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REST Integration in Application Express
Status Quo and Outlook

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- Consulting Member of Technical Staff
- Oracle since 2001
- APEX Team since 2016
- Focus on Web Source Modules,

  REST Enabled SQL, Data Loading,

  Calendar
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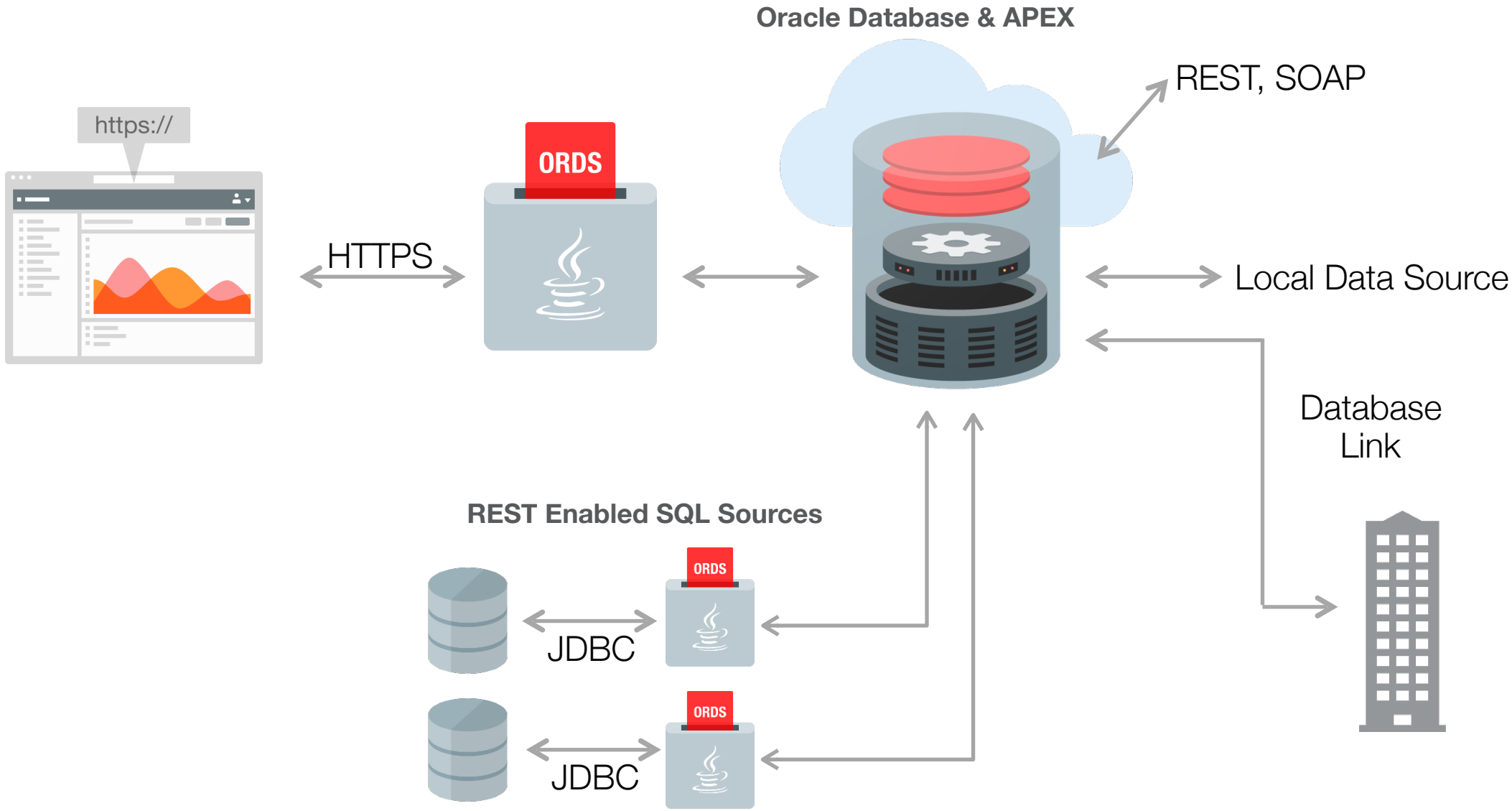


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Data Sources and APEX



Motivation and Architecture

REST Integration

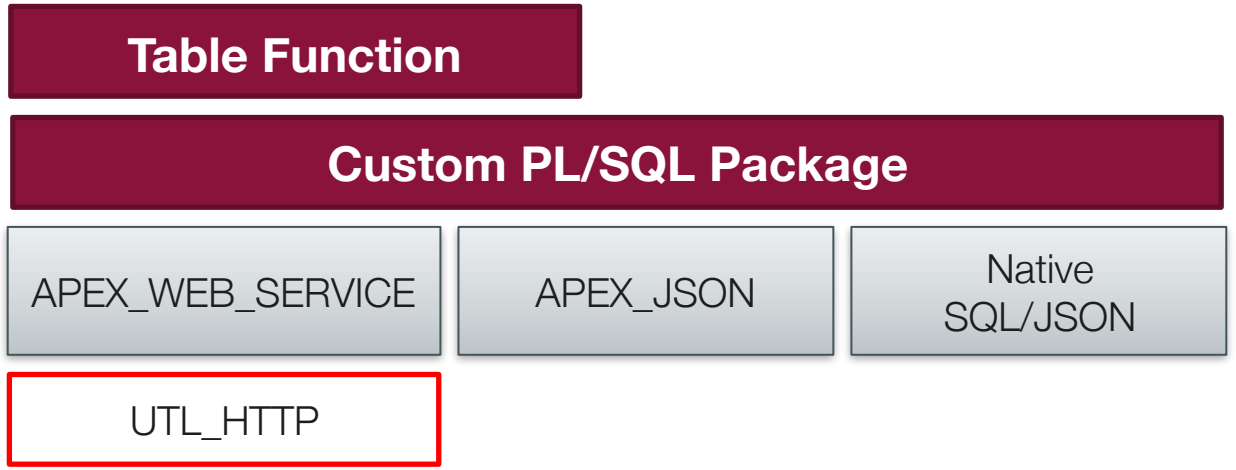
Back to 2017: The Motivation …

- REST Service consumption became more and more popular
- But still required lots of manual coding
  - Web Service References in 5.1 had only limited capabilities for REST
  - JSON or XML still needed to be manually parsed
  - APEX Components (reports) still contain (generated) code

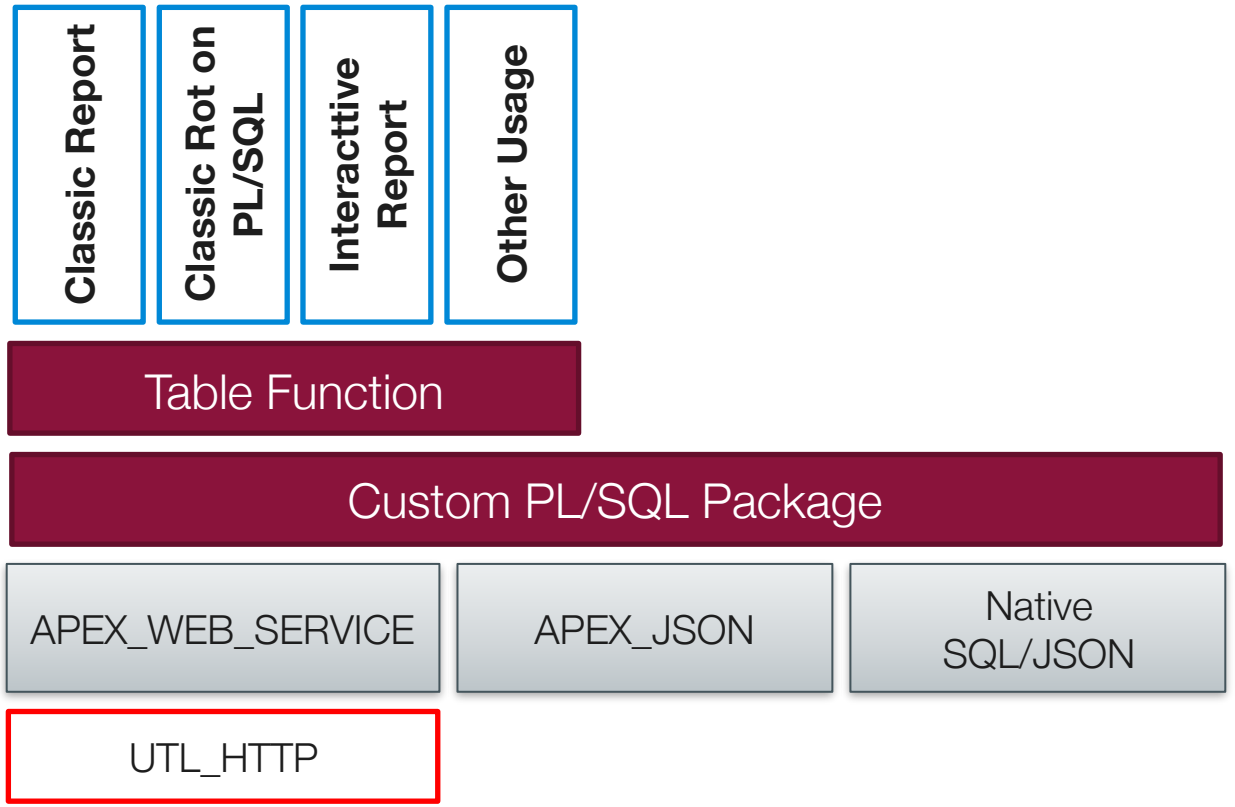
How to interact with a REST Service: Pre 18.1



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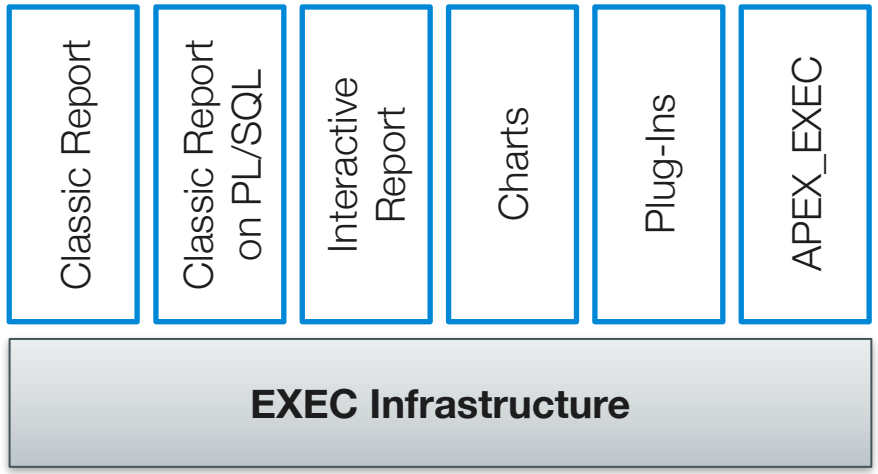
How to interact with a REST Service: Pre 18.1



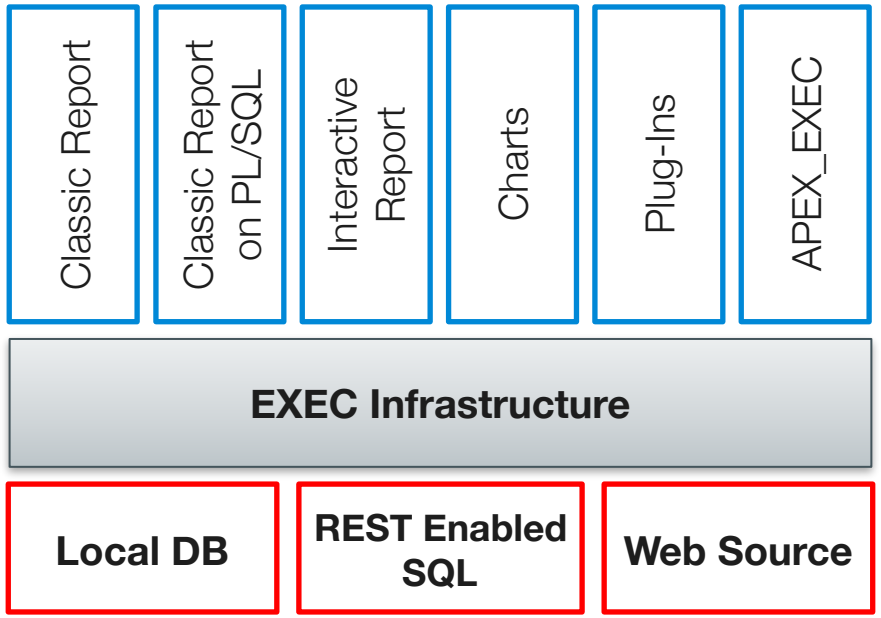
REST Integration in APEX

- Make REST (and REST Enabled SQL) a *first-class* data source.
- Component on REST is as easy as on a table.
- For all components (Charts, Calendar etc) and also for Plug-Ins.
- **Streamline data access for APEX components**.

How APEX Components get Data: 18.1 and up.



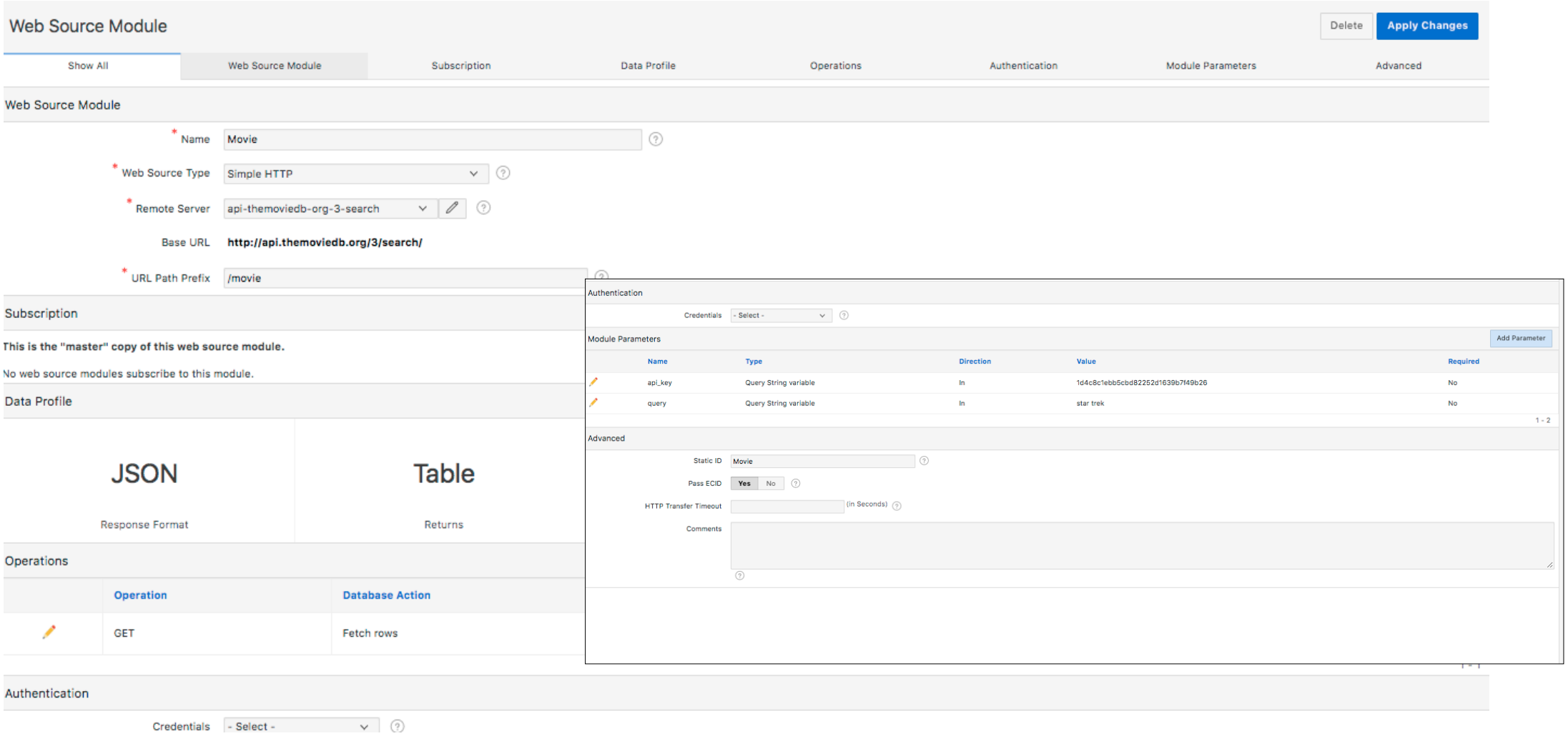
How APEX Components get Data



REST for APEX Components

REST Integration

Demo: Create and use a Web Source Module



Read/Write support for REST and Remote SQL

- APEX can now write to external data sources as well (declaratively!)
  - REST Services (Web Source Modules)
  - REST Enabled SQL
- Support in APEX for …
  - Forms
  - APEX_EXEC PL/SQL API (OPEN_DML_CONTEXT)
  - Interactive Grid (planned for APEX 19.2)

Requirements to the REST Service

- The REST Service must support methods for form actions
  - INSERT: HTTP POST
  - UPDATE: HTTP PUT
  - DELETE: HTTP DELETE
- Web Source Module must contain **Operations** for the HTTP Methods
- Add manually, if not auto-detected.

APEX 19.1 Create Form Page Wizard



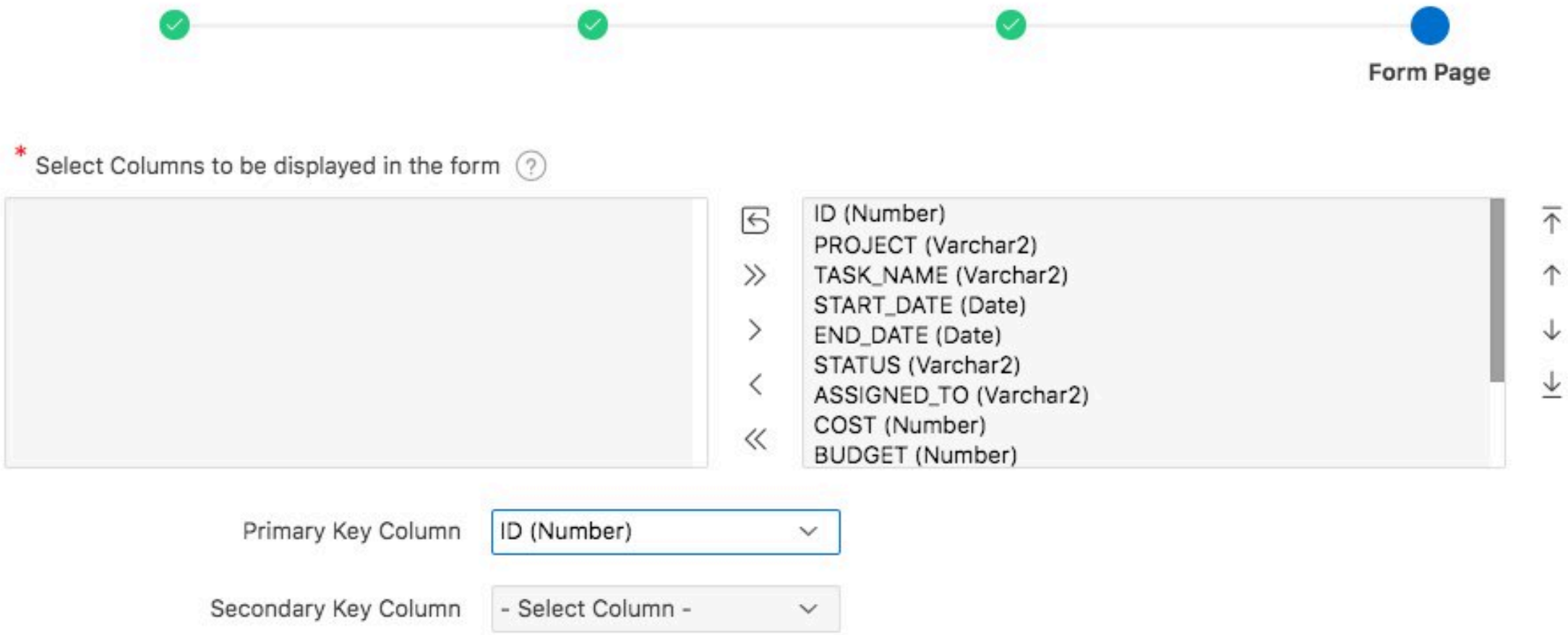
Data Source | Local Database | REST Enabled SQL Service | **Web Source**

Web Source Module | An external REST API

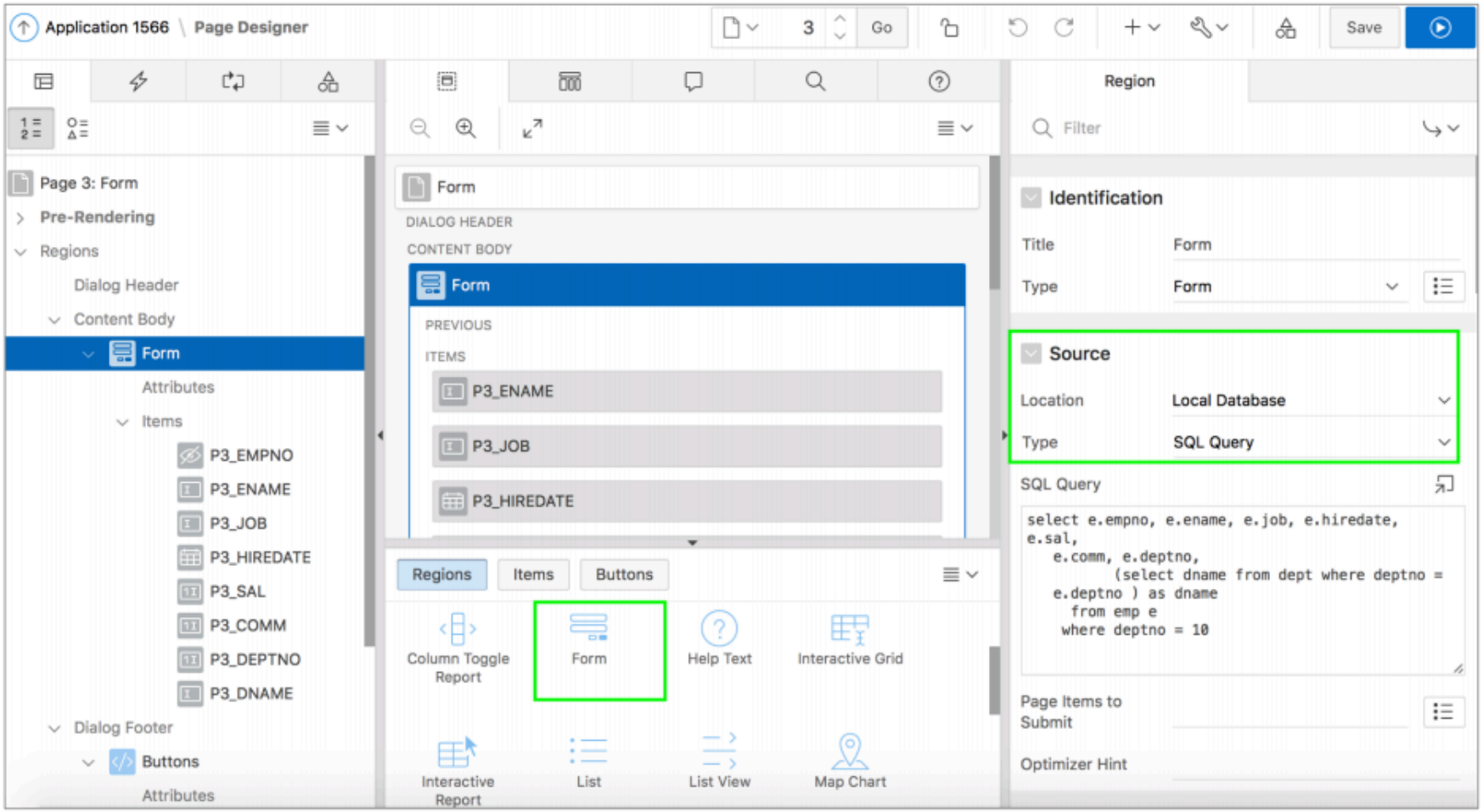
* Select Columns to be shown in the report

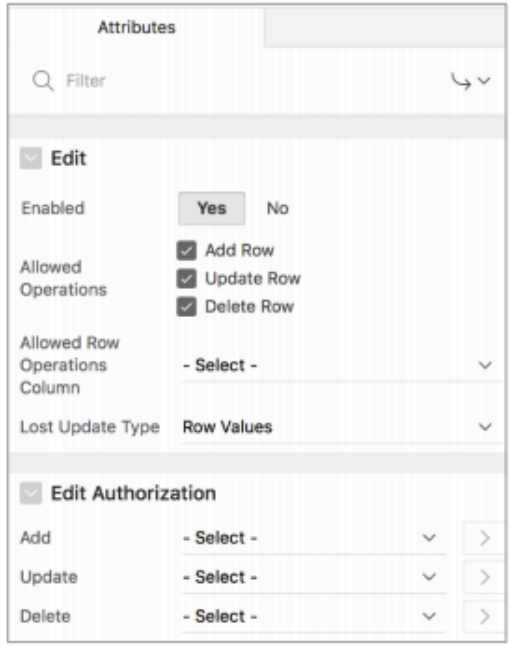
ID (Number)
PROJECT (Varchar2)
TASK_NAME (Varchar2)
START_DATE (Date)
END_DATE (Date)
STATUS (Varchar2)
ASSIGNED_TO (Varchar2)
COST (Number)
BUDGET (Number)

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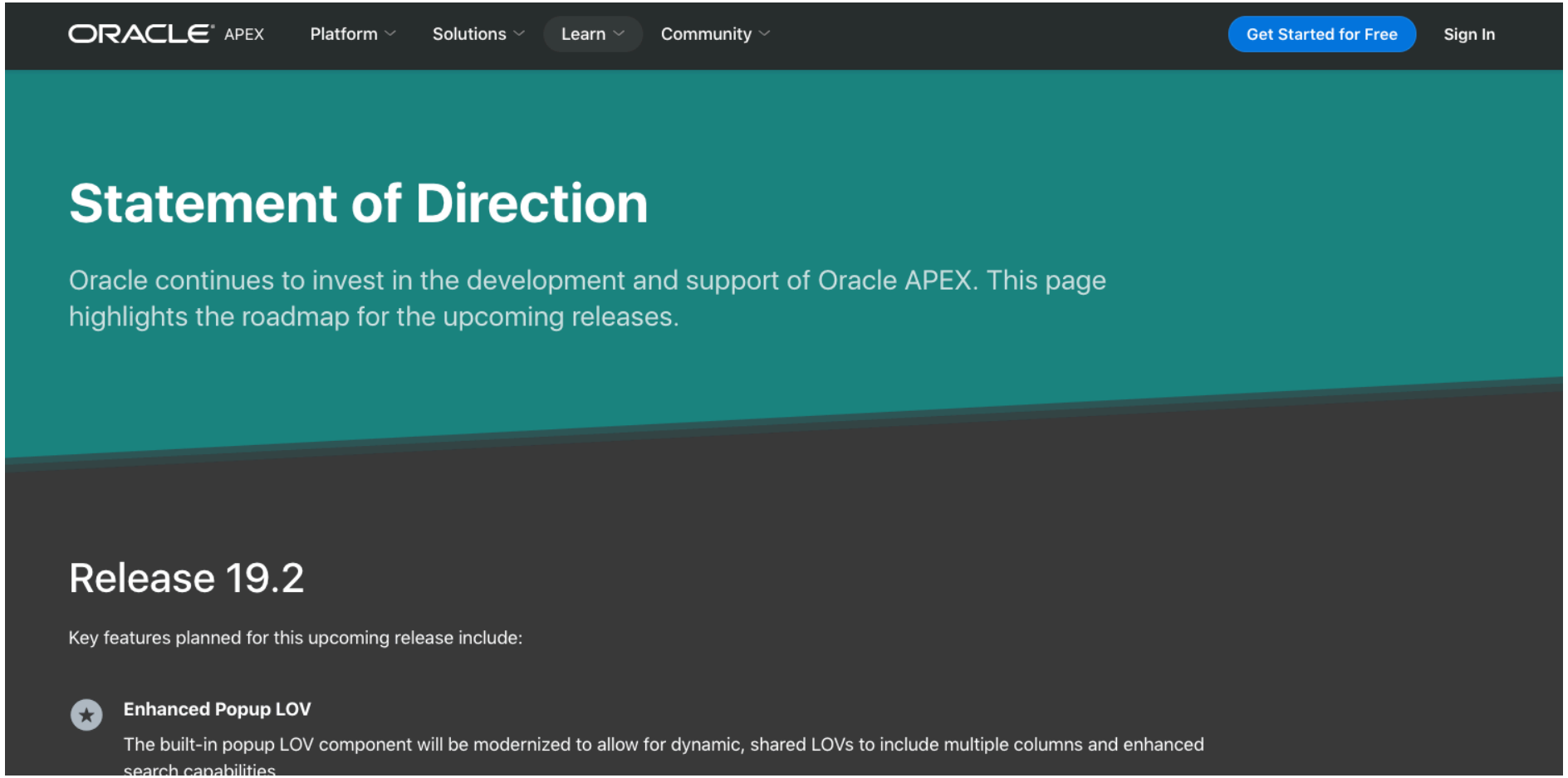


Let’s talk abut the new Form Region also





APEX Statement of Direction



http://apex.oracle.com/sod



Thank You!

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