
Equinox
***the adoption of the OSGi standard in enterprise
solutions***

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What are we going to talk about ?

❑ Introduction of two Eclipse Projects made by Engineering Group, built

over Equinox:

- eBPM

- eBAM

❑ OSGi features used by eBAM & eBPM

❑ Some case studies on eBPM and eBAM adoption in enterprise projects



eBPM

The complete BPM solution for OSGi

- ❑ **eBPM** (eclipse Business Process Management) is the Universal Middleware for the governance and realization of SOA solutions, which are highly modular and configurable around an OSGi kernel

- ❑ **eBPM** is the core of the open source project

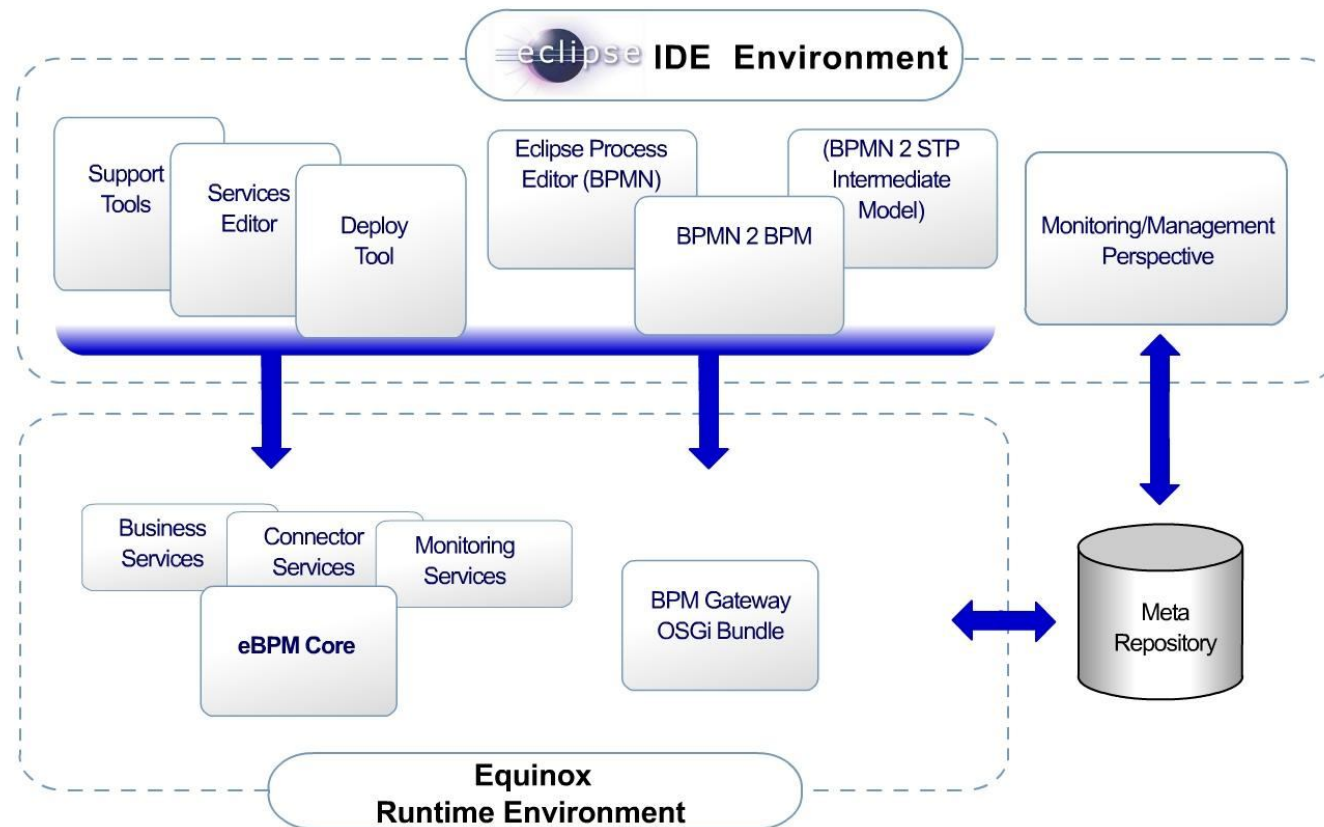
- ❑ **Features:**
 - Platform independence
 - Code reusability for different goals and containers
 - Management of the lifecycle of different business and infrastructural components
 - Configuration and start-up of single modules, in order to realize the most suitable solution for each project.



www.spagic.org

www.eclipse.org/ebpm

eBPM Architecture



- ❑ Some eBPM components are the **OSGi Bundles** that can leverage the capabilities of OSGi Declarative Services, providing a common way to define/develop OSGi services.
- ❑ Other eBPM components, once combined, allow process orchestration and communication between services and connectors

- ❑ **eBAM (extended Business Activity Monitoring)** is an advanced platform for the monitoring of heterogeneous services and applications and the historical analysis of data
- ❑ **eBAM** is integrated in the open source project

- ❑ **Features:**

- Real-time data management
- Settlement of governance rules, by defining events and services thresholds
- Settlement of alarms and SLA
- Recovery of external messages
- Sending of notifications to external systems or actors.

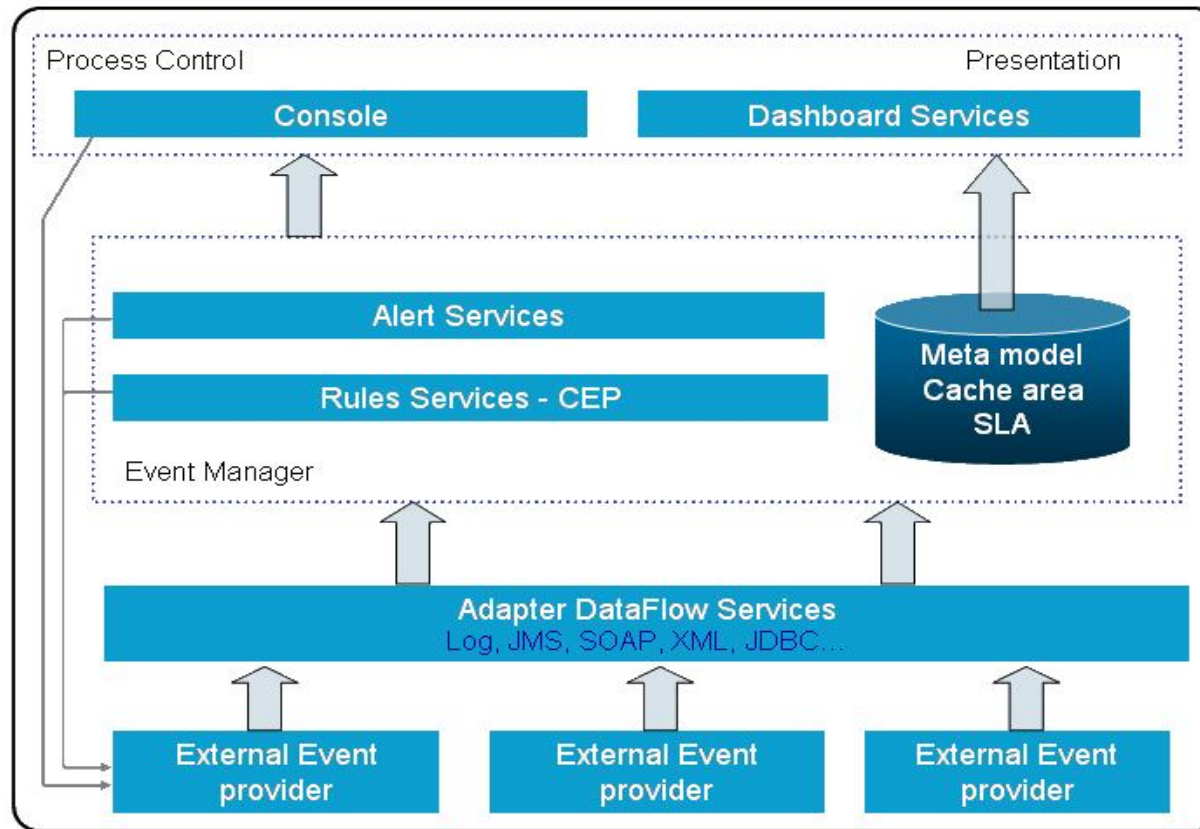


Open Source Business Intelligence

www.spagobi.org

www.eclipse.org/ebam

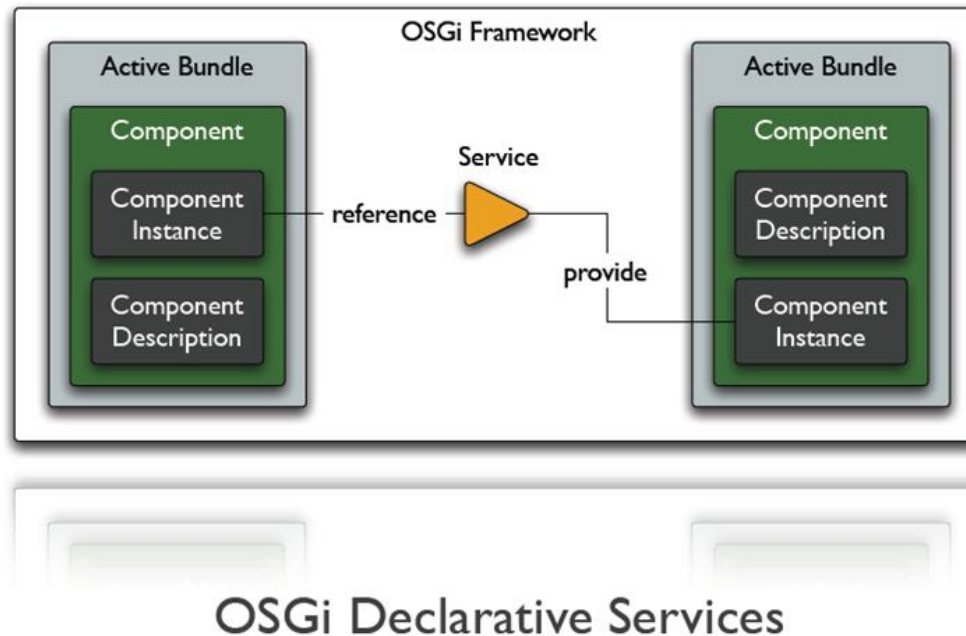
eBAM Architecture



- ❑ All eBAM modules are OSGi Bundles that dynamically interact in order to analyze different data coming from heterogeneous sources.
- ❑ eBAM architecture may include different elaboration data engines, dynamically linked to the architecture

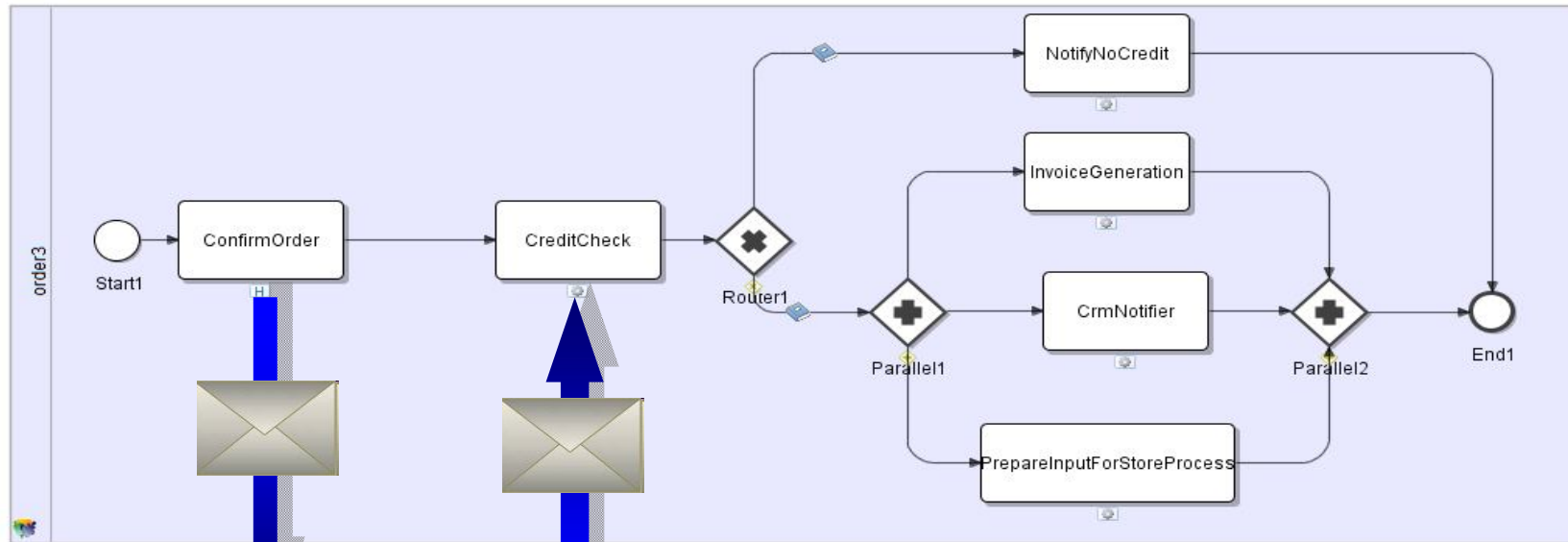
Components and Services in eBAM and eBPM

- ❑ eBPM services and connectors and eBAM modules are implemented using the Components Model
- ❑ each component can provide some services and refer to others
- ❑ the declarative services are used to build eBAM modules and eBPM services, so as to ensure the most dynamic behaviour of eBPM /eBAM services



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eBPM services for Orchestration



eBPM Normalized Message Router

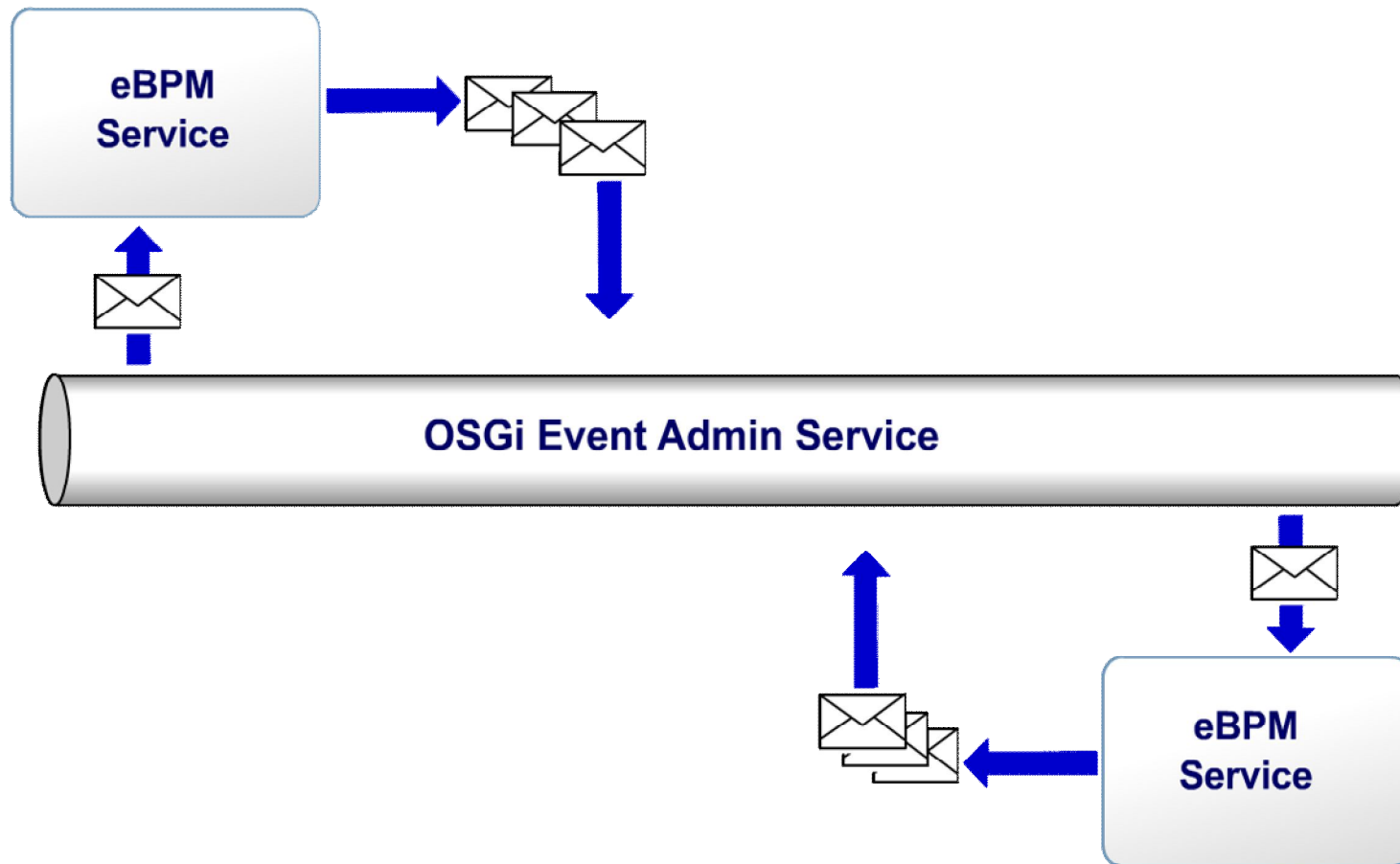
OSGi EventAdmin

Normalized Message Router

- it is the only responsible for the Message exchange between components.
- Internally, it is based on the OSGi EventAdmin Service.

Event Admin for communication

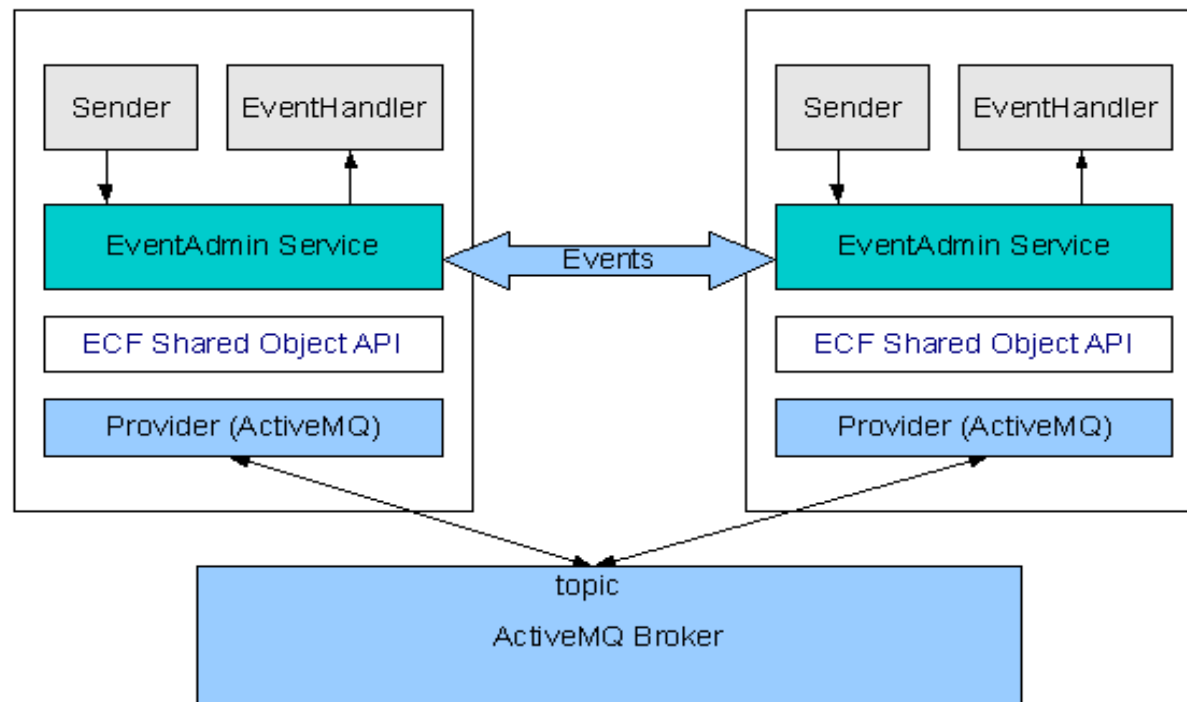
- Services interact with messages



ECF EventAdmin Service

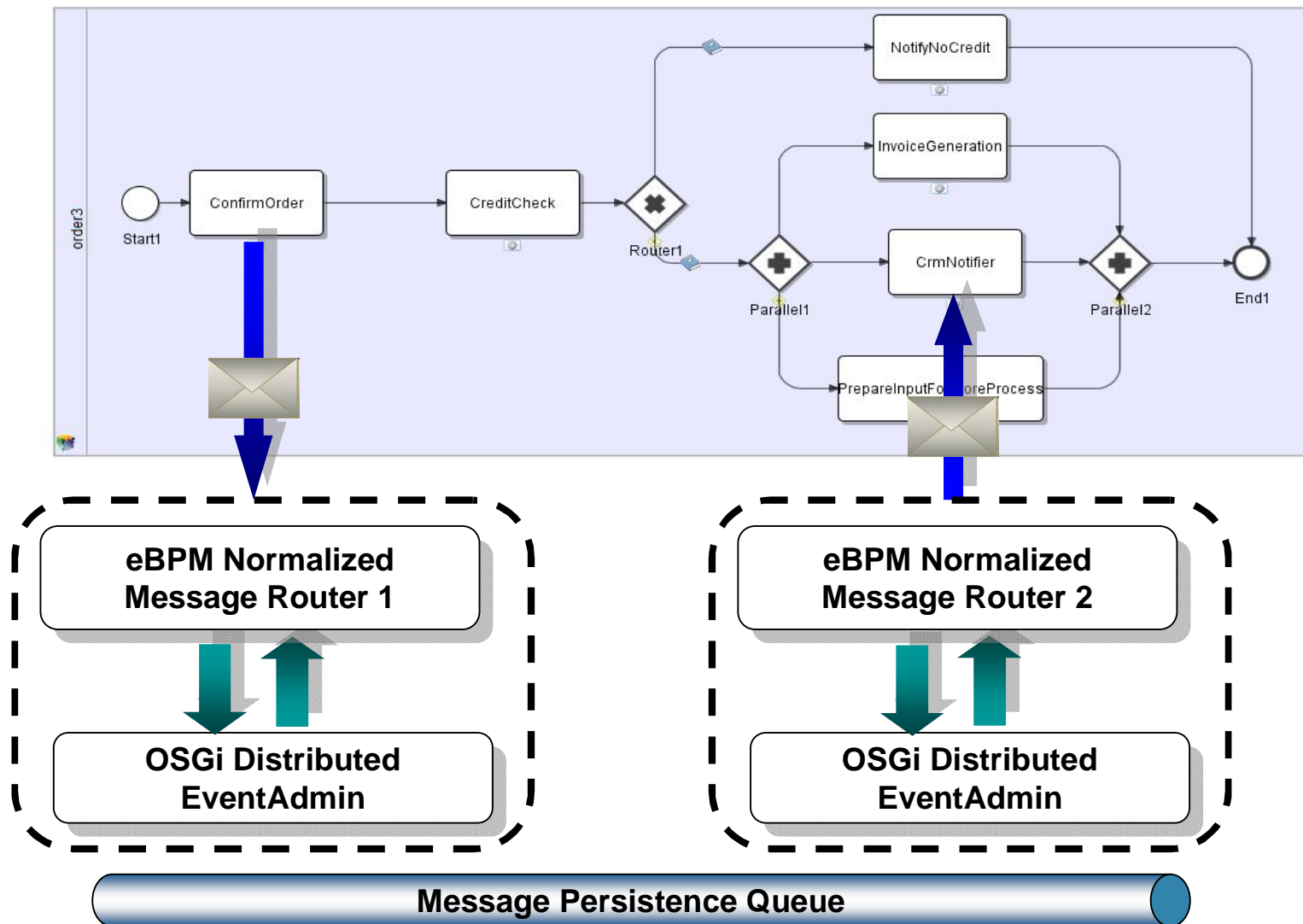
- ❑ Use of **ECF Distributed EventAdmin Service** for communication between services in different nodes

Distributed EventAdmin Service



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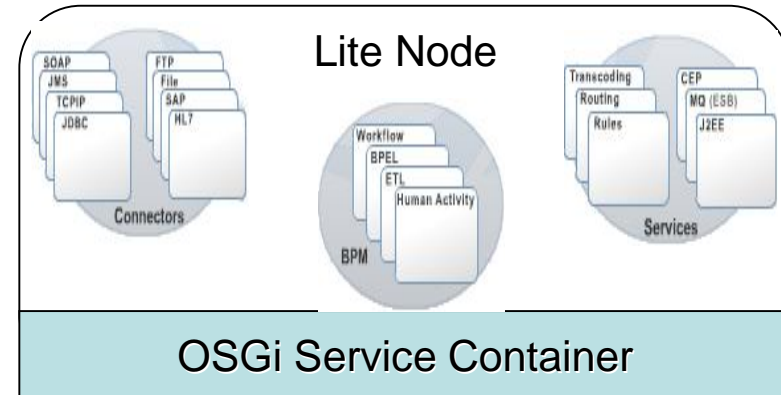
ECF EventAdmin Service



eBPM Deployment models

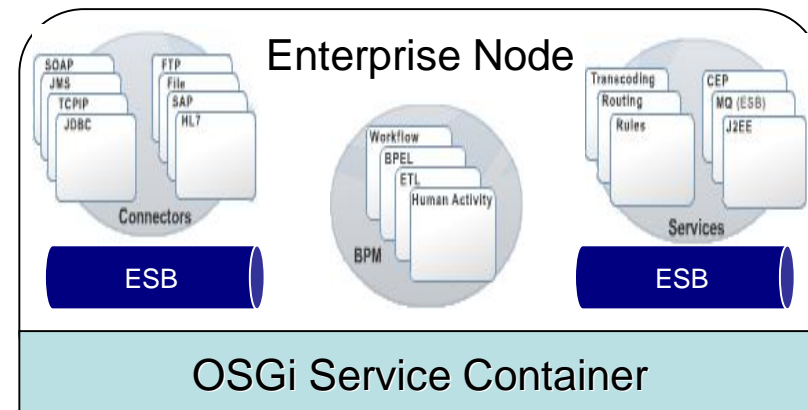
□ eBPM Lite Node

- all services run on a single node containing the eBPM middleware
- based on Equinox Event Admin



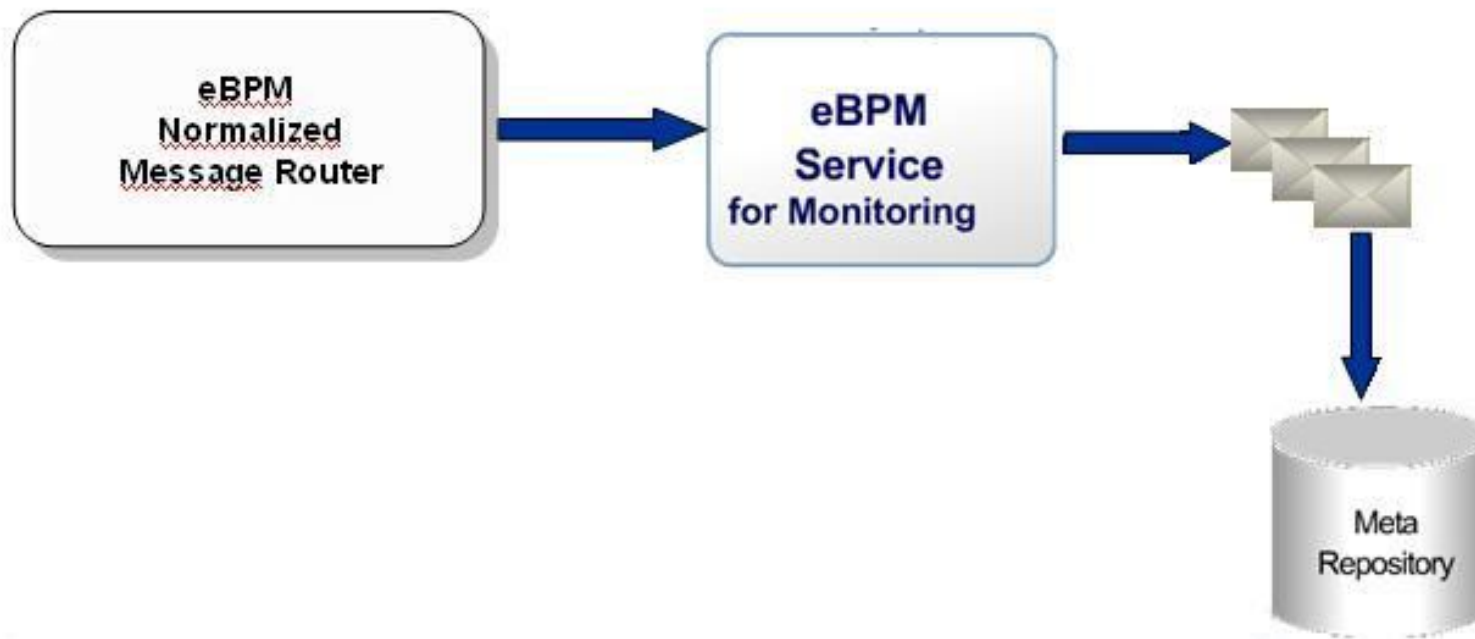
□ eBPM Enterprise

- eBPM services run on different nodes and different middleware
- based on ECF Distributed EventAdmin Service



eBPM Service for Monitoring

- ❑ Based on EventAdmin
- ❑ an eBPM Service subscribes to each topic, recognizes the sender and the receiver, and stores all the messages
- ❑ it contributes to build a knowledge base that can be used to feed a Data Warehouse or a monitoring system.



eBPM Business Case : SIURP



Organization

Regione Calabria

Market

Public

Status

Public Government

Mission

To improve local public services

Objective

To provide relationship and services for all territorial resources.

Country

Italy

The Open Source Integration Platform SOA/BPM Spagic, whose core is constituted by eBPM, is the integration platform which the system is built on. It manages all the business processes. The workflow also includes the activities to be manually executed.

The SIURP is the Regional United Information System for the Development, Management and Monitoring of public investments and related assistance services.

SIURP is a management system of the most important public investment programs, including the fund resources left by the previous investment programs. The system can manage all business processes until the single step operation, respecting the European and Italian guidelines and interacting with their monitoring system.

eBAM Business Case : Monitoring REMEDES



Organization

an Italian Region

Market

Public

Status

Public government

Mission

To improve standardization

Objective

To provide a solution for cooperation process and support new service by component composition.

Country

Italy

eBAM is the activity monitoring platform of the REMEDES application. It manages all the raw information extracted by various nodes, normalizing information in messages and using a customized engine to extract events through specific rules. It also stores events and generates alarms. Moreover, it builds the knowledge base for the open source Business Intelligence suite SpagoBI.

REMEDES

REMEDES is the unified reservation system used by a local public health company. It is used by citizens and employees to manage reservations. It is built by different reservation systems in different places. It collaborates with them in order to verify the availability of the reservation.

...towards a complete interaction standard for the whole IT infrastructure



Organization
an Italian Region

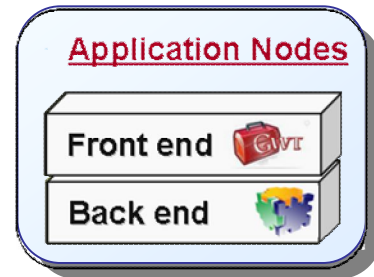
Market
Public

Status
Public government

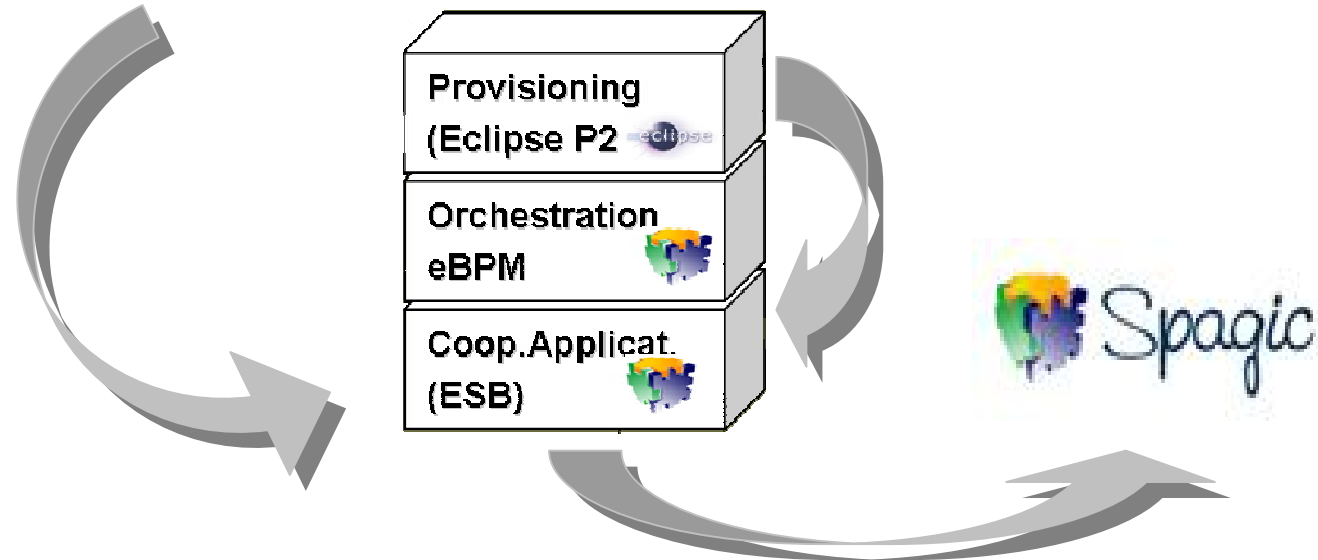
Mission
To improve
standardization

Objective
To provide a solution for
cooperation process and
support new service by
component composition.

Country
Italy



- Universal Middleware**
- Versioning**
- Security**
- Shearing & Collaboration**
- Standard**
- Governance**



For more informations.....

❑ ... about the Open Source Projects :

- Spagic3 : www.spagic.org/
- SpagoBI : www.spagobi.org/

❑ ... about the Eclipse Projects :

- eBPM : www.eclipse.org/ebpm/
- eBAM : www.eclipse.org/ebam/

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