

Break the E-Business Suite Jail with APEX

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Agenda

- Why Are We in Jail?
- Benefits of Web Services
- How APEX Can Help Your Organization
- Demo APEX With Web Services



Non-Scientific Survey!





Why Are We in Jail?

Other mission critical systems Other EBS instance, PeopleSoft or JD Edwards

It's often hard to get information in or out of EBS...

External Systems

Cloud Services or Hybrid Systems



Why are we in jail? - Data Exchange

E-Business Suite data exchange technology is cumbersome

Lots of efforts are required to transfer data back and forth

Most exchange methods are from other times

Execute an efficient process



Why Are We in Jail? Consequences for Your Organization

Requires people to constantly monitor processes

Delays in processing transactions

Errors generated by manipulating files



This is...





What do We Have to Do?



Eliminate legacy data exchange processes

Easily expose data using SQL or PL/SQL





Get ready for future cloud or hybrid integration



What do We Have to Do?

APEX (with the help of ORDS) can help your organization with:

- Easy consumption of RESTful or SOAP web service
- Easy exposure of data using SQL or PL/SQL over RESTful services
- APEX development to interact with that information

Bonus Feature:

APEX and ORDS are a no-cost option!



Benefits of Web Services



What are Web Services?

Web services are typically application programming interfaces (API) or web APIs that are accessed via Hypertext Transfer Protocol and executed on a remote system hosting the requested services.

A web API is a development in web services where emphasis has moved to simpler **re**presentational **s**tate **t**ransfer (REST) based communications. Restful APIs do not require XML-based web service protocols (SOAP and WSDL) to support their interfaces.



What are Web Services?

SOAP Web Services





What are Web Services?

RESTful Style Web Services





What is a Web Service? Technicalities

RESTful API can be defined in APEX / ORDS to read (GET) or populate (POST / PUT) data from external system or application using a standardized messaging system.



RESTful: communication method



JSON: messaging style

Regardless of the application or system used, the REST architecture can be used with JSON messaging as a data exchange language-agnostic platform.



What is a Web Service? Technicalities

JSON, or JavaScript Object Notation, is a minimal, readable format for structuring data. It is used primarily to transmit data between a server and web application, as an alternative to

XML.



Benefits of Web Services – APEX



REST SQL Support enables developers to create a REST SQL service to execute SQL or PL/SQL defined in APEX components on a remote source.



REST Service Consumption can use Web Sources as the data source for Classic Reports, Interactive Reports, Oracle JET Charts or the CSS Calendar.



Benefits of Web Services – APEX

In summary:

- Expose data as RESTful Web Services (message in JSON or CSV)
- Consume both RESTful and SOAP
- RESTful data sources on 18.1 facilitate consumption of RESTful web services

Starting with APEX 18.1, an Oracle database is not the only source of data for APEX.



How APEX can Help Your Organization

How APEX can Help Your Organization

- Fully Supported
- No-cost option of the database (you already own it!)
- Proven low code development solution since 2004
- Reuses SQL and PL/SQL skillset of your organization
- Cloud Ready



How APEX can Help Your Organization

- EBS Patches do not impact APEX
 - (Regular regression testing is still required)
- EBS and APEX have different upgrade cycles
- APEX is certified against the database not EBS version
 - Application Express (APEX) Database and Web Server Certification Reference (Doc ID 1344948.1)



APEX Applications
Using RESTful
Web Services



APEX Using Web Services – Setting it up

- The database server must be physically able to establish a network connection to the remote server hosting the REST service.
- A Network-ACL (Access Control List) must be configured for the APEX user
 (APEX_180100) using the DBMS_NETWORK_ACL_ADMIN package.
- For HTTPS endpoints, it is required to have a wallet configured for your APEX instance. If not already done, create the wallet on the database server, then configure APEX to use the wallet.



Demo - Define a Service to Consume Data

First Example

Display the expenses of the city Los Angeles Open Data initiative



Demo - Define a Service to Consume Data

Second Example

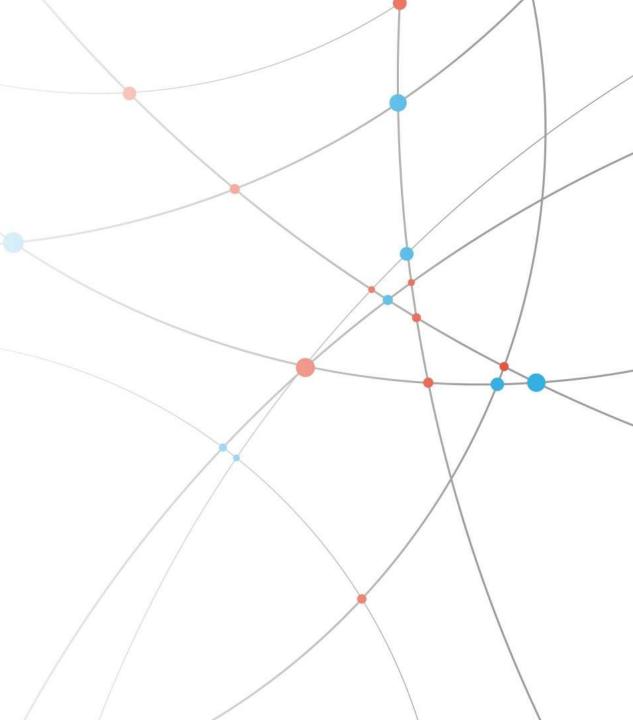
Display users information from EBS instance OCI8 on EBS instance OCI9.

Synchronize the email address between OCI9 and OCI8.



Demo – Let's See Web Services in Action!





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This year was my first ODTUG Kscope conference in Orlando and my expectations were definitely exceeded! I had the opportunity to meet and share information with my colleagues from around the world. My highlights were the excellent sessions and the business networking. I'm looking forward to ODTUG Kscope 19 in Seattle. - Martin Vallejo, Insum Solutions



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