

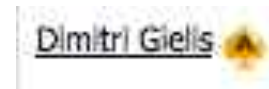
APEX Charts Inside Out

Dimitri Gielis



About Dimitri Gielis

- Director & Co-Founder of APEX Evangelists
- 12+ years of Oracle Experience
- OBUG APEX SIG Leader
- ‘Dimitri.Gielis@AE’ in the APEX forums
- Presenter at ODTUG, OOW, UKOUG, OBUG, ...
- OCP 8i/9i/10g + APEX Certified
- Oracle ACE Director
- “APEX Developer of the Year 2009”
- Blog @ <http://dgielis.blogspot.com>



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We are passionate about (and only focus on) Oracle Application Express (APEX) solutions, consulting and training.

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News

APEX Evangelists website revamped! Check out our solutions, consulting and training offering.

[Sign Up Now](#)

Sign up for an APEX Evangelists account to view our solutions live and receive our two monthly newsletter via email to your inbox.

Upcoming Events (and meet AE)



29-MAR-2011 OBUG Connect
Tracking GPS locations in APEX



18-MAY-2011 AE Training
2-day APEX with John and Dimitri



27-JUN-2011 ODTUG Kaleidoscope
APEX 4.0 Charts Inside Out



28-JUN-2011 ODTUG Kaleidoscope
APEX Big Projects Many Dev.

Tweets



sametbasaran (Samet Basaran) RT @ApexNinjas: Came across this:Formspider is better than APEX
<http://theformspider.com/product.php?descid=FormspiderVSOacleApex>
Anyone used it? #orclapex 20-MAR



hans_de_vries (Hans de Vries) RT @whitehorsesnl: RT @mvzoest: Cool! Our book is mentioned in the latest issue of #Oracle Magazine #orclapex <= congrats! 20-MAR



deltajouge (PeterPaul) RT @mvzoest: Cool! Our book is mentioned in the latest issue of #Oracle Magazine #orclapex <= congrats! 20-MAR

[View more >](#)

Plugins

Location Map Image	17-MAR
Item Button with redirect	08-MAR
Multiple File Upload	03-MAR
SkillBuilders Calendar	28-FEB
SkillBuilders Geocode	28-FEB
SkillBuilders Save Value	28-FEB
SkillBuilders Password	28-FEB
OPpen Layers region	28-FEB
Text	20-FEB

[View more >](#)

Blogs

Plugin: Location Map Image

Posted on 18-MAR-2011 07:00 by Peter Raganitsch

A couple of weeks i introduced a [Plugin](#) which helps the user to enter a postal address in an APEX Form.

Now i present a Plugin which lets you display an already stored address or location coordinates in a very simple and fast loading [Google Map Image](#) (png).

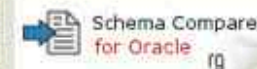
If you want you can put a link on this image which opens the address on maps.google.com in a separate Window where your user can interact with the Map.

These are the settings. Easy as can be :-)

Settings

Width 640

In the Picture



[Request to list me too](#)

Links

APEX Examples

[Carl Backstrom](#)
[Denes Kubicek](#)
[Dimitri Gielis](#)
[Hillary Farrell](#)

THE EXPERT'S VOICE® IN ORACLE

Expert Oracle Application Express

*Fourteen leading lights in Oracle Application
Express share their favorite insights from the field*

John Scott, Dietmar Aust, Martin D'Souza,
Doug Gault, Dimitri Gielis, Roel Hartman, Michael
Hichwa, Sharon Kennedy, Denes Kubicek,
Raj Mattamal, Dan McGhan, Francis
Mignault, and Anton Nielsen

apress®

Audience

- Who is new to APEX?
- Who is not yet on APEX 4.0?
- Who never created charts in APEX?

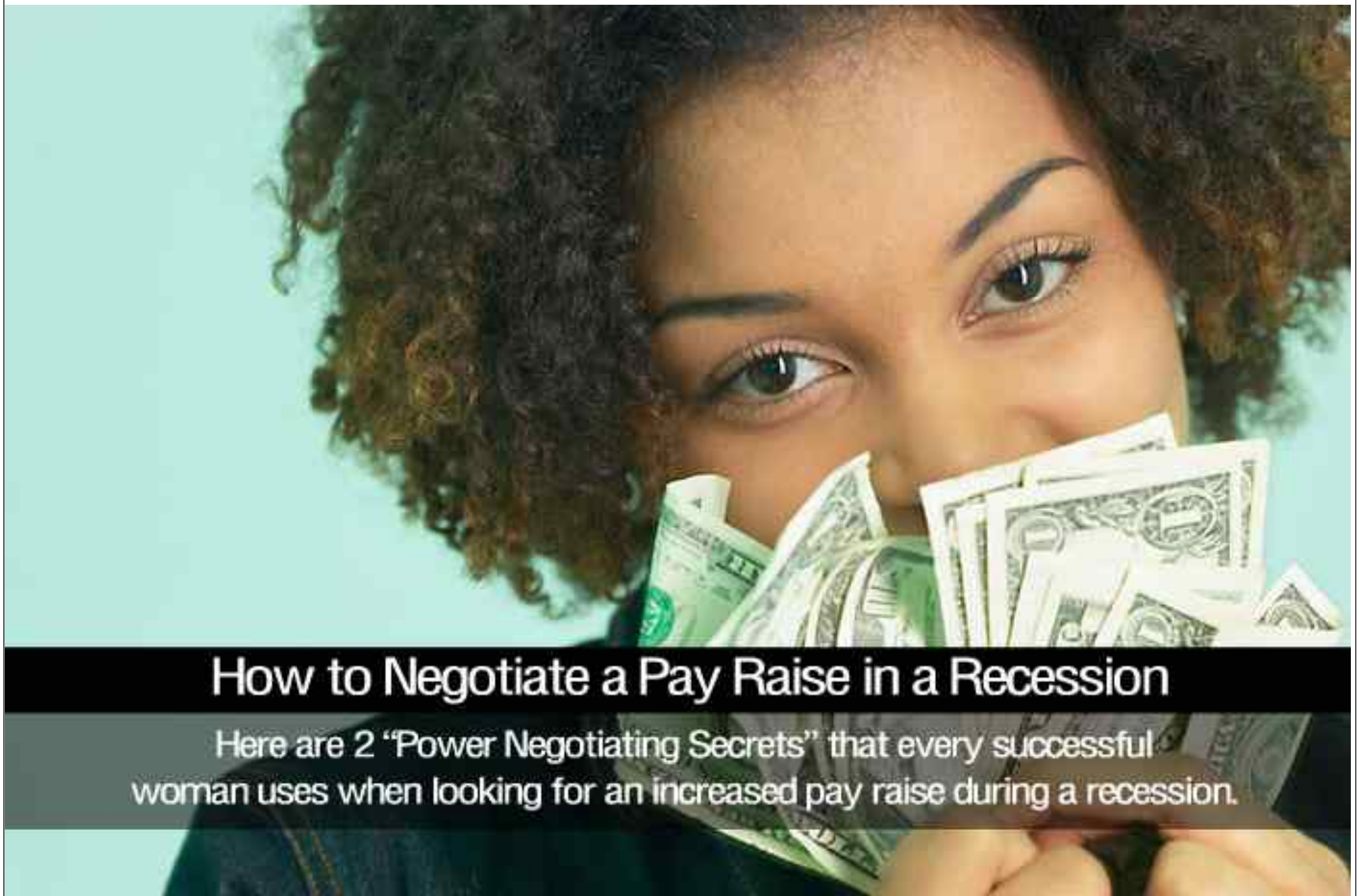
Outline

- Why use charts
- Create a chart in APEX 4.0/4.1
- Customise the chart in APEX 4.0/4.1
- APEX Charts behind the scenes (and debug)
- Create more advanced charts
- Charts in the Future



Why use charts





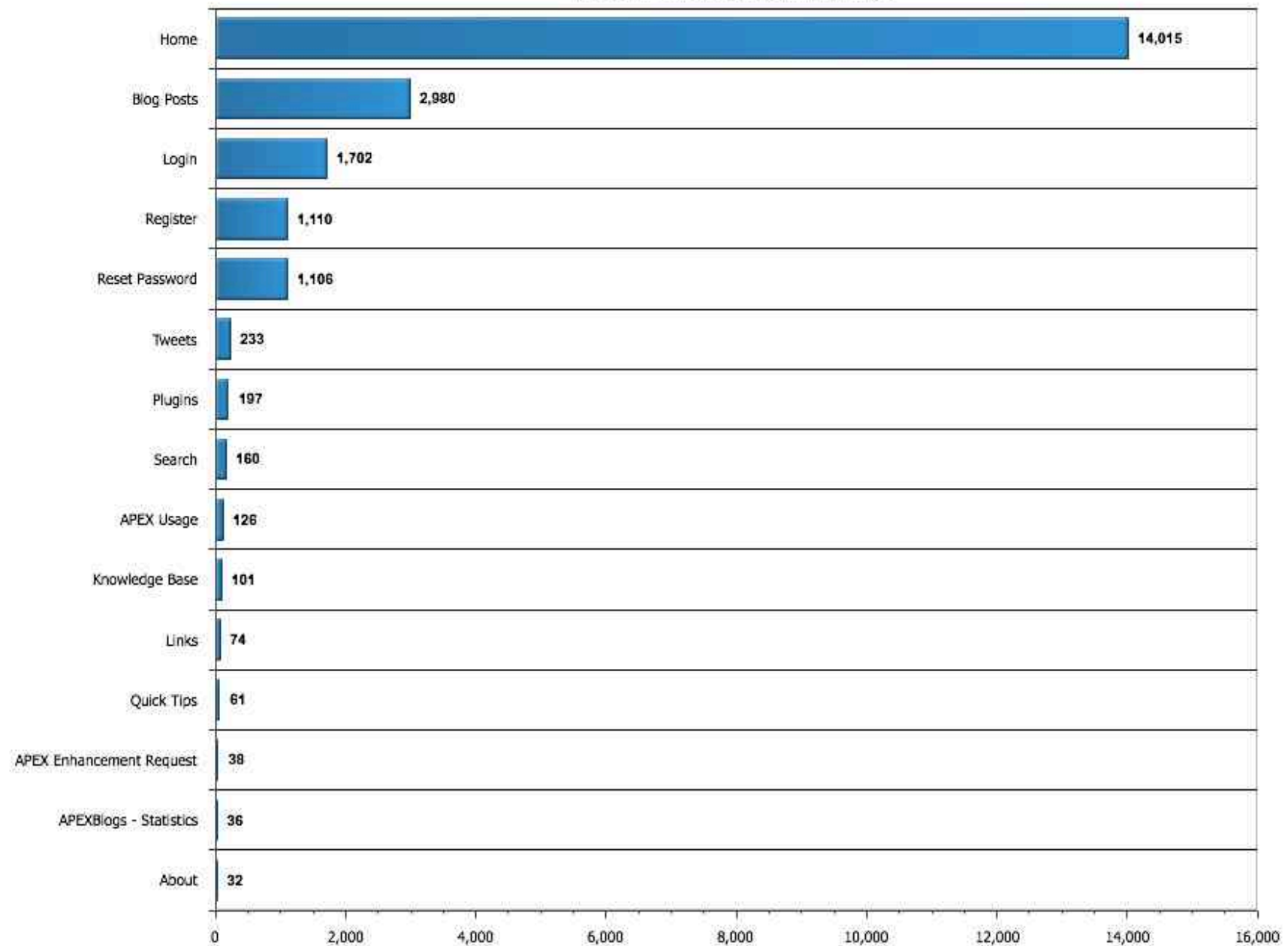
How to Negotiate a Pay Raise in a Recession

Here are 2 “Power Negotiating Secrets” that every successful woman uses when looking for an increased pay raise during a recession.

Since Application Reports ☐ ☐ Saved Report = "Activity with Page Name" ☐

Day	Date	User	Session	Application	Page	Page Name	User Agent
20110516	9 seconds ago	nobody	1458859182740106	118	1	Home	-
20110516	13 seconds ago	nobody	810140337102647	118	3	Blog Posts	Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1; Trident/4.0; .NET CLR 1
20110516	45 seconds ago	-	2692044084492765	118	101	Login	Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)
20110516	72 seconds ago	nobody	2761236034533132	118	1	Home	Mozilla/5.0 (Macintosh; U; Intel Mac OS X 10_6_7; en-us) AppleWebKit/533.2
20110516	114 seconds ago	nobody	1458859182740106	118	1	Home	-
20110516	115 seconds ago	nobody	1458859182740106	118	1	Home	-
20110516	3 minutes ago	nobody	4325672666608695	118	1	Home	-
20110516	4 minutes ago	nobody	93777953622103	118	1	Home	-
20110516	4 minutes ago	nobody	93777953622103	118	1	Home	-
20110516	4 minutes ago	nobody	1458859182740106	118	1	Home	-
20110516	4 minutes ago	nobody	1458859182740106	118	1	Home	Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/534.24 (KHTML, like G
20110516	5 minutes ago	nobody	2987355290251188	118	1	Home	Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.9.2.17) Gecko/201104
20110516	5 minutes ago	nobody	3723495844268642	118	1	Home	-
20110516	5 minutes ago	nobody	3723495844268642	118	1	Home	Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.9.2.17) Gecko/201104
20110516	6 minutes ago	nobody	2043372892802643	118	1	Home	-
20110516	6 minutes ago	nobody	2043372892802643	118	1	Home	Mozilla/5.0 (Windows NT 6.1; WOW64; rv:2.0.1) Gecko/20100101 Firefox/4.0
20110516	8 minutes ago	nobody	3552993785251965	118	1	Home	Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)
20110516	8 minutes ago	nobody	4325672666608695	118	1	Home	-
20110516	8 minutes ago	nobody	1675182899676645	118	28	Knowledge Base	Mozilla/5.0 (compatible; Balduspider/2.0; +http://www.baidu.com/search/spid
20110516	8 minutes ago	nobody	4325672666608695	118	1	Home	Mozilla/5.0 (Windows NT 5.1; rv:2.0.1) Gecko/20100101 Firefox/4.0.1
20110516	9 minutes ago	-	715046013221913	118	101	Login	Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)
20110516	12 minutes ago	-	3495210544017721	118	101	Login	Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)
20110516	13 minutes ago	nobody	597381217763600	118	1	Home	-
20110516	13 minutes ago	nobody	378556946689781	118	1	Home	-
20110516	13 minutes ago	nobody	378556946689781	118	1	Home	-
20110516	13 minutes ago	nobody	597381217763600	118	1	Home	Mozilla/5.0 (Windows NT 5.1; rv:2.0.1) Gecko/20100101 Firefox/4.0.1
20110516	13 minutes ago	nobody	378556946689781	118	1	Home	-
20110516	14 minutes ago	nobody	378556946689781	118	1	Home	Mozilla/5.0 (Windows; U; Windows NT 5.1; nl; rv:1.9.2.10) Gecko/20100914 F

Page Views in the last 2 weeks



Create a Chart

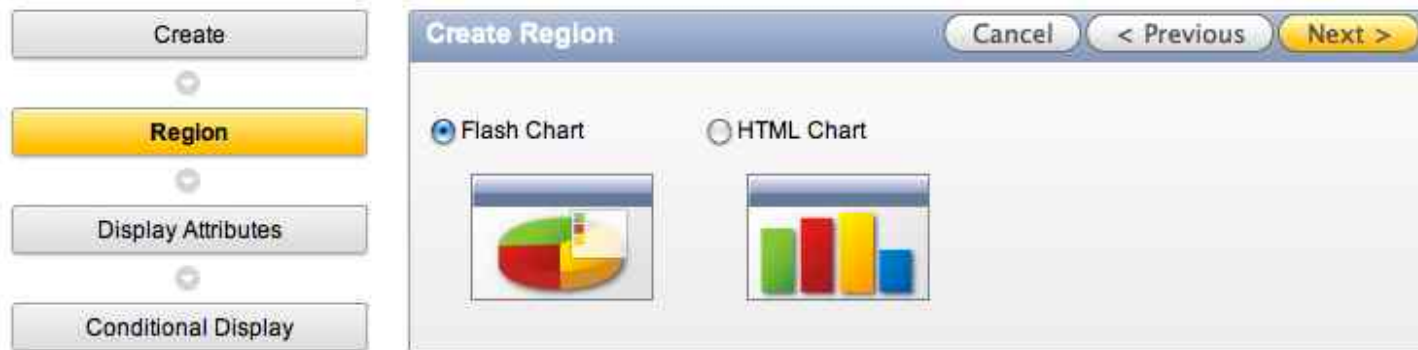
APEX 4.0 / 4.1



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Create Flash Chart - Step 1

- Create region



Create Flash Chart - Step 2

- Select main type



Create Flash Chart - Step 3

- Depending main type, select sub type



Create Flash Chart - Step 4

- Specify look and feel through chart attributes

Create Region [Cancel] [< Previous] [Next >]

Chart Type: **3D Column**

Chart Title: Salary by Employees

Chart Animation: None

Background Type: ☒ Transparent ☐ Solid Color ☐ Gradient

Background Color 1: #eeeeee

Background Color 2: #eeeeee

Gradient Angle:

Y Axis Title: Salary

Color Scheme: Look 6

X Axis Title: Employee

Show Hints: ☒

Show Labels: ☒

Show Values: ☒

Show Grid: ☐ None ☒ X-Axis ☐ Y-Axis ☐ Both

Show Scrollbar: ☒ None ☐ X-Axis ☐ Y-Axis ☐ Both

Show Legend: ☒ None ☐ Left ☐ Right ☐ Top ☐ Bottom ☐ Float



Create Flash Chart - Step 5

- Define the source for the data of the chart

Create Region

Cancel < Previous Next > Create Region

Page: 12 - Flash Chart
Region Title: 3D Column Chart

* Enter SQL Query or PL/SQL function returning a SQL Query:

```
SELECT NULL LINK,  
       ENAME LABEL,  
       SAL VALUE  
FROM   EMP  
ORDER BY ENAME
```

Build Query

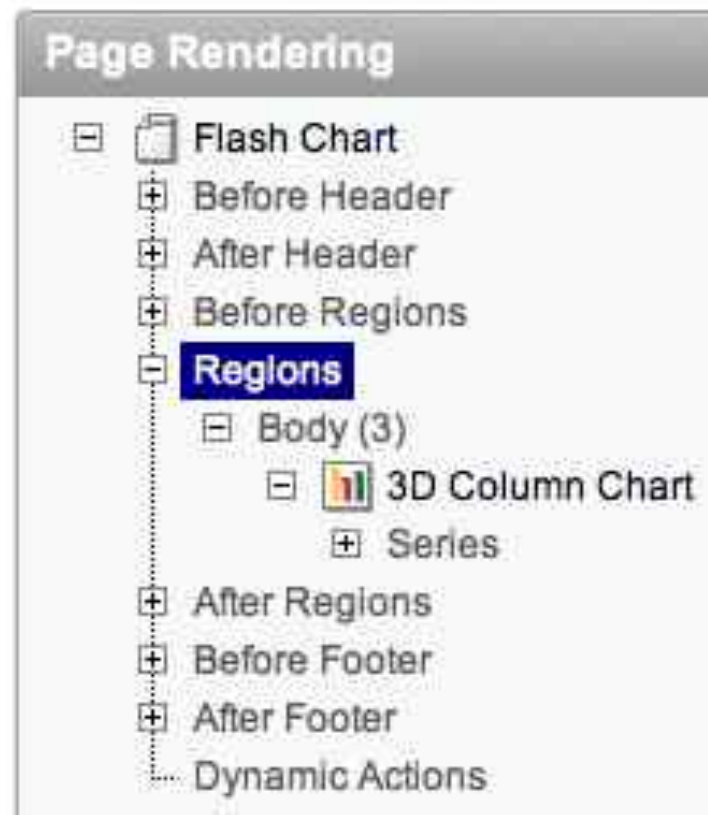
When No Data Found Message
No data found.

> Chart Query Example for 3D Column
> Items



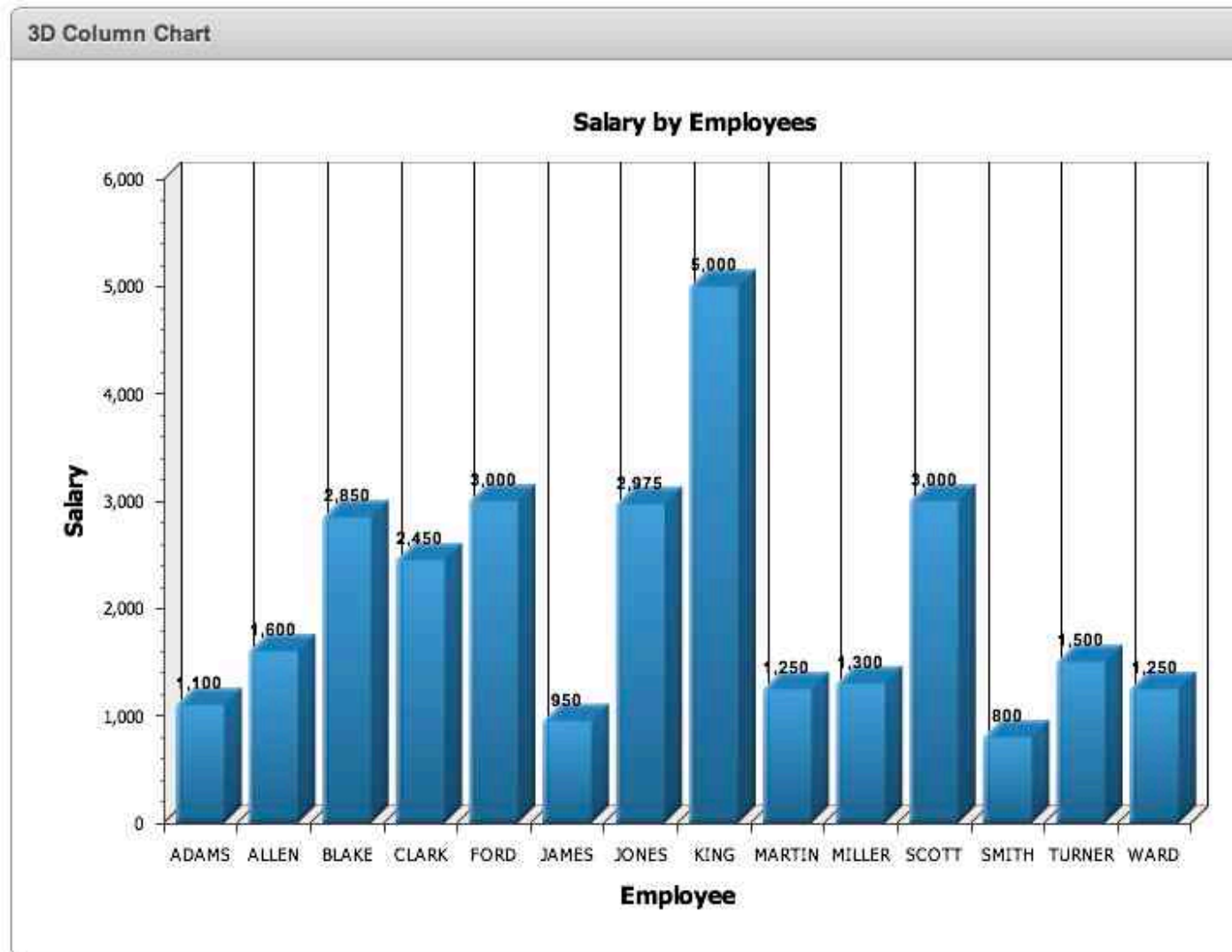
Create Flash Chart - Result

- A chart region is created (Page Definition)



Create Flash Chart - Result

- Chart is shown when the page is ran



Customise the Chart

APEX 4.0 / 4.1



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Customize A Chart - Part 1

- Region Definition

Region Definition

Chart Attributes

Region: 1 of 1 Name: 3D Column Chart

CancelDeleteApply Changes

Show AllIdentificationUser InterfaceSourceAttributesHeader and FooterConditionsSecurityConfigurationCachingCustomizationComments

Identification

Page: 2 Flash Chart

* Title 3D Column Chart☐ exclude title from translation

Type Chart (Flash Chart)

User Interface

Template Chart Region* Sequence 10

Parent Region - Select a Parent -

Display Point Page Template Body (3. items above region content)

Column 1

[Body] [Pos.1] [Pos.2] [Pos.3] [Pos.4]

Source

Region Source

```
<object classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"
codebase="#HOST_PROTOCOL#://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=6,0,0,0"
width="#WIDTH#"
height="#HEIGHT#"
id="#CHART_NAME#"
align="top">
<param name="movie" value="#IMAGE_PREFIX#flashchart/anychart_5/swf/#CHART_TYPE#.swf?XMLFile=#HOST#apex_util.flash?
p=&APP_ID.:2:&APP_SESSION.:FLOW_FLASH_CHART5_R#REGION_ID#">
<param name="quality" value="high">
<param name="allowScriptAccess" value="sameDomain">
<param name="allowNetworking" value="all">
```

Customize A Chart - Part 1

- Region Definition - Source (Object tag)

```
1 <object classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"
2     codebase="#HOST_PROTOCOL#://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=6,0,0,0"
3     width="#WIDTH#"
4     height="#HEIGHT#"
5     id="#CHART_NAME#"
6     align="top">
7 <param name="movie" value="#IMAGE_PREFIX#flashchart/anychart_5/swf/#CHART_TYPE#.swf?XMLFile=#HOST#apex_util.flash?p=&APP_ID.:2:&AP
8 <param name="quality" value="high">
9 <param name="allowScriptAccess" value="sameDomain">
10 <param name="allowNetworking" value="all">
11 <param name="scale" value="noscale">
12 <param name="wmode" value="transparent">
13 <param name="FlashVars" value="initText=#FLASH_INIT#&xmlLoadingText=#FLASH_LOADING#&resourcesLoadingText=#FLASH_RESOURCES#&noDataT
14 <embed src="#IMAGE_PREFIX#flashchart/anychart_5/swf/#CHART_TYPE#.swf?XMLFile=#HOST#apex_util.flash?p=&APP_ID.:2:&APP_SESSION.:FLOW
15     quality="high"
16     width="#WIDTH#"
17     height="#HEIGHT#"
18     name="#CHART_NAME#"
19     scale="noscale"
20     align=""
21     allowScriptAccess="sameDomain"
22     allowNetworking="all"
23     type="application/x-shockwave-flash"
24     pluginspage="#HOST_PROTOCOL#://www.macromedia.com/go/getflashplayer"
25     wmode="transparent"
26     FlashVars="initText=#FLASH_INIT#&xmlLoadingText=#FLASH_LOADING#&resourcesLoadingText=#FLASH_RESOURCES#&noDataText=#FLASH_NO
27 </embed>
28 </object>
29 #CHART_REFRESH#
```

Customize A Chart - Part 1

- Region Definition - Source (Embed tag)

```
1 <object classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"
2     codebase="#HOST_PROTOCOL#://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=6,0,0,0"
3     width="#WIDTH#"
4     height="#HEIGHT#"
5     id="#CHART_NAME#"
6     align="top">
7     <param name="movie" value="#IMAGE_PREFIX#flashchart/anychart_5/swf/#CHART_TYPE#.swf?XMLFile=#HOST#apex_util.flash?p=&APP_ID.:2:&AP
8     <param name="quality" value="high">
9     <param name="allowScriptAccess" value="sameDomain">
10    <param name="allowNetworking" value="all">
11    <param name="scale" value="noscale">
12    <param name="wmode" value="transparent">
13    <param name="FlashVars" value="initText=#FLASH_INIT#&xmlLoadingText=#FLASH_LOADING#&resourcesLoadingText=#FLASH_RESOURCES#&noDataT
14    <embed src="#IMAGE_PREFIX#flashchart/anychart_5/swf/#CHART_TYPE#.swf?XMLFile=#HOST#apex_util.flash?p=&APP_ID.:2:&APP_SESSION.:FLOW
15          quality="high"
16          width="#WIDTH#"
17          height="#HEIGHT#"
18          name="#CHART_NAME#"
19          scale="noscale"
20          align=""
21          allowScriptAccess="sameDomain"
22          allowNetworking="all"
23          type="application/x-shockwave-flash"
24          pluginspage="#HOST_PROTOCOL#://www.macromedia.com/go/getflashplayer"
25          wmode="transparent"
26          FlashVars="initText=#FLASH_INIT#&xmlLoadingText=#FLASH_LOADING#&resourcesLoadingText=#FLASH_RESOURCES#&noDataText=#FLASH_NO
27    </embed>
28  </object>
29  #CHART_REFRESH#
```

Customize A Chart - Part 1

- Region Definition - Source (#CHART_REFRESH#)

```
1 <object classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"
2   codebase="#HOST_PROTOCOL#://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=6,0,0,0"
3   width="#WIDTH#"
4   height="#HEIGHT#"
5   id="#CHART_NAME#"
6   align="top">
7   <param name="movie" value="#IMAGE_PREFIX#flashchart/anychart_5/swf/#CHART_TYPE#.swf?XMLFile=#HOST#apex_util.flash?p=&APP_ID.:2:&AP
8   <param name="quality" value="high">
9   <param name="allowScriptAccess" value="sameDomain">
10  <param name="allowNetworking" value="all">
11  <param name="scale" value="noscale">
12  <param name="wmode" value="transparent">
13  <param name="FlashVars" value="initText=#FLASH_INIT#&xmlLoadingText=#FLASH_LOADING#&resourcesLoadingText=#FLASH_RESOURCES#&noDataT
14  <embed src="#IMAGE_PREFIX#flashchart/anychart_5/swf/#CHART_TYPE#.swf?XMLFile=#HOST#apex_util.flash?p=&APP_ID.:2:&APP_SESSION.:FLOW
15    quality="high"
16    width="#WIDTH#"
17    height="#HEIGHT#"
18    name="#CHART_NAME#"
19    scale="noscale"
20    align=""
21    allowScriptAccess="sameDomain"
22    allowNetworking="all"
23    type="application/x-shockwave-flash"
24    pluginspage="#HOST_PROTOCOL#://www.macromedia.com/go/getflashplayer"
25    wmode="transparent"
26    FlashVars="initText=#FLASH_INIT#&xmlLoadingText=#FLASH_LOADING#&resourcesLoadingText=#FLASH_RESOURCES#&noDataText=#FLASH_NO
27  </embed>
28  </object>
29  #CHART_REFRESH#
```

Customize A Chart - Part 2

- Chart Attributes - Chart Settings

Region Definition **Chart Attributes**

Region Name: **3D Column Chart** Cancel Apply Changes

Show All **Chart Settings** Chart Series Display Settings Axes Settings Legend Settings Chart XML Refresh

Chart Settings

Chart Type: **3D Column**

Chart Title: **Salary by Employees**

* Chart Width: **700** * Chart Height: **500**

Chart Margin: Top Bottom Left Right

Color Scheme: **Look 6**

Hatch Pattern: **No**

Custom Colors:



Customize A Chart - Part 2

- Chart Attributes - Chart Series

The screenshot shows the 'Chart Attributes' dialog for a '3D Column Chart'. The 'Chart Series' tab is selected, showing a table with one series named 'Series 1' and its corresponding SQL query. The 'Add Series' button is visible in the top right of the series list.

Region Definition | **Chart Attributes**

Region Name: 3D Column Chart Cancel Apply Changes

Show All Chart Settings **Chart Series** Display Settings Axes Settings Legend Settings Chart XML Refresh

Chart Series Add Series >

Series Name	Query
Series 1	SELECT NULL LINK, ENAME LABEL, SAL VALUE FROM EMP ORDER BY ENAME

Customize A Chart - Part 2

- Chart Attributes - Display Settings

Region Definition | **Chart Attributes**

Region Name: 3D Column Chart Cancel Apply Changes

Show All | Chart Settings | Chart Series | **Display Settings** | Axes Settings | Legend Settings | Chart XML | Refresh

Display Settings

Animation: None

~~Marker: None~~ **APEX 4.1**

Style: Default

Background Type: ☒ Transparent ☐ Solid Color ☐ Gradient

Background Color 1:

Background Color 2:

Include on Chart:

☒ Hints	☒ Values	☒ Labels	☐ Group By Series
☐ Major Ticks	☐ Minor Ticks	☐ Tick Labels	☐ Multiple Y-Axes
☐ Invert X-Axis Scale	☐ Invert Y-Axis Scale	☐ Invert Scale	

Show Scrollbars: ☒ None ☐ X-Axis ☐ Y-Axis ☐ Both

Show Grid: ☐ None ☒ X-Axis ☐ Y-Axis ☐ Both

Gradient Angle: 0 Degrees

X-Axis Label Rotation: Degrees

Y-Axis Label Rotation: Degrees

Values Rotation: Degrees

Customize A Chart - Part 2

- Chart Attributes - Display Settings (**APEX 4.1**)

Region Definition | **Chart Attributes**

Region Name: 3D Column Chart Cancel Apply Changes

Show All | Chart Settings | Chart Series | **Display Settings** | Axes Settings | Legend Settings | Chart XML | Refresh

Display Settings

Animation: None

Style: Default

Background Type: ☒ Transparent ☐ Solid Color ☐ Gradient

Background Color 1: ☐

Background Color 2: ☐

Include on Chart:

☒ Hints	☐ Values	☒ Labels	☐ Group By Series
☐ Major Ticks	☐ Minor Ticks	☐ Tick Labels	☐ Multiple Y-Axes
☐ Invert X-Axis Scale	☐ Invert Y-Axis Scale	☐ Invert Scale	☐ Overlay Y-Axis
☐ Sorted Overlay Y-Axis			

Customize A Chart - Part 2

- Chart Attributes - Axes Settings

Region Definition | **Chart Attributes**

Region Name: 3D Column Chart Cancel Apply Changes

Show All | Chart Settings | Chart Series | Display Settings | **Axes Settings** | Legend Settings | Chart XML | Refresh

Axes Settings

X Axis Title:

Y Axis Title:

Y Axis: Min Max

X Axis: Prefix X Axis: Postfix

Y Axis: Prefix Y Axis: Postfix

X-Axis: Major Interval Minor Interval

Y-Axis: Major Interval Minor Interval

Decimal Places



Customize A Chart - Part 2

- Chart Attributes - Legend Settings

The screenshot shows a software interface for customizing a chart. At the top, there are two tabs: 'Region Definition' and 'Chart Attributes', with 'Chart Attributes' being the active tab. Below the tabs, a text field displays 'Region Name: 3D Column Chart'. To the right of this field are two buttons: 'Cancel' and 'Apply Changes'. Below the text field is a row of seven buttons: 'Show All', 'Chart Settings', 'Chart Series', 'Display Settings', 'Axes Settings', 'Legend Settings' (which is highlighted with a yellow background), 'Chart XML', and 'Refresh'. Below this row is a 'Legend Settings' dialog box. This dialog box has a title bar with the text 'Legend Settings' and a close button. Inside the dialog, there are four settings: 'Show Legend' with radio buttons for 'None', 'Left', 'Right', 'Top', 'Bottom', and 'Float'; 'Legend Title' with an empty text input field; 'Legend Element Layout' with radio buttons for 'Vertical' and 'Horizontal'; and 'Show Legend Background' with a checked checkbox.

Region Definition | **Chart Attributes**

Region Name: 3D Column Chart Cancel Apply Changes

Show All Chart Settings Chart Series Display Settings Axes Settings **Legend Settings** Chart XML Refresh

Legend Settings

Show Legend ☒ None ☐ Left ☐ Right ☐ Top ☐ Bottom ☐ Float

Legend Title

Legend Element Layout ☒ Vertical ☐ Horizontal

Show Legend Background ☒

Customize A Chart - Part 2

- Chart Attributes - Font Settings (APEX 4.1)

Region Definition: **Chart Attributes**

Region Name: **Sales by Category / Month**

Show All Chart Settings Chart Series Display Settings Axes Settings Legend Setting **Font Settings** Chart XML Refresh

Font Settings

	Font Face	Font Size	Font Color	
X Axis Labels	Tahoma	10	#000000	
Y-Axis Labels	Tahoma	10	#000000	
Values	Arial	10	#000000	
Hints	Tahoma	10	#000000	
Legend	Arial	10	#000000	
~~Grid Label~~	~~Arial~~	~~10~~	~~#000000~~	<del></del>
Chart Title	Tahoma	14	#000000	
X Axis Title	Tahoma	14	#000000	
Y Axis Title	Tahoma	14	#000000	

APEX 4.1



Customize A Chart - Part 2

- Chart Attributes - Chart XML

The screenshot shows the 'Chart Attributes' dialog box for a '3D Column Chart'. The 'Chart XML' tab is selected, displaying a text area with XML code. The 'Use Custom XML' dropdown is set to 'No'. A 'Reset' button is at the bottom left of the XML editor.

Region Definition | **Chart Attributes**

Region Name: 3D Column Chart [Cancel] [Apply Changes]

Show All | Chart Settings | Chart Series | Display Settings | Axes Settings | Legend Settings | **Chart XML** | Refresh

Chart XML

Use Custom XML: No

Custom XML

```
<?xml version = "1.0" encoding="utf-8" standalone = "yes"?>
<anychart>
  <settings>
    <animation enabled="false"/>
    <no_data show_waiting_animation="False">
      <label>
        <text> </text>
        <font family="Verdana" bold="yes" size="10"/>
      </label>
    </no_data>
  </settings>
</anychart>
```

[Reset]



Customize A Chart - Part 2

- Chart Attributes - Refresh

The screenshot shows the 'Chart Attributes' dialog box for a '3D Column Chart'. The 'Refresh' tab is selected, showing options for 'Asynchronous Update' (set to 'No') and 'Update Interval (Seconds)' (set to '10'). The 'Refresh' button is highlighted in yellow.

Region Definition | **Chart Attributes**

Region Name: 3D Column Chart Cancel Apply Changes

Show All | Chart Settings | Chart Series | Display Settings | Axes Settings | Legend Settings | Chart XML | **Refresh**

Refresh

Asynchronous Update: No ↕ Update Interval (Seconds): 10

Create and Customise a Chart

DEMONSTRATION



APEX Charts behind the scenes



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APEX Charts Behind The Scenes

- Based on AnyChart 5.1 (special version)

Native in the APEX Wizard

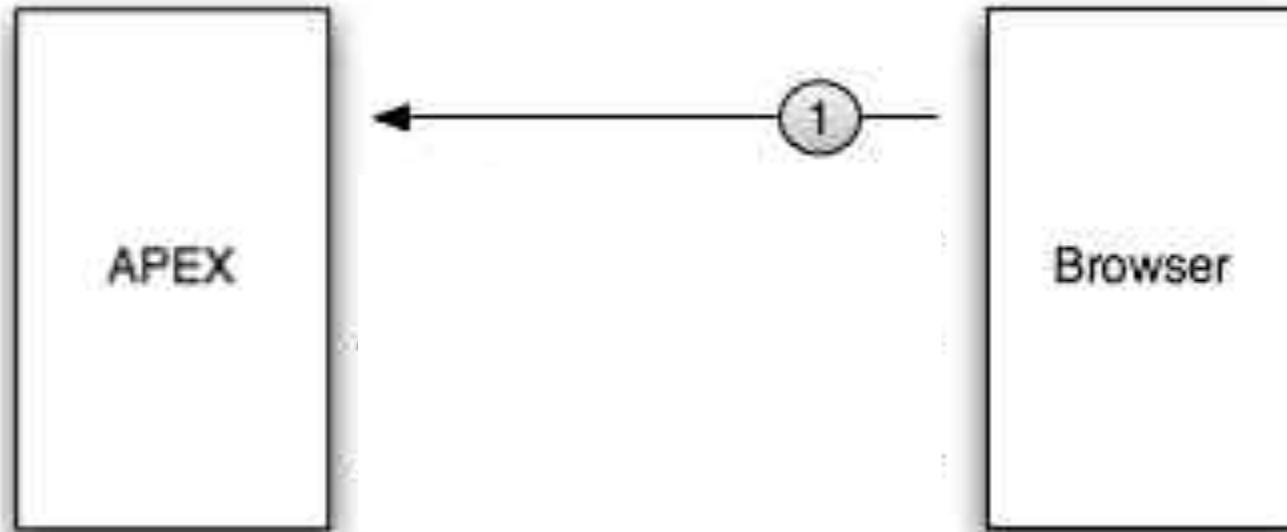
	Column chart
	Line Chart
	Bar Chart
	Range-Bar Chart
	Range-Column Chart
	Stacked Bar Chart
	Stacked Column chart
	100% Stacked Column Chart
	Candlestick Chart
	100% Stacked Bar Chart
	Pie Chart
	Doughnut Chart
	Circular Gauge
	Scatter Chart

Extra Chart Types in the AnyChart Integration Kit

	Stock(HLOC) Chart		Step-Line Chart
	Spline Chart		Spline-Area Chart
	Area Chart		Funnel Chart
	Step-Line-Area Chart		Pyramid Chart
	Range-Area Chart		Tree-Map
	Range-Spline-Area Chart		Indicator Gauge
	Stacked Area Chart		Vertical Gauge
	Stacked Spline-Area Chart		Heat-Map
	Stacked Step-Line-Area Chart		Interactive Gauges
	100% Stacked Area Chart		Interactive Dashboards
	100% Stacked Step-Line-Area Chart		Horizontal Gauge
	Bubble Chart		Image Gauge
	100% Stacked Spline-Area Chart		Thermometer Gauge
	Dot/Marker Chart		Tank Gauge



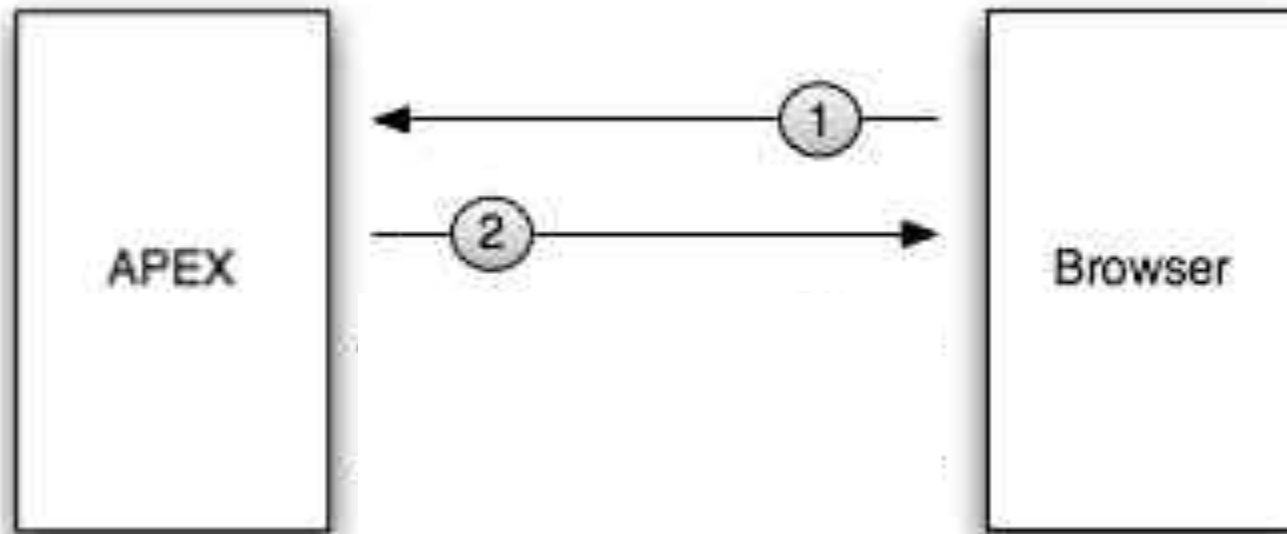
Process Of Running Flash Chart



I. Page request with chart



Process Of Running Flash Chart



1. Page request with chart
2. APEX sends back HTML



```

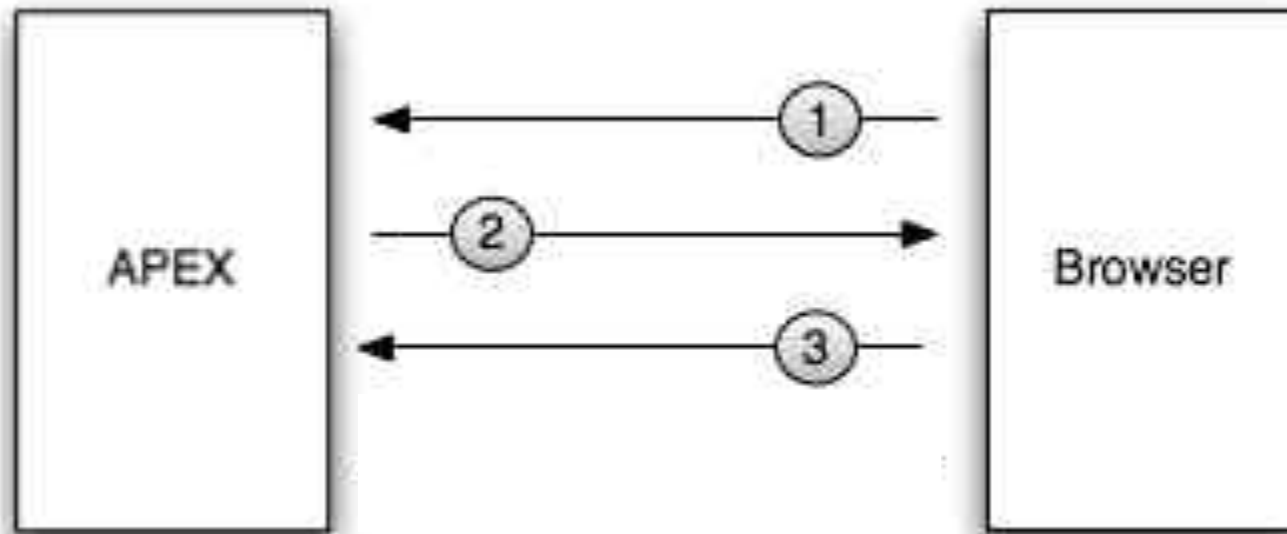
<td width="100%" valign="top">
<object classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"
  codebase="http://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=6,0,0,0"
  width="700"
  height="500"
  id="c23967225268238782"
  align="top">
<param name="movie" value="/i/flashchart/anychart_5/swf/OracleAnyChart.swf?XMLFile=http://aws1.apex-evangelists.com/pls/apex/apex_util.flash?p=40:15:2887089650234857:FLOW_FLASH_CHART5_R23967225268238782_en">
<param name="quality" value="high">
<param name="allowScriptAccess" value="sameDomain">
<param name="allowNetworking" value="all">
<param name="scale" value="noscale">
<param name="wmode" value="transparent">
<param name="FlashVars" value="initText=Initializing...&xmlLoadingText=Loading data...&resourcesLoadingText=Loading resources...&noDataText=No data found.&waitingForDataText=Loading data. Please wait.&templatesLoadingText=Loading templates...">
<embed src="/i/flashchart/anychart_5/swf/OracleAnyChart.swf?XMLFile=http://aws1.apex-evangelists.com/pls/apex/apex_util.flash?p=40:15:2887089650234857:FLOW_FLASH_CHART5_R23967225268238782_en"
  quality="high"
  width="700"
  height="500"
  name="c23967225268238782"
  scale="noscale"
  align=""
  allowScriptAccess="sameDomain"
  allowNetworking="all"
  type="application/x-shockwave-flash"
  pluginspage="http://www.macromedia.com/go/getflashplayer"
  wmode="transparent"
  FlashVars="initText=Initializing...&xmlLoadingText=Loading data...&resourcesLoadingText=Loading resources...&noDataText=No data found.&waitingForDataText=Loading data. Please wait.&templatesLoadingText=Loading templates...">
</embed>
</object>
<script type="text/javascript" language="javascript">
function chart_r23967225268238782_InitRefresh(pNow) {
  setTimeout("chart_r23967225268238782_InitRefresh(true)",10000);
  if (pNow){apex_RefreshFlashChart (15, '23967225268238782', 'en');}
}
apex_SWFFormFix('c23967225268238782');
</script>
</td>

```



Loading data...

Process Of Running Flash Chart



1. Page request with chart
2. APEX sends back HTML
3. Flash object requests data for chart



```

<td width="100%" valign="top">
<object classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"
  codebase="http://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=6,0,0,0"
  width="700"
  height="500"
  id="c23967225268238782"
  align="top">
<param name="movie" value="/i/flashchart/anychart_5/swf/OracleAnyChart.swf?XMLFile=http://aws1.apex-evangelists.com/pls/apex/apex_util.flash?p=40:15:2887089650234857:FLOW_FLASH_CHART5_R23967225268238782_en">
<param name="quality" value="high">
<param name="allowScriptAccess" value="sameDomain">
<param name="allowNetworking" value="all">
<param name="scale" value="noscale">
<param name="wmode" value="transparent">
<param name="FlashVars" value="initText=Initializing...&xmlLoadingText=Loading data...&resourcesLoadingText=Loading resources...&noDataText=No data found.&waitingForDataText=Loading data. Please wait.&templatesLoadingText=Loading templates...">
<embed src="/i/flashchart/anychart_5/swf/OracleAnyChart.swf?XMLFile=http://aws1.apex-evangelists.com/pls/apex/apex_util.flash?p=40:15:2887089650234857:FLOW_FLASH_CHART5_R23967225268238782_en"
  quality="high"
  width="700"
  height="500"
  name="c23967225268238782"
  scale="noscale"
  align=""
  allowScriptAccess="sameDomain"
  allowNetworking="all"
  type="application/x-shockwave-flash"
  pluginspage="http://www.macromedia.com/go/getflashplayer"
  wmode="transparent"
  FlashVars="initText=Initializing...&xmlLoadingText=Loading data...&resourcesLoadingText=Loading resources...&noDataText=No data found.&waitingForDataText=Loading data. Please wait.&templatesLoadingText=Loading templates...">
</embed>
</object>
<script type="text/javascript" language="javascript">
function chart_r23967225268238782_InitRefresh(pNow) {
  setTimeout("chart_r23967225268238782_InitRefresh(true)",10000);
  if (pNow){apex_RefreshFlashChart (15, '23967225268238782', 'en');}
}
apex_SWFFormFix('c23967225268238782');
</script>
</td>

```

Procedure To Generate XML For Chart

in APEX_UTIL package

```
1170
1171  procedure flash(
1172      --
1173      -- Anychart appends various parameters to the XML file URL
1174      -- This procedure accepts all parameters and discards them to call f?p
1175      --
1176      p in varchar2,
1177      fileParams in varchar2 default null,
1178      method in varchar2 default null,
1179      instance in varchar2 default null,
1180      methodName in varchar2 default null,
1181      tf in varchar2 default null,
1182      setXMLDataCall in varchar2 default null,
1183      setXMLTextCall in varchar2 default null,
1184      trial_tf in varchar2 default null,
1185      instance3 in varchar2 default null,
1186      XMLCallDate in varchar2 default null,
1187      onEnterFrame in varchar2 default null,
1188      j in varchar2 default null,
1189      loading in varchar2 default null,
1190      waiting in varchar2 default null);
1191
```



Procedure To Generate XML For Chart

Chart XML

Use Custom XML

Custom XML

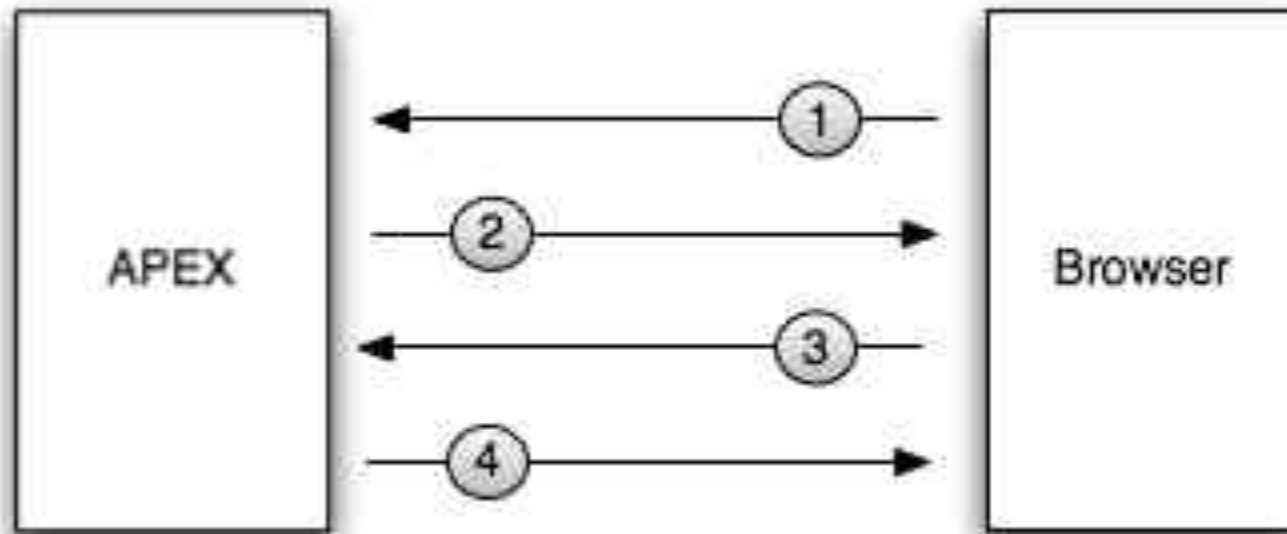
```
<?xml version = "1.0" encoding="utf-8" standalone = "yes"?>
<anychart>
  <settings>
    <animation enabled="false"/>
    <no_data show_waiting_animation="False">
      <label>
        <text></text>
        <font family="Verdana" bold="yes" size="10"/>
      </label>
    </no_data>
  </settings>
</anychart>
```

Refresh

Asynchronous Update Update Interval (Seconds)



Process Of Running Flash Chart



1. Page request with chart
2. APEX sends back HTML
3. Flash object requests data for chart
4. APEX sends back XML (data of chart)



APEX Sends Back XML (data Of Chart)

```
1 <?xml version="1.0" encoding="utf-8" standalone="yes"?>
2 <anychart>
3   <settings>
4     <animation enabled="false"/>
5   </settings>
6   <margin left="0" top="0" right="0" bottom="0"/>
7   <charts>
8     <chart plot_type="CategorizedVertical" name="chart_23967419144238800">
9       <chart_settings>
10        <title enabled="False"/>
11        <chart_background>
12          <fill type="Solid" color="0xffffffff" opacity="0"/>
13          <border enabled="false"/>
14          <corners type="Square"/>
15        </chart_background>
16        <data_plot_background></data_plot_background>
17        <axes>
41      </chart_settings>
42      <data_plot_settings enable_3d_mode="true">
60      <data>
61        <series name="VALUE" type="Bar" color="0x1D8BD1">
62          <point name="ADAMS" y="1100"></point>
63          <point name="ALLEN" y="1600"></point>
64          <point name="BLAKE" y="2850"></point>
65          <point name="CLARK" y="2450"></point>
66          <point name="FORD" y="3000"></point>
67          <point name="JAMES" y="950"></point>
68          <point name="JONES" y="2975"></point>
69          <point name="KING" y="5000"></point>
70          <point name="MARTIN" y="1250"></point>
71          <point name="MILLER" y="1300"></point>
72          <point name="SCOTT" y="3000"></point>
73          <point name="SMITH" y="800"></point>
74          <point name="TURNER" y="1500"></point>
75          <point name="WARD" y="1250"></point>
76        </series>
77      </data>
78    </chart>
79  </charts>
```



AnyChart XML Reference

- XML is fully documented on the AnyChart website



AnyChart

Flash Charting Component - XML Reference

Version 5.1.2

```
<anychart>
├── <charts>
│   └── <chart>
│       ├── <data_plot_settings>
│       ├── <chart_settings>
│       ├── <data>
│       ├── <styles>
│       ├── <palettes>
│       └── <thresholds>
├── <margin>
├── <settings>
├── <templates>
├── <dashboard>
├── <gauges>
└── <data_sets>
```

<chart> node

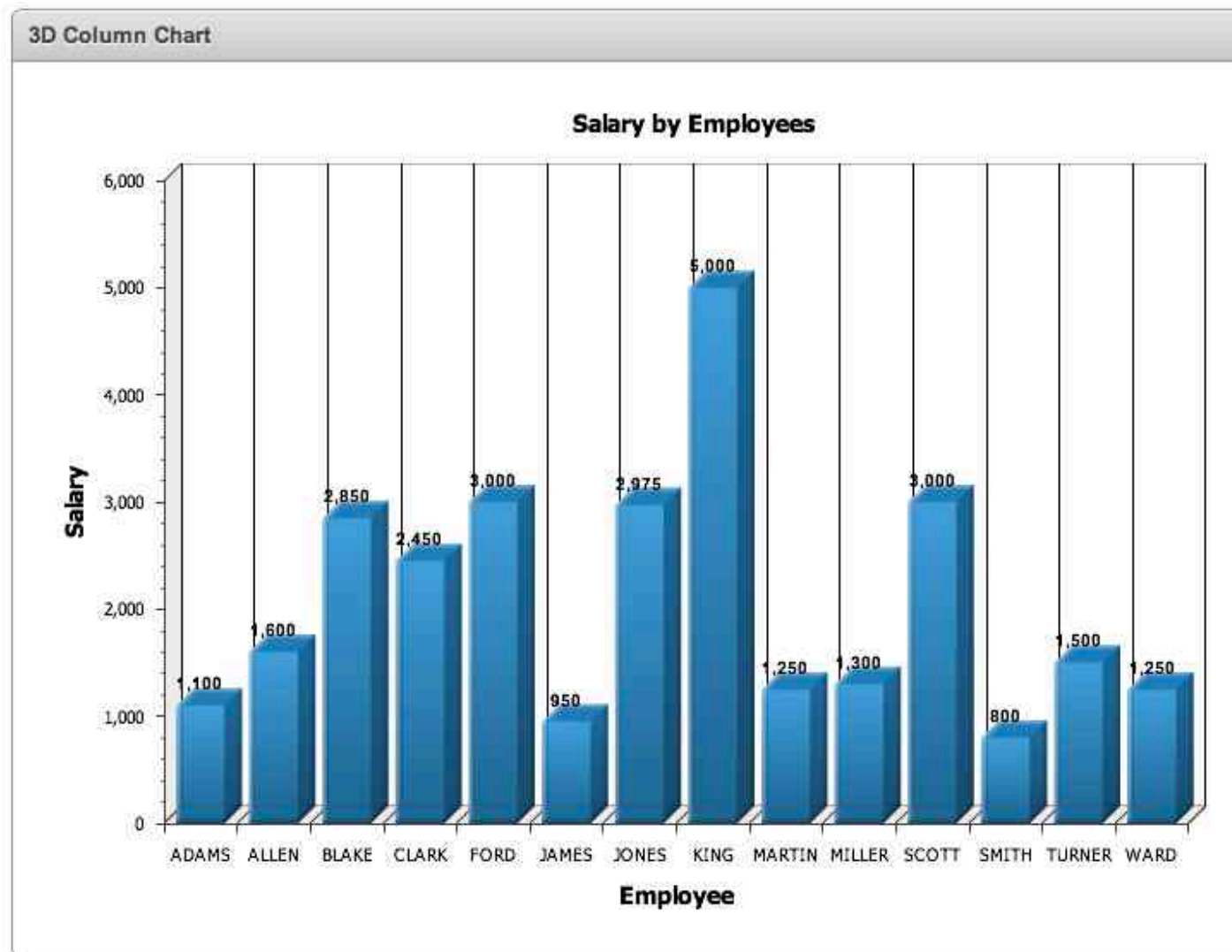
Description

Chart node contain settings and data for a single chart.

Attributes

Attribute Name	Description	Type	Possible Values	Default Value
plot_type	Plot type	Enum	CategorizedVertical CategorizedHorizontal CategorizedBySeriesVertical CategorizedBySeriesHorizontal Scatter Pie Doughnut Map HeatMap TreeMap Funnel	CategorizedVertical
template	Template name	String	n/a	n/a
name	Chart name used in dashboard mode.	String	n/a	n/a
enable_animation	Enables/Disables animation for the givent chart. For use in dashboard mode.	Boolean	True False	False

Flash Chart Rendered



Debugging An APEX Chart

- Debug on
 - XML can be viewed
- Full debug
 - Use Firebug and Flash Player Debug version



APEX Charts behind the scenes

DEMONSTRATION



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Create more advanced charts



Advanced Charts

- Custom XML
- Custom XML, Dynamic Actions and Javascript
- Creating charts completely manual
- Drill-down Charts, Dashboards and Interactivity



Advanced charts

DEMONSTRATION

Charts in the Future



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Charts In The Future

- Charts evolve
 - AnyChart Integration Kit for APEX
- Time-based Charts
 - AnyStock for APEX
- Non-Flash Charts
 - NFCharts APEX Plugin
 - AnyChart Non-Flash Chart for APEX Plugin



The future of charts

DEMONSTRATION



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<http://apex-evangelists.com>

Summary



Summary

- Why use charts
- Create and Customise a chart in APEX 4.0/4.1
- APEX Charts behind the scenes (and debug)
- Create more advanced charts
- Charts in the Future



Q&A



<http://apex-evangelists.com>



AnyChart Integration kit for APEX 3.x

AnyChart Integration kit for APEX 4.x

AnyStock Integration kit for APEX

<http://anychart.apex-evangelists.com>

What is NFCharts?



Beautiful interactive charts...everywhere



Oracle Application Express gives you a set of Flash charts out of the box. However not all browsers and devices support Flash. Our NFCharts (Non-Flash Charts) plugin for APEX gives you the best of both worlds

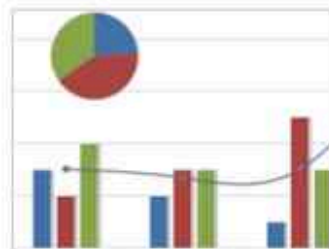
NFCharts is an APEX Plugin which means you can simply drop it into your existing projects and start using it within minutes.

If you've already used charts in APEX you will appreciate just how familiar the interface to NFCharts is.

[View Demo Site](#)



Buy Now



License Type:

NFCharts
£199

[Add to cart](#)

License Type

Application

You can use NFCharts in one application and use it as many times as you want inside that application.

Price

199 UKP

Server

You can use NFCharts in any application that is in the same APEX instance. (server)

499 UKP

Company

You can use NFCharts in any application and on all your APEX instances inside your company.

2499 UKP

<http://www.apex-evangelists.com/nfcharts>