**ESB (Enterprise Service Bus)**

It is about infrastructure logic

an ESB is part of an SOA infrastructure

**The responsibilities of ESBs are:**

* Monitor and control routing of message transfer between services
* Resolve contention between communicating service components
* Control deployment and versioning of services
* Arrange use of redundant services

**ESB characteristics**

**Routing**: Routing means addressability, static/deterministic routing, content-based routing, rules-based routing, and policy-based routing

**Service orchestration**: It is the coordination of multiple implementation services exposed as a single, aggregate service.

**Security**: It is a standardized security-model to authorize, authenticate and audit use of the ESB.

**Validation**: Validation against the schemas for sending and receiving messages.

Open source ESB's in Java

* Apache ServiceMix
* Mule
* Jboss ESB
* Spring Integration

Red Hat **JBoss Fuse** – Open source ESB connecting components/application

* Control routing of messages between services
* Data transformation and mapping
* Communication between service components and support multiple protocols
* Security and version control

Fuse fabric – management site – distribution containers, load balancing

Messaging queue

Drag and drop tooling in jboss fuse – can debug