

ESB Concepts

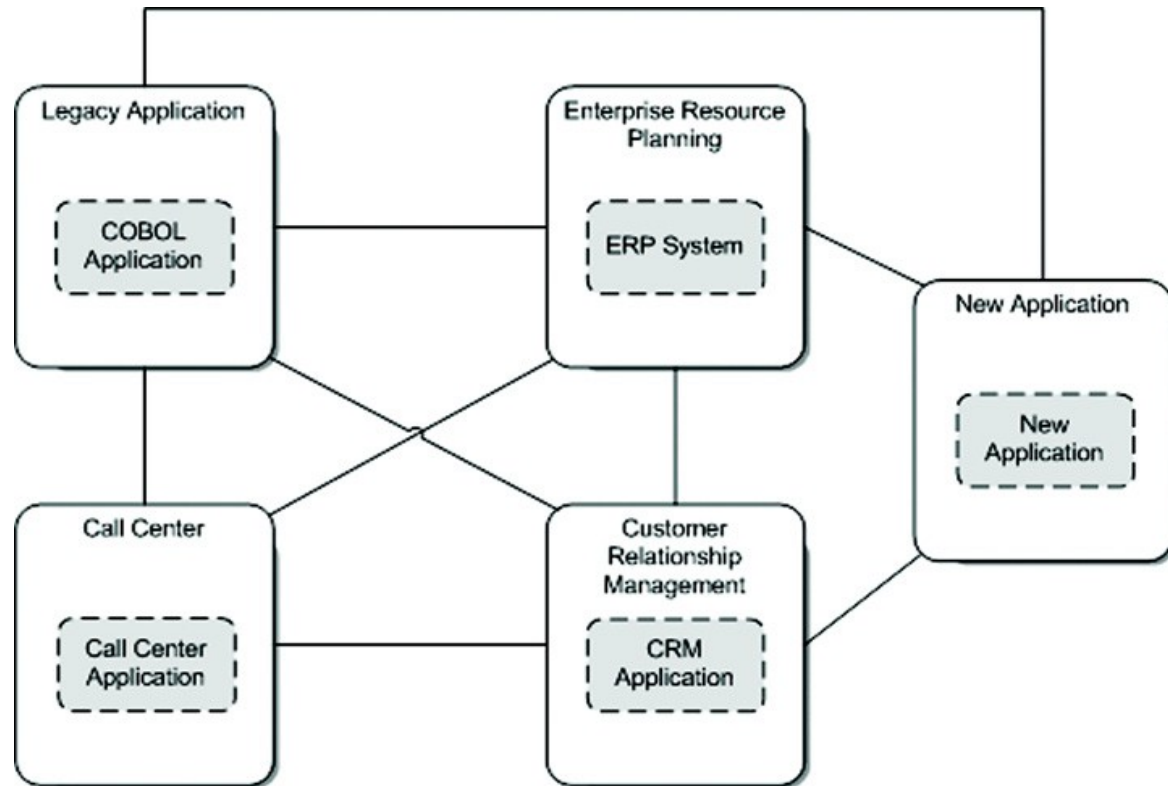
-Tarandeep



WHY

Why Do We Need ESB ?

Point to Point Architecture Without EAI/ESB





Benefits of using ESB

1) Necessity to integrate applications:

There must be a clear business need to integrate applications. Time-to-market and real-time reports are examples of business drivers.

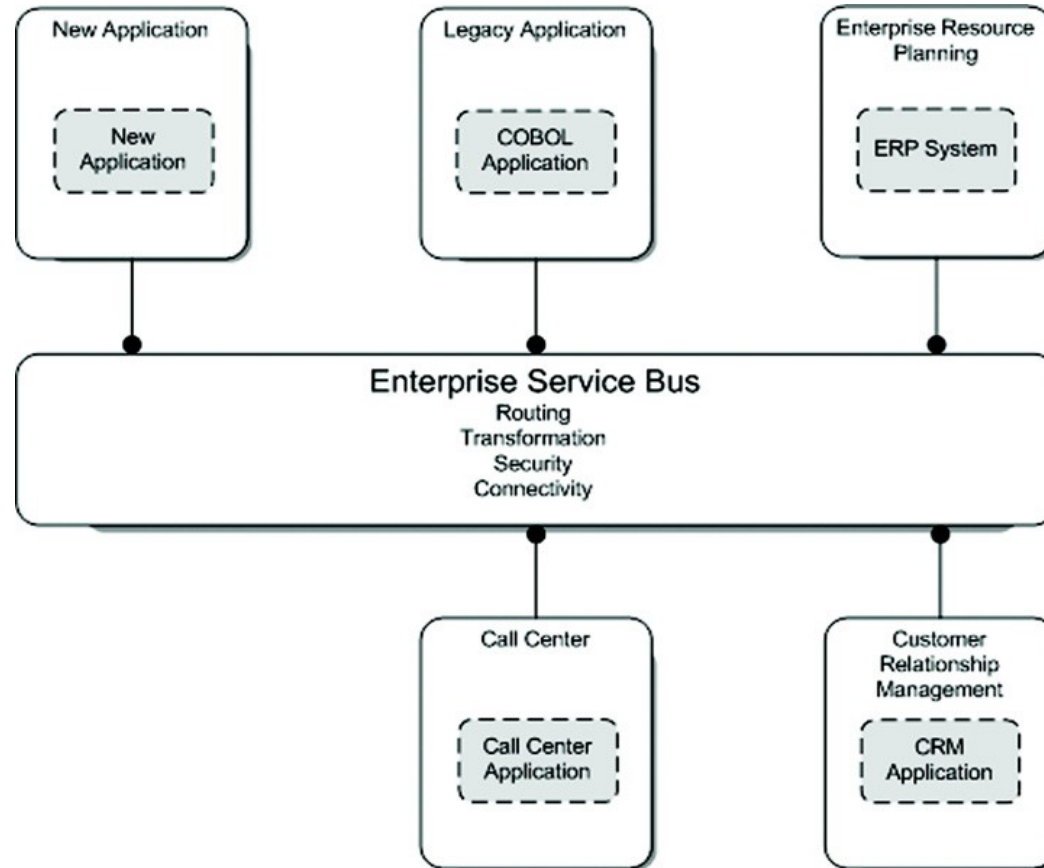
2) Heterogenous environment

When you have to deal with lots of different technologies and protocols, there is a clear need for a central solution that's made to deal with these challenges.

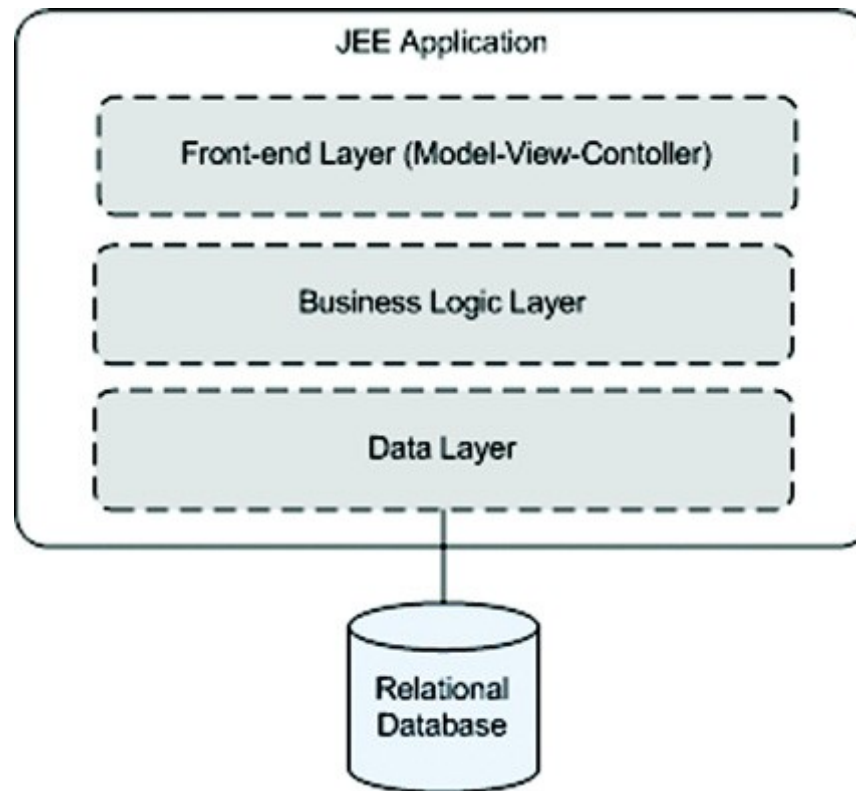
3) Reduction of total cost of ownership

IT departments are forced to cut maintenance costs to be able to satisfy demands for new products by the business departments. A central integration solution can help decrease the management and maintenance costs of the full application landscape.

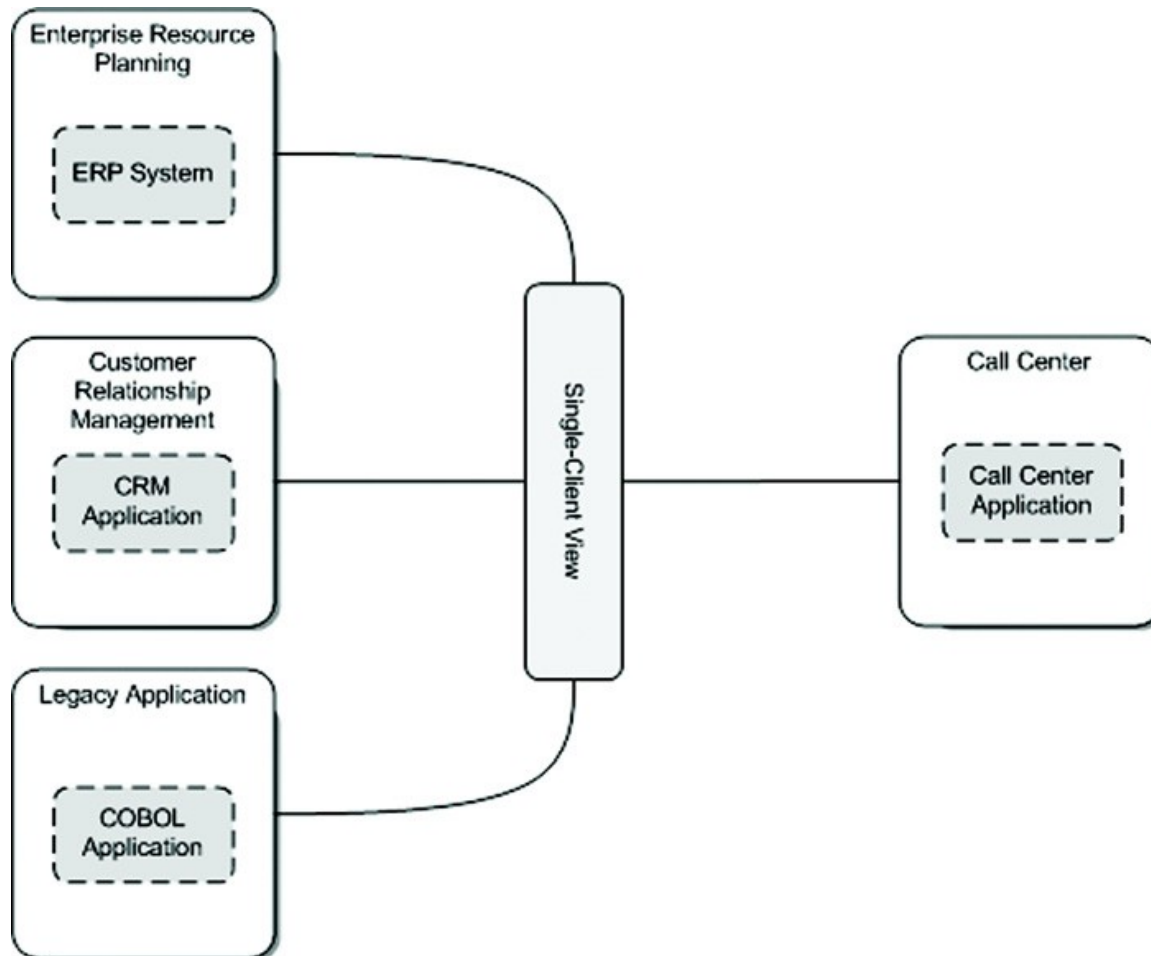
Using ESB over Point to Point



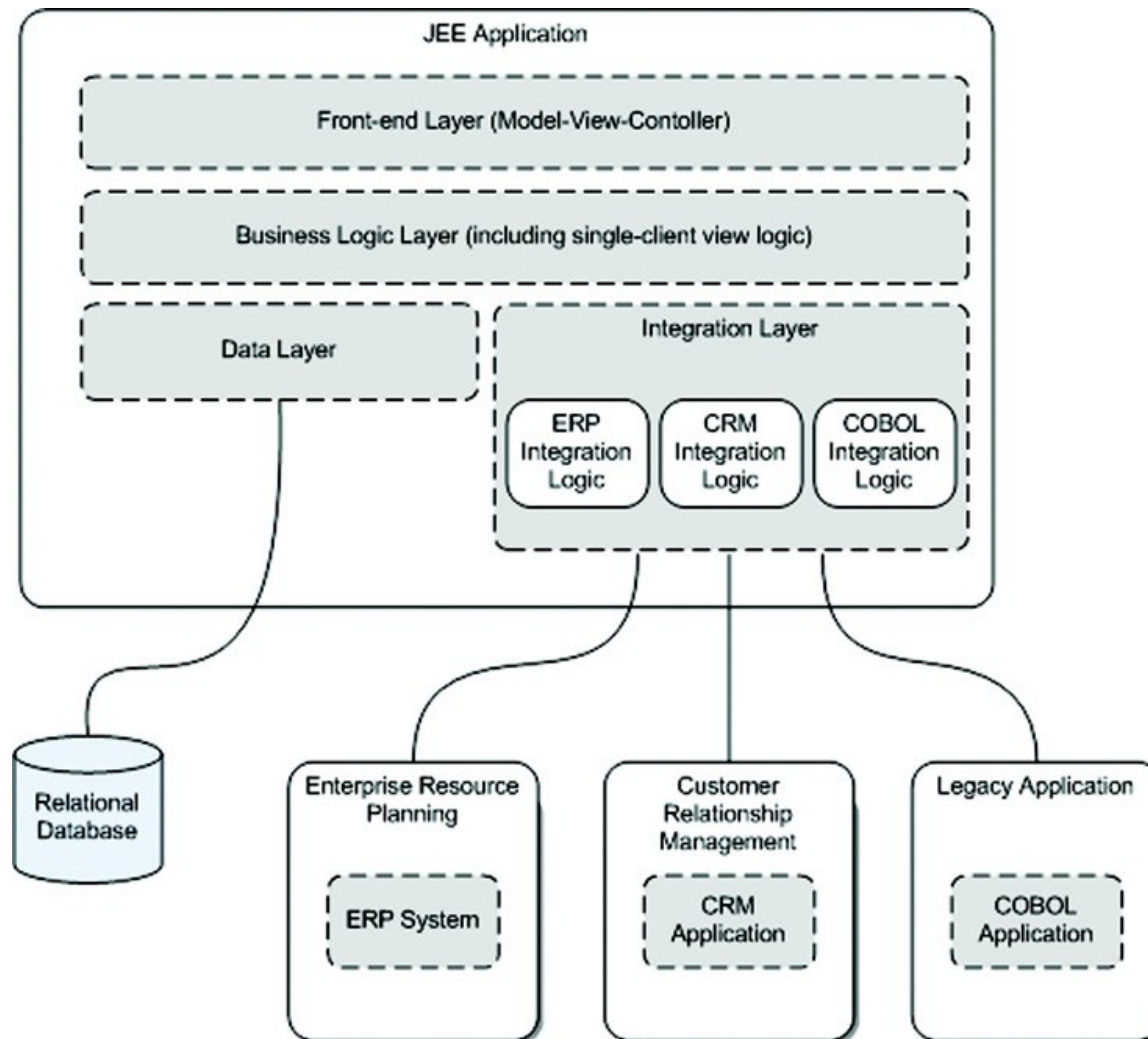
Example of typical JEE application architecture



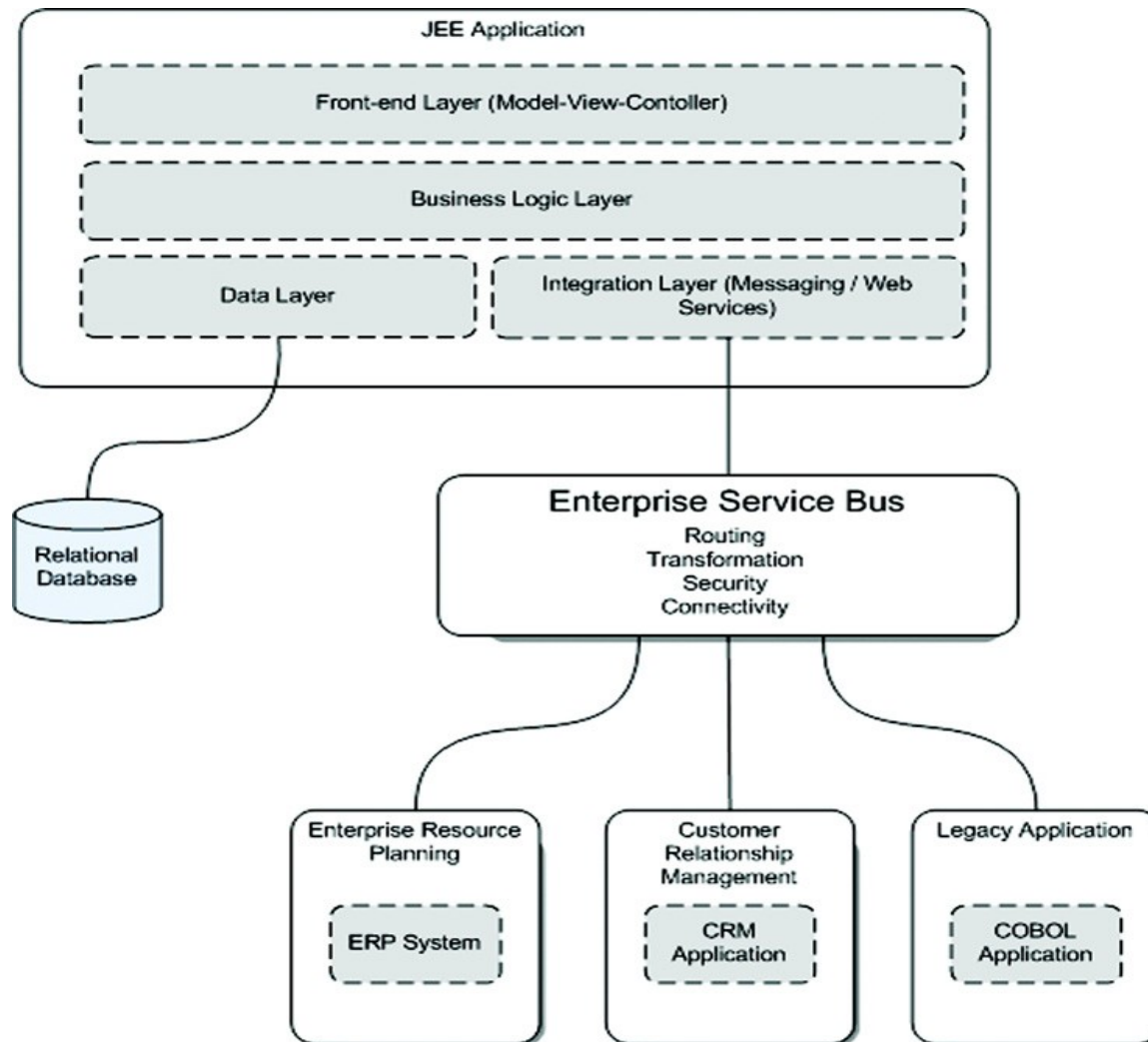
Business case: Single Client View



Adding Integration Layer to n-tier architecture

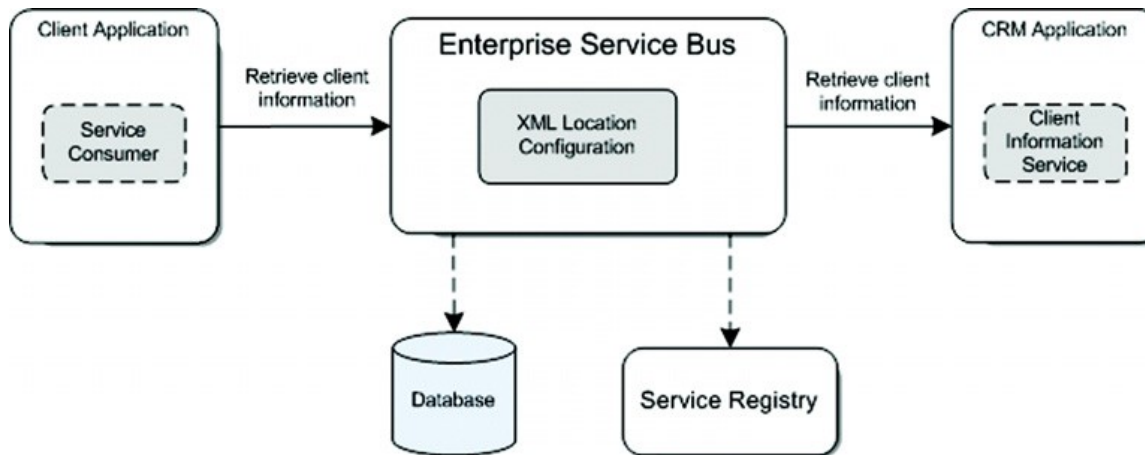


Adding ESB to implement integration solution



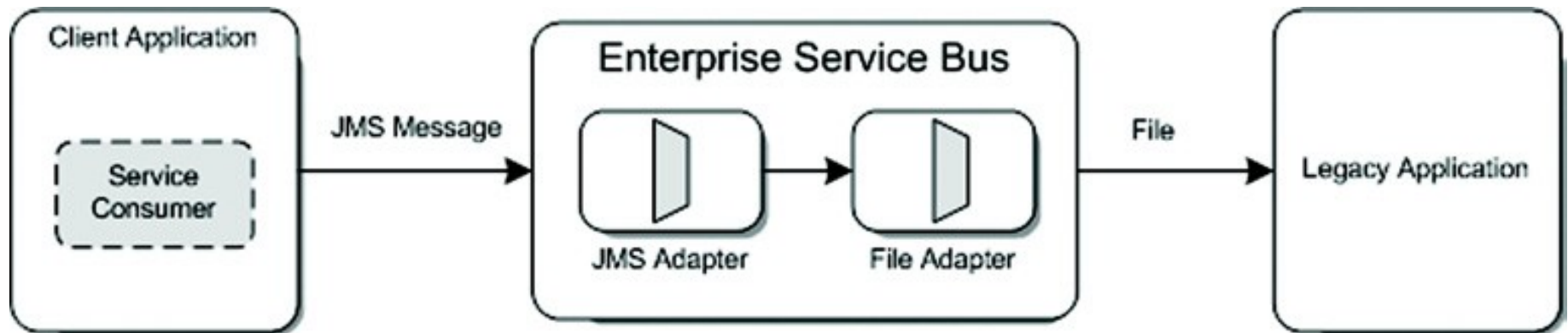
Core Functionalities of ESB

Location Transparency



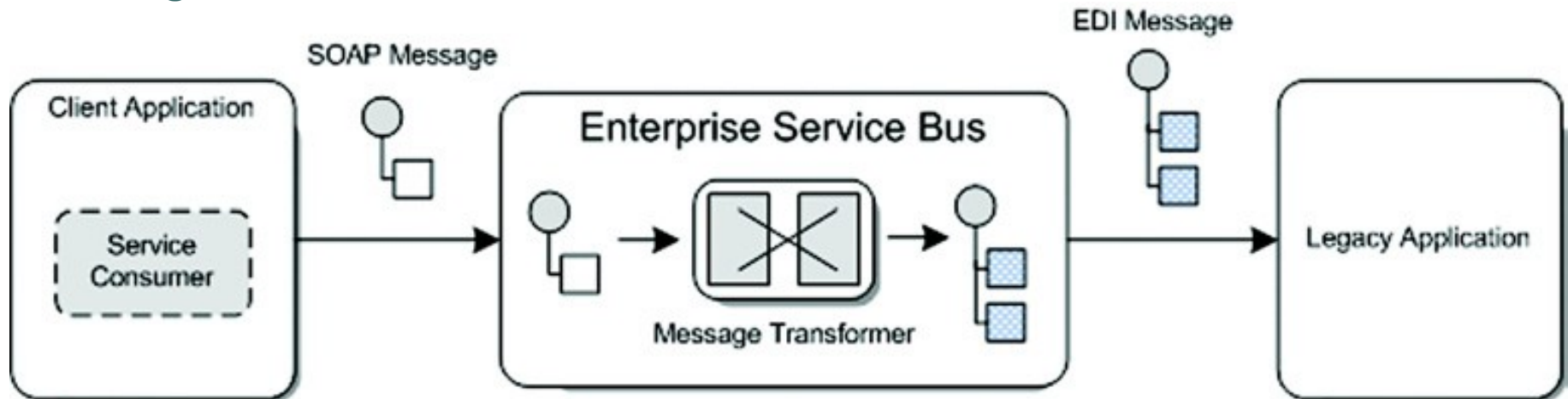
Core Functionalities of ESB – Cont.

Transport Protocol Conversion



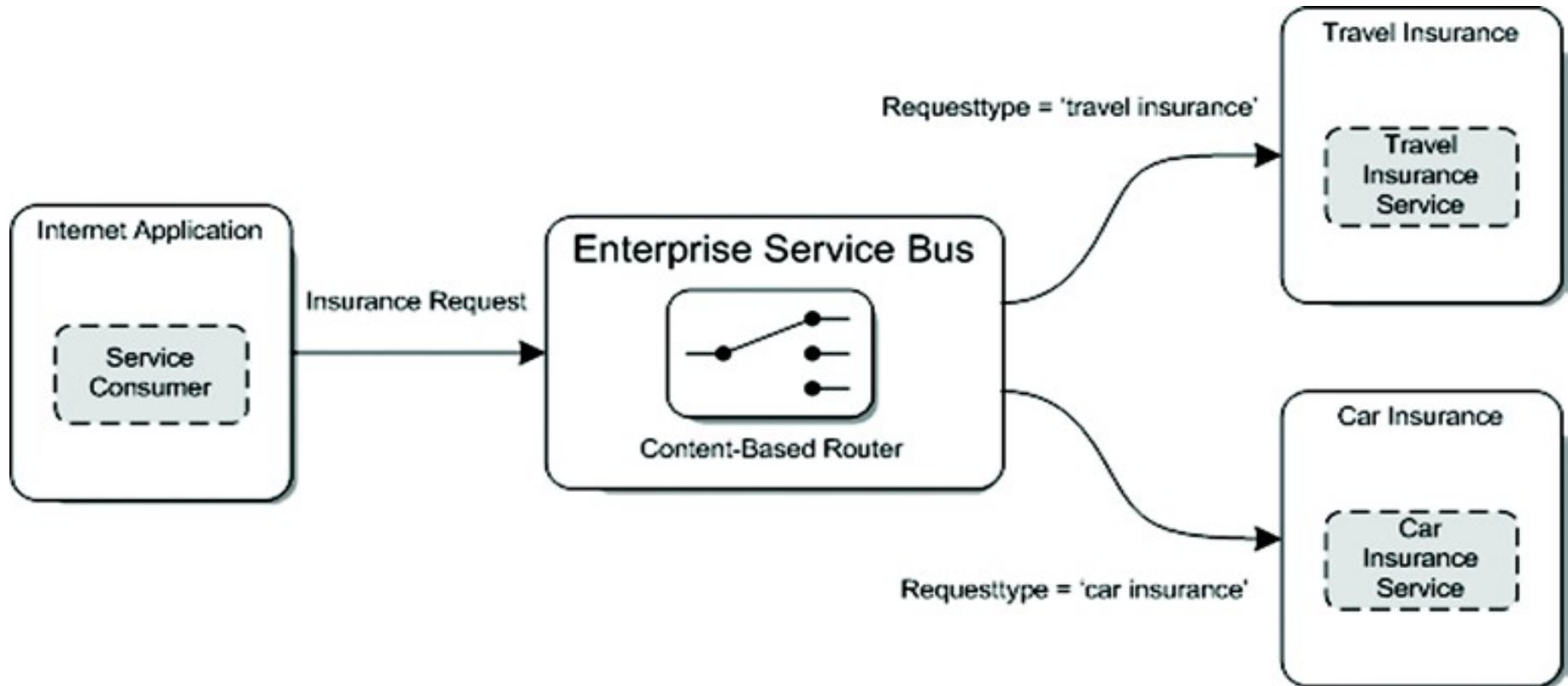
Core Functionalities of ESB – Cont.

Message Transformation



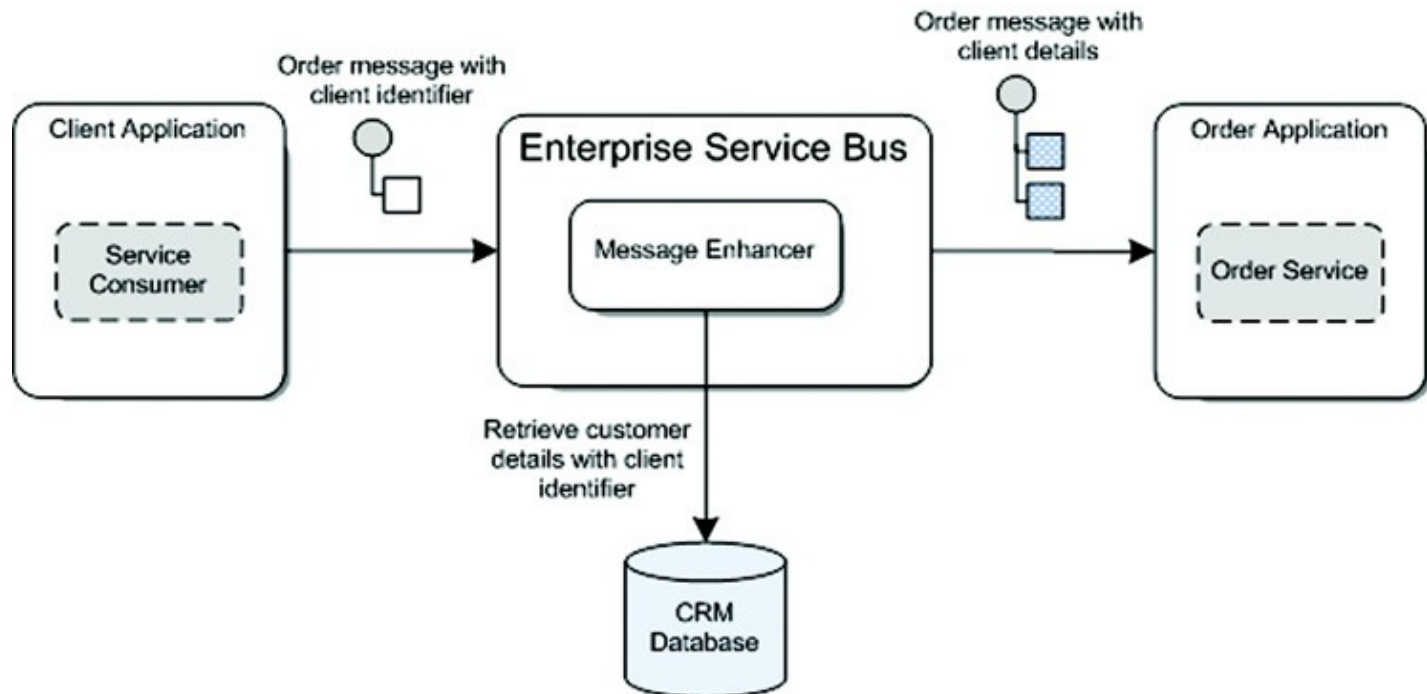
Core Functionalities of ESB – Cont.

Message Routing



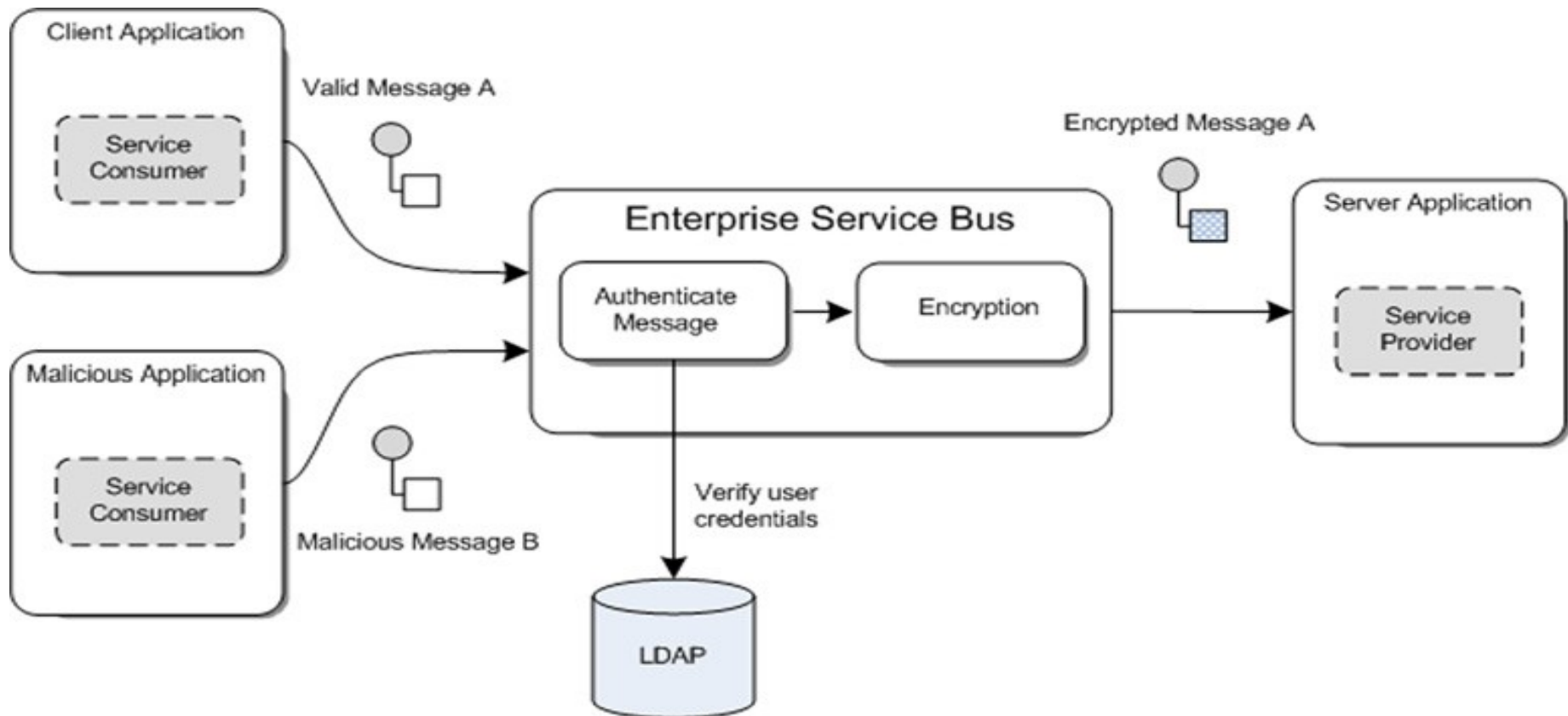
Core Functionalities of ESB – Cont.

Message Enhancement



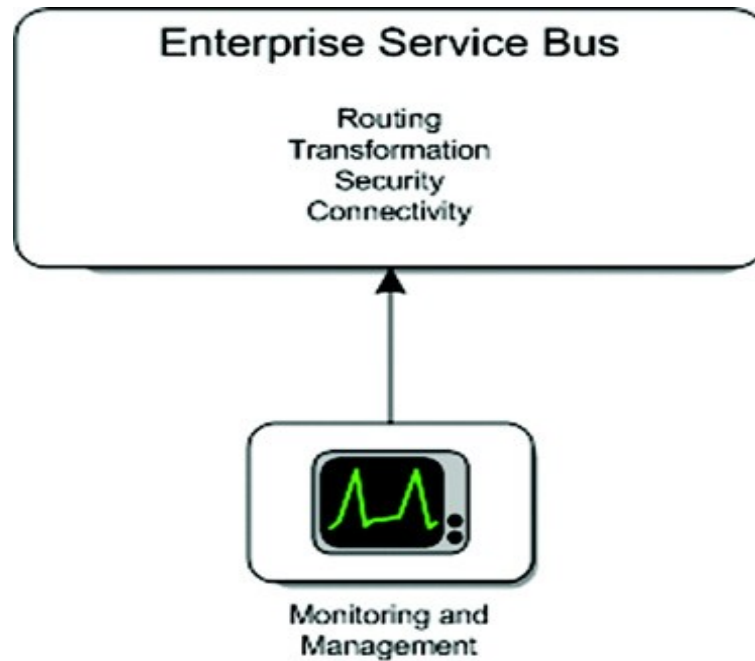
Core Functionalities of ESB – Cont.

Security

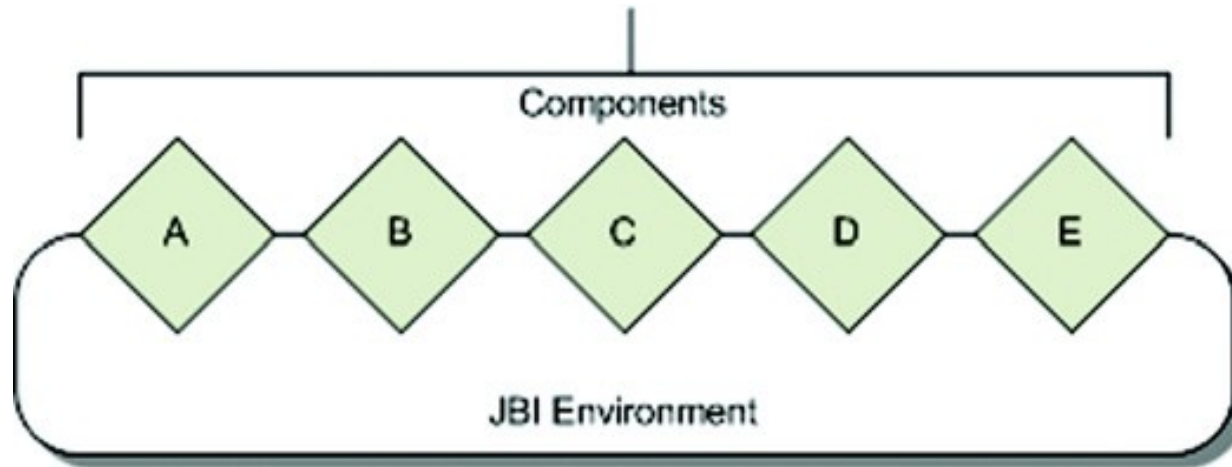


Core Functionalities of ESB – Cont.

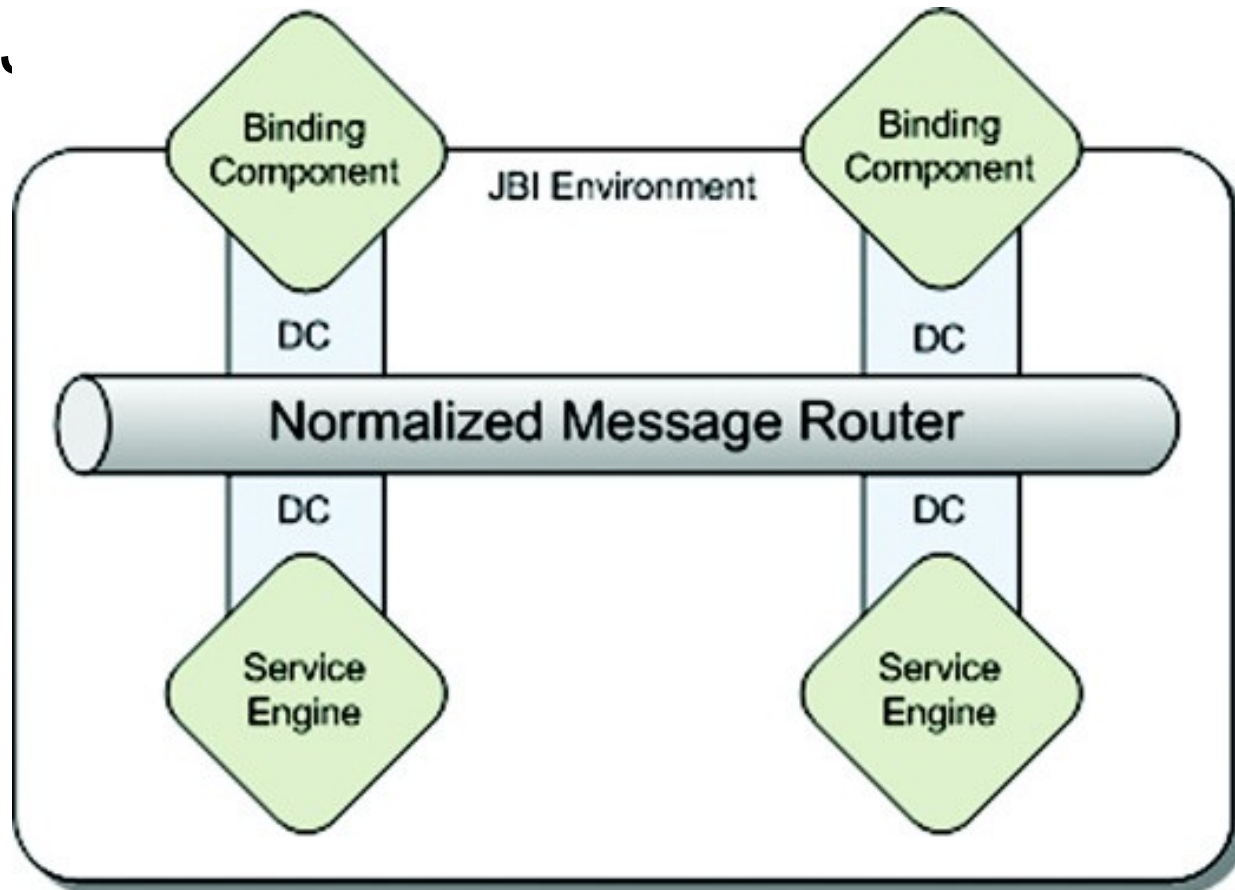
Monitoring and Management



JBI – Java Business Integration

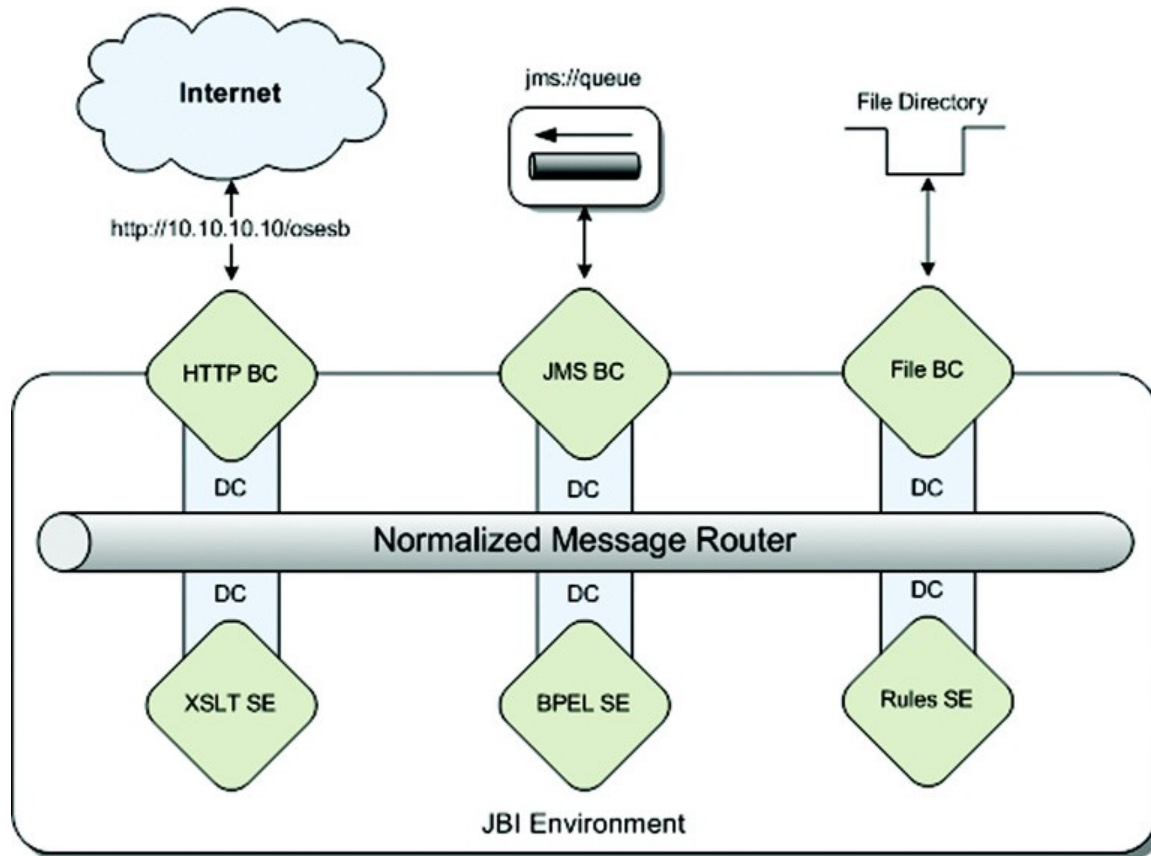


JBI – Java Business Integration – Cont.



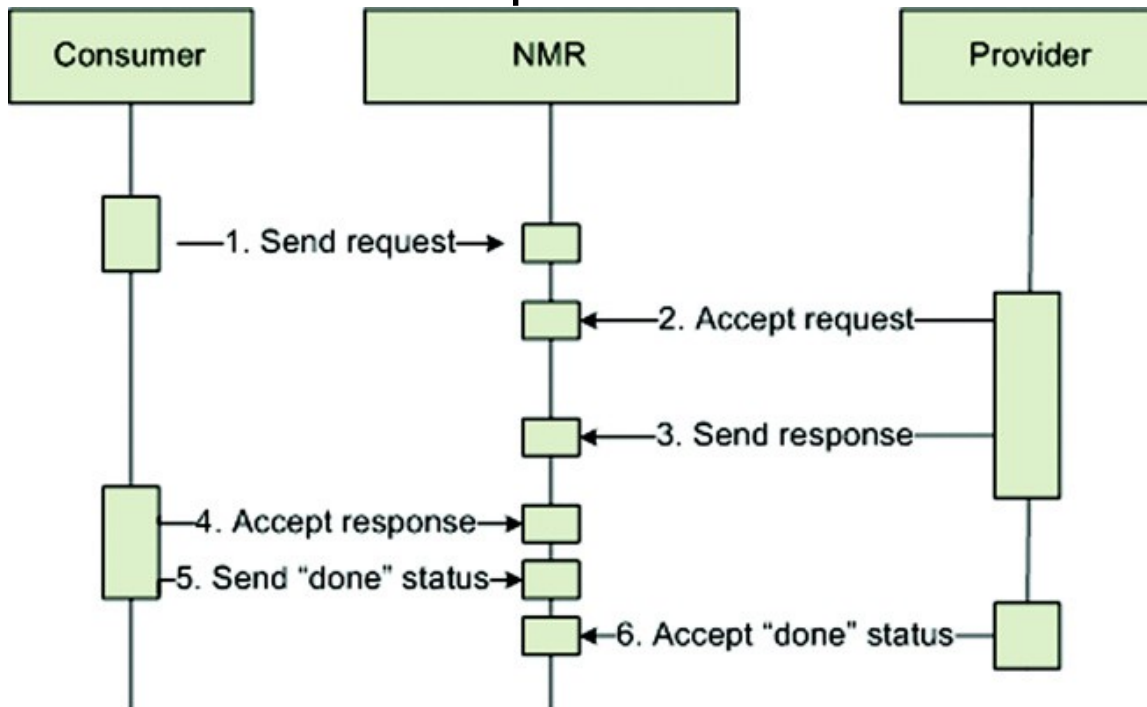
JBI – Java Business Integration – Cont.

Service Engines and Binding Components



JBI – Java Business Integration – Cont.

Services and Endpoints

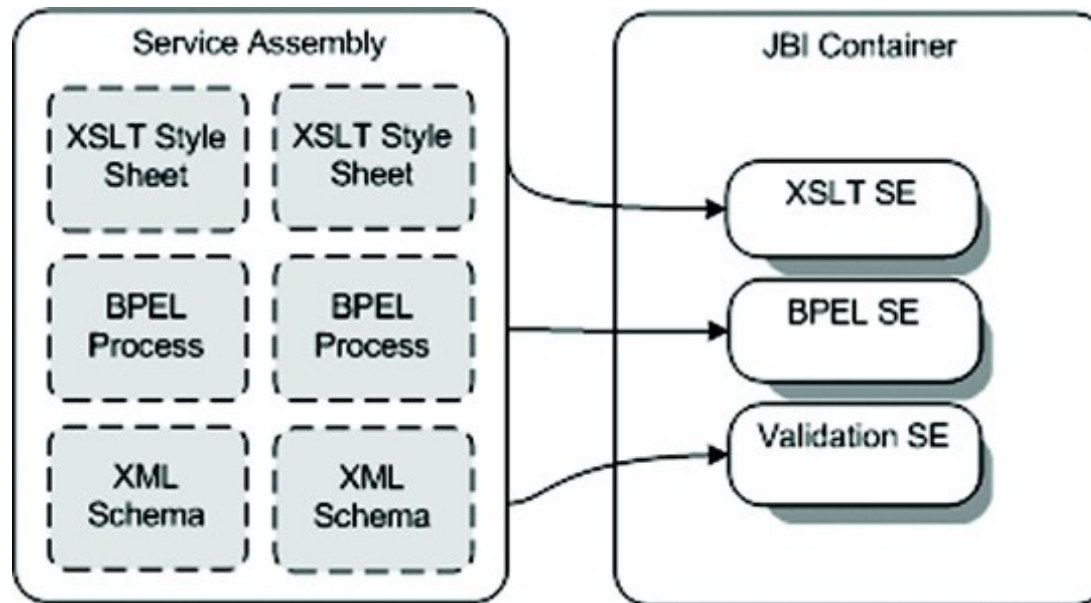


JBI – Java Business Integration – Cont.

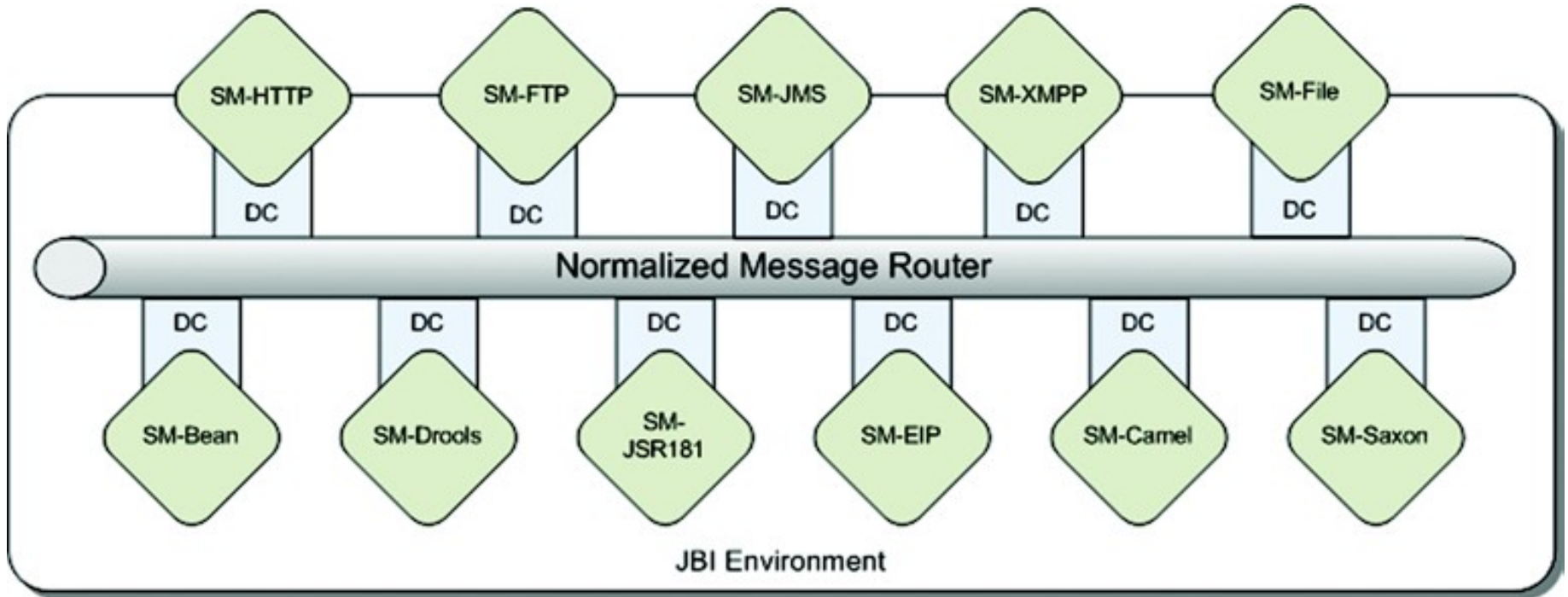
Delivery Channel

Service Unit

Service Assembly



ServiceMix





ServiceMix

Deployment Models

Running as Standalone server

Running from a Servlet Engine



Q&A