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# Chart Your Way to Success with Oracle JET Charts in APEX 18



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# Hilary Farrell

## Oracle Application Express

- Consulting Member of Technical Staff
- Based in Dublin, Ireland
- Joined Oracle in 1998
- Joined APEX Team in 2006
- Work includes Charts Integration, Modal Dialogs, RESTful Services integration with ORDS, Create Wizards, Packaged App Installations, Forms Conversion utilities; Release Management responsibilities; Hudson Build
- [Hilary Farrell-Oracle](#) on OTN Forum



# Agenda

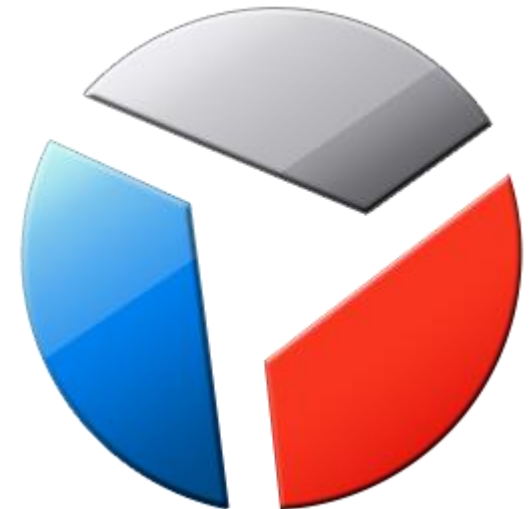
- 1 Oracle JET Charts
- 2 What's New in APEX 18
- 3 Declarative Support
- 4 Customisations using JET APIs

# Oracle JET Charts

# Oracle JET Charts

## Brief Intro

- Based on [Oracle JavaScript Extension Toolkit \(JET\) Data Visualization Components](#)
- JavaScript-based solution
- Highly Customizable
- Built-in Accessibility Support
- Built-in Responsive Design Support
- Wide Range of Chart Types



# Oracle JET Charts in APEX

## JET 2.0.2 in APEX 5.1

- New Chart Types
  - Funnel, Area, Polar, Line with Area, Radar
- Chart Source Definition Simplified
  - e.g. *select \* from EMP*
- Chart Editing via Page Designer only
- Colour palette integrated with Universal Theme



- No more 32k restriction
- Built-in Document Direction Support – RTL
- Upgrade from AnyChart to JET
- Interactive Grid Charts
- Enhanced Sample Charts application

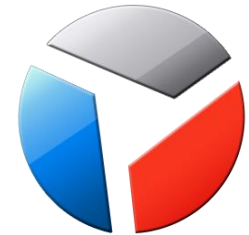


# What's New in APEX 18

# What's New in 18

## Upgraded 3<sup>rd</sup> Party Libraries

- Upgraded jQuery & jQuery UI Libraries
  - jQuery 3.1.1 and jQuery UI 1.12.0
  - [Review jQuery Upgrade Guide](#)
- New Oracle JET libraries
  - JET 4.2.0
  - Impact on custom JavaScript & plug-ins
  - New Common bundle [jetCommonBundle.min.js](#)
    - Use the **[require jet]** prefix



# What's New in 18

## REST Enabled SQL & REST Service Consumption

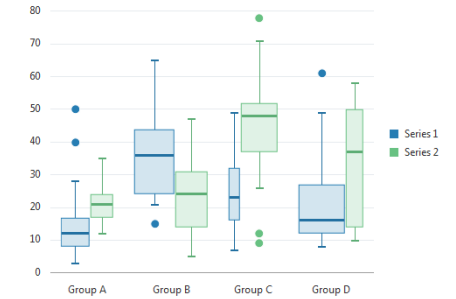
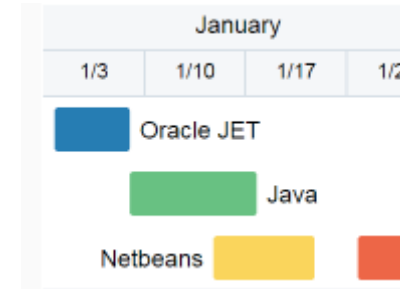


- New Data Source **Location** Options
  - Local Database
  - Remote Database
  - Web Source
- Database Source **Type** ( local or remote)
  - Table / View
  - SQL Query
  - PL/SQL Function Body returning SQL Query

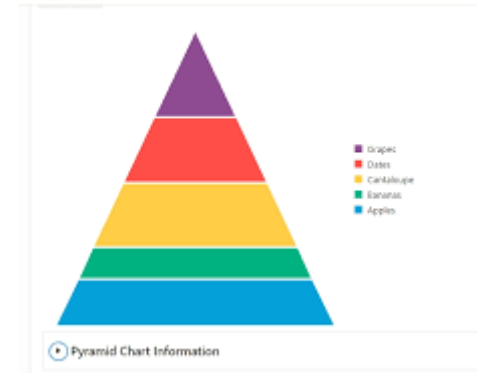
# What's New in 18

## New Chart Types

- New Gantt Charts
  - Based on JET ojGantt component
  - JavaScript-based
  - Responsive, themable, WAI-ARIA compliant
- New Chart Types – Pyramid, Box Plot
- New Interactive Report & Websheet Charts
- Enhanced Sample Charts application



Pyramid



# Declarative Support

# Declarative Chart Support

## Chart Level

- Time Axis Type
- Hide & Show Behaviour
- Zoom & Scroll
  - Initial Zooming
  - Overview
- Fill Gaps in Chart Data
  - Sort Order

# Declarative Chart Support

## Series Level

- Type
- Assigned To Y2 Axis
- Colour
- Aggregation
- Label **Display As** option

# Declarative Chart Support

## Axes Level

- Format Type
  - New Currency handling based on NLS setting
- Dual Y Axes



# Demo

# Customisations using JET APIs

# Customisations using JET APIs

## ojChart API

- Check JET Version
  - Ensure you use the associated ojChart API guide
- Dynamic Actions
- JavaScript Code chart attribute
- New JET components



# Demo

# Additional Resources

## **APEX**

**APEX 18.2 Sample Charts App -**  
<https://apex.oracle.com/charts/>

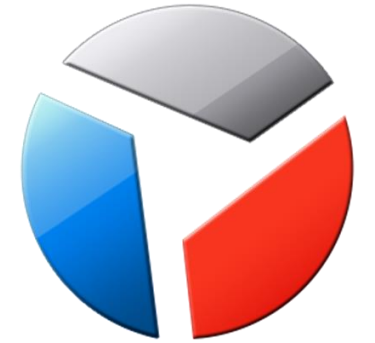
**My Sample App -**  
[https://apex.oracle.com/pls/otn/f?p=SAMPLE\\_CHARTS](https://apex.oracle.com/pls/otn/f?p=SAMPLE_CHARTS)

**OTN Forum -**  
<https://community.oracle.com/community/groundbreakers/database/development-tools/application-express>



# Additional Resources

## JET



Oracle JET -

<http://oraclejet.org/>

JET 4.2.0 ojChart API -

<https://docs.oracle.com/en/middleware/jet/4.2.0/reference-api/oj.ojChart.html>

JET 4.2.0 Cookbook -

<https://www.oracle.com/webfolder/technetwork/jet-420/jetCookbook.html>

JET OTN Forum -

[https://community.oracle.com/community/groundbreakers/development\\_tools/oracle-jet](https://community.oracle.com/community/groundbreakers/development_tools/oracle-jet)





# Integrated Cloud

## Applications & Platform Services



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