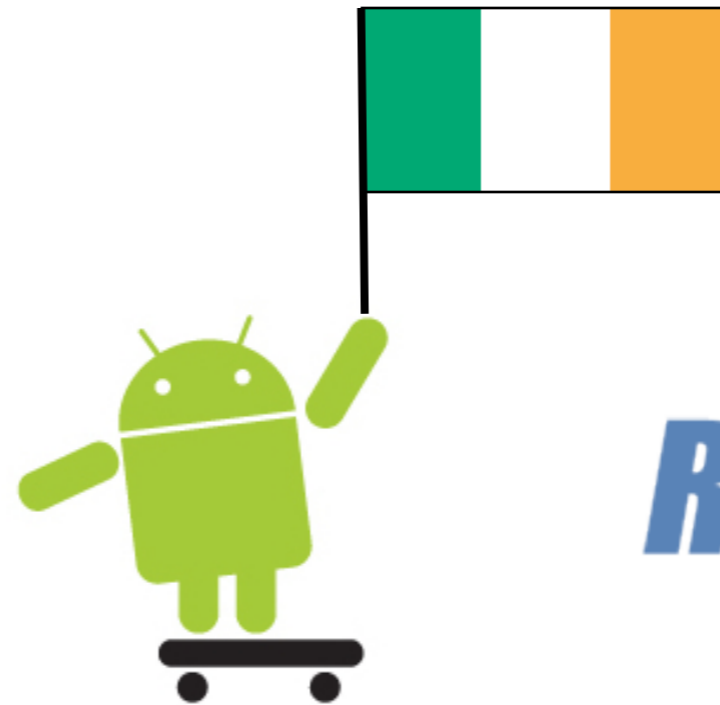


OAuth and REST web services



Sean Sullivan
Portland Java User Group
March 17, 2009



Restlet[®]



Representational state transfer (REST) is a style of software architecture for distributed hypermedia systems such as the World Wide Web. As such, it is not strictly a method for building "web services." The terms "representational state transfer" and "REST" were introduced in 2000 in the doctoral dissertation of Roy Fielding, one of the principal authors of the Hypertext Transfer Protocol (HTTP) specification.

UNIVERSITY OF CALIFORNIA, IRVINE

**Architectural Styles and
the Design of Network-based Software
Architectures**

DISSERTATION

submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in Information and Computer Science

by

[Roy Thomas Fielding](#)

2000

<http://www.ics.uci.edu/~fielding/pubs/dissertation/top.htm>

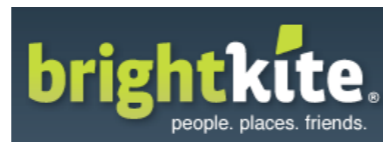
CHAPTER 5

Representational State Transfer (REST)

This chapter introduces and elaborates the Representational State Transfer (REST) architectural style for distributed hypermedia systems, describing the software engineering principles guiding REST and the interaction constraints chosen to retain those principles, while contrasting them to the constraints of other architectural styles. REST is a hybrid style derived from several of the network-based architectural styles described in Chapter 3 and combined with additional constraints that define a uniform connector interface. The software architecture framework of Chapter 1 is used to define the architectural elements of REST and examine sample process, connector, and data views of prototypical architectures.

<http://www.ics.uci.edu/~fielding/pubs/dissertation/top.htm>

REST web service API's



“REST is an architectural style, not a protocol”

Roy Fielding

September 2008

<http://roy.gbiv.com/untangled/2008/no-rest-in-cmis>

REST +



- Jersey
- JBoss RESTEasy
- Apache CXF
- Restlet
- Spring 3.0



- Restlet API
- JAX-RS API
- Restlet client API



- org.restlet.Application
- org.restlet.resource.Resource
- org.restlet.Restlet
- org.restlet.representation.Representation
- org.restlet.representation.Variant
- org.restlet.ext.servlet.ServerServlet

JAX-RS

- Java API for RESTful web services
- JSR-311
- <https://jsr311.dev.java.net>

Restlet configuration

“As XML has been frequently overused as an alternative programming language, in the Restlet framework we are very careful about this. We think that any configuration that must be done by an application developer should be done in Java.”

<http://www.restlet.org/documentation/1.1/faq>



“An open protocol to allow secure API authorization in a simple and standard method from desktop and web applications”

<http://oauth.net>



- use OAuth to access protected data
- your application needs to obtain an access token from the service provider
- service provider will issue access token after the user grants permission



OAuth signup can be found here:
http://twitter.com/oauth_cl...

about 3 hours ago from Splitweet

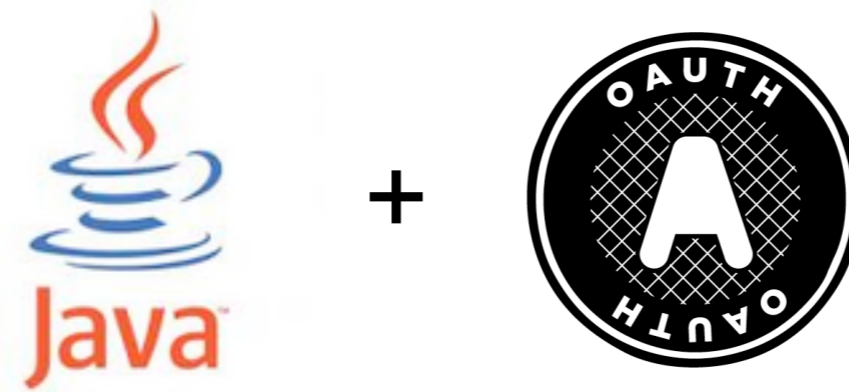


twitterapi
Twitter API

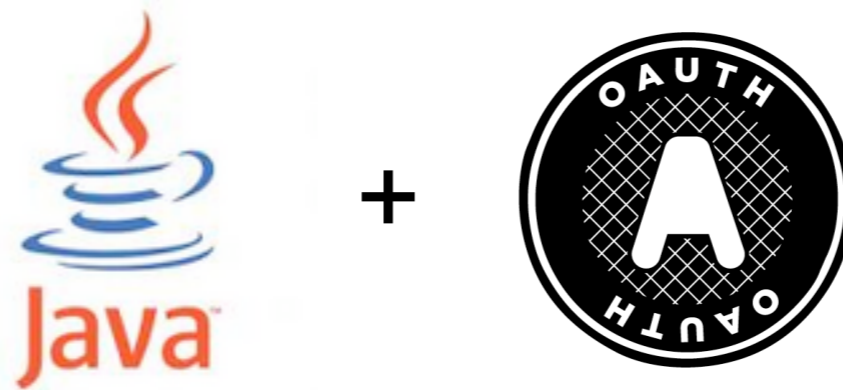
http://twitter.com/oauth_clients



<http://wiki.oauth.net/ServiceProviders>



<http://code.google.com/p/oauth>



- `net.oauth.OAuthAccessor`
- `net.oauth.OAuthConsumer`
- `net.oauth.OAuthMessage`
- `net.oauth.client.OAuthClient`
- `net.oauth.client.httpclient4.HttpClient4`



HTTP request



XML response



Open source projects



code.google.com/p/jfireeagle



code.google.com/p/jpoco



code.google.com/p/meetup-java-client



code.google.com/p/friendfeed-java-api



code.google.com/p/twilio-java-client

Thank you

sean@seansullivan.com