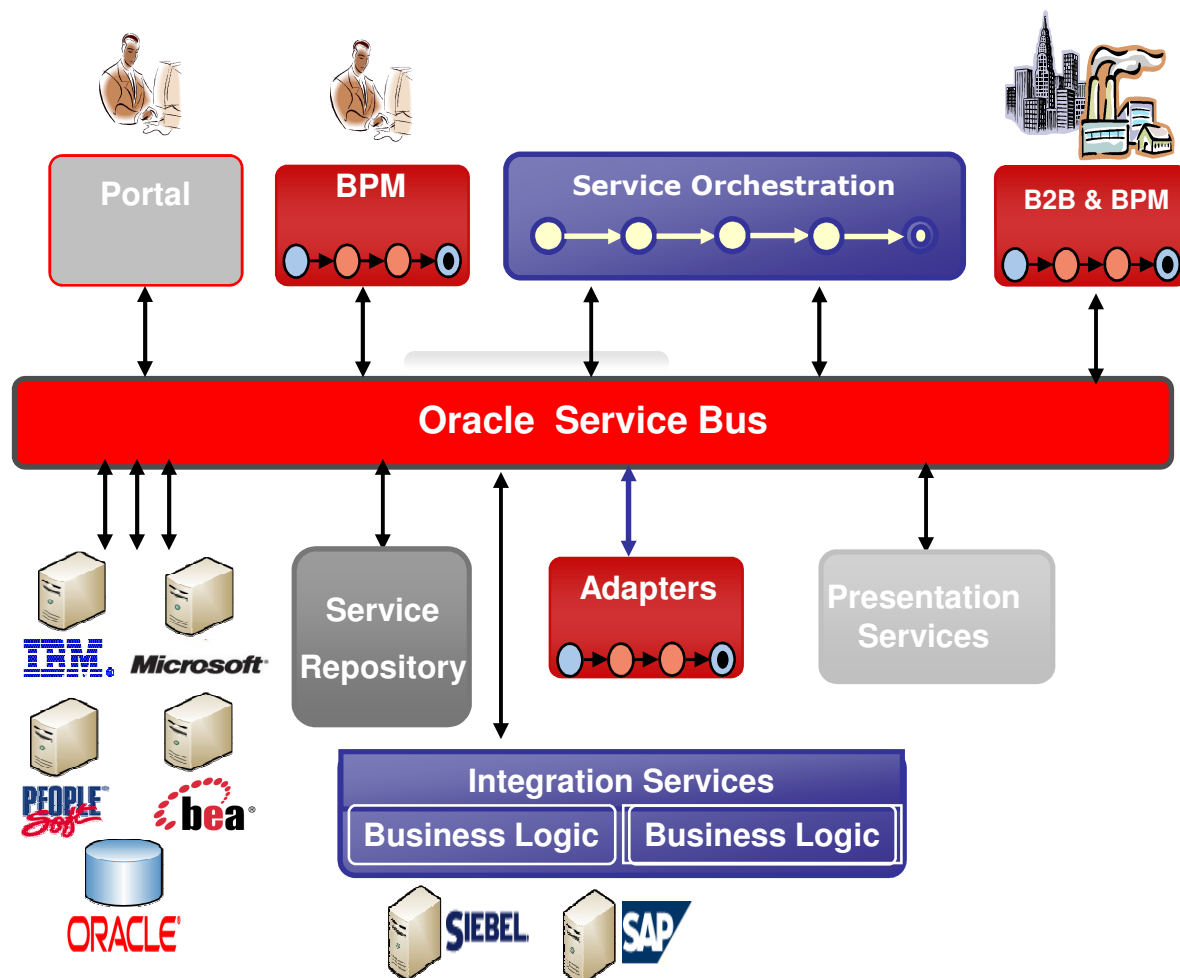# Oracle Service Bus
Essential Concepts

ORACLE

Duško Vukmanović
Principal Sales Consultant

Realize the Full Benefits of SOA
With an Enterprise-Class Service Bus

Service Intermediary & Management

- **Location Transparency**
- **Service Virtualization**
- **Configuration**
- **Any to Any Protocol, Payload**
- **Advanced Integration Patterns**
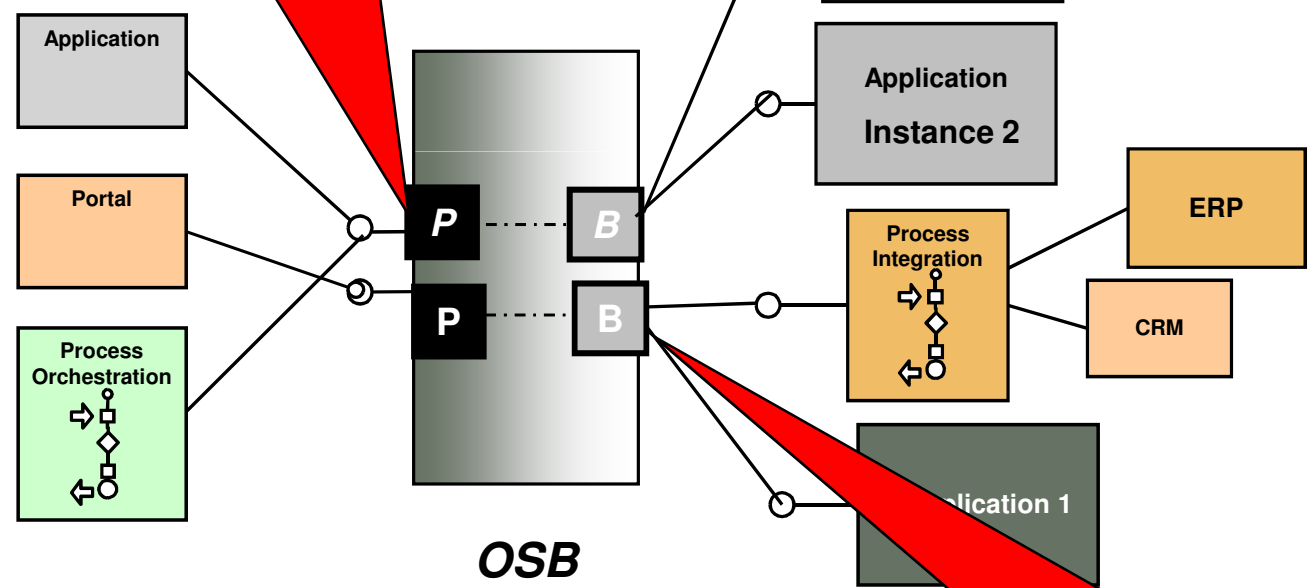- **High Availability & Scale**

Portal

BPM

Service Orchestration

B2B & BPM

Oracle Service Bus

IBM. Microsoft

PEOPLE Soft

bea

ORACLE

Service Repository

Adapters

Presentation Services

Integration Services

Business Logic   Business Logic

SIEBEL   SAP

With Service Bus...
Location Transparency

Endpoint
Concrete implementation of Service

Proxy
Provides location transparency
of the actual endpoint.

Service Providers

Service Consumers

Application

Portal

Process Orchestration

P **B**

P **B**

OSB

Application Instance 1

Application Instance 2

Process Integration

ERP

CRM

plication 1

Logical Business Service
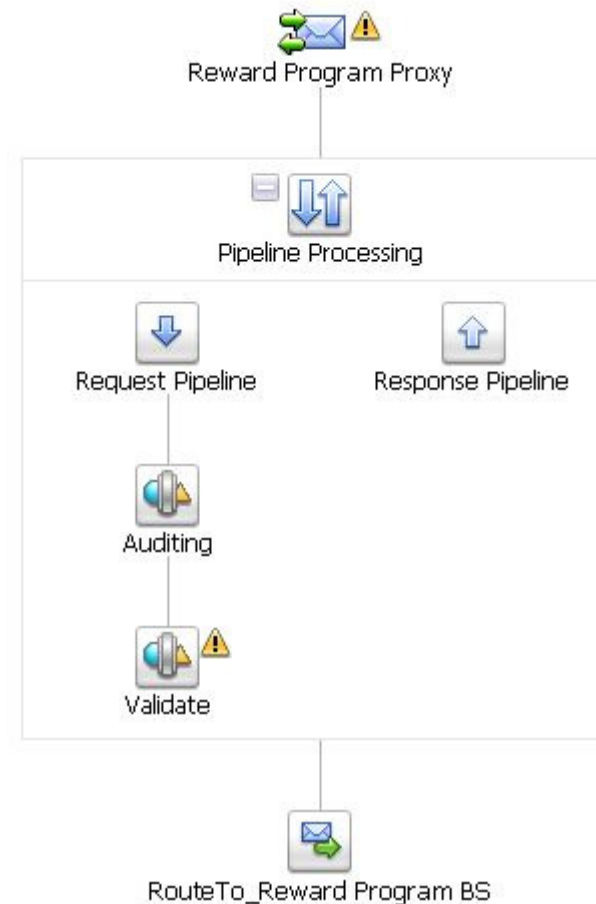View of many endpoints

ORACLE

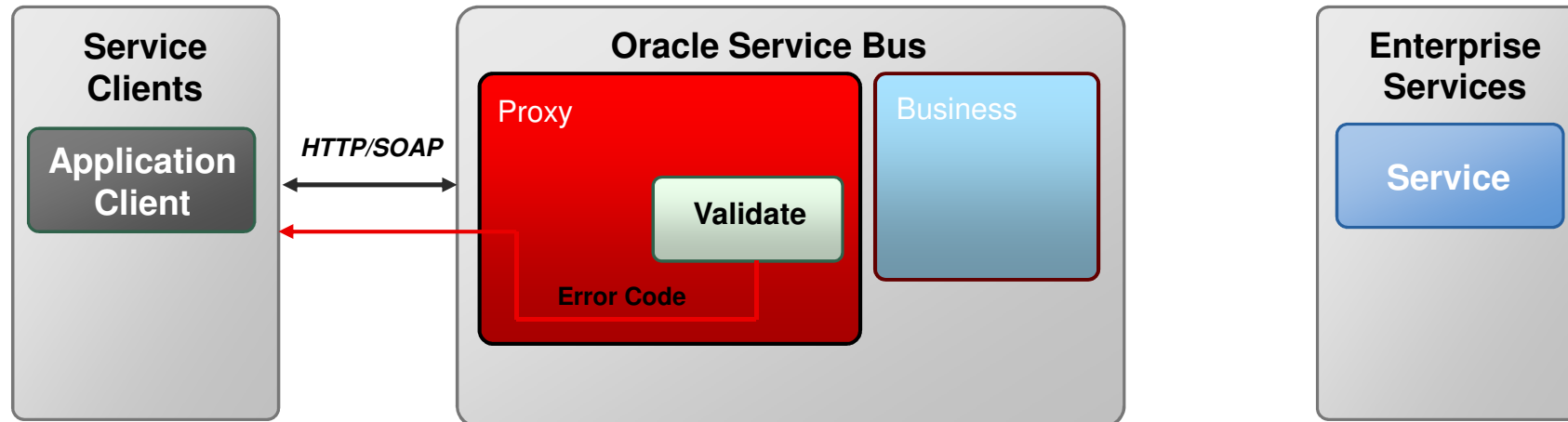# Mediation: Proxy & Business Services
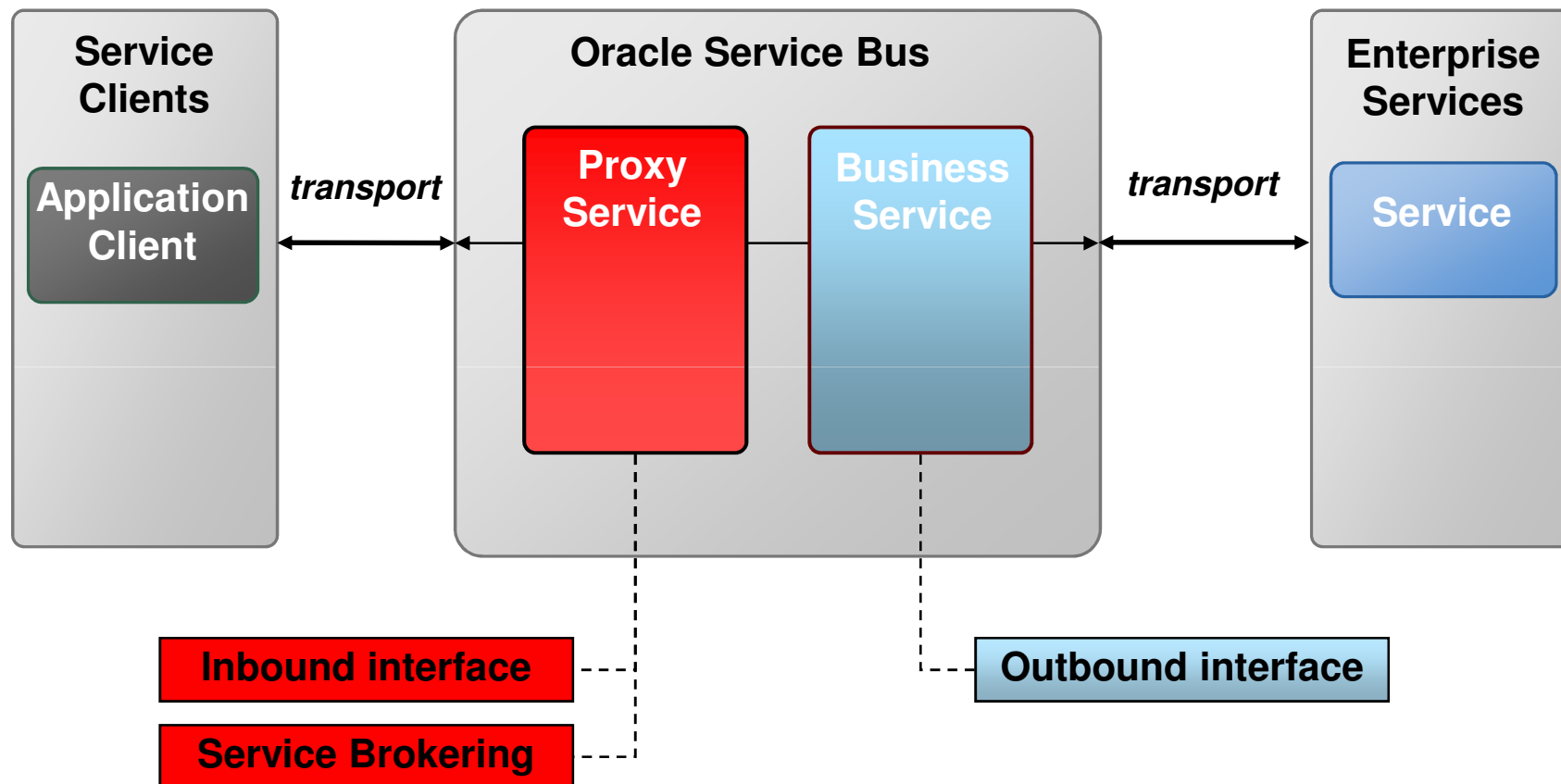
Predefined Message Context Variables

- $inbound is inbound transport metadata, security context and transport headers
- $outbound is outbound transport metadata and transport headers
- $header is the soap header in message
- $body is message payload or soap body
- $attachments are message attachments
- There is *Always* a current message at all times

Mediation: Message Flows

- Proxy Service Definitions
  - Defined by pipelines, branch nodes, and route nodes
  - Used to configure logic for manipulation of messages
  - Logic includes transformation, publishing, reporting, etc.
  - Logic is configured in individual actions within message flow
- Pipeline Pairs:
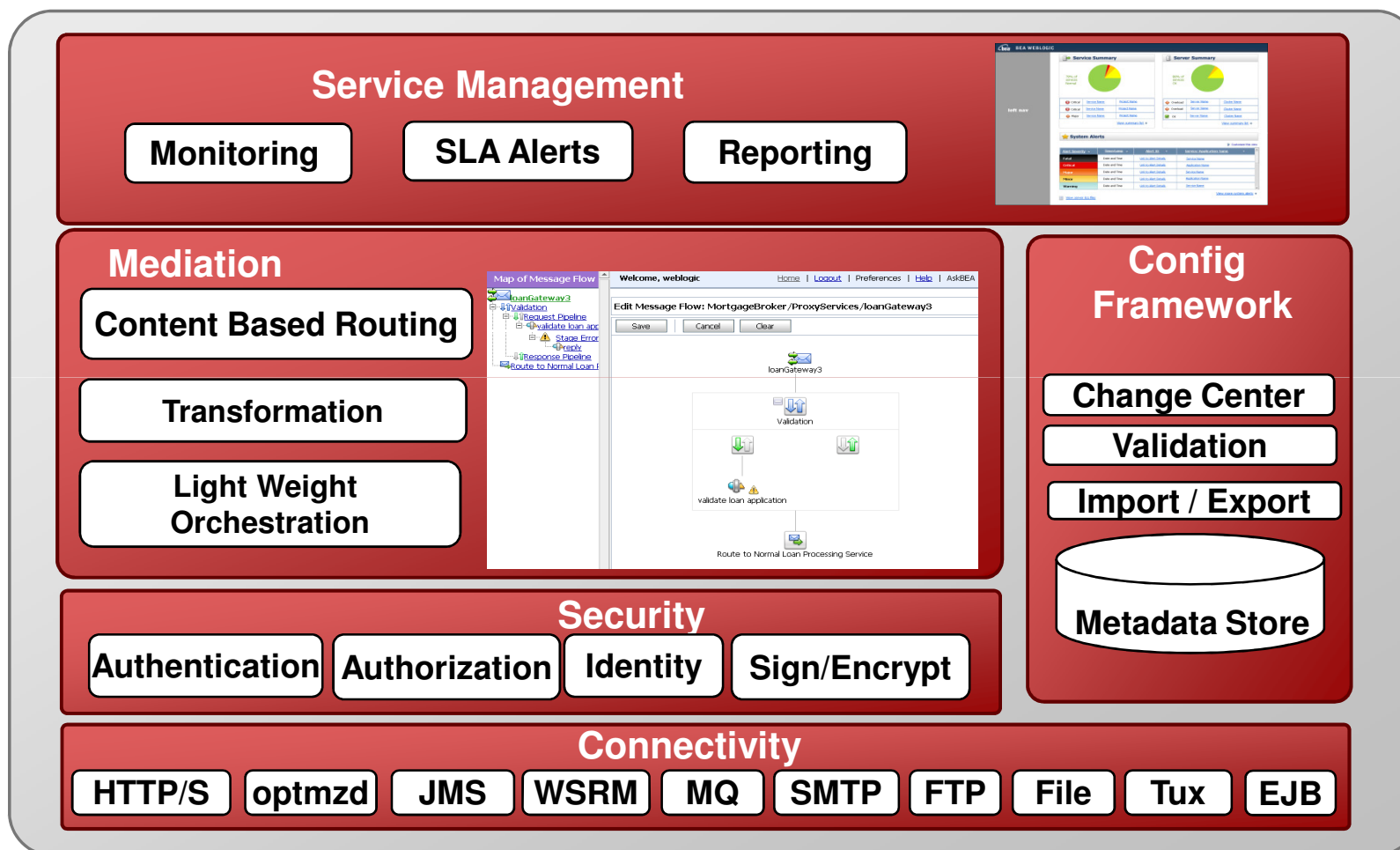 - Pairs of definitions, consisting of a *request pipeline* and a *response pipeline*

Reward Program Proxy

Pipeline Processing

Request Pipeline   Response Pipeline

Auditing

Validate

RouteTo_Reward Program BS

Mediation: Error-Handling

Service Clients	Oracle Service Bus	Enterprise Services
Application Client	Proxy — Validate — Error Code — Business	**Service**

HTTP/SOAP

- Error-handling Features
  - Technology errors/faults
  - Validation errors
  - Security errors: authentication, authorisation, signing, decryption
  - Process SOAP Faults
  - Raise error on custom-defined conditions
  - Enrich custom error messages for invoking services
  - Search/report by error conditions
- Error-handlers at Service, Pipeline and Stage level

OSB Functional Diagram

Service Management

Monitoring SLA Alerts Reporting

Mediation

Content Based Routing

Transformation

Light Weight Orchestration

Config Framework

Change Center

Validation

Import / Export

Metadata Store

Security

Authentication Authorization Identity Sign/Encrypt

Connectivity

HTTP/S optmzd JMS WSRM MQ SMTP FTP File Tux EJB

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