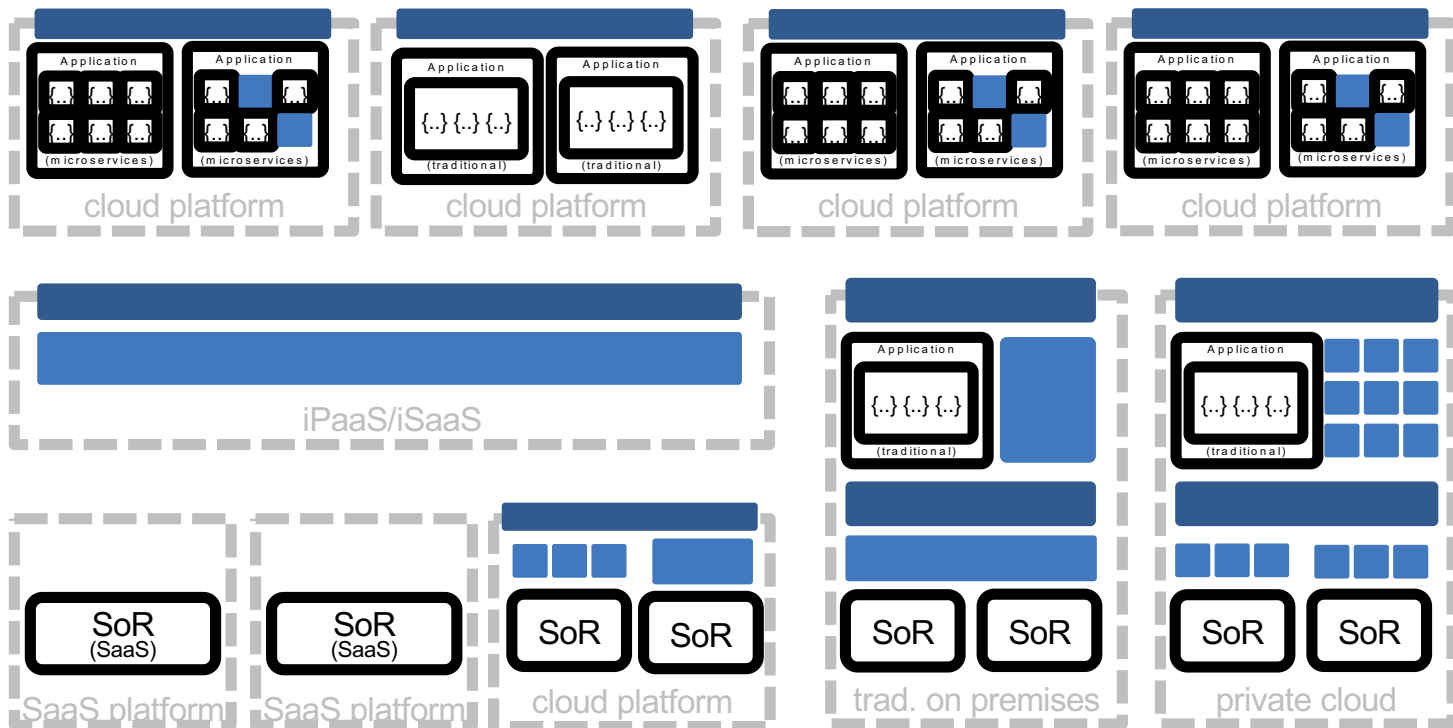


# The integration architecture is reliant on *transport backplanes*





# The multi-cloud challenge



# Multi-cloud integration considerations

## *What are the multi-cloud challenges?*

### Scope of management

- self-managed pets
- platform managed cattle
- fully managed PaaS/SaaS

### Ownership boundaries

- application boundaries
- between/within clouds
- different at each level
  - infrastructure
  - platform
  - software

### Latency

- data location
- data replication close to consumer
- local data optimisation
- reducing layering, but retaining isolation and abstraction
- distance/bandwidth

### Migration/modernization

- co-location and isolation of integration with its application
- lightweight topology choices
- granularity to enable movement
- lift/shift or refactor

### Identity and access control

- choosing/bridging domains
- private, partner, public
- the implicit assumption of public

### Portability

- cloud native principles
- orchestrated containerisation
- image based deploy
- write once deploy to any cloud
- Distributed deployment

### SaaS integration

- cloud app connectivity
- business data aware connectors
- out of the box integration patterns

### Decentralization

- federated management of runtimes and gateways
- simplifying cloud to ground hybrid solutions
- solutions spanning multiple clouds.

### Data sovereignty/privacy

- Legislative information domains
- GDPR
- Encryption
- Archiving/deletion

### Async. transport backbone

- messaging vs events
- event or log replication
- when/where to aggregate

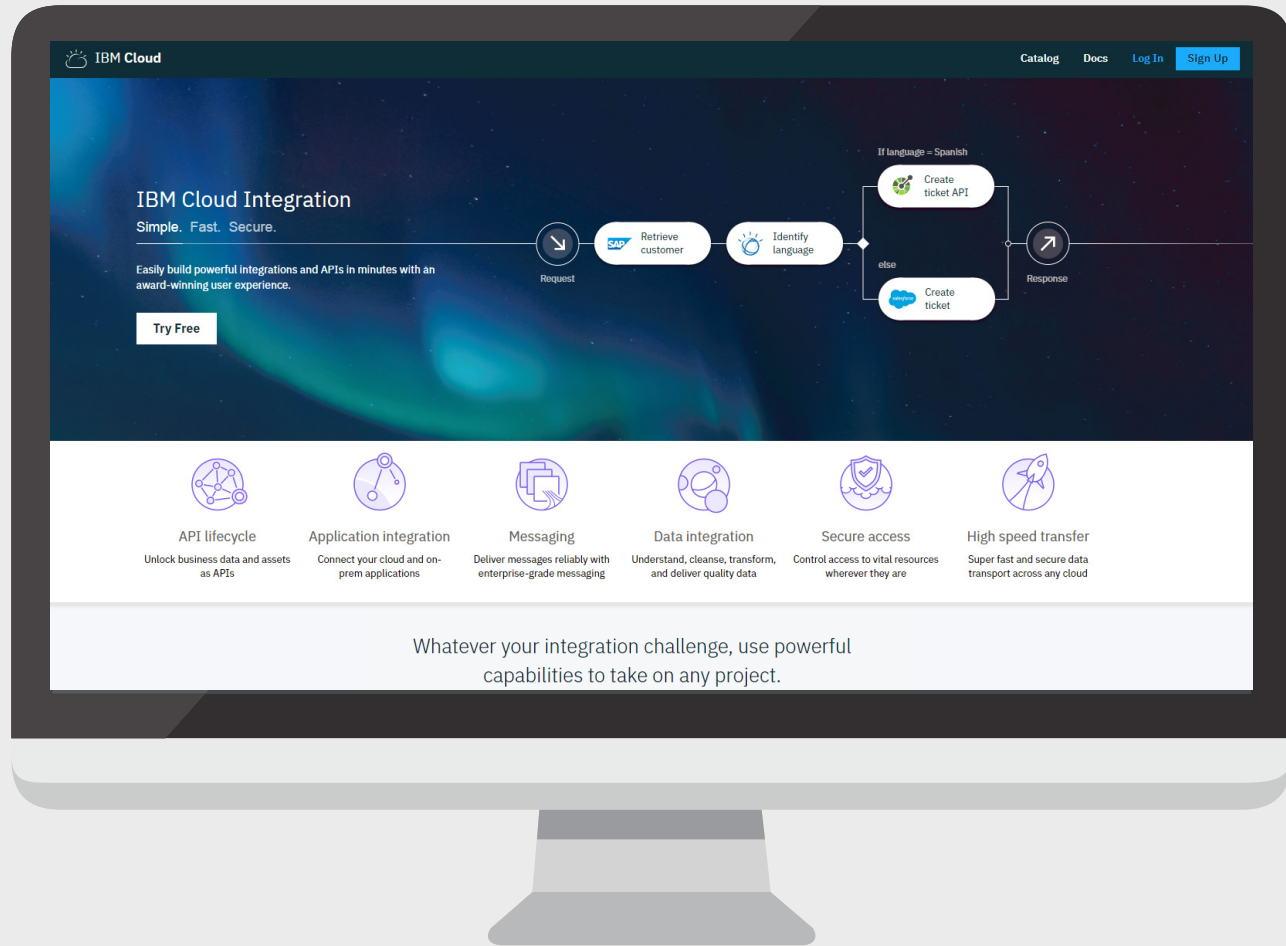
### Monitoring and operations

- viewing and diagnosing across boundaries
- Collation/aggregation of logs across and end to end solution

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• ???

# One Platform for **Simple, Fast, and Secure** Multicloud Integration



# Acme Bank Demo



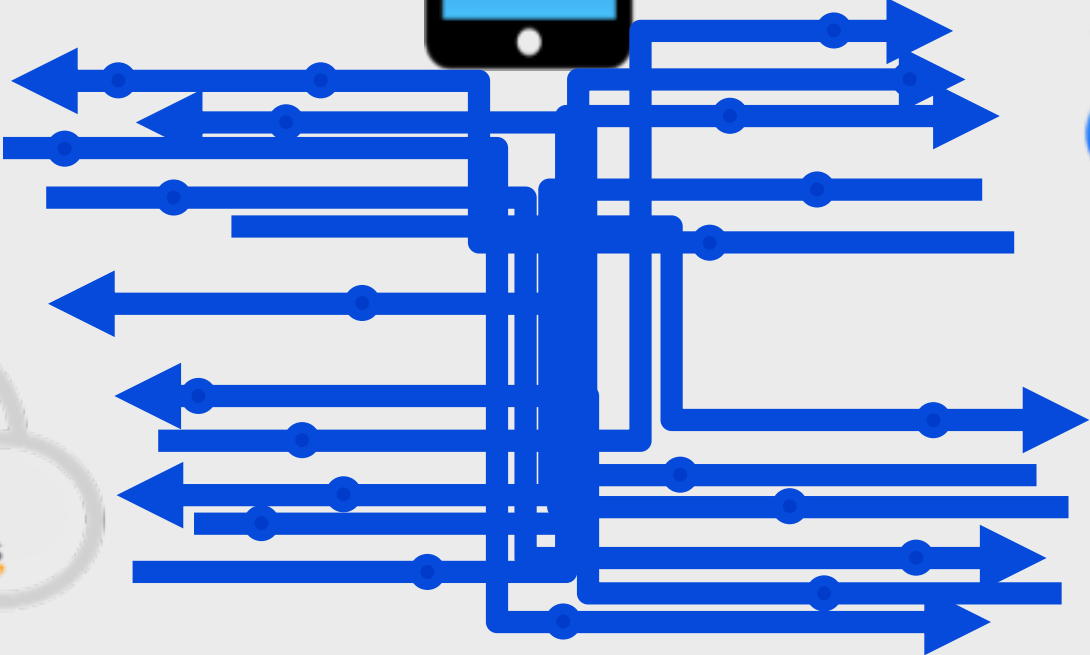
IBM **Cloud** Private



IBM **Cloud** Public



Enterprise Network





1

Fine grained  
integration  
deployment

2

Decentralized  
integration  
deployment

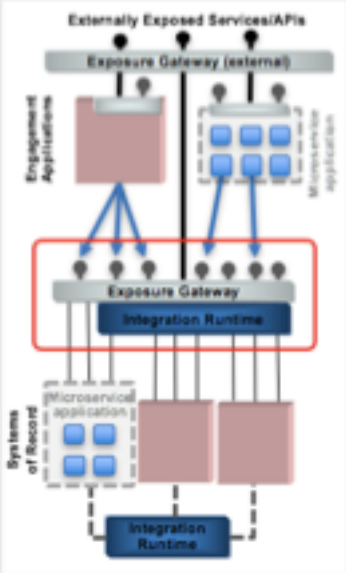
3

Cloud native  
integration  
infrastructure

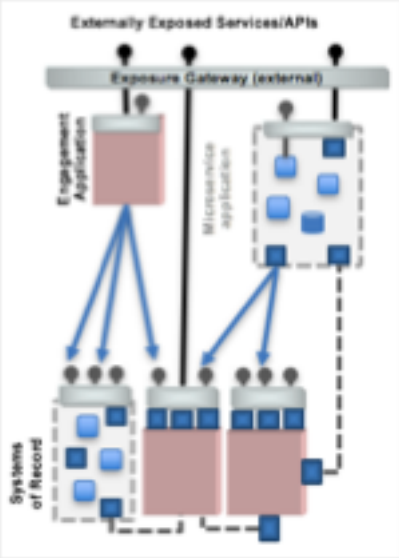
# Multicloud & Agile Integration Architecture

# The fate of the ESB: Agile Integration Architecture

## Centralized ESB



## Integration as a microservice runtime



Containerization  
Application autonomy

## Cloud Native Applications demand:

## Cloud Native Integration

The Enterprise Service Bus evolves into **Agile Integration Architecture**

The same powerful features but managed as a micro-service.

Modern Integration runtimes can be deployed as 12 Factor Applications:

- Containerized
- Stateless
- Horizontally scalable
- Pipeline deployed



Agile integration

Extended Connectivity

Collaboration across users

Flexible integration styles



# Thank you

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