

# Enterprise Service Bus as Testing Sandbox for SOAP and REST Web Services

Talend, Global Leader in Open Source Integration Solutions

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# Agenda

- Introduction „Talend ESB“
- Test Scenarios for Talend ESB
- Live Demo

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# Talend Overview



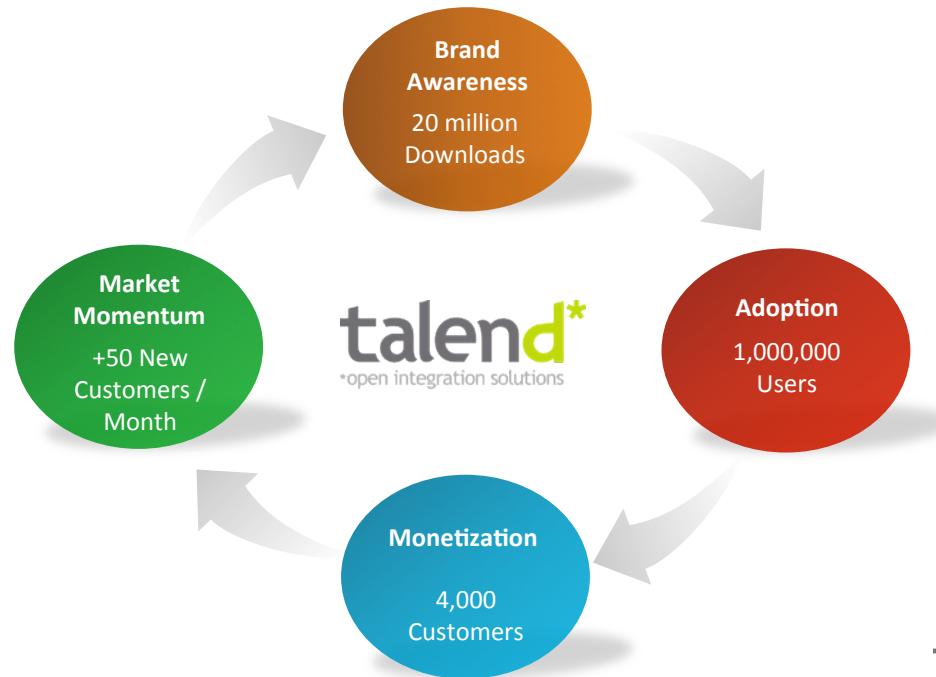
## At a glance

- ▶ Founded in 2005
- ▶ Offers highly scalable integration solutions addressing Data Integration, Data Quality, MDM, ESB and BPM
- ▶ Provides:
  - Subscriptions including 24/7 support and indemnification;
  - Worldwide training and services
- ▶ Recognized as the open source leader in each of its market categories

## Talend today

- 400 employees in 7 countries with dual HQ in Los Altos, CA and Paris, France
- Over 4,000 paying customers across different industry verticals and company sizes
- Backed by Silver Lake Sumeru, Balderton Capital and Idinvest Partners

## High growth through a proven model



# Next Generation Solutions

To address these trends in the integration market, Talend offers a Unique Solution built on Next Gen Technology, presented through a disruptive Business Model

## Solution

- Best-of-Breed
- Unified Platform
- Converged Integration

## Technology

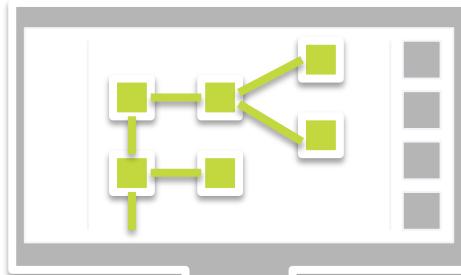
- Code Generator
- 100% Standards-Based
- Distributed Architecture

## Model

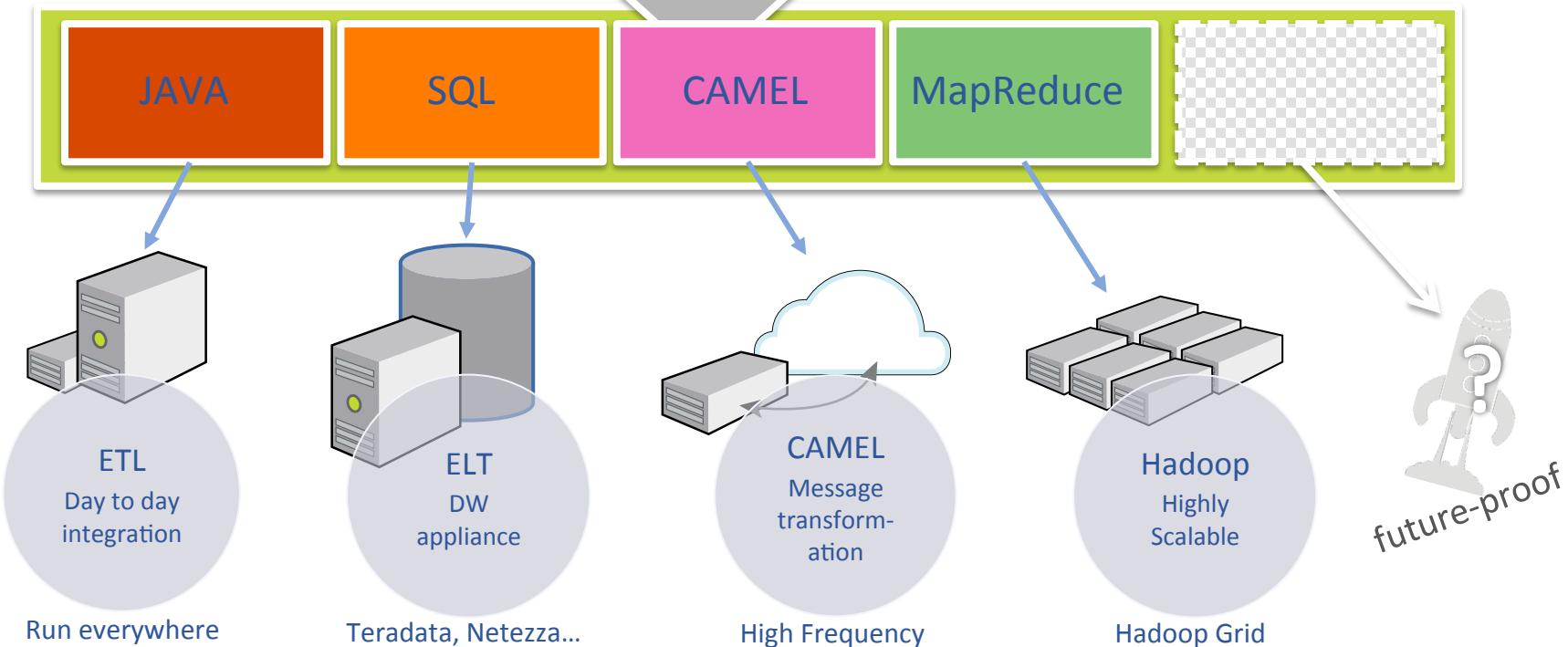
- Open Source
- Community-Based
- Subscription Pricing

# Key Differentiators of our Next Gen Architecture...

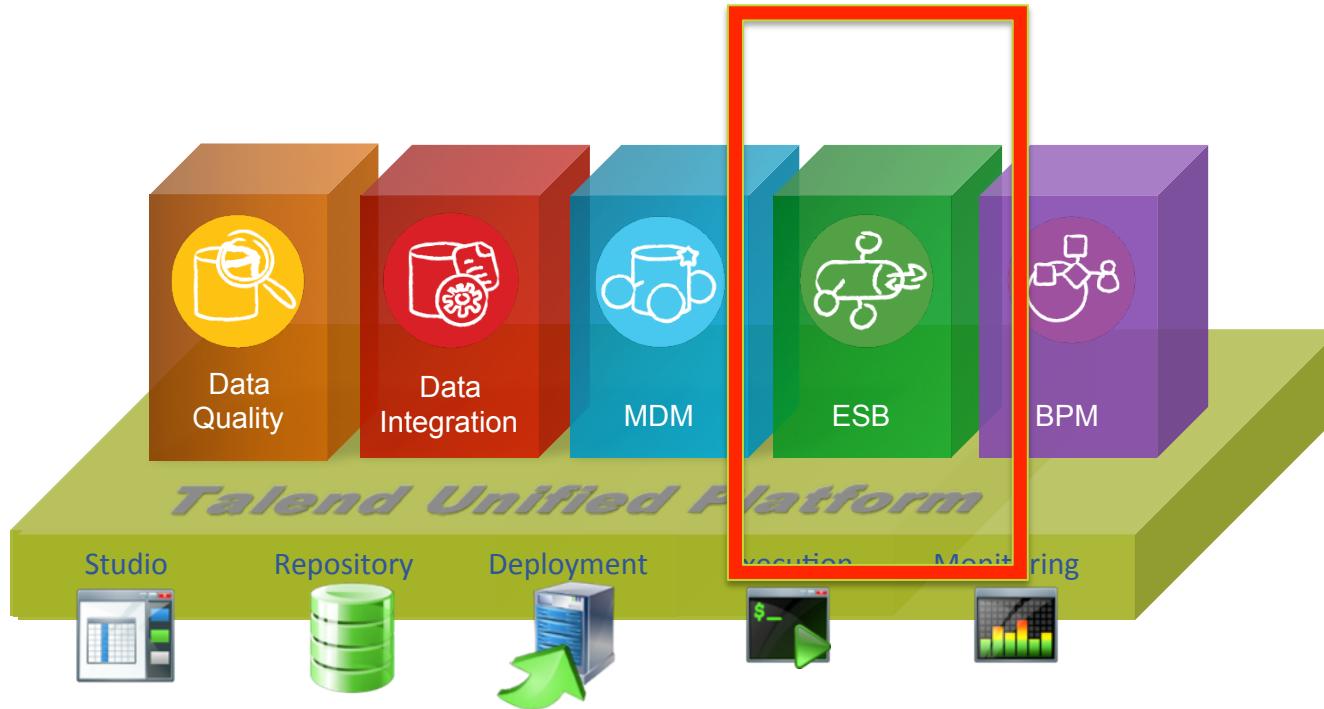
## Code Generator



- No black-box engine
- Enables light-weight distributed, customizable and parallelizable run time
- Standards-based



# Talend's Unique Integration Solution



- Reduce costs
- Eliminate risk
- Reuse skills
- Economies of scale
- Incremental adoption

Best-of-Breed Solutions

+

Talend Unified Platform

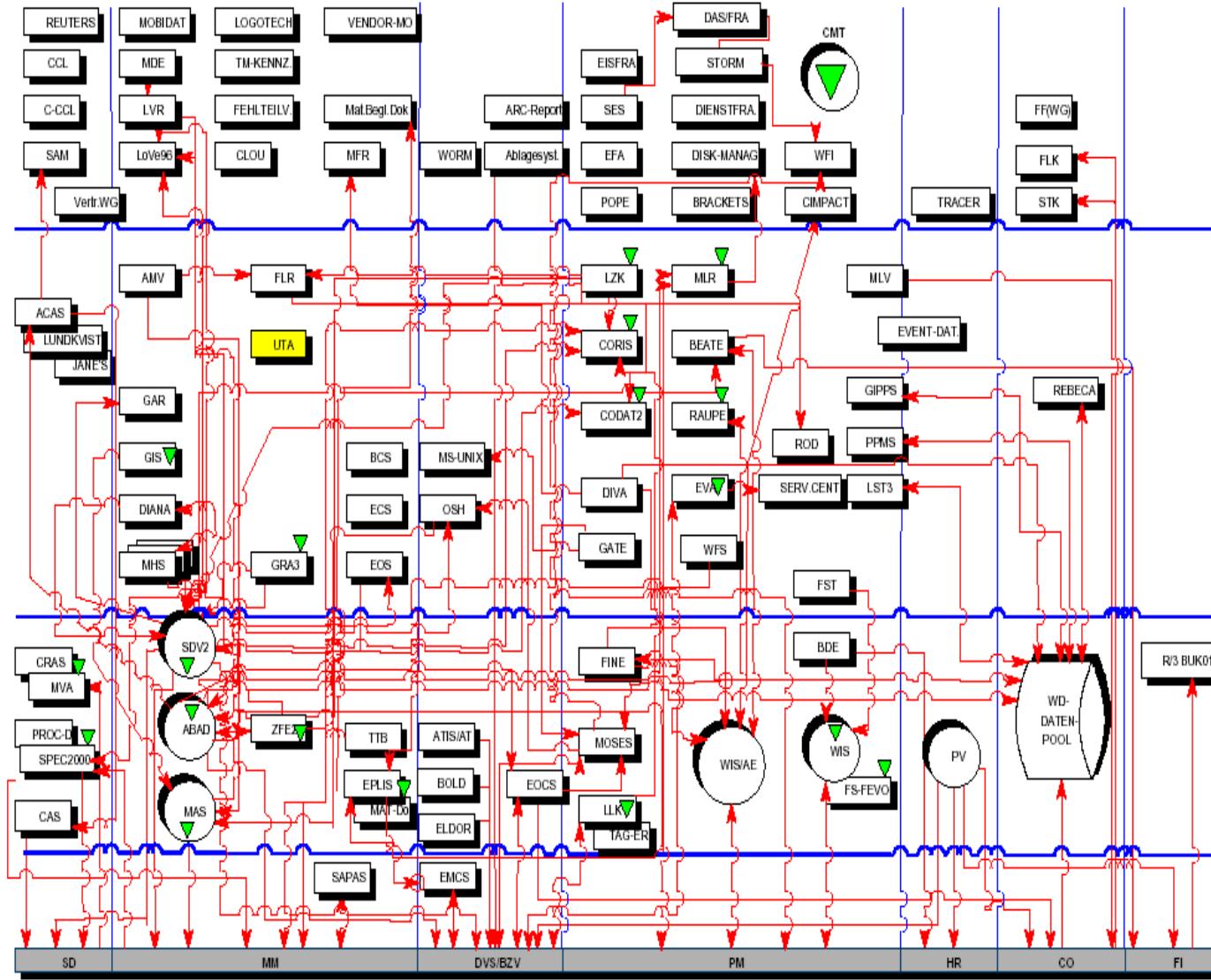
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Unique Integration Solution

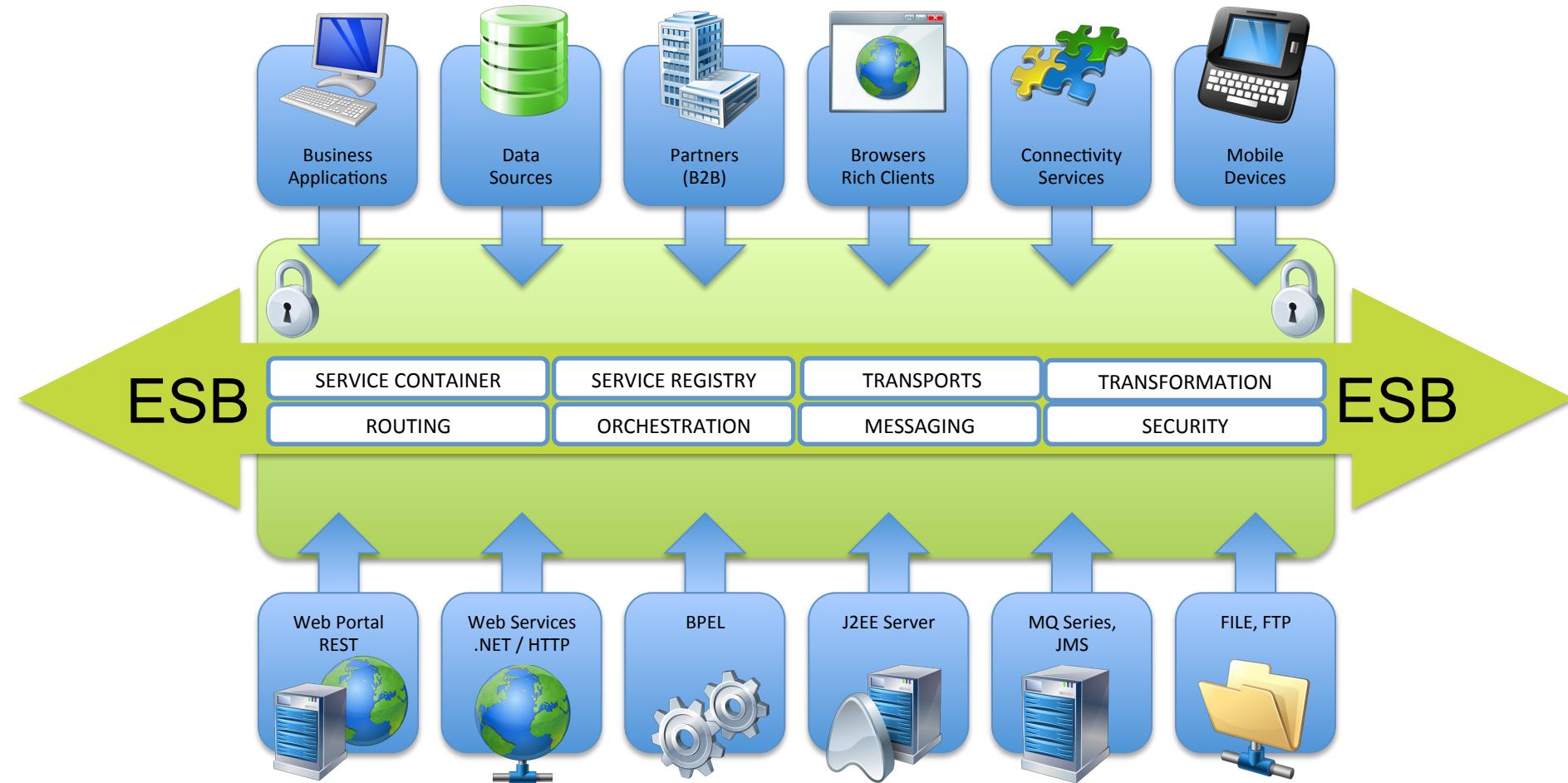
# Enterprise Service Bus (ESB)

- No standard definition
- Integration (Files, DBs, SAP, etc.)
- Service Implementation (SOAP and REST Web Services)
- Mediation (Routing, Filtering, Transformation, Transport, etc.)
- Enterprise Integration Patterns (EIP)
- Dynamic Runtime
- „24/7“
- Administration and Monitoring

# Point to Point Integration



# ESB Middleware



# Talend ESB Overview



## Development

Service Development

Mediation & Integration

Testing

Build & Deploy

Talend ESB Studio

## Runtime

Web Services Stack

Mediation & Integration

Message Broker

Service Container

Security

Loadbalancing & High Availability

Business Rules

Deployment Repository

## Operation

Management

Configuration

Project Repository

Performance & Availability

Talend Administration Center

## Documentation & Examples

24x7 Support

Maintenance

Training & Certification

Professional Services

Indemnification

Certified Partners

# Talend ESB Overview



## Development

Eclipse STP/WTP  
soapUI

Route Designer  
Mediation

Service Designer  
Integration

Apache Maven  
Build & Deploy

Talend ESB Studio

## Runtime

Apache CXF  
REST & Web Services

Apache Camel  
Mediation

Apache ActiveMQ  
Message Broker

Apache Karaf / Cellar  
OSGi / Clustering

Secure Token Server  
Security

Service Locator &  
Service Act. Monitoring  
Distributed Registry / Tracking

Apache Archiva  
Artifact repository

Eclipse Equinox  
OSGi

## Operation

Management,  
Configuration &  
Monitoring

Service Activity Monitoring  
and Service Locator UI

Repository  
Metadata & Projects

vFabric  
Hyperic HQ

Talend ESB Runtime

Talend Administration Center

## Documentation & Examples

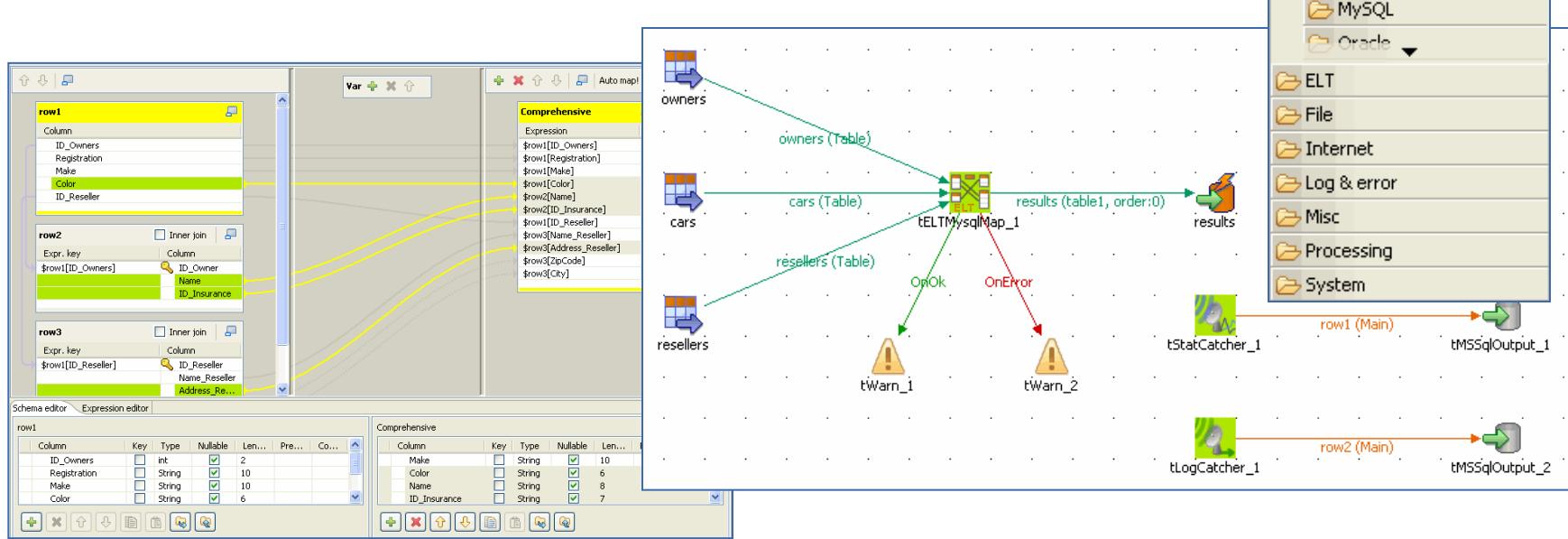
24x7 Support  
Maintenance

Training & Certification  
Professional Services

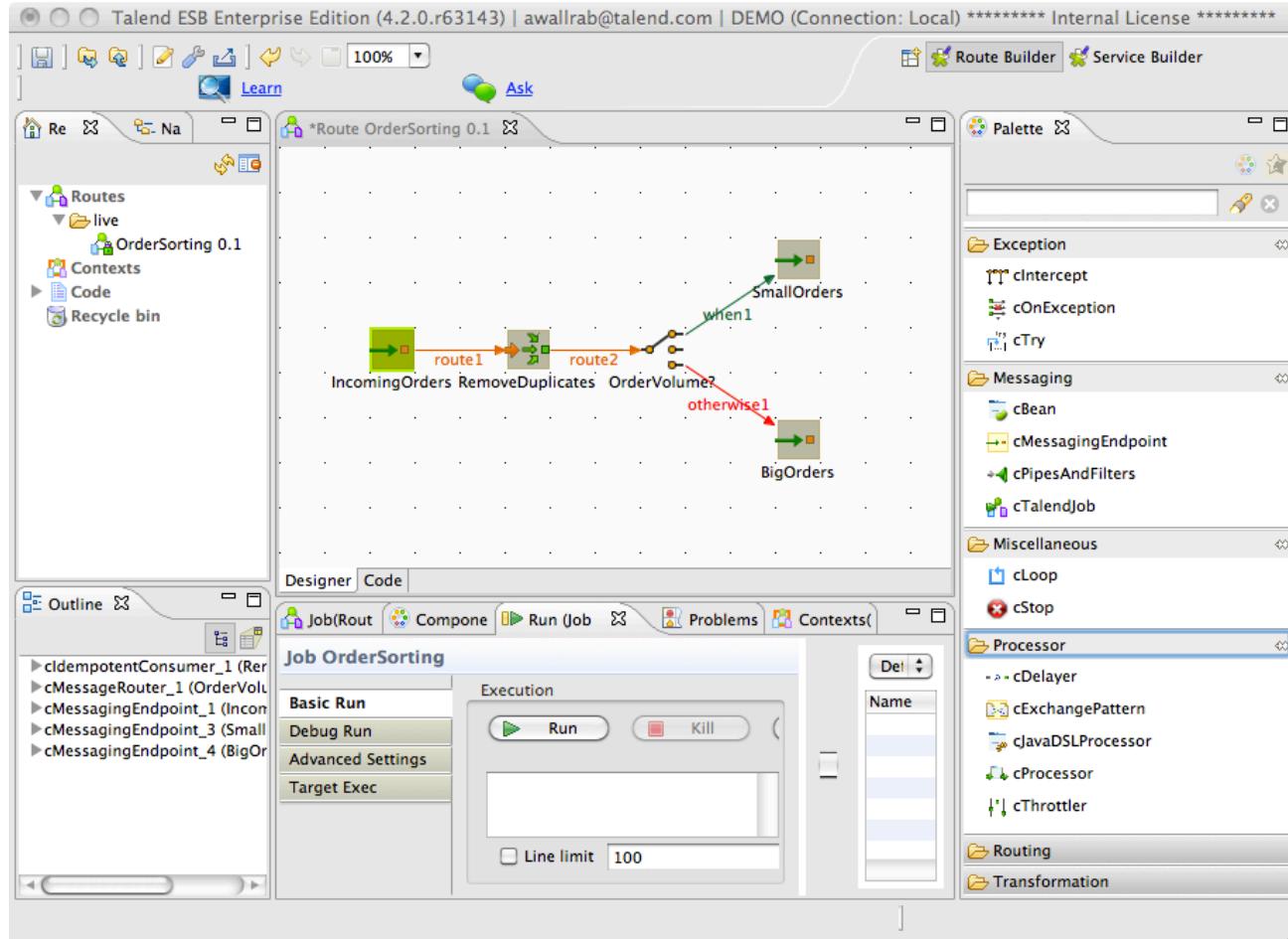
Indemnification  
Certified Partners

# Talend ESB Service Builder

- Service enablement of existing applications
- Data centric services
- 450+ Components
  - Business Applications: SAP, Salesforce, Sugar CRM, Sage X3, etc.
  - Databases: Oracle, MySQL, DB/2, LDAP, Teradata, AS/400, etc.
  - Content & Mapping: Positional, delimited, Excel, EDIFACT, XML, etc.
  - Communication: Web Services, JMS, FTP, HTTP, POP, SMTP...



# Talend ESB Route Builder



## Route Builder

- Endpoints
- EIPs
- Processors
- Custom components

## Configuration

- Components
- Endpoints

## Code Generation

- 100% Java
- Camel Code
- Packaged as OSGi Bundles

## Execution in the IDE

- Debugging
- Live statistics
- Short dev cycles

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# Test Scenarios for Talend ESB

## → Fields of application

- Realization of tests within **same IDE as development** (i.e. no new other testing tool necessary)
- **Rapid Prototyping** → Execution of tests within IDE or ESB runtime, started manually or via scheduling or via BPM
- Deployment of service consumer / provider mocks to **ESB container** (used by responsible departments / companies for implementation of counterpart)

## → Target audience

- Developer, architect, technical tester
- NOT: business people, „ui tester“

# Test Scenarios for Talend ESB

## → SOAP and REST Web Services

- Definition of the interface (WSDL, URL)
- Service consumer mock
- Service provider mock

## → Test Data

- e.g. Strings
- e.g. Files

## → Integration

- Technologies (e.g. SQL, File, JMS, NoSQL)
- B2B software (e.g. SAP, Salesforce)

## → Flows

- Sequence of service calls (Talend Administration Center)
- Human interaction (BPMN + web ui)

# Test Scenarios for Talend ESB

## → Demos / exercises

- Creation / import of test data: hardcoded, csv file
- Implementation of SOAP Web Service provider + consumer
- Implementation of REST Web Service provider + consumer
- Deployment in ESB container
- Execution of tests in IDE and in ESB container
- Not included, just FYI: Testing flow with Talend Administration Center + BPM tooling

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# Questions & Answers

- **NOW**
  - Questions
- **LATER**
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  - Xing / LinkedIn

# Exercises for Talend ESB

- Get „Talend Open Studio for ESB“
  - Download or use USB stick
  - Start Studio via /Studio/TOS\_ESB\_“YOUR\_OPERATING\_SYSTEM\_EXECUTABLE“
  - Open Project „ESB Roadshow“
- All exercises exists already as working demos
  - Start with these jobs: „DummyService“ and „DummyServiceConsumer“
- Recreate the demos by yourself
  - Drag&drop components from palette, Double click and configure, Connect components, Run jobs
- Help / Documentation
  - Documentation for all Talend topics: [www.help.talend.com](http://www.help.talend.com)
  - Detailed descriptions for components + **complete step-by-step-tutorials (== exercises):**  
<https://help.talend.com/display/TALENDOPENSTUDIOCOMPONENTSREFERENCEGUIDE52EN/Home>