

Focal Point[®] Custom Chart Plugin Reference Manual 7.42



Publication information

FPNC-7420-00 (November 2020)

Information in this publication is subject to change. Changes will be published in new editions or technical newsletters.

Documentation set

The documentation relating to this product includes:

- Focal Point APM Workspace Deployment Guide
- Focal Point APM Workspace User Guide
- Focal Point Business Rule Development and Usage
 Guide
- Focal Point Custom Chart Plugin Reference Manual
- Focal Point REST RDF API Reference Manual
- Focal Point RESTful API Reference Manual
- Focal Point Web Services API Reference Manual

Copyright notice

Focal Point[®] (the Programs and associated materials) is a proprietary product of UNICOM Systems, Inc. - a division of UNICOM Global. The Programs have been provided pursuant to License Agreement containing restrictions on their use. The programs and associated materials contain valuable trade secrets and proprietary information of UNICOM Systems, Inc. and are protected by United States Federal and non-United States copyright laws. The Programs and associated materials may not be reproduced, copied, changed, stored, disclosed to third parties, and distributed in any form or media (including but not limited to copies on magnetic media) without the express prior written permission of UNICOM Systems, Inc., UNICOM Plaza Suite 310, 15535 San Fernando Mission Blvd., Mission Hills, CA 91345 USA.

Focal Point[®]

© Copyright 1997-2020 All Rights Reserved. UNICOM Systems, Inc. – a division of UNICOM Global.

No part of this Program may be reproduced in any form or by electronic means, including the use of information storage and retrieval systems, without the express prior written consent and authorization of UNICOM Systems, Inc.

No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, without prior written permission from UNICOM Systems, Inc.

Disclaimer

We cannot guarantee freedom from, or assume any responsibility or liability for technical inaccuracies or typographical errors. The information herein is furnished for informational use only and should not be construed as a commitment by UNICOM Systems, Inc. – a division of UNICOM Global.

Trademarks

The following are trademarks or registered trademarks of UNICOM Systems, Inc. in the United States and/or other jurisdictions worldwide: Focal Point, UNICOM, UNICOM Systems.

Trademark acknowledgements

Divisions of UNICOM Global:

DETEC, iET Solutions, Macro 4, SoftLanding, UNICOM.

IBM:

IBM[®], AIX[®], CICS[®], CICS/ESA[®], CICS TS[®] CMAC[®], Db2[®], DFSMS/MVS[®], Domino[®], DOORS[®], ESCON[®], IBM MQ, IBM Z[®], IMS[™], iSeries[®], Jazz[™], Language Environment[®], L[®], Lotus[®], MQSeries[®], Multi-Factor Authentication for z/OS[®], MVS[™], MQSeries^e, Multi-ractor Autnentication for z/OS[®], MVS[™], MVS/ESA[®], OMEGAMON[®], OS/390[®], OS/400[®], Power[®], POWER[®], pSeries[®], RACF[®], Rational[®], Rational Team Concert[®], RMF[™], S/370[®], S/390[®], SMF[®], System/390[®], System i[®], System p[®], System z[®], VisualAge[®], VM/ESA[®], VSE/ESA[®], VTAM[®], WebSphere[®], z/OS[®], z/VM[®], z/VSE[®], zSeries[®], z Systems[®] and the IBM logo are trademarks or registered trademarks of IBM Corporation in the United States or other countries or both.

Microsoft:

Active Directory, Excel, Internet Explorer, Microsoft, Notepad, PowerPoint, Visio, Visual Basic, Windows, Windows 2000, Windows NT, Windows Server 2003, Windows Server 2007, Windows Vista, Windows XP, WordPad and/or other Microsoft products referenced are either trademarks or registered trademarks of Microsoft Corporation.

Adobe Systems Incorporated:

Adobe[®], the Adobe logo, Acrobat[®] and Adobe Reader[®] are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Amazon.com, Inc.:

Amazon Web Services, the "Powered by AWS" logo and Amazon S3 are trademarks of Amazon.com, Inc. or its affiliates in the United States and/or other countries.

Apache Software Foundation:

Apache, Apache Commons, Apache Tomcat, Log4j, Lucene, Solr, Tomcat, Xalan and Xerces are trademarks of the Apache Software Foundation

Apple Inc.:

AirPrint, App Store, iPad, iPhone and Safari are trademarks, registered trademarks or service marks of Apple Inc. registered in the United States and other countries.

Atlassian:

Atlassian and Jira are registered trademarks of Atlassian.

AXELOS Limited:

ITIL[®] is a registered trademark of AXELOS Limited, used under permission of AXELOS Limited.

babel:

A GitHub repository with contributions from Sebastian McKenzie and others and distributed under the MIT license.

BEA Systems, Inc.:

JRockit and WebLogic are registered trademarks of BEA Systems, Inc.

BCD Software, LLC:

ProGen Plus and WebSmart are trademarks or registered trademarks of BCD Software, LLC.

BMC Software Inc.:

Boole & Babbage, Data Packer, Optimizer and Super Optimizer are trademarks or registered trademarks of BMC Software, Inc., or its affiliates or subsidiaries (collectively, "BMC Software").

BSD:

PostgreSQL is distributed under the classic BSD license. (Portions Copyright © 1996-2006, PostgreSQL Global Development Group; Portions Copyright © 1994-1996 Regents of the University of California.)

CA. Inc.:

CA 2E, CA ACF2, CA Datacom, CA Endevor, CA IDMS, CA InterTest, CA NetMaster, CA Optimizer, CA Panexec, CA Panvalet, CA Ramis, CA Telon and CA Top Secret are registered trademarks of CA, Inc.

Candescent SoftBase LLC:

SoftBase is a registered trademark of Candescent SoftBase LLC.

Canonical Ltd:

Ubuntu is a registered trademark of Canonical Ltd.

Capgemini:

IAF is a trademark of Capgemini.

Chicago-Soft, Ltd.: QuickRef is a trademark of Chicago-Soft, Ltd.

Cincom Systems, Inc.:

MANTIS is a registered trademark of Cincom Systems, Inc.

Cisco Systems, Inc.:

Cisco, Cisco Systems, Cisco Unity Express, the Cisco logo, the Cisco Systems logo and IOS are trademarks or registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

Computer Sciences Corporation:

Hogan and Hogan Umbrella are trademarks or registered trademarks of Computer Sciences Corporation.

Compuware Corporation:

Abend-AID and Compuware are trademarks or registered trademarks of Compuware Corporation.

Dell Inc.:

Dell and the Dell logo are trademarks of Dell Inc.

Emtex Limited:

Emtex and VIP are trademarks of Emtex Limited.

ExcelSystems Software Development Inc.:

WebSmart is a registered trademark of ExcelSystems Software Development Inc.

FasterXML, LLC:

Jackson is a FasterXML, LLC GitHub repository and is released under the terms of the Apache License 2.0.

Jean-loup Gailly and Mark Adler:

zlib is a registered trademark or trademark of Jean-loup Gailly and Mark Adler.

GNU General Public License:

Cygwin is free software released under the GNU General Public License.

Google Inc.:

Android[™] platform, Google[®] and Google Chrome[®] are trademarks or registered trademarks of Google Inc.

Hewlett-Packard Development Company, L.P.: HP and HP-UX are registered trademarks of Hewlett-Packard Development Company, L.P., and/or its subsidiaries.

hjson:

A GitHub repository with contributions from Christian Zangl and others and distributed under the MIT license.

Idera, Inc.:

LANSA is a registered trademark of Idera, Inc.

IDM Computer Solutions, Inc.:

UltraEdit is a trademark owned by IDM Computer Solutions, Inc. All rights reserved.

Infor (US), Inc.:

Lawson is a registered trademark of Infor (US), Inc.

Innovation Data Processing:

IAM is a registered trademark of Innovation Data Processing Corporation.

Hilton Janfield:

jquery.enhsplitter is a GitHub repository owned by Hilton Janfield and is released under the terms of the GNU Lesser General Public License

Kofax, Inc.:

Kofax, the Kofax logo and Kofax Capture are the trademarks or registered trademarks of Kofax, Inc., in the United States and other countries.

Daniel Lovasko:

libdes © Copyright 2017-2018 Daniel Lovasko All rights reserved.

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Massachusetts Institute of Technology (MIT):

Kerberos is a trademark of the Massachusetts Institute of Technology (MIT).

Merrill Pty Ltd.:

MXG is a registered trademark of Merrill Pty Ltd.

Mozilla Foundation:

Firefox is a registered trademark of the Mozilla Foundation.

Mozilla Public License:

Expat is free software released under the Mozilla Public License.

BPEL is a trademark of OASIS.

Object Management Group:

BPMN^M, Object Management Group[®], OMG[®] and UML[®] are trademarks or registered trademarks of Object Management Group.

The Open Group:

ArchiMate, The Open Group, TOGAF and UNIX are registered trademarks of The Open Group in the United States and other countries.

Oracle Corporation:

EJB, Java, JDBC, JDK, JMX, JRE, JSP, JVM, OpenJDK, Solaris and SunOS are trademarks or registered trademarks of Oracle Corporation and/or its affiliates. Oracle is a registered trademark, and other Oracle product names, service names, slogans or logos are trademarks or registered trademarks of Oracle Corporation.

The pgAdmin Development Team:

pgAdmin is a trademark of The pgAdmin Development Team.

Pink Elephant Inc.:

Pink Elephant and its logo, PinkVERIFY, PinkSCAN, PinkATLAS, PinkSELECT and PinkREADY are either trademarks or registered trademarks of Pink Elephant Inc.

Python Software Foundation:

Python is a registered trademark of the Python Software Foundation in the United States.

QOS.ch:

SLF4J is from QOS.ch and its source code and binaries are distributed under the MIT license.

Red Hat, Inc.:

Red Hat, Red Hat Enterprise Linux, the Shadowman logo and JBoss are registered trademarks of Red Hat, Inc. in the United States and other countries.

SAP AG:

SAP, the SAP logo, the SAP Partner logo, Duet, SAP ArchiveLink, SAP Crystal Reports, SAP NetWeaver, SAP R/3 and SAPPHIRE are trademarks or registered trademarks of SAP AG in Germany and in

several other countries.

SAS Institute Inc.:

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries.

Secretary of State for Defence:

MODAF is a registered trademark of the Secretary of State for Defence.

Software AG:

Adabas and Natural are registered trademarks of Software AG. Software AG and all Software AG products are either trademarks or registered trademarks of Software AG and/or Software AG USA, Inc.

SPARC International, Inc.:

SPARC is a registered trademark of SPARC International, Inc. (Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.)

Splunk Inc.

Splunk[®], Splunk>[®], Listen to Your Data[®], The Engine for Machine Data[®], Hunk[®], Splunk Cloud[®], Splunk[®] Light, SPL[™] and Splunk MINT[™] are trademarks or registered trademarks of Splunk Inc. in the United States and other countries.

Standardware Inc.:

COPE is a trademark of Standardware Inc.

Sun Microsystems, Inc.:

Sun, Sun Microsystems, the Sun logo, MySQL and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. or its subsidiaries in the United States and other countries.

SUSE:

openSUSE, the openSUSE logo, SUSE, the SUSE logo, YAST, and the Chameleon mark are registered trademarks of SUSE or its subsidiaries or affiliates. AutoBuild, SUSE Studio, SUSECON, "We adapt. You succeed." are trademarks of SUSE or its subsidiaries or affiliates.

Syncsort Inc.:

Syncsort is a registered trademark of Syncsort Inc.

Simon Tatham:

PuTTY is copyright Simon Tatham.

TIBCO Software Inc.:

JasperReports and Jaspersoft are registered trademarks of TIBCO Software Inc. and/or its subsidiaries in the United States and/or other countries.

Linus Torvalds:

Linux is a registered trademark of Linus Torvalds.

Unicode, Inc.:

Unicode and the Unicode logo are registered trademarks of Unicode, Inc. in the United States and other countries.

VMware, Inc.:

spring is a registered trademark of VMware, Inc.

Wireshark Foundation:

Wireshark and the "fin" logo are registered trademarks of the Wireshark Foundation.

XEROX CORPORATION:

XEROX, The Document Company and the stylized X are trademarks of XEROX CORPORATION.

X.Org Foundation:

X Window System is a trademark of the X.Org Foundation.

Zachman International, Inc.:

Zachman[®], Zachman Framework™ and Zachman International[®] are trademarks or registered trademarks of Zachman International, Inc.

Additional trademarks and registered trademarks are the property of their respective owners.

Contents

1	Focal Point® Custom Chart Plugin Reference	7
	Introduction	7
	Overview Diagram	7
	Configuration	8
	Examples	8
	Steps to create a script for Chart Plugin	8
	Step 1 Create a base script	8
	Step 2 Create an add-on script (optional step)	9
	Step 3 Add CSS, JPEG or JS Files	9
	Step 4 Create the Plugin	10
	Steps to upload a Custom Chart Plugin	10
	Step 1 Go to the Configure Plugin page	10
	Step 2 Download the sample Chart Policy	11
	Step 3 Unzip the file SampleChartPolicy.zip	11
	Step 4 Import the sample workspace (optional step)	12
	Step 5 Upload the Plugins	12
	Step 6 Configure the plugin on the home page	14
	Step 7 Configure the plugin on the Homepage for XSLT plugin	16
	Step 8 Configure the plugin on a view page	17
	CUSDATA/DAO object	18
	CUSDATA API Information	19
	<pre>getAttribIdFromName(attribName) > {String}</pre>	19
	<pre>getAttribNameFromId(attribId) > {String}</pre>	19
	getAttrNamesFromDAO(types) > {Array}	19
	<pre>getBasicFpDataUrl() > {String}</pre>	20
	<pre>getCurrentPluginId() > {String}</pre>	20
	<pre>getCustomFpDataUrl(ATTR, conditions) > {String}</pre>	20
	getData(ATTR, conditions, callback) > {Void}	21
	getFPRestData(URL, callback, outputFormat) > {Void}	21
	getPref() > {Object}	22
	<pre>getPrefData(callback) > {Void}</pre>	22
	<pre>postPrefData(callback) > {Void}</pre>	22
	resize() > {Void}	23
	<pre>savePref(JsonSettingsData) > {Void}</pre>	23

transform(xmlData,	userDefinedXslFilePath)	>	{Void}	23
Data types				24
ID				24
Workspace				24
View				24
Element				24
Attribute				24
AttributeValue				25
AttributeSetup				26
ElementSet				27
AttributeType				27
AttributeSetupInfo				27
ChoiceSetup				27
ChoiceSetupItem				27
ViewInfo				27
HistoryEntry				28

1 Focal Point[®] Custom Chart Plugin Reference

Introduction

Data visualization capabilities that are included in Focal Point[®] help you to make value-based decisions in the field of Portfolio Management and Product Management. You can also use the 'Custom Chart Plugin' capability to develop and add your own unique charting/reporting capabilities as plugins.

This document describes the API and the Usage guide of 'Custom Chart Plugin' for Focal Point[®] version 7.1.2 onwards.

The Focal Point[®] Chart plugin is based on the Focal Point[®] REST services. The purpose is to provide access to Focal Point[®] data and services and facilitate the display of the data in the form of visualization charts and reports on home pages and view pages.

To use the Focal Chart plugin and understand this document, you need to be familiar with the Focal Point[®] REST Services, Java Script and JSON/XML data standards and have basic understanding of the Focal Point[®] data model, usage, and administration.



Overview Diagram

Configuration

As an Admin, you can upload the Custom Chart plugin in the **Applications** > **Plugins** settings and then configure homepage settings and view settings.

Charts and reports can be created by using any of the freely available data visualization libraries such as D3, Dimple, Plotly and XSLT.

The Focal Point[®] JavaScript API, which is provided for the development of the Custom Chart plugin, provides access to the following services:

- Retrieve attribute names and types available in a view
- Retrieve data in JSON format using the Focal Point[®] REST API
- Retrieve user settings from Focal Point[®] and save back to database

Examples

Code examples for Custom Chart plugins in Focal Point[®] can be found in the download link provided in **Administration** > **Application** > **Plugin** page.

The examples provided can be used as the basis for custom chart development.

Steps to create a script for Chart Plugin

Step 1 Create a base script

The path to the script has two parts; one is fixed and the other is a relative path to the script file.

The Fixed PATH (which will be the same for all plugins):

- For homepage plugins: fpone/plugins/homepage/
- For view plugins: fpone/plugins/view/

The Relative PATH (which will be different for each plugin) to script is:

<DIR PATH>/<scriptfilename>

The Complete PATH will be the Fixed PATH concatenated with the Relative PATH.

For example:

```
fpone/plugins/view/MYDIR/main
```

The base script file (main.js) would have the following structure.

```
define("fpone/plugins/view/MYDIR/main",[
    "dojo/ready"
    ], function(ready) {
    function main(CUSDATA) {
    }
    return main;
});
```

Step 2 Create an add-on script (optional step)

The following step is optional, and is only required if you want to add another script to the base script.

First create a script in AMD format which would look like the following example.

Note For view type plugin, the PATH would be: fpone/plugins/view/MYDIR/lib

```
The Relative PATH to the script is: MYDIR/lib/addon.js
```

```
define("fpone/plugins/view/MYDIR/lib", [], function() {
var Refresh = {};
//User defined functions
Refresh.fullDoc = function(target) {
    //user code
}
return Refresh;
});
```

Next, to add this script to the base script, modify the base script file (main.js) to have the following structure.

```
define("fpone/plugins/homepage/MYDIR/main",[
         "dojo/ready",
         "fpone/plugins/homepage/MYDIR/lib/addon"
        ], function(ready, Refresh) {
    function main(CUSDATA) {
        //Call your methods of addon
        //For eg
        Refresh.fullDoc();
    }
        return main;
});
```

Step 3 Add CSS, JPEG or JS Files

To add CSS, JPEG or JS Files, create a directory structure to keep these files.

For example:

```
MYDIR/LIB/
MYDIR/CSS/main.css
MYDIR/IMG/clip.png
MYDIR/JS/chart.js
```

In the HTML files just replace the pluginBasePath available with the CUSDATA object.

If you are using XSL files, use the following method:

Use the following replacement text:.

For namespace URL use @@FPNAMESPACE@@

For example:

xmlns:ns="@@FPNAMESPACE@@"

For path to custom script files use @@BASEPATH@@

For example:

```
<link rel="stylesheet" type="text/css" href="@@BASEPATH@@XSLT/css/util.css" />
```

```
<script type="text/javascript"
src=""@@BASEPATH@@XSLT/lib/jquery.js"></script>
```

Note Refer to the sample XSL file in the XSLT zip folder (demoxslt.xsl).

Note If there is a single CSS file, then name the CSS file the same as the base script file and it will be automatically picked up. For example, if the base filename is main.js then name the CSS filename as main.css. In this case the CSS file should be present in the same directory as that of the base script file.

Step 4 Create the Plugin

The final step is to create a zip file of the directory MYDIR and upload it as a plugin.

Steps to upload a Custom Chart Plugin

Step 1 Go to the Configure Plugin page

Login as Admin and go to **Administration** > **Application Tab** > **Plugins** and then click **Add Plugin**.

Føcal Polet – Wentspaces - Add - Dinjstay -	Admin -	۰	UNICOM Systems, Inc.
Aministation			
General Application Users Advanced			
Mail .			
Support and Center			
Prey			
Logit Rapp			
5ecuty			
Data Access			
Frends (Outbound)			
Consumers (Informat)			
Association Line Types			
Pages			
Copyright 2011 UNICOM Systems, Inc.			
			A 100% -

Step 2 Download the sample Chart Policy

Once the Plugin form is displayed, click on the link **Download Sample Chart Policy**.

Step 3 Unzip the file SampleChartPolicy.zip

Unzip the file <code>SampleChartPolicy.zip</code> to display the contents.

Name 🔺	Date modified	Туре	Size	
儿 JavaScriptAPIDoc	27-04-2018 18:36	File folder		
🛃 Bubble1.zip	02-02-2018 15:17	KuaiZip ZIP Archive	74 KB	
🥳 Bubble2.zip	02-02-2018 15:18	KuaiZip ZIP Archive	376 KB	
CustomPluginChartUsageguide.txt	13-03-2018 17:18	Text Document	9 KB	
Rational_Focal_Point_RESTful_API_Referen	27-04-2018 18:08	PDF File	204 KB	
readme.txt	27-04-2018 18:04	Text Document	4 KB	
XSLT_DEMO_WORKSPACE .fpz	27-03-2018 21:19	FPZ File	1,053 KB	
🧭 XsltTransform.zip	26-04-2018 18:57	KuaiZip ZIP Archive	17 KB	
 readme.txt XSLT_DEMO_WORKSPACE .fpz XsltTransform.zip 	27-04-2018 18:04 27-03-2018 21:19 26-04-2018 18:57	Text Document FPZ File KuaiZip ZIP Archive	4 KB 1,053 KB 17 KB	

Step 4 Import the sample workspace (optional step)

Note This step is optional and is needed only if you want to deploy the XSLTdemo plugin.

Login as Admin and import the sample workspace <code>XSLT_DEMO_WORKSPACE.fpz</code> file.

Step 5 Upload the Plugins

Now proceed to fill the **Add Plugin** Form with all the necessary plugin information as shown below.

Upload Plugin 1

To display a bubble chart on the home page, select Bubble1.zip file against Upload Plugin Policy.

Provide 'Policy's Javascript Module ID' as fpone/plugins/homepage/bubble. Click on the OK button once the setup is complete.

Focal Point Worksp	aces - Add - Display -			Admin - 🔿 -	UNICOM Systems, Inc.
Administration					
Mail					
Support and Contact	Add Plugm	Add Plugin			
Proxy					
Login Page		Enter information about the new plugi	n, and click OK.		
Security		Name	Home Bubble		
Data Access		Second second	This will display subble chart on the Momerade.		
Friends (Outbound)					
Consumers (inbound)			ľ		
Association Link Types		Type Pluain Palicy Configuration	Home page 🔽		
Plugins		Upleed Plugin Folicy	eChanPolicy <mark>Butble1.zip</mark> Browse .		
			Attention: Upicad a Plugin Policy Zip Six.		
		Policy's Javascript Hedule ID	fpane/slugins/homepage/tubble		
			Example: fone.jplugina/komepage/bubble (for wome page plugin type) Example: fone.jplugina/komepage/bubble (for home page plugin type)		
		Example Chart Code	Download Sample Chart Policy		
			×		
			OK Close		
			Copyright 2018 UNICOM Systems, Inc.		

Once the upload process is successful, the "Plugins" page displays an entry as shown in the following screenshot:



Upload Plugin 2 (optional step)

To display a bubble chart on a view page, select Bubble2.zip file against 'Upload Plugin Policy'. Entry against 'Policy's Javascript Module ID' will be fpone/plugins/view/plotlyBubble.</code>

Click on the **OK** button, once the setup is complete.

Focal Point Works	paces · Ac	ld - Display -		Admin · ① -			
Administration							
Mail	A 44 70 - 4						
Support and Contact	Add Pug	Modify Plugin					
Proxy	1						
Login Page	2	Enter information about the new plu	agin, and click OK.	^			
Security		Name	View Bubble				
Data Access		Celopon	This will display bubble chart on any View page.				
Friends (Outbound)							
Consumers (inbound)		Test					
Association Link Types		Plugin Policy Configuration	View				
Plugins		Upload Plugin Policy	eChartPolicy/Bubbls2.ztp Browse				
			Attention: Upload a Plugin Policy Zip File.				
		Policy's Javascript Module ID	fpometplugins/viewiplotlyBubble				
			Attentions Enter Hodule (2 of main Jayascript that implements custom chart Example: fpans/plugma/view/bubble (for view plugm type) Example: fpans/plugma/kompage/bubble (for home page plugin type)				
		Example Chart Code	Download Sample Chart Policy				
				°			
				OK Close			
			Copyright 2018 UNICOM Systems, Inc.				

Once the upload process is successful, the "Plugins" page displays an entry as shown in the following screenshot:

Food Point Workspaces - And - Departy - Addres							
Administration							
General Application	Users Advanced						
Mail							
Support and Contact	Add Plugin						
Proxy	ID Name 1 Home Bubble	Description This will display Bubble chart on the Homeosope.	Type Home page	Actions +			
Login Page	2 View Bubble	This will display Bubble chart on any View page.	View	Actions +			
Security							
Data Access							
Friends (Outbound)							
Censumers (inbound)							
Association Link Types							
Plugins							
		Copyright 2018 UNICOM Systems, Inc.			1.1000		

Upload Plugin 3 (optional step)

For displaying a HTML report on the home Page, select XslTransform.zip file against Upload Plugin Policy. Provide the value fpone/plugins/homepage/XSLT/demoxslt against 'Policy's Javascript Module ID'.

Click on the **OK** button, once the setup is complete.

Focal F	Point Worksp	aces · A	d - Display -	Admi	· @ -	UNICOM Systems, Inc.
Adminis	tration					
General	Application	Users	Advanced			
Mail						
Suppor	t and Contact	Add Plug	Add Plugin			
Proxy		1				
Loop	Tana	2	lama			
coger	-		Description	pinn.koport This will distant Mobile obser on the		
Securit	у			Monepage.		
Data A	ccess					
Friends	(Outbound)			× ·		
Consu	ners (inbound)		Туре	Home page 💌		
Associ	ation Link Types		Plugin Policy Configuration			
Plunin			opiona Plagar Policy	tifoticy(Xall mendorm zgg		
1				Attestion: Upload a Plugin Policy Zip Na.		
			Policy's Javascript Module ID	[pons/plagins/homepage/XSLT/demoxsit		
				Attendiene: Enter Module II del maini Javascript that implementa sustom chart Emmyler (poenglipiqent/iven/bubble (for vew plagin type) Example: Poenglipique/iven/papeglibble (for them page plagin type)		
			Example Chart Code	Download Sample Chart Policy		
					1	~
				ОК	Close	
				Copyright 2018 UNICOM Systems, Inc.		

Once the upload process is successful, the "Plugins" page displays an entry as shown in the following screenshot:

Focal Point Worksp	Focal Poles, Westspaces - Add - Desplay - Admin - O - C UNICOM - Control - C - C UNICOM - C - C - C - C - C - C - C - C - C -								
Administration	desentation								
General Application	Users Advanced								
Mail									
Support and Contact	Add Plugin								
Provy	1D Namo 1 Home Subole	Description This will display Bubble chart on the Homepage.		Type Home page	Actions +				
Login Page	2 View Butble 3 HTML Report	This will display Bubble chart on any View page. This will display Bubble chart on the Homepage.		View Home page	Actions + Actions +				
Security									
Data Access									
Friends (Outbound)									
Consumers (inbound)									
Association Link Types									
Plugins									
			Copyright 2018 UNICOM Systems, Inc.						

Step 6 Configure the plugin on the home page

Open **XSLT DEMO WORKSPACE**, go to **Homepage Settings** > **Add window** and click on the **Chart** option. The Add window form will be displayed.

Proceed by filling in the necessary details like Window title, Chart Plugin and View.

Focal Point	Workspace	4 - Add -	Display -	င္ 😤 Admin - ႐ု 🔅 - တိ -
XSLT_DEMO_W	ORKSPACE			Type Unique ID and press enter
Add Window I Window Title Visible	(2 of 2)	Bubbles Dem		
Chart Plugin Chart Container Wid	n L	Home Bubble	80)	
Chart Container Heig	pra .	800 (in pi	eka)	
Title			Description	
Resource Va	ew			
C E FeaturesView				
C 📰 FeatureCust	omView			
< Buck	DK			
			Control MRI 1987 AM Restores Inc.	
			Copyright 2018 ONIC CM Systems, inc.	

On clicking the **OK** button, the below page is displayed.

Focal Point Workspaces - Add - Dis	iplay -	Q. ★ Admin - Q. ★ - ⊙ - Cunicode Systems for
XSLT_DEMO_WORKSPACE		Type Unique ID and press enter
(Untitled) +		
Editing My Home		
Bubble1 Demo		b- ∠×
Contents Visible	Chart Yes	/
View Description	ProductsView	
Hide Empty Windows		
If a home page window is empty (no view re	suit) hide the window completely.	
Public Home Page Information		
Enable the Public Home Page feature for this	s home page	
When this feature is enabled you can access of this home page without logging in using t	a read-only version his unc.	
Public Home Page URL		
Right-click the URL above and select Copy 5	Shortcut from the	
menu and pasce the tikt. In your incernet bro	WINE.	
Add Window Preview Reload tob	contents every time when it is selected	
		Copyright 2018 UNICOM Systems, Inc.

Click on the **Preview** button to see the chart being displayed.

Focal Point Workspaces - Add - Display -		Q ∰ Admin - D ∰ - ⊙ - OUNICOM Bythevia. Inc
X9LT_DEMO_WORKSPACE		Type Unique ID and press enter
(Untitied) -	C Focal Point - Internet Explorer	
Editing My Home	http://10.04.150/soso/piservet/HomerageControler/me_/homepage/tabs.jspar/vacton=snowkeemab1	
Bubble1 Demo	(Untitled)	5- ZX
Contents Chart	Bubble1 Demo	
Visue Products View	Product	· · · · · · · · · · · · · · · · · · ·
Description	**	
Hide Empty Windows	H Carlos	
□ If a home page window is empty (no view result) hide the window completely.		
Public Home Page Information	\$ 10	
Enable the Public Home Page feature for this home page	2 com	
When this feature is enabled you can access a read-only version	4 determination	
of this home page without logging in using this URL:	2 Internet Bard Age	
Public Home Page URL	2 3 4 5 7 9 10 72 80 90 Percent Total ECGA	
Right-click the URL above and select Copy Shortcut from the menu and paste the URL in your internet browser.		
	X-Avis Percent Total ECSA V	
	Y-Avis Percent Total ESQ4 W	
	Bubble Start Date	
	< >	
	Close	
Add Window Preview Related tab contants every time when it is selected		
	Copyright 2018 UNICOM Systems, Inc.	

Click on the Home icon to see the home page.

Focal Point Workspaces - Add - Display -	Q 者 Admin - Q 🔅 - O - GUNICOM Gutara, Re
X9LT_DEMO_WORKSPACE	Type Unique ID and press enter
(Untitled) -	
Bubble1 Demo	
Product 10 10 10 10 10 10 10 10 10 10	
	X-Axis Percent Total ECSA
	Y-Axis Percent Total ESCALM
2 3 4 5 7 9 10 72 53 50 Present Isia ECDA	
Copyright 2018 UNICOM Systems, Inc.	

Change the values on X-axis, Y-Axis and bubble to see the changes being applied to the chart.

Step 7 Configure the plugin on the Homepage for XSLT plugin

Open the **XSLT DEMO WORKSPACE**, go to **Homepage Settings** > **Add window** and click on the **Chart** option. The Add window form will be displayed.

Proceed by filling in the necessary details like Window title, Chart Plugin, and View. Set the height=5000 and width=900.

Focal Point Workspaces - Add - Display -	Q 🕸 Admin - D 🔅 - 🕐 -
XSLT_DEMO_WORKSPACE	Type Unique ID and press enter
Configure Vision/ (2 of 2) Wate Two Wate Two Value Order Value Order Data Camer Data Camer	
The Dec	cription
0 2 Policia Merei ■ 2 Policia Merei ■ 2 Federative	
III FeatureCustomVew	
sakct Websen Title, vibile, Chart Ruge, Vien.	
< BOCK UN	
Constituti 2018 UN/COM Sectors Inc.	

Click on the **OK** button.

Click on the **Preview** button to see the chart being displayed.

Click on the Home icon to see the Home Page.

ocal Point	t Workspaces - A	Add - Display -		
XSLT_DEMO	_WORKSPACE			
(Untilled)	(Untitled) -			
XSLT De	mo			
PRO	DUCT			
Intern	net Banking			
DES	CRIPTION			
You c check great you to	can pay your bills online cing account transactions feature, and most banks o deposit checks by simp	e and access a record of your is online. Online banking is a s offer it Some banks allow ply taking a picture.		
STA				Product Owner APPF BY
Imple	emented	20/2/2018	27/2/2019	sreejith manav
Prod	luct Diagram			
	Presentin banking Download t to avail serv KNOW MO	ng an easy way g on the go! the iMobile Banking A vices anytime, anywho RE	of App ere.	
				C

Step 8 Configure the plugin on a view page

Go to Configure views, select any view and Edit the view definition and click **Next** twice to reach the Define view settings page. Select **Plugins for this view** by selecting the checkboxes for appropriate plugin and click **Finish** as shown below.

Define view setti	ngs for ProductsView			- 1
Administration Settings	-		Default Settings	. 1
Icon Attribute De	Piul - Tuela		Default Global Filter None 💌	
Color Attribute De	V - tual		Display Toolbar Tree	
Sort Attribute De			Visualize Toolbar Bar Chart	
Tree Group By Attribute Us	er Defined			- 1
Add View De	w			
Excel Import View De	- tuat			- 1
Link Table Popup View De	V-ture			- 1
Settings not changeable by me	imbers		Only applicable until another selection is made by the user.	
Enable/Disable View Options fi	or users			
Disable Export				
Disable Multime Excel Exports Disable Update	upcare			
Disable Delete				- 1
Disable Dynamic Filter Disable Shared Filter				- 1
Disable Add To Other		<u> </u>		- 1
Disable Add new Tag keywords	5			- 1
Select Plugins for th	is view			-
View Bubble				- 1
Workspace Associati	ion with the Service Provider			- 1
Allow Restrict Association Lin	nk Type	Artifact Container (For example, Project Are	10	

Now go to Display View and select the view, and click on the icon as show below to display the chart on the view Page.

Cook:Property Tax > Tree > ProductsVie	w > XSLT_DEMO_WORKSPACE >	ocal Point - Internet Explorer
Focal Point Workspaces - Add - Dis	splay -	Q ∰ Admin - Q ☆ · O · O <mark>UNICOM</mark> igne
XSLT_DEMO_WORKSPACE - ProductsView #	★ Till B 3 E St ins Very Bubble y Tax	Quidt Search in ProductiView Os to - Adapt - Serve All Castor
by Totality (19) by Totality (20) by T	t0 / Tas / Decorption	B01 Property Tar PROAD Tar Product face Product face Product face Offers a former on them IRCAL Bark to a galaxies of easy. We other hyper- eligibity and lower ENIts at statice in meet meet. Product face Car Loss Product face The more gardward face/or the car lower in the country. Network at more than tool meet parties in one '1100 locations'. Tai-gala with all adding addination manufactures to escure the static data: file-bala schemata & galaxi: processing Handling addination face/or the car lower. Promotion Product face Product face Promotion Product face Product face Product face Promotion Product face Product face Product face
	4 Link From Feature	Million Contraction Contractio
	Product Status Details	Edit
	Status	Approved
	Start Date	"Sat, 24 Mar 2018"
	End Date	Tel. 22 Mar 2019
	Product Owner	g snegin

On click, the following chart is displayed.



CUSDATA/DAO object

This section provides information about the values present in CUSDATA/DAO object. Some of the useful information in CUSDATA object is given below.

DAO object in custom script can be accessed via **JSON Object** > **CUSDATA.dao**.

```
{
"dao":{
   "activeFilterId":-1,
   "moduleNamePlur": "Products",
   "viewId":30,
   "fpresourceUrl": "http://10.0.4.150:8080/fp/resources",
   "ncModuleNamePlur": "Products",
   "moduleName":"Product",
   "treeElement":48,
   "attrsInfo":[],
   "ncModuleName":"Product",
   "moduleId":13,
   "userId":"13",
   "workspaceId":2,
   "divId":"fp-maincontainer"
},
"basicFpDataUrl": "http://10.0.4.150:8080/fp/resources/workspaces/2/modules/
13/elements/?view=30&includeAttributes=true&optimize=true",
"namespaceFPUrl": "http://10.0.4.150:8080/fp/namespace/workspaces/2/modules/
13/views/30/elements",
"attrNames":[],
"attrTypes":[],
"attrRealNames":[],
"attrIds":[],
"pluginBasePath":"../../../one/js/modules/plugins/view/"
}
```

Note The Attribute Info array contains array length() equal to the number of attributes in the module.

CUSDATA API Information

Open the JavaScriptAPIDoc folder unzipped from SampleChartPolicy.zip. Open the index.html File in Browser and all methods could be browsed in detail. Some of the common methods are given below.

```
getAttribIdFromName(attribName) > {String}
```

Returns the attribute Id for a given Attribute Name.

Parameters:

Name	Туре	Description	
attribName	String	Attribute name.	
Returns:			
attribId - Attribute I	D		
Type: String			
getAttribNameFro	<pre>omId(attribId) ></pre>	{String}	
Returns the attribut	e Name for a given At	tribute Id.	
Parameters:			
Name	Туре	Description	
attribId	String	Attribute ID.	
Returns:			
attribName - Attribu	ite Name		
Type: String			
getAttrNamesFrom	nDAO(types) > {Ar	ray}	

Finds the attribute names based upon the types specified. If no types are specified, then all 'integer' and 'float' attributes are retrieved.

Name	Туре	Description			
Types	Array	Array of type of attributes specified to prepare the attribute list.			
Returns:					
keys - Array of nam	es of attributes				
Type: Array					
getBasicFpDataU	<pre>Irl() > {String}</pre>				
Creates basic URL.					
Returns:					
Return basic Focal	Return basic Focal Point [®] DATA URL				
Type: String	Type: String				
getCurrentPlugi	.nId() > {String}				
Returns the plugin	Returns the plugin id from DAO object.				
Returns:	Returns:				
Plugin id					
Type: String					

getCustomFpDataUrl(ATTR, conditions) > {String}

Generates a Focal Point[®] REST URL to retrieve data for the attributes from the view in which the plugin is operating. Users can provide a list of attributes for which data needs to be retrieved. It is also possible to provide attribute conditions so that the elements retrieved from the REST URL are filtered based on these conditions.

Refer to the Focal Point[®] REST API for details on how attribute conditions can be specified. This method returns a Focal Point[®] REST URL after the list of attributes and conditions are added to the base URL obtained through the call getBasicFpDataUrl().

Name	Туре	Description
ATTR	Array	Array containing the names of the attributes.
conditions	Array	Array containing the attribute conditions.

Returns:

Returns custom URL

Type: String

getData(ATTR, conditions, callback) > {Void}

This method returns the collection of attribute values retrieved from the current view by making a REST call to the URL obtained from the method getCustomFpDataUrl(). Users can provide a list of attributes for which data needs to be retrieved.

Note Only Integer, Float, Date and Text attributes are supported here.

It is also possible to provide attribute conditions so that the elements retrieved from the REST URL are filtered based on these conditions.

Refer to the Focal Point[®] REST API for details on how attribute conditions can be specified. If the user is looking for the unfiltered response, or is looking for information of attributes other than Integer, Float, Date or Test, then it is recommended to use the method getFPRestData which will return the entire response in JSON format.

Name	Туре	Description
ATTR	Array	Array containing the names of the attributes.
conditions	Array	Array containing the attribute conditions.
callback	Function	Callback function with chart data.
Returns:		
Type: Void		

Parameters:

getFPRestData(URL, callback, outputFormat) > {Void}

This method returns data in JSON Object or XML format from any Focal Point[®] REST URL.

Note By default the response would be in JSON Format.

User can provide a REST URL as a parameter. To retrieve element and attribute information from the current view in which the plugin is operating, users can pass <code>@param{basicFpDataUrl}</code> as defined above. If data needs to be retrieved from any other URL, then users needs to construct the URL accordingly.

Refer to the Focal Point[®] REST API documentation in the help section for details on how a GET URL can be constructed.

Name	Туре	Description
URL	String	Focal Point [®] REST URL to fetch DATA.
callback	Function	Callback function with Focal Point [®] REST response data.
outputFormat (optional)	String	Value should be either "json" or "xml". This parameter is optional. If omitted, output would be in JSON Object format.

Returns:

Type: Void

getPref() > {Object}

Retrieves user preference data from window object.

Returns:

User preference data as a JSON object.

Type: Object

getPrefData(callback) > {Void}

Retrieves the user preference data from the Focal Point[®] Database.

Parameters:

Nume		•
callback	Function	Callback functions with user preference data as a parameter.

Returns:

Type: Void

```
postPrefData(callback) > {Void}
```

Saves the user preference data into the Focal Point[®] Database using a HTTP POST call. The data to be saved will be retrieved from the window object using the getPref() call. Users should have called savePref() to store user preference to the window object before calling this method.

Name	Туре	Description
callback (optional)	Function	Callback function to handle the success message from the post call. This parameter is optional.

Returns:

Type: Void

resize() > {Void}

Sets the window dimensions for view and home page.

Returns:

Type: Void

```
savePref(JsonSettingsData) > {Void}
```

Saves the user preference data into window.fp object for further use.

Parameters:

Name	Туре	Description
JsonSettingsData	Object	User preference data in JSON format.
Returns:		
Type: Void		

transform(xmlData, userDefinedXslFilePath) > {Void}

Applies the XSL transformation on the XML data for view or home page.

Parameters:

Name	Туре	Description
xmlData	Object	Data in XML format.
userDefinedXslFilePath	String	Relative XSL File path defined by the user.

Returns:

Type: Void

Data types

This is a description of the data types used by the operations of the Web Service API. They are defined in the WSDL using an inline XSD Schema. When using an object-oriented programming language that can generate code from a WSDL document (for example Microsoft.NET or the Java Apache Axis framework), these data types are typically transferred into classes.

ID

An ID is the combination of a localId and a workspaceId. Focal Point[®] is divided into several workspaces, each with its own identifier. Objects (views, elements, attributes etc) in each workspace have their own identifier, but it is only unique within that workspace. In order to uniquely identify an object you need both its own identifier (i.e the localId) and the identifier of the workspace (i.e the workspaceId) it is part of. The data type ID is these two identifiers paired together. For example there can be an element with localId 200 in workspace 2 and another element with localId 200 in workspace 3.

Workspace

A Workspace contains information about a workspace in Focal Point[®]. It has an identifier (and integer), a title (the name of the workspace) and a description.

View

A View contains information about a view in Focal Point[®]. It has an ID, a title (the name of the view) and a description.

Element

The data type Element is used to represent an element in Focal Point[®]. It consists of an ID (that uniquely identifies the element) and a list of Attributes.

Attribute

An Attribute is used to maintain the attribute values for an Element. It consists of an "attributeSetupId" which is an ID that references the AttributeSetup that defines the attribute, a "value" which is an AttributeValue that contains the actual value of the attribute and a "displayValue" which is a simple string representation (if possible) of the attribute value.

The displayValue property should be regarded as a read-only property. When updating or creating an element the displayValue of an Attribute will be ignored, it is only the AttributeValue that is used.

If the value of an attribute is empty/null both the AttributeValue property and displayValue will be null.

AttributeValue

AttributeValue is in itself an empty data type. Instead there are a number of data types that extend AttributeValue. In an object-oriented environment this translates to a superclass/subclass structure.

CheckBoxValue

The CheckBoxValue has a Boolean property called selected that tells if the CheckBox attribute is selected or not.

ChoiceValue

The ChoiceValue has an integer that identifies the selected choice. The full list of choices and their names is retrieved from the Attribute's AttributeSetup.

DateValue

The DateValue has an xsd:dateTime that represents the value of the date attribute. For most date attributes in Focal Point[®] only the date and not the time point is stored, but in the DateValue the hour and minute is included as well. In cases where they haven't been set in the Focal Point[®] server, the time point 00:00 will be returned from the Web Services.

The time point part will be ignored when setting or updating an attribute value.

FloatValue

The FloatValue has an xsd:double that represents its value.

IntegerValue

The IntegerValue has an xsd:long that represents its value.

LinkValue

The LinkValue is represented by an ID that identifies another element in Focal Point[®].

ListValue

The ListValue does not contain any values itself. Instead it has a list of values. It can either be a list of LinkValues or a list of TextValues

MultiChoiceValue

The MultiChoiceValue has a list of integers that represents the selected choices. The full list of choices and their names is retrieved from the Attribute's AttributeSetup.

TextValue

The TextValue contains a string with the value of the text attribute. It will be equal to displayValue.

Any formatting used will be ignored.

UniqueIdValue

The UniqueIdValue is represented by a string.

UrlValue

The UrlValue is represented by a string.

VersionValue

The VersionValue is represented by a string.

FileValue

The FileValue contains a list of FileDataValues. The FileDataValue contains the name, content type and length of a file. Each FileDataValue also has a file number which is an identifier for that particular file within the file attribute. Note that the actual file content is not included when reading a file attribute (for example when using GetElement or GetElements). Retrieving the file content can be done using GetFileContent. When writing a file (when using AddElement or UpdateElement) the file content shall be included. If the supplied file number is found in the existing file attribute (on the server) the file will be replaced with the supplied data, if the file number is not found a new file will be added.

AttributeSetup

The AttributeSetup is the definition of an attribute. An AttributeSetup is always referred to by an Attribute. It contains an ID, a "title" (the name of the attribute), a "description", a "type" (an AttributeType) and a "mandatoryName".

The mandatoryName is a string that is only used for attributes that are mandatory (for example title, last changed by). Since it is possible to change the name for any attribute in Focal Point[®], mandatoryName is a name that does not change. For example the mandatoryName of the description attribute will always be "Description" even if the title has been changed to something else.

Another way to determine which attribute is the title, description, or prefix attribute is reading the AttributeSetupInfo in a ViewInfo or ElementSet.

ElementSet

An ElementSet is a container of Elements and some information about the view they where retrieved from. It has a list of Elements, a list of AttributeSetups reflecting the attribute setups for the view that the elements were retrieved from and an AttributeSetupInfo.

AttributeType

The AttributeType data type is used by AttributeSetup to tell which type attribute values based on that attribute setup will be. AttributeSetup is an enumeration and can be any of the following values: Text, Link, Date, CheckBox, List, Choice, Float, Integer, MultiChoice, Url, UniqueId, or Version.

Example: If an AttributeSetup has the AttributeType Date any Attribute that refers to the AttributeSetup will have a DateValue value.

AttributeSetupInfo

The AttribteSetupInfo data type contains information about a set of AttributeSetup retrieved from a view. It contains three IDs that each point to an AttributeSetup. This is used to tell which attribute is the title, description, and prefix attribute. It is also possible to determine this by reading the mandatoryName property of an AttributeSetup (see the description of AttributeSetup).

ChoiceSetup

The ChoiceSetup data type is an extension of the AttributeSetup data type. It includes everything an AttributeSetup has got and adds a list of ChoiceSetupItems. The ChoiceSetup is used when the AttributeSetup's AttributeType is Choice. The ChoiceSetupItems contain information about all available choices for a choice attribute.

ChoiceSetupItem

The ChoiceSetupItem data type contains information about a choice for a choice attribute. It has an integer which is an identifier for this choice and a "title". The id is used to match ChoiceSetupItems and ChoiceValues.

ViewInfo

The ViewInfo data type contains a list of AttributeSetups and an AttributeInfo. That can be useful if you want to know which attributes that are visible in a view without first retrieving an ElementSet, for example if you want to create a new Element.

HistoryEntry

A HistoryEntry describes a previous change of an attribute. It consists of four parts: "username" the full name of the user who made the change, "date" the date of the change, "elementId" the ID of the element that was changed and "attribute" the changed attribute with the value it had at the time of the change.





www.unicomsi.com

We welcome feedback on our documentation. Please email us at: tech.authors@unicomsi.com

www.unicomglobal.com