



Utilize the full power of the web  
with Restlet

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## General Info

- > Founded in 2002
- > 40+ consultants
- > Specialized in DW/BI Systems, BigData and Java/Oracle Development
- > Large Number of Successful International Projects and Satisfied Customers

## Oracle Partner - Platinum Level

- > Experience with Exastack products
- > BigData & Exadata & Exalytics Distributor



Specialized  
Communications Industry



Specialized  
Financial Services



Specialized  
Oracle Application  
Development Framework



Specialized  
Oracle Business Intelligence  
Foundation



Specialized  
Data Warehousing



## Competencies

- > More than 12 Years of Experience
- > Certified experts (OCP, DW/BI, Java)

## Oracle Specializations

- > Communications Industry
- > Financial Services
- > Data Warehousing
- > Data Integration
- > Business Intelligence Foundation
- > Java Platform
- > Application Development Framework

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NEOS has been chosen as the winning Oracle partner in the Oracle ECE region in the Big Data & Analytics Innovation Award category for 2015.

NEOS developed an innovative solution called SNA Analytics. Social Network Analysis helps companies predict their customers' behavior in order to better manage their business as well as providing their customers, employees and stakeholders with more value.



## DW&BI Design & Implementation

- > Project Management
- > Business Requirements Analysis
- > System Architecture Design
- > Logical and Physical Data Modeling
- > ETL Procedures Design & Implementation
- > Reports Design & Implementation
- > Integration, Testing and Documentation

## App Design & Development

- > Project Management
- > Business Requirements Analysis
- > System Architecture Design
- > Custom Modules Design & Development
- > Integration, Testing and Documentation



## Clients

- > International and Regional Companies
- > Large and Medium Sized Companies

## Industries/Areas

- > Financial Industry (Banks, Funds)
- > Telco Industry
- > Accounting
- > Insurance
- > Energy distribution
- > Retail & Wholesale
- > Other



# REST – short look

- REpresentational State Transfer
- According to Roy T. Fielding :
  - „...a set of principles that, when correctly applied, helps in building software architectures and applications that benefit from the qualities of the web“
- Fielding continues his definition by defining architectural elements:
  - Components
  - Connectors
  - Representations
  - Resources





- The most important element
- Implemented the way Tim Berners-Lee envisioned
- Some state and a standard set of methods (GET, PUT, DELETE, POST)
- Comparable to an object in object-oriented paradigm , the difference is the limited number of methods and their predefined behavior regulated by HTTP

- Software element that is used for encapsulating state and behavior and exposing it on a distributed network such as the internet
- Examples:
  - User agent
  - Origin server
  - Gateway
  - Proxy



- Used for communication between components
- Examples:
  - Client connector
  - Server connector
  - Cache
  - Resolver
  - Tunnel

- HTTP embodies the principles of REST
- HTTP is a mature high-level layer and it would be a shame to not use its features
- HTTP is stateless by definition, that's why REST is scalable!
- Writing web applications without REST is like writing non OO applications with OO languages!

# Restlet Framework

- The main feature is the Restlet API , a portable and compact Java API that embodies the main concepts of REST:
  - Uniform Interface ( a standardized way of interacting with resources when using requests and responses)
  - Resources
  - Components
  - Connectors
  - Representations



- Abstracts the main features of HTTP and enables you to use them without deep understanding of HTTP headers, statuses and methods
- It offers:
  - Content negotiation
  - Automatic compression
  - Conditional processing
  - Caching



- Thread-safe
- Ready for scalable and high concurrency deployment environments
- Offers client and server implementations
- Mature framework in development since 2005.
- Free and open-source
- Requires Java version 5 or newer

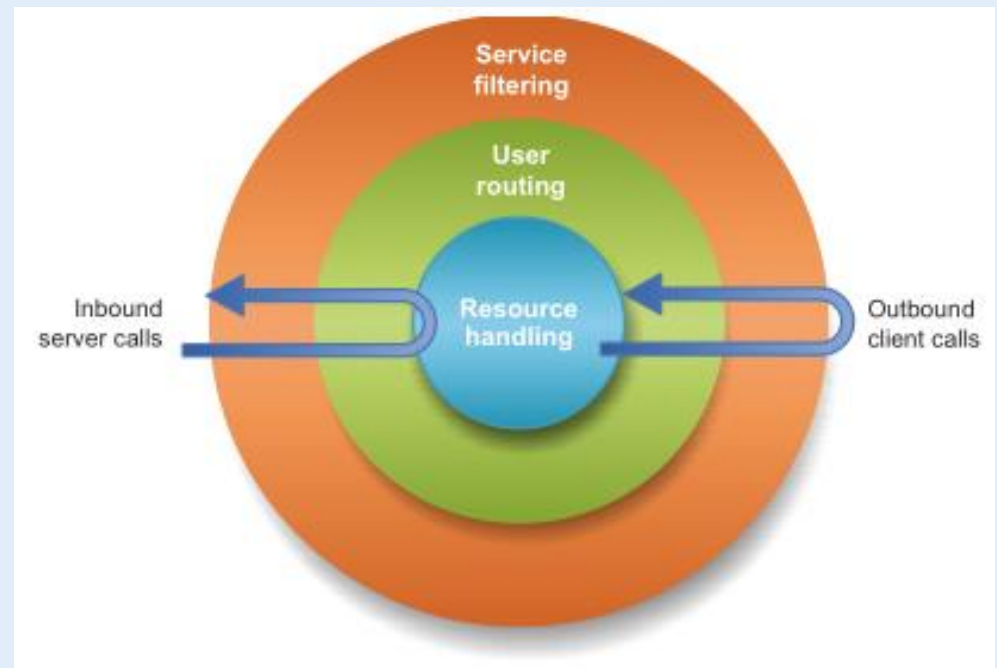


- Available in versions for:
  - Java SE
  - Java EE
  - Android
  - Google Web Toolkit
  - Google App Engine
  - OSGi

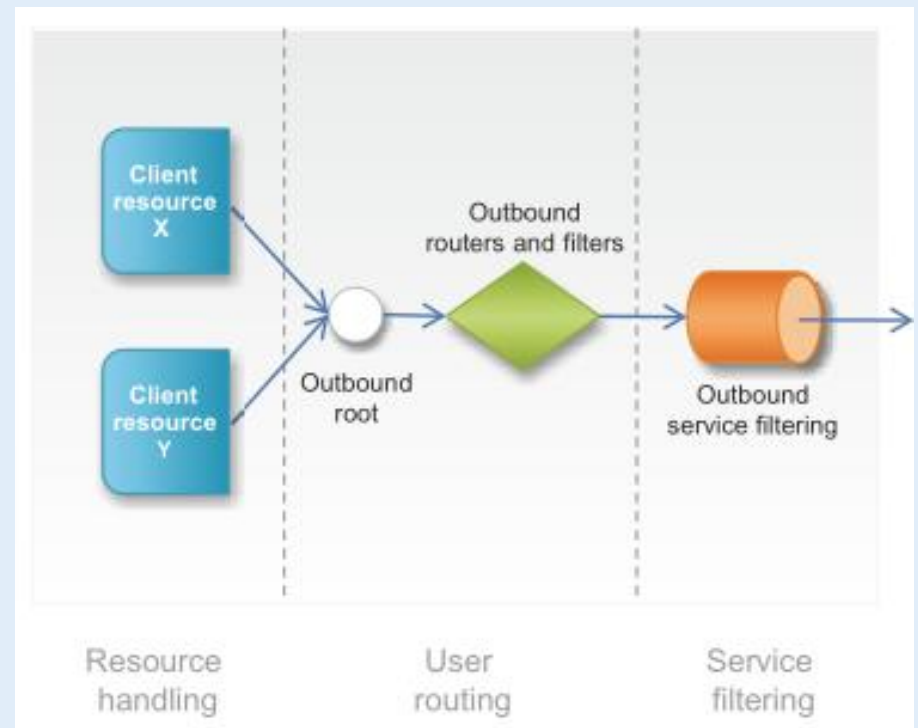
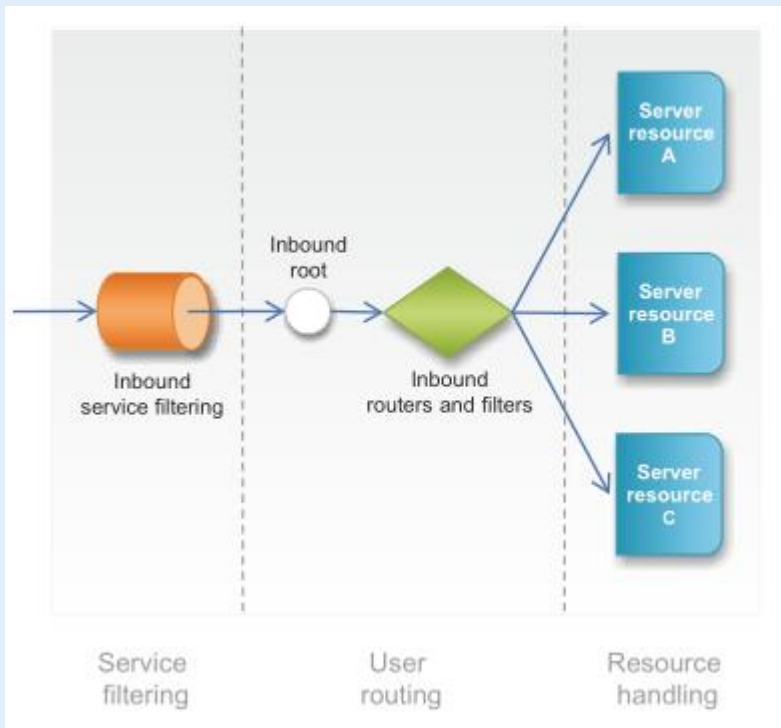


- Embeddable toolkit
- Library from which you can handpick features you want
- Comprehensive framework

- Every call passes through 3 layers:
  - Service filtering
  - User routing
  - Resource handling



# Incoming calls & outgoing calls



- Offers the incoming/outcoming call the services that Restlet provides:
  - DecoderService/EncoderService
  - TunnelService (gives transparent support for all HTTP methods)  
<http://localhost:8111/test/abcd?method=options>
  - StatusService
  - ConverterService
  - And many others offered by the core package and extensions

- Routers and filters
- Filters have methods that are called before and after a call
- Routers offer routing paths based on the called URI

- Resource class offers methods for:
  - Handling calls
  - Error handling
  - Representation
  - Methods for GET, PUT, UPDATE, POST and DELETE

- Jerome Louvel was a member of the JCP that worked on JAX-RS
- The authors were guided by their experience with JAX-RS and decided to simplify and enhance the use of annotations, reducing the number from 21 to 5!
- Annotations work for the client and the server
- The annotations:
  - @Get
  - @Put
  - @Post
  - @Delete
  - @Update





- Works as a container for a Restlet applications
- Other components don't need to be Restlet applications to work with it
- Connects through a Restlet Connector:
  - Server
  - Client
  - Servlet (when you still want to use the Java EE Servlet)
  - And many others available through extensions

Q&A

# Thank you!

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