## SOASTA 50 (mPulse 6937.27)

Jan 23, 2014

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## SOASTA 50 (mPulse 6937.27)

## **Enhancements**

## **Enable Cookies for Session Tracking option**

The mPulse Configure Domain box, General tab now includes an additional Enable Cookies for Session Tracking option (enabled by default) to disable cookies in the Boomerang.

General	Beacons	Page Groups	Custom Metrics	Custom Timers
Name	e (			
Domair	x (			
3 (bucket) tests variable name	e 🗌			
Development Server Lis	t: [			
Session Timeou	t: 30	(minu	tes, maximum of 60)	0
Data Template	E			
Generate API Key	MDK9E	-X8SYU-KUKRN-(	QQMMC-BSJZ7	Show Javascript
Enable Cookies for Sessio Trackin	n 🗹			
Enable bandwidth tes	it 🗌			
Images location	G) [			
Sampling Percentage		%		
	Disat	ble Bandwidth Tes	ting for Mobile User-	Agents

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## New UI 'Dark' Dashboard Theme

mPulse custom dashboards now include a new 'Dark' Dashboard Theme, which can be found in the Dashboard Edit Panel, Properties tab. This new theme controls the widget color for all dashboard widgets.

Dashboard	General	E.	Layout
	Dashboard Theme: Light •Dark Background Color: #e4e7eb		Widget P <u>Res</u>
	Background Image: Default Dashboard Texture Texture Opacity 100% \$ Tiled Stretched Import	•	

- Once in Dashboard Edit Mode, select the Dark Dashboard Theme as shown above. Click Apply to finalize your selection to all widgets in the display.
- **Note:** As always, entering dashboard edit mode from the default mPulse Dashboard will prompt you to create a new, custom dashboard.

## Using Dashboard Display Properties in mPulse

The Dashboard, Properties tab also includes additional dashboard display properties that can be used with either the Light or Dark Theme.

- **Background Color** Background Color can be separately set to offset the widget color. Choose from among the presets or enter a new color using hex-code style (i.e. #FFFFF for white, etcetera).
- **Background Image** A Default Dashboard Texture image is provided. Use the Import button to utilize a custom image of your choosing. The background image is Tiled (by default) or can be Stretched). Click Import if that image is not also already in the repository.
- Widget Padding increase internal and external space around the widget border
- Link Chart Timelines Chart timelines are linked across the dashboard by default, unchecking this will unlink them
- Enable widget animations Turn chart animations associated with realtime deltas on or off.
- **Hide widgets when not playing** This setting applies to CloudTest and TouchTest only.
- Column widths Set a column width in pixels

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In the screenshot below, the Default Dashboard Texture image is applied with 50% texture opacity selected.

mPulse Domain soasta.com	Date/Time Last 60 Minute	Country es 🗧 All	Region Call	Page ( All	Broup
Page Load	Page	Load Histogra	ım		
2.70 sec	) Su		lse		
Margin of Error (sec)	± 1.86				
Number of Beacons	80	2	Median: 2.699		
95th Percentile (sec)	12.40	0 0s	3s	58	88
98th Percentile (sec)	28.75				
Bounce Rate vs. Comple	ted Sessions				No Dat
Dashboard	1		(	General	Layout
	Dashboard Them Background Cole Background Imag	he: Light Dark or: #303030	ard Texture \$	Widget Padding <u>Restore Def</u>	(px): 10 Te ault 10 R 10 B 10 L

• **Import** – Use the Import button to launch the select a new background image to import.

When you do so, the New Image dialog box appears for you to choose the image file to import. Dashboard background images should be 72 pixels wide by 27 pixels tall. The Maximum file size is 5,120 bytes.

	Median: 2.699	
Π	New Image	8
	Images should be 72 pixels wide by 27 pixels tall. Smaller images will be scaled up an will result in a loss of quality. Maximum file size is 5,120 bytes.	d
	Image name:	
	Select the file to be imported. Choose File no file selected	
	Image will be shown here	
		- 5
	OK Cance	
	Restore Default	

• Provide an Image Name and use Choose File to select the image to upload. The Image Name will appear in the Background Image dropdown.

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## **Bugs Fixed**

## 74505: Dashboard query inconsistencies during deployment

This fix resolves an issue that was causing some widgets to display incorrect data for active time windows.

# 74475: Page Groups option 'URL Pattern' should be 'Query String Parameter'

The Configure Domain, Page Groups tab, URL Pattern option has now been renamed Query String Parameter.

## 74171: Beacons shown on Globe don't appear on Geography widget

Beacons outside the US, Canada, and UK did not show up on the Map for mPulse Lite customers.

## 74053: Date legend is cut off

When there was a two-line x-axis caption the second line was being cut off.

## 73940: Handle invalid token exceptions in a couple of odd places

This fix improves token exception handling.

## 73632: Bounce Rate would disappear in some cases

An errant database entry caused the bounce rate to be infinite.

# 73586: When 'Today' is selected in the Date/Time filter, the text for the previous label now says 'Yesterday' instead of 'Previous 24 hours'

This fix changes "Previous 24 Hours" to "Yesterday" in the Date Time picker.

## 73148: Time selector is showing a different time than what is selected

This fix resolves this and other related issues found while using the Date/Time filter from the Dashboard lower panel.

## 72161: mPulse - Summary Widget Showing incorrect data for 98th Percentile

The 98th Percentile calculation was flawed in aggregate.

## 71204: Date drop down should persist per user (in preferences)

User preferences didn't persist as expected for mPulse Lite users.

## Data wouldn't update after filtering with Show Heatmap enabled

If Show Heatmap checkbox was enabled, in some cases heatmap data would not display if a Dashboard filter was changed while in heatmap mode.

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## SOASTA 49.06.1 (mPulse 6872.48.2)

## Enhancements

### **Geography Widget**

• Don't trash and recreate each polygon on filter change.

### Table Widget

• Don't re-measure column widths on each filter change

## **Bugs Fixed**

# 73878: Hotfix number not applied to login page cachebust / version in lower left

The hotfix cache bust was not being applied to the Login page as expected.

### 73869: Firefox 26 script error when changing filters

Changing the dashboard filter would result in this error in Firefox version 26.

## 73785: Deobfuscation of RUM functions

This fix simplifies various RUM functions.

# 73499: Multi-histogram for Page Group, User Agent, and A/B test doesn't respond to active data

This fixes data consistency between widgets (beacon count).

## SOASTA 49.06 (mPulse 6872.48)

## **Bugs Fixed**

### 73485: Using minute-level data to load multi-day dashboards

mPulse was using minute-level data in a multi-day dashboard, thus causing a noticeable performance hit.

# 73271: Percentage based metrics incorrect for Metric per Page Load Time widget

Incorrect data was displayed in the Metric Analysis dashboard. While the Metrics and Timers, as well as the Metric over Time widgets appear to be correctly reporting conversion rate - the Metric per Page Load Time and Sessions Per Page Load Time was off.

## 73236: Setting "Between" on the same day results in different times than selected

An attempt to set a "between" time window using specified times on the same calendar date was not successful.

## 73233: Date/Time control not using time zone to select "today"

Selecting a time zone that's different from the local system time zone, and then clicking "Today" would fail to bring the calendar to "Today" in the newly-selected time zone. Now, the newly-selected time zone is used.

#### 73226: Wrong x-axis

Confusion arose while using the Date/Time selector because when there was no time zone chosen, mPulse would use UTC. However, the Date/Time dropdown pre-selected the local time zone (as expected). Now, mPulse will use the user's browser's time zone, not UTC.

## 73203: Auditing failure on Main

A tenant suspended warning culminated in an Auditing error.

## 73107: Time Zone issues on a new dashboard

The local timezone was mucked after adding a RUM widget to a new dashboard.

# 73105: Clicking on Previous 60 Minutes from the "Last" option jumps to the future

After clicking the Date/Time dropdown while Last 60 Minutes was selected, the Time Selector would jump to the future.

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### 73101: Bounce Rate is still over 100%

The Bounce Rate was being reported as 133%.

### 73095: mPulse widgets not displaying data in some custom dashboards

mPulse widgets were not displaying data in some custom dashboards. Users could bypass the issue after modifying dashboard-level filters such as adding mpulse domain then these populate with data; however, closing and reopening the dashboard would cause the issue to return.

# 73087: Everything in mPulse table widgets is ellipsized (including column headers)

All of the mPulse table widgets (i.e. Top 10 Page Groups, etc.) unexpectedly had ellipses applied rather than displaying the full column or row headings.

## 72969: Timers and Metrics widget assumes all metrics are based on completed sessions

Metrics that are not percentages are now reported in real-time in the Timers and Metrics widget. Previously, they were only displayed after the session timeout interval (as percentage metrics should be).

### 72914: Exception when deleting a timer

This error occurred while deleting a custom timer, which incidentally was not in use in any dashboards.

### 72903: Precedence in page group definition is incorrect

While defining page groups in domain configuration, the precedence appears correctly when testing the URL Pattern. However, the page group being passed into the beacon was incorrect.

## 72274: Time Filter should only allow integer values for time filter. i.e. Last 15 seconds

The Time Filter entry field unexpectedly accepted a non-integer value, which then resulted in this number format exception.

## 71693: Labels on default Performance Summary Dashboard are not consistent

The terms Back-End and Front-End were inconsistently applied in the Performance Summary dashboard. They will now be hyphenated consistently.

## SOASTA 49 (6872.6)

## **New Features**

This release includes the following major new features.

## CloudTest

## Date/Time Attribute

This release introduces a new Date/Time Attribute by which to filter dashboards, including a new control for time selection.

The Date/Time filter applies to CloudTest, TouchTest, and mPulse equally. Refer to <u>mPulse Analytics: Time Windows</u> for more about using the Date/Time filter in beacon-based dashboards. Use of Date/Time filters in mPulse is also covered in <u>SOASTA 48</u> release notes.

In prior releases, time filter selection was achieved using a number of filters that were at times difficult to understand. The prior release contained all of the following:

- Date filter
- Time filter
- Time Format filter
- Time Range filter
- Time Zone filter
- Time Format (Absolute or Relative)
- Dashboard result time

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## Date/Time Attribute in Result-Based Dashboards

All of the following new operators are available in result-based dashboards via the Date/Time attribute:

Dashboard	General		Layout	Properties	Filter	
	y all of the followin	g crite	ria:			Display filter toolbar
	Attribute		Operator		Value	Display
	Date/Time	\$	Dashboard	result time 🕴		🗆 🛛   🕂 🗙
			Dashboan Today On This week This monti Last Between	d result time		

- **Dashboard result time** As in prior releases, this is the time range of the selected result
- Today Filter by the current calendar date
- On Filter is set to the specified calendar date

Apply all of the following	criteria	:						(	Dis	play filter toolb
Attribute		Operator	Value					Dis	olay	
Date/Time	÷	Or	\$ 12/6/20	13						+ ×
				С	urrent 1	lime (		D	ate / 1	Time
					Dn					\$
				G	Dec	embe	r 🛊	20	13	• •
				S	M	Т	W	Т	F	S
				24	1 25	26	27	28	29	
					2	3	4	5	8	7
					-	-		-	· ·	· ·

- **This week** Filter by the current calendar week that is underway
- **This month** Filter by the current calendar month that is underway
- Last Filter by the specified "Last" range. When this option is selected, the Time Selector Control appears.
- **TIP:** The meaning of "Last X" will depend on the dashboard setting for the Time Format attribute. In this setting, the user can choose between absolute and relative time. For example, if Last 5 Minutes is defined using Date/Time, it can mean either the last 5 minutes

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from now (absolute time format option) or the last 5 minutes of

the test (*relative* time format option).

Use the Slider to specify a moving time window of the given length. To set the value for Last, toggle between Current Time and Date/Time to set the time format.

Attribute		Operator	Value					Disp	Displa	ay filter	tool
Date/Time	÷	Last	\$ hour						<u>ا</u>	×	
				C	Current	t Time		Da	te / Tim	10	
			Lasi								
			-3 days	-24 hrs	-12 hrs	-6 hrs	-3 hrs	-60 min	-30 min	-5 min	No
				G		Previo	us 60	minute	18		

- For **Current Time**, the current selection is indicated in the bottom row (e.g. Previous 60 minutes).
- For **Date/Time**, use one of the provided time windows (keeping in mind the Time Format attribute can be either absolute or relative as noted above).

Attribute		Operator		Value	Display
Date/Time	+	Last	\$	hour	🗆   🕂 🗙
					Current Time Date / Time
			_		Today *
					America/New_York (GMT \$

Or, select "Between" to define a custom time window to filter by.

	0	General	Layout		Proper	ties	F	ilter	)						
Apply all of the following o	criteria:							Displ	lay filter	toolba	ar				
Attribute	Operato	r	Value				C	Visplay							
Date/Time	‡ Between	-	: 12/5/20	013 12	00 AM 8	and 12/	/6/2013	12:00 AM		-	×				
			-				Curren	t Time		Date /	Time				
							Betw	een			\$				
			0	De	cembe	r \$	2013	10	G	Dece	ember	+	20	13 \$	0
				De S N	cembe 1 T	r 🛊	2013 T F	• 0 S	G	Dece	ember T	r 🛊 W	20 T	13 🛊 F	S
				De De S N 24 21	cembe 1 T 5 28	r 🗘	2013 T F	\$ S	G S 24	Dece M	T 28	W 27	20 T 28	13 \$ F 29	S 80
				De S N 24 21 1 2	cembe 1 T 5 28 1 3	r 🗘 W 27 4	2013 T F 28 29 5 6	\$ S 30 7	G S 24 1	Dece M 25	T 28 3	♥ 27 4	20 T 28 5	F 29 6	S 90 7

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• **Between** – Filter by the defined time window using the Time Selector Control (one each for start and end). You can also set a 'Between' time range by choosing 'Last', 'Date/Time', and then between (as shown above).



**TIP:** To ensure that your Date/Time filter is added to the Dashboard filter toolbar, check "Display filter toolbar" as you have always done.

Once defined and added to the filter toolbar, your Date/Time filter can be modified and/or redefined from the toolbar using the Time Selector Control.

te/Time	) en 5/	1/20	001	12:0	00 A	M and	dl	nvali	d Da	ate li	nval	id D	ate	\$
				Cu	rrent	Time			)ate /	Time				
				B	letwe	en				÷	)			
G	Мау		\$	20	01	; •		G (	Dece	embe	r ‡	20	)13	• •
S	м	т	w	т	F	S		S	м	т	w	т	F	S
22	23	24	25	26	27			24	25	26	27	28		
		1	2	3	4	5		1	2	3	4	5	6	7
6	7	8	9	10	11	12		8	9	10	11	12	13	14
13	14	15	16	17	18	19		15	16	17	18	19	20	21
20	21	22	23	24	25	26		22	23	24	25	26	27	28
27	28	29	30	31	1			29	30	31	1			4
6	12	AM	¢:	00	t) No	w		0	7 P	М	¢:	35	¢ No	w
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			G	12	2 year	8, 222 (	day	s, 20	hours	, 39	Ð			
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													1	ОК

This control is the same whether utilized from the lower panel (during initial setup of a custom dashboard) or from the dashboard filter toolbar.

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## Hybrid Dashboard Layout

In prior releases, while creating a dashboard, users were presented with a Browser Window Fit option.



The Browser Window Fit option(s) (shown above) are no longer a part of dashboard creation as of this release.

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Instead, users need merely pick the Widget Layout. In this release, the majority of widgets will now fill the available height of the dashboard window, instead of being a fixed height. There are no changes to the default widths of widgets in this release.

ew Dashboard Setur	)	
Name:	Save Location: /	Browse
Widget Layout		
		Next

The available vertical height for a given widget is now delimited in a dashboard not by its layout—but rather by how many widgets are already in that dashboard.

The minimum height that a widget will shrink to is its current/prior default height. When sufficient widgets are stacked in a dashboard, then Dashboard scroll bars will appear.

A handful of widgets still have a fixed height in this release:

Fundamentals (CloudTest)

Summary (mPulse)

Timers and Metrics (mPulse)

## TouchTest

## Multi-Touch Gestures (Native iOS and Android)

This release introduces improved TouchTest support for native multi-touch recording and playback for both iOS and Android native apps.

TouchTest will accurately record and simulate a multi-touch event doing a multitouch pinch and rotate such as user actions performed on a Google Map.

Multi-touch gestures are recorded and played back using a precision array. New, multi-touch app action types include tapPan (below) and multiTouch.

▼⊵	App Action6		doubleTap	
	🔻 된 doubleTa	p		
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	🕨 📲 builtIn-wa	itForGestur	eComplete	Timeout Action: Fail the parent
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$\blacksquare \mathbb{P}$	App Action8		tapPan	
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	F	Precision [	2,[[345.25,401.3	30304,0],0.131],[[0,0,3],0.034],[[0.] 🔁 📰
	🕨 📲 builtIn-wa	itForGestur	eComplete	Timeout Action: Fail the parent

The previously supported multi-touch gestures included tap, doubleTap, longPress, pan. Now, with the addition of tapPan and multiTouch app action, full multi-touch support is achieved.

Other common gestures supported in this release using tapPan:

- Two finger drag (tilts map from 2d to 3d view)
- Two finger rotate (rotates the map)
- Verify long press (introduced in SOASTA 47.17, Build 6656.141)
- Double tap and drag (zoom out)

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## mPulse

### New mPulse Boomerang version

This release presents a new Boomerang version that features new Page Groups, Custom Timers, & Custom Metrics formats that, in many cases, requires no additional client-side code. Previously defined client-side page groups, metrics, and timers are still supported.

## Page Group, Custom Timers, and Custom Metrics Improvements

This release introduces new formats for Page Groups, Timers, and Metrics. Two types of URL Pattern matching are provided: query string parameters and XPath.

Using either match type, Domain Administrators can setup page groups, timers, and metrics to track. The XPath and URL evaluations are all done client side, and users do not have to write their own plugins to use either technique. The plugin-based technique (using variable) available in earlier releases is still supported.

**TIP**: When using XPath, the best way to get the XPath is to open

developer tools in Chrome (or using Firebug), right click on a node, and choose copy XPath:

Q Elements	Network Sources Timeline	Profiles Resources Audits Console
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"if(stWidg	<pre>get.buttonClicked==false){st</pre>	Widget.stopClosing=false;stWidget.openDuration=0;stWidget.stClose(
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<ifrar< td=""><td>Break on</td><td>e" title="Google conversion frame" width="0" height="0" src="htt</td></ifrar<>	Break on	e" title="Google conversion frame" width="0" height="0" src="htt
googlea		<pre>wthroughconversion/10631</pre>
<u>80&amp;u_ja</u>	Scroll into View	<pre>Irm=0&amp;url=http%3A//www.soasta.com/" frameborder="0" marginwidth='</pre>
marginh	London Charles Contract Propagae	allowtransparency="true" scrolling="no" style="display: none !:

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In all cases (Page Groups, Timers & Metrics), a final filter is run on the result that will strip out any invalid characters for that type. So for Page Groups, mPulse strips out any characters that are non-alphabetic, underscore, dash or space. For Custom Timers & Metrics, mPulse strips out anything that is not a number, a decimal point or a negative sign.

## Page Groups Tab

The Configure Domains, Page Group tab presents settings to define and execute page groups using URL Pattern.

**Note:** JavaScript variable code settings from the prior release are still

Definition Method	Parameter1				
Variable \$				Para	meter2
	Variable Name:	LOGN.pg			
<b>4</b>					

supported.

## Defining a Page Group

Page Groups utilize a priority system, in which the first page group that gets a match is page group that gets used for a given page or view.

First, create a row using one of the definition methods listed below

1. Enter a Test URL that uses the pattern you're trying to extract.



2. Click the Test button. If the match is successful, the row will turn green (red for no match). Additionally, the Result field will be populated with the given match.

Result: search?q=widgets&oq=widgets&aqs=d

## Page Group Definition Methods

Use any of the following definition methods to construct an URL pattern match for use in a page group.

• Variable - Reads the value of a JavaScript variable defined on the page.

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		General	Beacons	Page Groups	Custom	n Metrics	Custom Timers	
age g	roups (comma separated):				(Maximu	um of 5)		
	Enter Test URL:					Test	Result	
	Definition Method	Parameter1				Para	ameter2	
1	Variable \$	Variable Name:	LOGN.pg					×
4								

The JavaScript variable may be nested inside a namespace or an object, and you can use variables from other products,

• URL Pattern – Parses the value of an URL query string parameter by its pattern. URL Patterns are any regular URL with \* used as a wildcard anywhere in the URL.

For example, entering:

```
*.google.com/*
Will match:
http://www.google.com/
https://www.google.com/
abcdefg://accounts.google.com/
http://www.google.com/?q=hello
```

## But will not match:

http://www.google.com (because / is required in the pattern)

		General	Beacons	Page Groups	Custom Me	trics Custom	Timers	
age g	roups (comma separated):				(Maximum o	f 5)		
	Enter Test URL:				Tes	t Result:		
	Definition Method	Parameter1				Parameter2		

Specify the URL Pattern in the 2<sup>nd</sup> column and give it a name in the 3<sup>rd</sup> column. For example, http://www.soasta.com/\* and vars.

With the query string type URL pattern, mPulse looks for the first matching query string parameter for the page whose URL matches the pattern.

• URL Substring - End of Text - Strips out the specified substring from the start of the text and then uses whatever is left.

With the substring URL pattern, mPulse looks for any URL that matches the leading pattern + something + the trailing pattern, and then uses that "something". The URL pattern with no trailing part is identical to this except trailing is an empty string.

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		General	Beacons	Page Groups	Custom Metric	s Custom Timer
	Definition Method	Parameter1			Pa	irameter2
	URL Substring - End O 💲	URL Start:	*.google.com/*			
4						

For example, if \*.google.com/\* is used, then the page group definition will consist of any text that comes after the /\*.

• URL Substring - Trailing Text - Strips out the leading and trailing parts of the URL and uses the remainder.

Definition Method     Parameter1     Parameter2       URL Substring - Trailing +     URL Start: *.google.com/search?q=*     Trailing Text: &oq=vinyl&aqs=chrome69i57j0i5.			General	Beacons Page Grou	custom Metri	cs Custom	Timers
URL Substring - Trailing + URL Start: *.google.com/search?q=* Trailing Text: &oq=vinyl&aqs=chrome69i57j0i5.		Definition Method	Parameter1		F	Parameter2	
h and a second		URL Substring - Trailin:	URL Start:	*.google.com/search?q=*		Trailing Text:	&oq=vinyl&aqs=chrome69i57j0l5.1
	Þ						

For example, if URL Start is <code>\*google.com/=search?vinyl\*</code> and Trailing Text continues with "&oq...", then for the test URL the portion between is parsed as <code>vinyl</code>.

D	(	
Result:	vinyl	<b>U</b>

• **Regular Expression** - Matches the URL to a regular expression and then uses the value of the replaced field.

			General	Beacons Page Groups	Custom Me	etrics Custom Timers	
age ç	groups (comma separated):				(Maximum o	of 5)	
	Enter Test URL:	http:	//www.foo.com/W	/omen/Scarves/	Tes	st Result	
	Definition Method		Parameter1			Parameter2	

While using Regular Expression, the URL Pattern is a full RegEx. So rather than just \*, administrators can use any regex character like  $\w$  or  $\d$ . Also, to match 0 or more of any character, use .\* and not just \*.

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Additionally, for the RegEx, any un-escaped parentheses will create a matching group indexed with the leftmost starting with 1. The replacement will have \$1, \$2, \$3, etc. that map to these groups. A maximum of 9 page groups can be defined.

## **Custom Metrics**

The Custom Metrics tab now presents Domain Admins with the ability define custom metrics using an URL Pattern (or URL Pattern/XPath combination), as an alternative to indicating the variable name of a Boomerang plugin (using the Variable Name field shown below). URL Pattern extraction is performed on the client side and requires no Boomerang plugin.

General	Beacons	Page Groups	Custom Metrics	Custom Timers	
Name:					14
Description:					
• Variable					
Variable Name:					
O URL Pattern					
URL Pattern:	(Any URL)				
	(optional)				
XPath:					
Color Researce					

Just as in the prior release, multiple custom metrics can be defined using either method.

• URL Pattern – Parses the value of an URL query string parameter by its pattern. An optional XPath can also be provided.

Select the Custom Metrics tab, URL Pattern button to define a custom metric based on its URL Pattern.

URL Patterns are any regular URL with \* used as a wildcard anywhere in the URL.

For example, entering:

```
*.google.com/*
Will match:
```

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http://www.google.com/
https://www.google.com/
abcdefg://accounts.google.com/
http://www.google.com/?q=hello
But will not match:

.

http://www.google.com (because / is required in the pattern)

General	Beacons Pag	le Groups Cus	tom Metrics	Custom Timers	1
Name:					4
Description:					
O Manhala					
U Variable					
Variable Name:				)	
Variable Name: • URL Pattern					
Variable Name: Variable Name: URL Pattern URL Pattern:	http://www/soasta.com	m/*			
<ul> <li>Variable</li> <li>Variable Name:</li> <li>URL Pattern</li> <li>URL Pattern:</li> <li>XPath:</li> </ul>	http://www/soasta.com (optional)	m/*			
Variable Name: Variable Name: URL Pattern URL Pattern: XPath: Color Rance:	http://www/soasta.cor (optional)	m/*			

- Specify the URL Pattern for the custom metric. For example, <u>http://www.soasta.com/\*</u>.
- o Optionally, provide an XPath value valid for the given URL Pattern.

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## **Custom Timers**

In addition to creating custom timers using the variable name of a deployed Boomerang plugin, Domain Administrators can now define server-side custom timers from within the Configure Domain box, Custom Timers tab.

Currently, navigation, resource, and user timers are defined using this method. No additional Boomerang plugin is required.

The Custom Timers tab has been updated in this release to provide a clearer workflow, with rows that collapse/expand for easier use with multiple timer rows, as well as the new additional options for creating custom timers using the new URL Pattern method.

😯 Co	nfigure Dom	ain				G
	General	Beacons	Page Groups	Custom Metrics	Custom Timers	
•	Name:					<b>4 X</b>

As in the prior release, click the green Plus icon to add a row. The Domain Admin now enters the (repository) Name and clicks to expand the row.

 Defining a Custom Timer using a Variable works as it did in the prior release. To do so, enter the Variable Name (the one used in the Boomerang plugin) and click OK to complete domain configuration.

General	Beacons	Page Groups	Custom Metrics	Custom Timers	
Name: PluginNa	ıme				4
Description:					
<ul> <li>Variable</li> </ul>					
Variable Name	PluginName				
<ul> <li>Navigation Timing</li> </ul>					
URL Pattern	(Any URL)				
Start	Start Time	\$	End: Response	End \$	
Resource Timing					
URL Pattern	(Any URL)				
XPath					
Start	Start Time	\$	End: Response	End \$	
User Timing					
URL Pattern	(Any URL)				
User Timer Name				1	

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## **Defining Custom Timers using URL Pattern**

Domain Administrators can now define server-side custom timers from within the Configure Domain box, Custom Timers tab. Currently, navigation, resource, and user timers can be defined using this method.

This features works with basic Boomerang and no additional Boomerang plugin is required.

URL Patterns are any regular URL with \* used as a wildcard anywhere in the URL.

For example, entering:

\*.google.com/\*

Will match:

http://www.google.com/

https://www.google.com/

abcdefg://accounts.google.com/

http://www.google.com/?q=hello

### But will not match:

http://www.google.com (because / is required in the pattern)

Use the Navigation, Resource, and/or User Timers in tandem with an URL Pattern (and optional fields or the given timer type). This feature uses an URL Pattern in tandem with any of the following start and end timers:

## **Navigation Timing Start/End Values**

This feature uses an URL Pattern in tandem with any of the following start and end timers

- Start Time
- Redirect Start
- Redirect End
- Fetch Start
- Domain Lookup Start
- Domain Lookup End
- Connect Start
- Secure Connect Start
- Connect End
- Request Start
- Response Start

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Response End

## Define a Navigation Timer using URL Pattern

1. To define a custom navigation timer, select Navigation Timing.

General	Beacons	Page Groups	Custom Metrics	Custom Timers	
Description:					
Variable					
Variable Nam	181				
Navigation Timin	g				
URL Patter	m: (Any URL)				
Sta	rt: Start Time	\$	End: Response	End 🗘	
Resource Timing	9				
URL Patter	m: (Any URL)				
ХРа	th:				
Sta	rt: Start Time	\$	End: Response	End \$	
O User Timing					
URL Patter	m: (Any URL)				
User Timer Nam	78: (				
Indicator Color Ran	ges:				

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C	Gen	eral	Beacons	Page Groups	Custom Metrics	Custom Timers	
	Name:	PluginN	ame				14
Desc	ription:	Use the	value of BOON	1R.plugins.PluginN	ame here.		
0	/ariable	ble Name	Divoinhame				
•	Vavigati UF	on Timing	http://www.s	soasta.com/*			
0	Resourc	Star e Timing	✓ Start Time Redirect St Redirect En Fetch Start	art nd	End: Start Time	(+	
0.1	Jser Tin	XPath Star	Domain Lo Domain Lo Connect St Secure Con Connect Er	okup Start okup End art nnect Start	End: Start Time	\$	
	UF Iser Tir	L Pattern	Request St Response Response	art Start End			

2. Specify an URL Pattern to match.

3. Select a corresponding start and end value from among the provided values.

## Defining a Custom Resource Timer using URL Pattern

1. To define a custom resource timer, select Resource Timing.

	<u></u>			
Variable Name:	PluginName			
Navigation Timing				
URL Pattern:	(Any URL)			
Start:	Start Time	\$ End:	Start Time	\$
Resource Timing				
URL Pattern:	http://www.soasta	.com/*		
XPath:				
Start:	Start Time	\$ End:	Start Time	\$
User Timing				
URL Pattern:	(Any URL)			
	-			

2. Specify an URL Pattern to match.

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- 3. An optional XPath can also be provided.
- 4. Select a corresponding start and end value from among the provided values.

#### Defining a User Timer using URL Pattern

1. To define a custom user timer, select User Timing.

<ul> <li>Resource Timing</li> </ul>		
URL Pattern:	(http://www.soasta.com/*	
XPath:		
Start:	Redirect Start 🕴 End: Start Time	÷
<ul> <li>User Timing</li> </ul>		
URL Pattern:	http://www.soasta.com/*	
Llear Timer Name	MyLIserTimer	

- 2. Specify an URL Pattern to match.
- 3. An optional XPath can also be provided.

Select a corresponding start and end value from among the provided values.

## **Session Metrics Improvements**

This release includes improvements to mPulse user session metrics, including a new Session Timeout setting.

In previous releases, mPulse percentage-based metrics such as bounce rates were calculated on the basis of short-term user behavior. This calculation was predictive and not altogether reliable. For example, a single-page user session was presumed to be a bounced session (unless a 2<sup>nd</sup> page hit occurred in the timeline).

Session metrics are now calculated using the Session Timeout setting, which appears in the Configure Domain, General tab.

General	Bea	acons	Page Gr	oups	Custom Metrics	Custom Timers
B (bucket) tests varia Development Si Sessior Data	Name: Domain: ole name: erver List: Timeout: Femplate:	30		(minute	s, maximum of 60	
Generate AP	Key width test	AS7YP-	XDMRL-QS	9EW-JI	J92N-RR2PX	Show Javascrip

While configuring Session Timeout, consider the following:

- The default Session Timeout setting is 30 minutes, but any value between 1 and 60 minutes can be set.
- The timeout clock only starts when the user stops using the site and the session timeout is reset whenever there is user activity.
- Once the timeout is completed, the dashboard will show data for the time when the last user activity took place.

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Any session-based metrics such as a bounce rate or conversion rate will not be reported until the session timeout interval has passed for that session.

Domain Administrators should also note the following about mPulse analytics and the Session Timeout setting:

- The Metrics over Time widgets will show metrics per beacon, which is not related to user sessions, for all metrics that are non-percentage based.
- If a percentage metric is selected then the Metrics over Time will show that metric based only on completed session times. For example, if a 30-minute moving time window is in effect in a given percentage metric, the widget will remain blank for the 30-minute period, and only data from outside that 30 minutes will be posted as completed.

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## **Enhancements**

## CloudTest

## Prompt to Switch Tests with More than 10 VUs to Load Mode

CloudTest's longstanding 10 Virtual User check for Load Mode now comes with a new prompt that will switch the test composition into Load Mode unless the user opts out explicitly.



Refer to <u>Play Modes and Result Logging</u> for more information about CloudTest play modes and their relationship to how results are logged.

## Database Action Validations & Property Sets in lower panel

In the prior release, user-defined validations and property sets for database actions were provided only in the Clip Editor, List view. Validations and property sets were added to the action only via the Add toolbar in Expanded List View.

. ▼ [	D	ataba	se Actv-with-head	er SQL	Add: 🖌 🙀
	₹		SQL Text		
		1 2 3		SELECT * FROMdatabase	_testing;
	►	6	Options		
	►	V	Validation 1	Exact Matc	h: column_int,column_varchar,col
		97			
			Name	New Property Set	
			Retrieved using:	Substring	\$
			Leading Text		
			Trailing Text		

Now users can add Valdiations or Property Sets from Icon view as well. The Validations form is now presented in the lower panel Action Editor via the Validations tab, while the Property Sets form is found in the Property Sets tab.

These forms are identical whether added via the expanded List view, or List or Icon View with the Action Editor showing in the lower panel.

Solutions Scripts	tat: osv	Datab_ader	să. s atat: xmi Da	QL ta	many Da	ata: json	Datamary	Sol Databonly
	General	Repeat	SQL Editor	0	Custom Pro	perties	Validations	Property Sets
Name	New Prope	erty Set				4 ×		
Retrieved using:	Substring			¢				
Leading Text								
Trailing Text								
Value Length								
Multi Match:	all value(s)			¢				
No Match:	return null			ŧ				
Property to set	(Inot specifi	ied]						

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## mPulse

## Improved Bandwidth Testing

This release presents bandwidth testing improvements, including a new sampling percentage that allows a Domain Administrator to specify a portion of traffic to sample for bandwidth analysis.

Sampled bandwidth testing will permit mPulse users tracking large sites to adjust the percentage of the population that bandwidth testing is run against, thus controlling costs, as well as resource consumption during testing.

With bandwidth testing enabled, and a Sampling Percentage entered, mPulse will enforce a sample rate as a percentage of total traffic when and is also accompanied by a rate entered into the new field.

Domain Admins can define a sampling percentage for bandwidth testing via the Configure Domain box, General tab, Enable bandwidth test, Sampling Percentage field.

Enable bandwidth test		
Images location:		?
Sampling Percentage:	%	
Strip Query String Parameters	From Raw Beacon Logs	

## Changes to Session Metric Widget Names

The following widget names have been changed for this release (and now have the phrase "(Completed Sessions)" appended to the widget title:

#### mPulse Dashboard

The "Sessions vs. Bounce Rate" widget is now the "Bounce Rate vs. Completed Sessions" widget.

#### **Operational Dashboard**

The "Bounce Rate vs. Page Load" widget is now the "Bounce Rate vs. Completed Sessions" widget, and the "Bounce Rate" part of this widget name will now change dynamically to show the currently selected Metric.

#### Metric Analysis Dashboard

The "Metric vs. Page Load Time" widget is now the "Bounce Rate vs. Completed Sessions" widget, and the "Bounce Rate" part of this widget name will change dynamically to show the currently selected Metric.

The "Metric over Time" widget is now the "Bounce Rate over Time" widget, and the "Bounce Rate" part of this widget name will change dynamically to show the currently selected Metric.

## **Other Configure Domain Tab Changes**

As part of the introduction of URL Pattern matching, the Configure Domain box now includes additional tabs and features.

The Configure Domain box has the following new tabs: Beacons and Page Groups. Additionally, both the Custom Metrics and Custom Timers present additional URL Pattern fields and a new workflow.

#### **General Tab**

The General tab remains much as it did in the prior release; however, Beacon settings have been moved to the new Beacons tab and are no longer found here.

General	Beacons	Page Groups	Custom Metrics	Custom Timers	
Na	me: soasta	com			
Dom	ain: soasta.c	om			
VB (bucket) tests variable na	me:				
Development Server I	_ist:				
Session Time	out: 30	(min	ites, maximum of 60)		
Data Templ	ate:				
Generate API Key	AJTS2-	BYE2Q-DAV9U-5	8PXS-5ZNXL	Show Javascri	pt
Enable bandwidth	test				
Images locat	ion: http://v	/ww.soasta.com/l	ognormal/images/		
Sampling Percenta	ige:	%			

For an overview of these previously existing General tab settings, see <u>mPulse</u> <u>Setup</u>.

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#### **Beacons tab**

Beacon settings that were formerly found on the General tab are now consolidated into this new tab.

	eral	Beacons	Page Groups	Custom Metrics	Custom Timers	
🗹 Opt In to Rollu	o Vert	ical Market: s	ales			
Suspend Bead	ons					
Strip Query St	ing Parar	meters From Rav	w Beacon Logs			
Upload raw be	acons to	S3				
33 Bucket Name:						
S3 Region:	US Sta	indard				\$
AWS Access Key:						
AWS Secret Key:			)			

• Refer to <u>Beacon Settings</u> for more information about beacon-related fields.

## TouchTest

## New "reporterrors: flag in MakeAppTouchTestable

A new -reporterrors flag is now available to MakeAppTouchTestable (MATT) users. This flag is used to report errors to SOASTA and also to upload relevant files along with it.

When MATT fails with an error, additional information about this flag will be printed to the command line informing the user how to re-run MATT and upload the support-relevant files for SOASTA use.

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## **Bugs Fixed**

## CloudTest

## 72765: Cache Dynamic Resources is Always Disabled

Cache Dynamic Resources was always disabled, even after enabling it and saving it.

## 72762: Composition names with "&" not correctly encoded

Compositions that had "&" characters in the name of the composition were not being correctly URL encoded.

Now the url encoding happens in a more central place in the code, not from everywhere that calls the save dialog

## 72623: Re-naming a Cloud Provider Account shows wrong previous name

The context label for an existing CPA was unexpectedly the cloud provider and not the account name.

## 72314: Event Log dashboard comes up too small

Playing a Composition with the Event Log dashboard in display would result in an inordinately small.

# 71886: An attempt was made to add something to storage that exceeded the quota

This error would occur while Safari was in private browsing mode.

## 71368: Object doesn't support property or method 'selectNodes'; JS line 8

This selection error would occur in the Grid Manager.

# 69986: Using EC2 internal host name does not work across accounts in VPC

When combining multiple AWS accounts in the same region, and when one or more of those accounts were "EC2-VPC" account types, deploying Grids did not work correctly.

# 61751: Clip changes are not reflected in composition, looks for the deleted objects

The logic that tries to remove orphaned targets was not recognizing when the path to a target had changed for a nested clip, now it works and the old clip property is replaced with the correct one.

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## TouchTest [release requires new TouchTestDriver]

### 72706: Custom timers still appear in filter after being deleted

A deleted custom timer appears in the filter dropdown that is not currently defined in the domain configuration.

### 72366: Automation HUD is showing JSON locators

JSON locators were unexpectedly shown during Heads Up Display. This bug occurred in the last several releases (since the introduction of storing all locators).

## 72324: Android: Tap should work only when offset is specified and tapCount and tapDuration is empty

The Android Developer Tools would not resolve build configuration properly

### 71721: NullPointerException while opening target

This null exception would occur in a mobile test composition when the target was initialized.

## 65947: storeSelectedLabels Value return not as expected

The advent of stored arrays in array properties broke the storeAll accessors. Users will need to recreate the property set after the fix is applied. The fix will not fix existing property sets.

## mPulse

#### 72706: Custom timers still appear in filter after being deleted

A deleted custom timer (e.g. that is not currently defined in the domain configuration) appeared in the dashboard filter dropdown.

#### 72309: Daily Performance Volume Widget Showing incorrect Results

Inaccurate results were found while generating a Time Window range in the default mPulse Dashboard.

#### 71925: mPulse portal exception

An inordinate amount of exceptions were seen in the portal environment.

#### 71920: Improve logging/handling of mPulse object error

Changed to a warning since there was no way to easily rate limit how frequently this shows up in the logs.

#### 71865: InvalidStateError; JS line 22

This error occurred on the default mPulse dashboard.

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