

To ESB or not to ESB

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MuleSoft

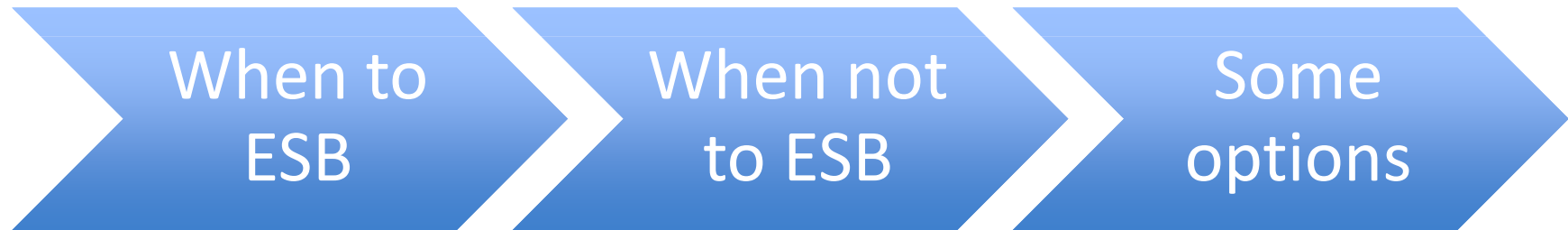


About Me



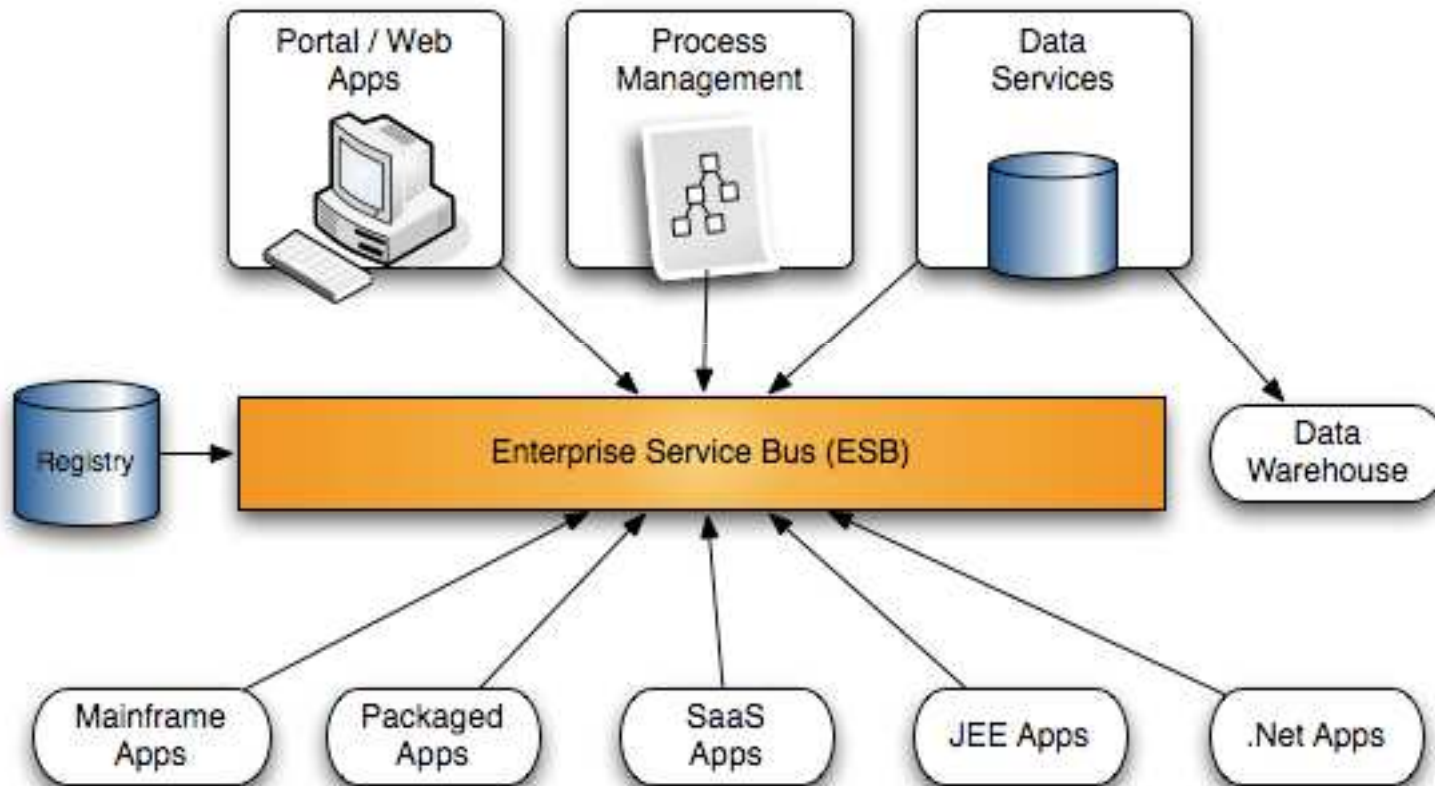
MuleSoft™

Agenda

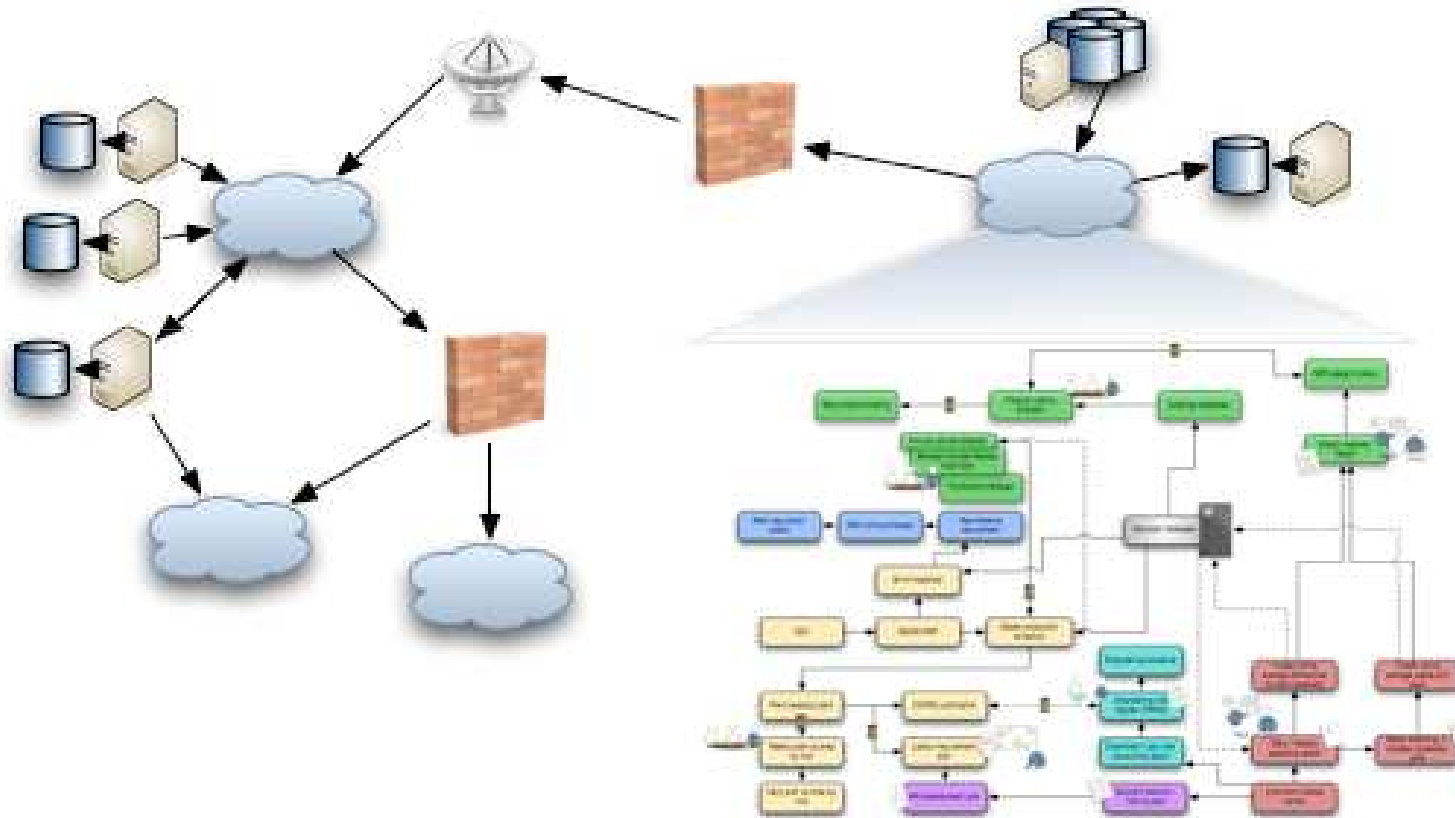


“Technology selection is notoriously difficult in the enterprise since the criteria and complexity of the problem is often not fully understood until later in the development process.”

“Vendor” ESB



Reality Check



Know your Architecture



Architecture Checklist

- ✓ Identify systems and processes
- ✓ Create an integration profile
- ✓ Map data flows
- ✓ Set performance requirements
- ✓ Define security requirements
- ✓ Identify redundancy requirements
- ✓ Quantify QoS requirements



Bling, innit

To ESB

- ✓ Numerous integration points
- ✓ Need to grow the architecture
- ✓ More than one protocol
- ✓ Mediation requirements
- ✓ Scalability, Management, Monitoring, Transformation and Security requirements
- ✓ Strategic Projects

Not to ESB

"I'm only using Web Services"

"I just need two integration points"

"We need to FTP a file from a server to a web app"

"We need access to a message queue"


"We need to FTP a file from a server to a web app"

Not to ESB: RDD

THE 
APPRENTICE

Not to ESB: YAGNI



A photograph of two men on a golf course. The man on the left is wearing a white polo shirt, dark pants, and a white cap. The man on the right is wearing a bright green polo shirt, khaki pants, a blue cap, and glasses. They are both smiling and high-fiving each other. The background shows a green golf course with trees and a clear blue sky.

I'll buy your software

cha-ching

Not to ESB: GOLF

What are the options?



Web Services

- Pros:
 - Language, platform, *and* transport agnostic
 - Mediation support
 - Built-in error handling (faults)
 - Extensibility
- Cons:
 - heavy-weight
 - verbose
 - Hard to develop, requires tools
 - Sprawling WS-* standards

REST

- Pros:
 - Language and platform agnostic
 - Small learning curve, less reliance on tools
 - Concise & Clean
- Cons:
 - Assumes a point-to-point communication
 - Lack of standards support for security, policy, reliable messaging, etc.
 - Tied to the HTTP transport model

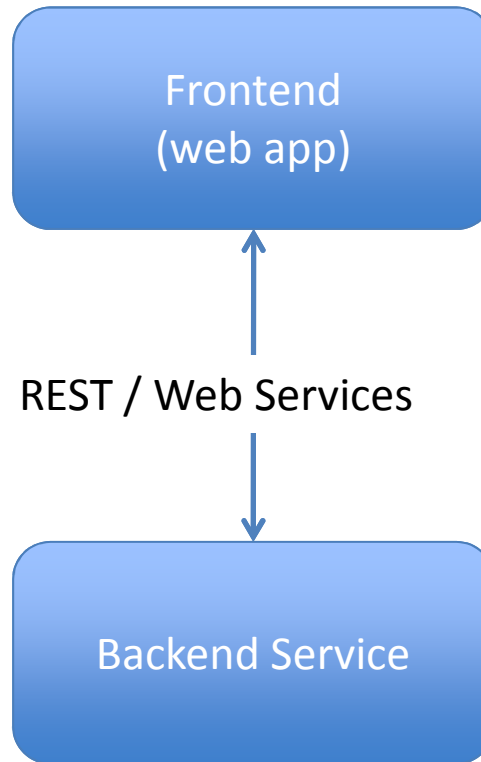
Custom code

- Pros
 - Quick solution
 - Tailored to the specific problem
- Cons
 - Need to maintain more code
 - Difficult to change over time
 - Need to build security, management, reliability
 - Slow to add new capabilities
 - No core business activity

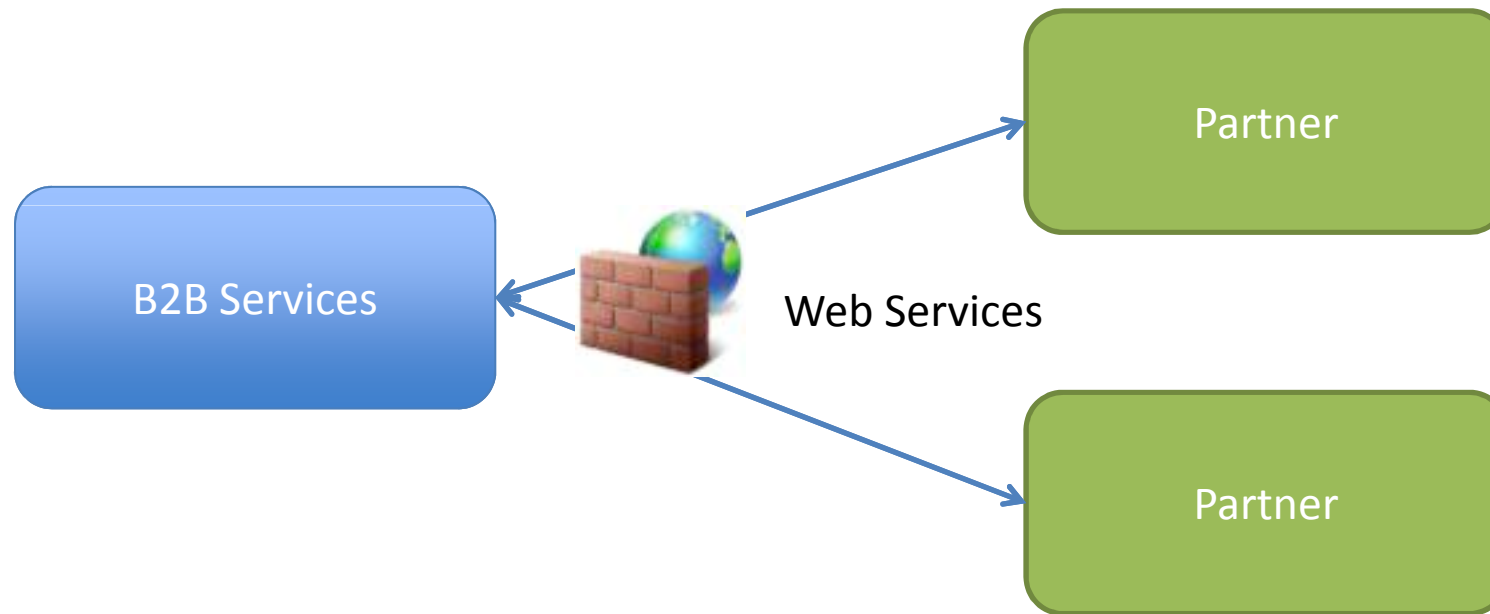
An aerial photograph of a massive, multi-level highway interchange. The image shows a complex network of elevated roads, ramps, and overpasses, with numerous cars and trucks traveling in various directions. The perspective is from directly above, highlighting the intricate geometry of the infrastructure. The text "Integration Scenarios" is overlaid in the center in a white, sans-serif font.

Integration Scenarios

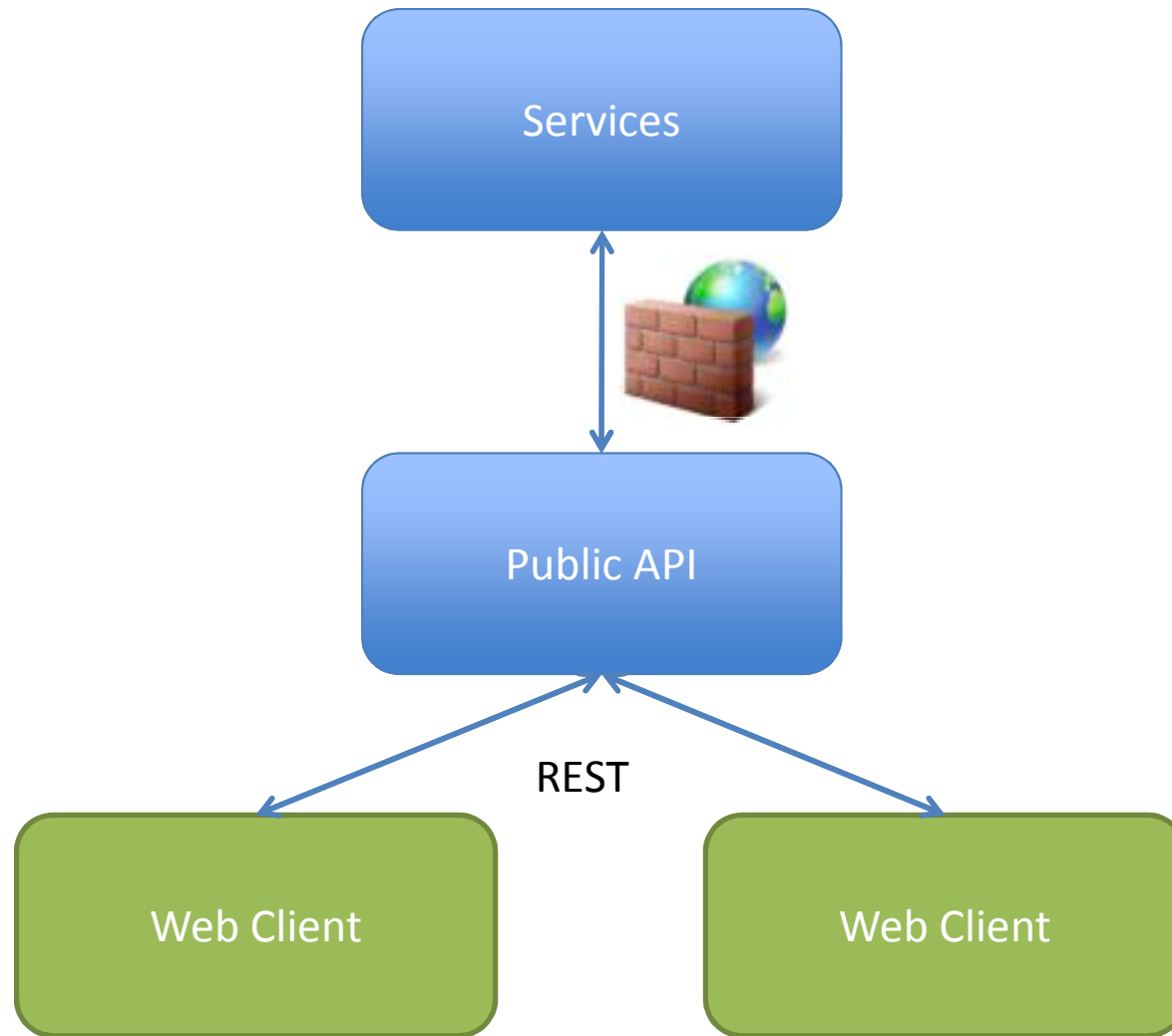
Simple Integration



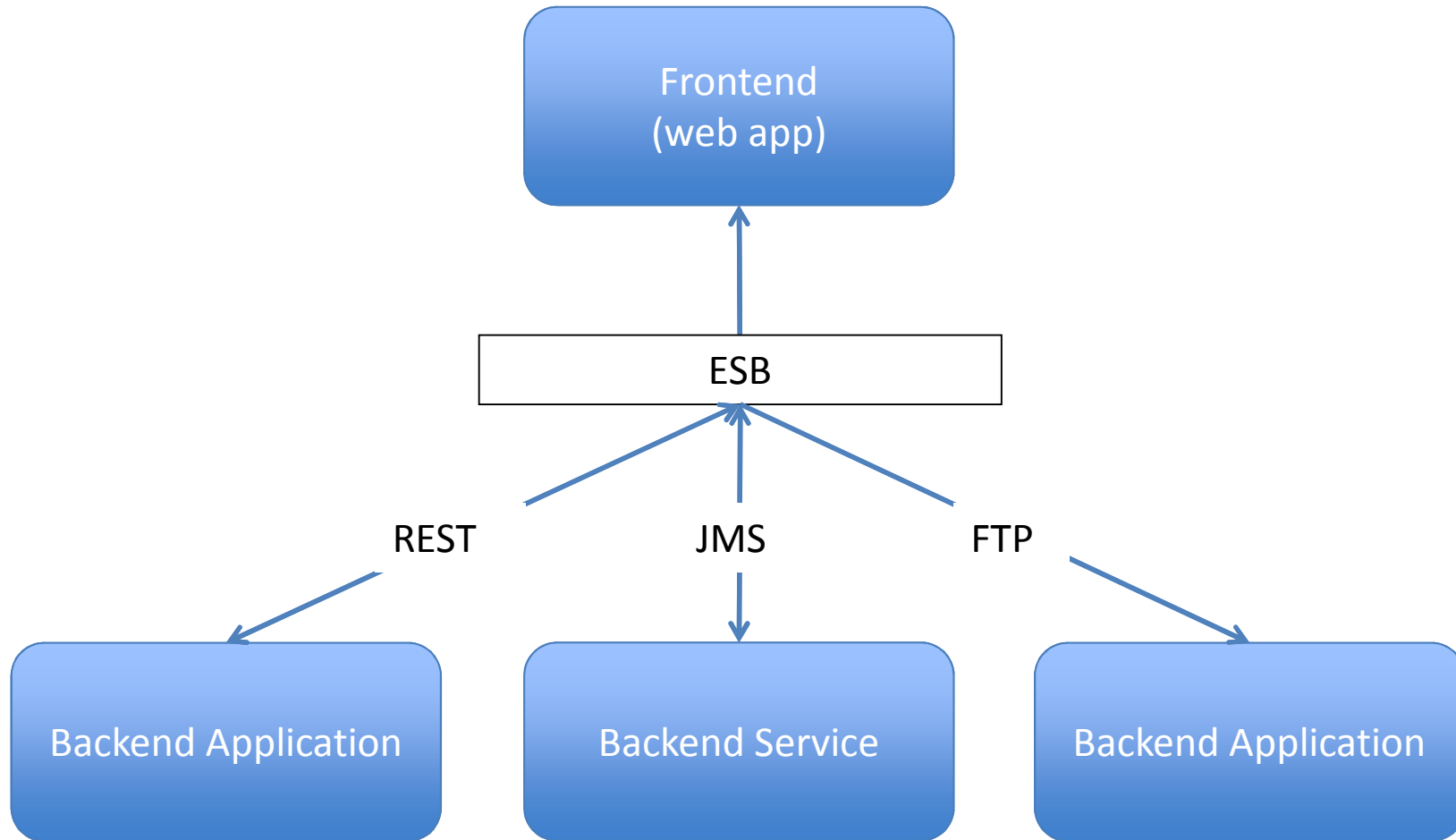
Partner Data integration



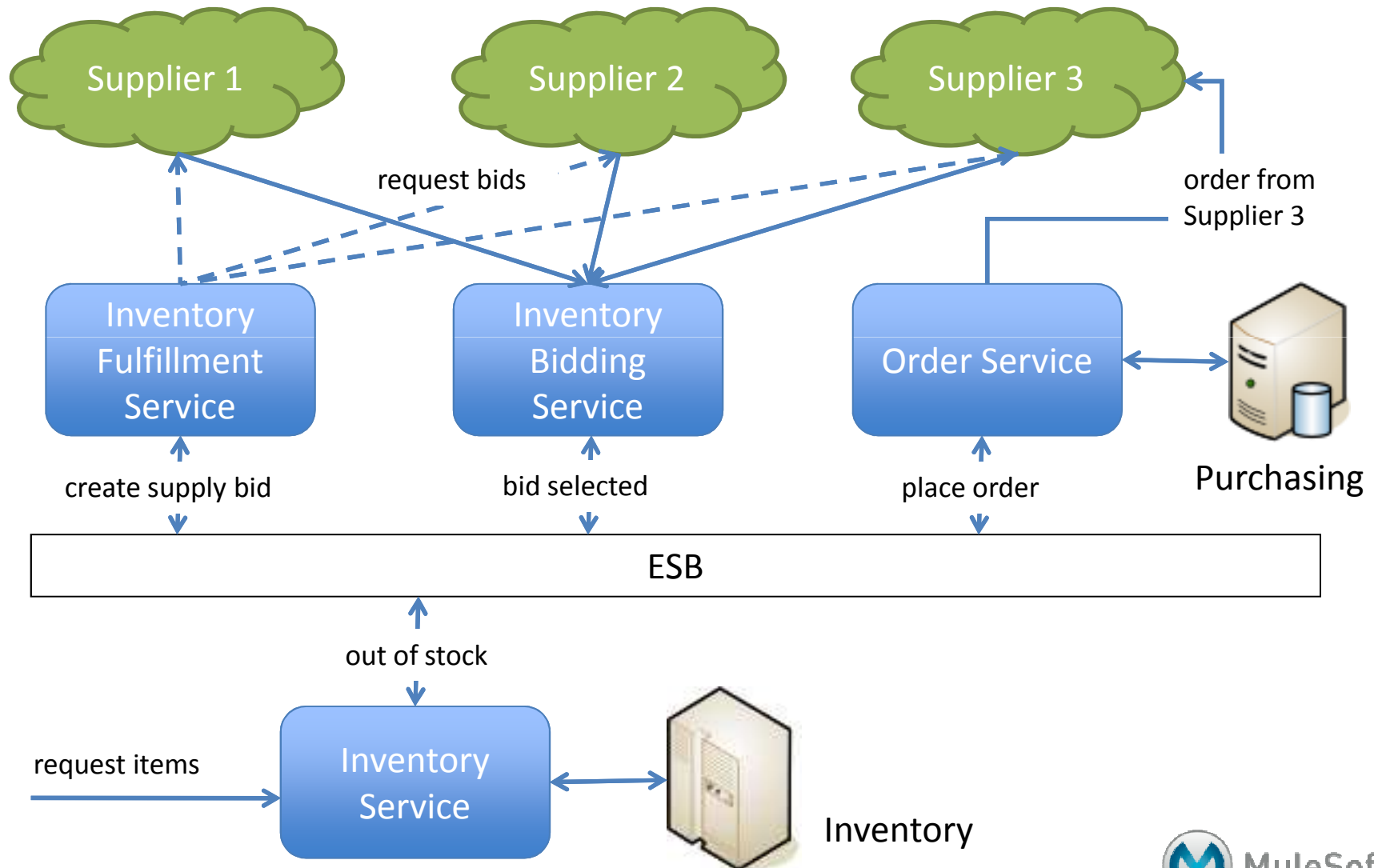
Public API



Mixed Integration



ESB Integration



iBeans

easy service integrations

Foundation

- Abstraction for the complexity of SOA
- Open source framework
- Lineage, pedigree of Mule ESB
- 15+ iBeans ready for production

- **“Micro-light ESB”**

Communication

- Reusable Java modules
- Bean interface to networked services
 - Not just SOAP, REST
- Communications channels
 - Ajax from JavaScript
 - RPC
 - Java

Use cases

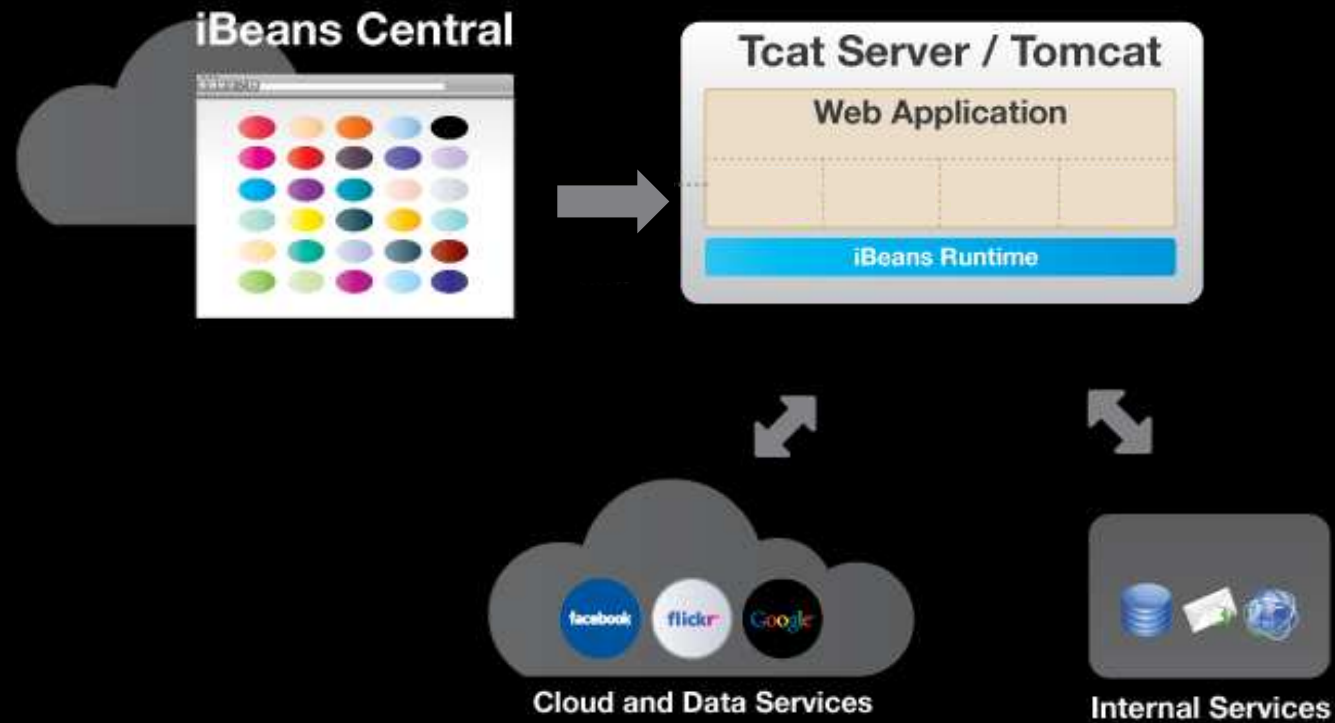
- Situations where an **ESB is too heavy**
- Social media app integrations
- Easy cross-webapp reuse
- Point-to-point integration
- Seamless migration path to Mule ESB

GPS Walker

demo

<http://10.0.17.238:8080/gpswalker/cursor.html>

Overview



The pieces

Runtime Container: Tomcat, Tcat, (Mule)

iBeans Runtime

Channels: HTTP, SMTP, IMAP,
REST, JDBC, JMS, XMPP, FTP

Formats: JSON, RSS, ATOM,
XML, SOAP

Scheduler

Transform and Bindings

Application Annotations

iBean Objects

Web apps

console

your

web

apps

Summary

- Technology selection must be driven by architecture
- ESBs are good for integrations with multiple participants
- REST/WS are better suited to other integration problems
- iBeans offers a point-to-point to ESB migration path

Questions?



- Embedding Mule in a web application not usually a good idea

