SOASTA CloudTest™ Release Notes Build 6179.152

Apr 4, 2013

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Build 6179.152

Bugs Fixed

51170: Tap Action passes in Composition but doesn't tap on the device [requires new TouchTest Driver]

Despite a tap action passing in its composition, the requisite action was not performed on the device as expected.

50793: VUPercentile not calculating correctly

The calculation is the "position within the list of users." The problem that has been fixed is that new users (repeat renewals) are always added to the end of the list, so most of the time you would get the highest number, since typically you would ask for the value at the start of the user's execution, just after it had been added to the end of the list. Now, the calculation will be ordered by the original Track repeat ("repeat index before renewal"), so that the original ordering will tend to be maintained and new users won't be considered to be at the end all of the time.

50367: Changing the Target for any Browser Action in a Functional Web Clip will remove the associated Locator values

Opening a clip and then changing one of its browser actions targets from a production target to one on a final testing server resulted in lost locator values, thus making the final version of that clip useless.

50326: iOS TTD crash at recording on a text field [requires new TouchTest Driver]

An isEqualToString exception occurred on the Login button of a mobile app during a mobile recording session.

50160: Remove "MakeAppTouchTestable" text from AddMPulse log

Build 6179.147

Bugs Fixed

50972: Recording clicks failed in iOS TouchTest Web

Clicks were being recorded with empty locators and would fail when played back.

50699: **JavaScript error trying to use Appcelerator link API**

The RefreshOpener didn't work in Appcelerator 360.

Build 6179.144

Bugs Fixed

50913: iOS caps lock action not working [requires new TouchTest Driver]

Because the double tap is not sent properly the playback action didn't lock the Shift key

50779: Clip Editor Lower Panel Displays Property Name but Main Panel Does Not

If the argument was just a normal string, then changed to a valid ISSE, under some circumstances it would switch back to the string.

50613: Clip failing after doing Mass Target change

A test clip became unusable after a Mass Target Change was applied.

50262: Can't set timeout on Target [requires new TouchTest Driver]

There was a separate hard-coded wait that was being used for implicit waits that should have been using the same wait timeout from the target.

Build 6179.136

Bugs Fixed

50233: webTouchUp is recorded before webClick and doesn't play back articles [requires new TouchTest Driver]

TouchTest was unable to record or playback hybrid 'swiping' on article.

50817: Globe widget not filling available space

The Globe widget didn't occupy the full dashboard space as expected.

50813: Maestro proxy support does not respect wildcards in bypass list

The use of wildcards in the bypass proxy list unexpectedly failed.

Build 6179.131

Bugs Fixed

50697: XSD error while saving a target

Fixing an edge case where if username/password are empty, we were setting the authentication scheme value to lower case Basic.

50270: Null Pointer Exception while saving a clip

This null pointer exception occurred saving a clip based upon a WebUI target bound to a specific Conductor, after adding a new clip element based on that same target. This fix also includes additional null checking for a similar error experienced in Case 50168.

50257: Proxy error

An underlying DWR proxy error surfaced in the Dashboard Editor while a composition was playing.

49658: Cannot call method 'setAttribute' of null

This setAttribute error occurred in the mPulse dashboard with the Summary widget selected while in Dashboard Edit mode.

49540: Message Editor not translating from Form to XML view

Message generation in clips based on some WSDL-based targets would perform erratically. This was most evident when switching between Form and XML view after adding or revising message details. In some cases, changes were not translated or retained between these views.

44248: Mass Target Change doesn't work for accessors

The accessors of a clip proved unusable, and the clip produced this error when it was played in a composition, after Mass Target Change had been used.

Build 6179.128

Bugs Fixed

50685: Touch Test Locators not showing the touchtestid locators [requires new TouchTest Driver]

Touch Test Locators were not showing touchtestid locators in the Validations form, Locator drop-down list.

50683: Device Monitoring Missing Axis

The Axis lines were missing in mobile monitor charts in the Result Details, Monitored Device(s) section.

50611: CloudTest Lite Proxy not using bypass

This release includes a new "HTTP.Proxy.BypassList" service setting. This fix also causes this setting to be "inherited" from the Site Administration settings in CT Lite (where there is no server list).

49840: Target Editor Password field is misleading

In prior releases entering a target password (i.e. for HTTP authentication) didn't result in the password field being populated. Now, we will show ******* to indicate to the user that we remembered the value.

38578: TouchTest Agent causes huge numbers of audit records to be written to the Repository

The auditing records showed one user logged in hundreds of times in the same time span.

44107: Localhost should always be automatically included in bypass proxy list

This fix augments and improves the prior fix reported in Italia 22.

Build 6179.118

Bugs Fixed

50430: Missing data for one Netherlands region

A region that used to use a different FIPS code (08) but now uses code 15 was omitted from the mPulse region UI.

50324: Unable to encode response with character set ISO-LATIN-1

CloudTest was unable to encode a message response with character set ISO-LATIN-1.

50302: Cannot contact the CloudTest license server

A user-friendly error will now display when CloudTest can't contact the license server.

50249: Property GeneratedValue, Number throws error when adding Pattern

While adding a pattern to the GeneratedValue-, Number property, typing "%" in the text field resulted in this error. The issue originated in the underlying URL encoding, which didn't encode "%."

50190: Changing templates doesn't do anything until server is re-started

Editing a domain's template settings wouldn't result in the expected change being distributed as expected.

49655: Android app doesn't record

A given Android app launched on the device for recording as expected but no actions were captured.

48805: Acessors should return array if the locator matches more than one element [requires new TouchTest Driver]

The getAllElementText and getAllPropertyValue accessors will now return an array if the locator matches more than one element.

44107: Localhost should always be automatically included in bypass proxy list

Requests to "localhost" should never be proxied.

Build 6179.113

Bugs Fixed

50325: Add mPulse ready app crashes if CloudTest with mPulse Domain is not available

If anything went wrong with the CloudTest set up for the mpulse Domain, or even if CloudTest was just unavailable for the moment, the app crashed.

50276: Results Service should handle any issue with reading the template

If the Results Service has trouble renewing its template it should just return the old one.

50268: Digest authentication is not working

Clips consistently got HTTP 401 Unauthorized errors for messages that used targets that used (the recently added) digest authentication. Now, we will also set the value of m_authenticationSchemeOriginal variable when setting m_authenticationScheme. Still contains logging for debug purposes in case the issue happens again.

50265: Opening a new mPulse domain by non-admin causes an error and stack trace

Creating an mPulse Domain as a user with such a privilege, and then logging out and back in as a standard user would result in this error in an existing tab if Domain was clicked. Now, we create the minimum Results Service RUM tables when the domain is created so that an unprivileged user does not run into a problem when bringing up a dashboard later.

50167: text=2x is recorded and should not be [requires new TouchTest Driver]

On iOS, tapping the magnification (2x) button for a given iPhone app running an on iPad was unexpectedly recorded.

49954: this.m_oHiddenTab is undefined; JS line 1716

This null error occurred while loading the DOM for a given page. Additional null checking code has been added.

49809: Cannot call method 'GetParent' of undefined

This happened when in adding an if-then-else with no clip elements selected

49657: Uncaught TypeError: Cannot read property 'offsetHeight' of null; JS line 10566

This null error occurred in the mPulse Globe dashboard on reload. Additional null checking code has been added.

49527: Uncaught TypeError: Cannot read property 'ModelViewMatrix' of undefined; JS line 4499

This error would occur when a "dead" WebGL context was encountered in the mPulse Globe dashboard or widget. Now, this is detected.

Build 6179.111

Bugs Fixed

50078: Need better error when trying to use a name that's too long

In cases where the default name of an object exceeded the maximum 255 characters, rather than trim the name, an error would occur. Now, a user-friendly error is displayed.

50028: Repository migration is failing on some systems

This rare migration error affected some systems during upgrade.

49953: Recording of button tap crashing application [requires new TouchTest Driver]

Recording a button press (tap) on the top right menu of the given app crashed the application for each button.

49922: Tool tip for Custom Property and Generated Value not displaying correctly

When adding a custom property and selecting Generated Value in Firefox, the tooltip was cutting off the very last line.

47640: Y-Axis title for widgets doesn't truncate to size of widget

In a 3-column mPulse dashboard using Full-Screen in Chrome on a new retina MacBook Pro, the widget in the upper right with a long title would run off the top of the widget. This issue was even more acute in regular, non-full screens. Now, the Y-Axis title will truncate.

49453: Top N Messages by Average Bytes Sent and Received is mislabeled

The 'Top N Messaged by Average Bytes Sent and Received' widget had an incorrectly labeled axis (it had Mb where Kb was intended).

49405: Titanium Android ScrollableView "swipe' event not captured [requires new TouchTest Driver]

Some swipe gestures were not recorded as expected.

3478: Array type property Sets should populate array properties (not comma separated string)

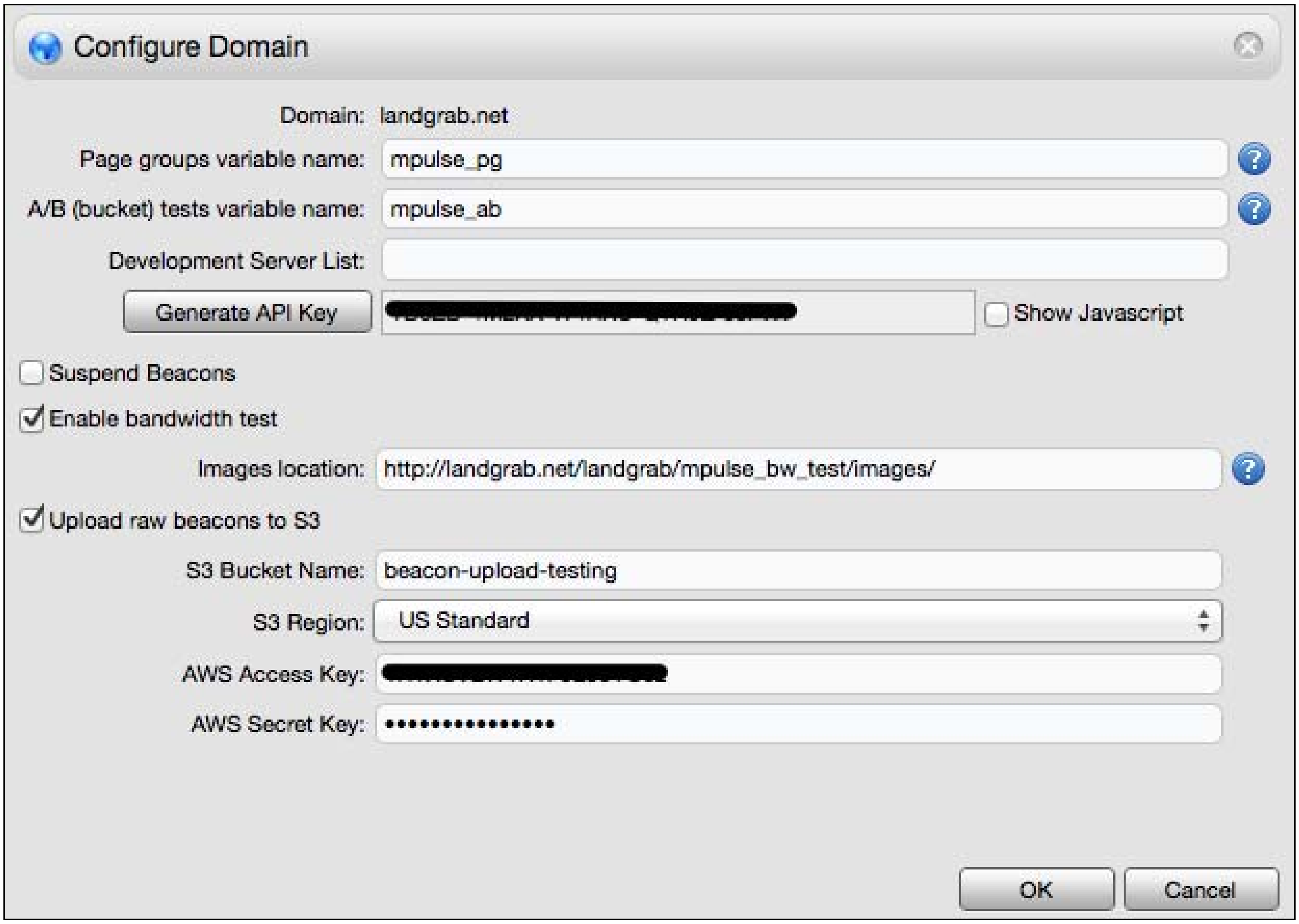
Array values returned by accessors should not be converted to strings.

Build 6179.101

mPulse

Amazon S3 Upload Setup for Domain-Specific Beacon Logs (Domain Admin)

This release includes new Configure Domains box fields that enable the user to upload Beacon logs to their own Amazon S3 specified account. In prior releases, logs were uploaded only to a default (internal only) SOASTA account.



Configure Domain

Domain: landgrab.net

Page groups variable name: mpulse_pg

A/B (bucket) tests variable name: mpulse_ab

Development Server List:

Generate API Key [redacted] ☐ Show Javascript

☐ Suspend Beacons

☑ Enable bandwidth test

Images location: http://landgrab.net/landgrab/mpulse_bw_test/images/

☑ Upload raw beacons to S3

S3 Bucket Name: beacon-upload-testing

S3 Region: US Standard

AWS Access Key: [redacted]

AWS Secret Key: ••••••••••••••••

The new fields include:

S3 Bucket Name – The user-created unique name. This must exist on Amazon before its use here; in essence it is like a folder name. Refer to Amazon S3 Functionality for more information.

S3 Region – Specify the S3 Region to use from those that appear in the dropdown. A bucket can be stored in one of several Regions so ensure to select the Amazon Server location where the S3 Bucket Name was created.

AWS Access Key – Enter the account access key to use.

AWS Secret Key – Enter the account secret key to use.

Bugs Fixed

49989: Recording of a segmented control with text labels doesn't play back [requires new TouchTestDriver]

Recording of a segmented control with text labels doesn't play back

49939: Choosing the target manually for recording is not working (a new target is still created)

Adding a target to a mobile clip manually by selecting it in the Available Targets list in the Clip Editor lower panel unexpectedly didn't prevent a new target from being added to the Included Targets list.

49752: Unable to record against Android app [requires new TouchTest Driver]

An exception occurred when requestFeature() wasn't called before adding content.

49737: Duplicate targets created when creating new script

CloudTest created multiple incorrect targets for the same URL while doing HTTP recording.

49644: Page Group - Send all unclassified pages to the "Other"

If customers don't define a page group for a page, its beacons will show up under the "Other..." page group in their dashboard.

49596: Session histogram still needs work

Session Bounce and Load Time Bug Fix

49540: Message Editor not translating from form view to XML view

Fixed the namespace lookup algorithm in case of imported schemas

46664: Cannot call method 'get' of undefined

Attempts to cut comments using the Clipboard command were unsuccessful.

49531: TableView scrollEnd event not generating Android apps [requires new TouchTest Driver]
This fixes an aspectj crash while building app by a simple refactoring.

49530: Unable to enable Titanium project for TouchTest using MakeAppTouchTestable utility

Fixing the NPE caused by MATT when the MAIN/Launcher Intent is a part of Application node instead of the Activity node.

49229: Unable to register iPhone simulator as TouchTest agent

This fix adds a Logout link to the Register Device screen of the TouchTest Agent workflow.

Build 6179.97

Bugs Fixed

49844: High Collector CPU usage due to user agent cache

This fix changes the user-agent cache to use Google's LinkedConcurrentHashMap instead of our own internal LRUCache.

49830: SCommand does not allow you to delete results for a composition unless you know the result names

SCommand "delete" command now allows specifying a composition by name.

49807: MATT doesn't work on app

We will not quit AppDelegate modification process if we are unable to find the class name for one of the AppDelegate files (because the AppDelegate file could be a subclass of another valid AppDelegate File).

49637: Cannot add image validation from result on this clip

Adding an image validation on an app action contained in a group unexpectedly failed.

49601: Global Properties hard to see

The Global Properties box prevented users from seeing longer values. Now, the box is larger and will accommodate longer values.

49559: this.m_oSpinner is undefined; JS line 58

This error occurred accessing the progress spinner in a given app.

49557: Unexpected token

In some cases invalid JSON (HTML) was not handled as expected.

49533: EC2 "validity" check uses default security group

In prior releases during Grid and RSDB selection, when a user tried to launch an EC2 instance, we first checked the default security group settings to make sure that ports 80 and 443 are open. If not, we stopped deployment and show an error. Now, because we now allow the user to use a non-default security group, we will check the correct group, instead of always checking "default".

49410: Intermittent WebView is not found error in Android Hybrid

An issue occurred in Android TouchTest Hybrid where playback would unexpectedly fail with the error message "WebView not found."

49323: A Soap fault has occurred. faultString: For input string: ""

This error occurred while trying to show the lower panel for an unselected user.

49301: MakeAppTouchTestable crashes when run without a "-target" parameter

This fix undoes a regression that caused the MakeAppTouchTestable utility to crash with a Null Pointer Exception error if no target was provided.

49171: Replaying recorded clip fails on Hybrid App, Phonegap

A recorded clip would unexpectedly fail on the login button press. TouchTest believes it webClicked the login button, but the application doesn't recognize it.

49053: Wrong number of arguments or invalid property assignment; JS line 3920

Nested clips could not be successfully pasted into other situations in Internet Explorer 9.

48920: "Insufficient privileges" error while updating a user

A bogus insufficient privileges error would occur while updating a user when the admin user theoretically had sufficient privileges.

48288: sCommand picking the wrong URL for accessing repository

An sCommand problem occurred with picking the wrong URL for accessing the repository.

Build 6179.94

Bugs Fixed

49605: The tenant attribute 'dataTemplate' is not recognized

This fix backs out a prior checkin that unexpectedly disrupted the creation of tenants in a CloudTest instance.

49191: Recording of pan doesn't record full precision so only a partial pan is played back

Build 6179.89

CloudTest

Test Execution

Amazon EC2 Australia (Sydney) Region (Cloud Only)

As of this release, the Amazon Elastic Cloud (EC2) Australia (Sydney) region is available for the deployment of EC2 instances.

To add a Location for this new region:

1. Navigate to Central > Locations.
2. Click New. The New Location dialog box appears.
3. Enter a location name, and optionally add a description and geographic location (for use in activity maps). For more information about using geographic locations and the Google Maps API with CloudTest, see Interacting with Activity Maps.
4. Select Sydney in the Region drop-down.
5. Click OK to create this location.

Once configured, your location can be selected for use within a grid via the Grids Manager (Central > Grids), Server Instances page.

Bugs Fixed

49462: Operation input not persisted when "play" is pushed

The change to a value entered into the WSDL form of a generic message added to a test clip based on a WSDL target was not persisted when the user clicked play (i.e. the input is not blurred before pushing play).

49417: TouchTest Web issue with recording from a select element

Recording from Select element such as a dropbox unexpectedly failed.

49131: Android NumberPicker widget not being recognised properly

The NumberPicker was not recorded because it is in an ext lib. Now, all libs are instrumented.

Build 6179.86

Bugs Fixed

49496: Italia 14 does not have proxy settings link

The login page's proxy settings link was missing in Italia 14.

49355: High CPU reported for mPulse Default Dashboard

A number of performance improvements to the mPulse Default Dashboard are included in this release; "lating" objects and polygons for each country/region will be created once and restyled as necessary rather than deleted and recreated, animations will no longer be shown on first draw, and finally, this fix eliminates some unnecessary network chatter.

49167: Add more support in Android builds

All the libraries in a given app weren't instrumented by the MakeAppTouchTestable utility, so recording and playback succed. This fix is related to the fix for Case 48651.

48651: MATT PostCompileTask Android potential problem

Previously, the MakeAppTouchTestable utility didn't instrument all libraries found in the project. Now, MATT detects all libraries and the libraries_whitelist.xml is no longer necessary.

47706: Transport Layer support for Digest Authentication

This release introduces support for Digest Authentication into the Transport Layer and Target Editor. Users can now enter Digest Authentication credentials into the Target Editor as well as into the Target Creation Wizard.

Build 6179.78

Bugs Fixed

49383: Target Editor UI broken for Auto-generated targets

The UI-rendering code for Target Editor broke when confronted by auto-generated targets that didn't exactly match the service name. For example, if a target for "mydomain.com" was named "mydomain.com (2)" this error could occur. These are valid targets but the UI rendering code for Target Editor breaks when the target name does not exactly match the service name.

49357: Validations are intermittently being dropped from the result

A TouchTest Web test failed because one or more validations would intermittently be dropped.

49339: Copy/paste of Pan actions is corrupting the parameters

The parameters of a copied and pasted app action were corrupt.

49338: Pinch parameters are being recorded without {}; requires re-MATT

Pinch parameter storage changed from {x,y} to x,y; however, playback of x,y failed. Now, points can be stored in the appAction as either {x,y} or x,y. The default value for a point that is empty string or nil is the center of the specified view.

49322: Histogram no longer pinned to 20 seconds

The Histogram widget's X-value range was going from 0 to 10 minutes instead of the expected 0 to 20 seconds. With such a long X range, all the useful data was getting slammed over on the left edge of the chart, making the chart essentially useless.

49304: Error columns misleading

The mPulse Browser widget Error column has been changed to Margin of Error with an additional tooltip that reads "Margin of Error (sec)."

49241: Keyboard action gets recorded but it's not being played back

Playback of a user-recorded keyboard action, in this case to initiate a search after entering text, was unsuccessful.

49221: 'Globe' is undefined; JS line 871

This error occurred on opening the WebGL globe in the unsupported Internet Explorer. Now, a user-friendly pop-up indicates that IE is not supported in this release.

49131: Android NumberPicker widget not being recognized properly

The underlying TouchTest dialog aspect encountered an unfamiliar way of building a dialog and therefore didn't recognize it.

48756: Unable to import HTTPS WSDL

On import, HTTP protocol in the import schema location URI was being replaced by HTTPS because the base URI was unexpectedly HTTPS.

48404: Bounce Rate Performance by session graph issues

The 'Sessions vs. Bounce Rate by Page Load Time' widget’s performance by session distribution falsely indicated false bi-modal distribution (two humps) for all current mPulse customers. Session buckets needed to have their heights scaled to the bucket width. So we need to scale the bucket height for session charts.

47053: TouchTest Web Playback fails to focus on an input field

TouchTest Web recorded an input field but was unable to get focus to play it back.

Build 6179.67

Test Creation

Device Agent, Mobile Apps List No Longer an Exclude List

In Build 6179.43, the Central, Device Agents list, Mobile Apps tab was purposely switched to work by exclusion. For example, by viewing the device agent's Mobile Apps list in the lower panel, and then checking each box for the mobile app *not* to use.

After some user feedback that pointed out the obvious paradigm shift of checking something to exclude it, the old UI found in every build prior to 6179.43 has been restored.

As of this release, per Device Agent mobile apps are once again indicated by inclusion. However, now when a mobile app is created—whether manually or via the MakeAppTouchTestable utility—that app is automatically included in those apps "included" (i.e. checked) with device agents.

Users need only disassociate a given mobile app and a device agent if they choose to use the target-level "Any Device Agent" feature, in which case, all the device agents that will not be used (either they don't have the app installed or are unnecessary in the given test) should be unchecked (or excluded).

Bugs Fixed

49247: Importing clips from Vanquish to Italia adds ttxp= to all xpath locators

Vanquish exported clips unexpectedly showed the deprecated ttxp= value in all TouchTest-related Xpath locators (ttxp was recently replaced by xpath as a TouchTest location strategy).

49103: Beacon logs are not consistently being uploaded

If a beacon arrived at a Collector before it was fully initialized, the logger would be initialized without any S3 connection information and basically be wrong forever and no uploads would ensue. Now, the health check page will return false if the Collector is not fully initialized. This will prevent it from receiving any beacons prior to initialization.

49046: Geography widget breaks when day != today

This fixes polling issues in the mPulse Geography widget when not looking at "today."

48954: Android Screenshot fails app display

An error occurred in Android test clips that invoked screenshot features when the given app view was not ready.

48868: Object [object Object] has no method 'setAttribute'

Don't file errors using the Concerto Error Report feature when the user has overwritten prototype with jQuery.

48708: Issue with Android button click events

In some cases on Titanium platforms with Android, button click events weren't getting detected in touchtestable apps.

47786: Pie colors are imbalanced during composition play

There was some code in the Pie chart series reload function that was causing the array of available colors to be repopulated each time a new data set came in. This caused any new slices that had not been given colors in previous polling loops to get their colors from the start of the array.

47645: Enable alert e-mails from Collectors

Domain administrators will now receive email alerts from Collector servers.

47637: Network tuning

We set the max to 10000000 to avoid problems, but under load the highest we're seeing is around 8000. I'll drop it down to 20000 just to be safe. This is still 0.2% of the current value.

47560: CloudTest Admin: Backup Mirror doesn't seem to work

After setting up NFS on a Linux box the CloudTest Admin "test" button indicated success. However, after 24 hours, no files had shown up on the Linux box.

Build 6179.61

Bugs Fixed

49025 : WidgetLogic.applyWidgetFilterChange doesn't work correctly in nested dashboard containers

The underlying widget filter logic only applied filter changes to filters one level up in the dashboard hierarchy. So, if a widget was in a nested dashboard container and calls this method, it only updated the other widgets in its dashboard container and didn't affect dashboard level widget filters and all associated widgets. Widget filter changes are now applied all the way to the root.

49023 : Error running a report in a non-mPulse environment

This "g_bMpulseEnabled is not defined" error occurred during report generation.

49017: Unable to get property 'parentElement' of undefined or null reference; JS line 2040

This error occurred while trying to size a screenshot when the parent element has been unloaded.

48983: DWR client network error

A client network error occurred in the DWR error handler.

48936: Android swipe doesn't playback (android.widget.LinearLayout)

A swipe was recorded when a scroll was performed on an id (`id=detail_item_product_detail_layout[1]`) in an android.widget.LinearLayout and subsequently didn't play back.

48839: UI trying to save null "PageGroupsElementName" XML element

The mPulse user interface unexpectedly attempted to write a variable that is null (and therefore produced this error).

48813: Validations show not evaluated but shows passed in output

A related output and validation were not matched because the validation name had an initial space. Now, the user interface prevents the user from entering a validation or wait name that starts or ends with a space.

48741: Error Trying to Import result set, value out of range

The ResultsServiceWriter id was being parsed as a Short on import but should have been a long.

48688: Make boomerang pass jslint checks

This null error occurred after ending and then restarting a mobile recording session.

48451: Drop log does not contain drop reason

Drop code and warnings have been added to beacon log file to facilitate tracking the reason for the beacon being dropped.

48182: Pasting tracks into bands with different timing types causes invalid XML on Save

This error would occur when a user copied tracks in a timed band and pasted them into a sequenced band. Now, it is possible to copy tracks from bands of one timing type and paste them into a different composition with a band of a different timing type. Just as with adding clips to the composition, you cannot paste timed clips into a sequenced band. However, if there are no clips in the band, the timing type will be changed to accommodate adding the clip. If the clips are not pasted because they are of the wrong timing type, then the track will still be pasted without any of the clips.

47729: Browser Recording with Client Cert Issue

An attempt to record a site using a client certificate didn't work as expected as during recording the certificate was ignored and a HTTP 400 error resulted instead.

46802: App crashes with NullPointerException on any action after a back action

This fix augments the earlier fix documented for this case. Now, the TouchTestDriver no longer requires implementation of the onResume method.

Build 6179.56

Bugs Fixed

48823: Object #<ConcertoObject> has no method 'getRepositoryAttrName'

The user has a transaction with multiple clip elements in a "then" or "else" of an "if". At that point, you shouldn't be allowed to remove the clip elements from the transaction because you can only have one clip element in those conditional segments.

48826: Problem when creating Custom Properties via Script for an item with no Custom Properties initially

If rare cases where an item (such as a Clip) had no Custom Properties at all, and it or one of its parents repeated, and on-the-fly custom properties were created at play time via Script, the properties of different instances of the Clips would accidentally get intermixed, causing bogus "scope" errors when accessing the created properties. This only happened if the item (or one of its parents) repeated. The error occurred on repeats other than the first one.

For builds prior to this fix, users can manually define a single Custom Property in the item. The property doesn't need to be used for anything; the item just has to have at least one manually-created Custom Property.

48687: iOS TTWeb undefined symbol: _OBJC_CLASS_$_TTInspector

An undefined symbol for architecture i386 error prevented the user from building the TouchTest Web application using Xcode despite meeting all the hardware requirements defined in the TouchTest Web for iOS Tutorial.

48656: mpulse SQL exception - needs to use query service to create tables

The underlying RumDomainInstance is throwing exceptions when querying a table-per-day that does not exist. This can happen if the day has rolled over and no beacons have been sent to the domain being queried.

48640: Unable to playback recording that has Android alert dialogs screenshot fails

A recording of an Android app with alert dialogs, which also included screenshots, failed to playback as expected.

48639: Ramp interval rounding not happening when you change the repeat number

This happened due to a parentheses typo included in the fix for Case 48283 that caused the ramp intervals to not be rounded when the repeat value is changed such that the interval would produce a fractional value.

48343: operation kybdRtrn fails to press Search button in clip replay; requires re-MATT

A keyboard return captured during recording failed on playback.

48186: Uncaught SyntaxError: Unexpected token); JS line 1

This happens if for some reason there is not screenshot in the result.

47938: Uncaught TypeError: Cannot read property 'attributeType' of undefined; JS line 11410

This error occurred in a custom dashboard once the Globe widget rendering was complete.

47756: Recording stops with an exception

This exception would occur after tapping Pick in a date picker, thus ending the recording session abruptly.

47230: Globe - Missing or incorrectly drawn border for Somaliland

This fix adds the previously missing border for Somaliland.

Build 6179.49

Bugs Fixed

48265: Recording scrolls instead of swipes for Android Gallery Widget

TouchTest will now record swipes during recording sessions in order to more accurately capture app actions from an Android gallery.

Build 6179.48

Bugs Fixed

48578: MATT generates code compilation error

The MakeAppTouchTestable utility will now will now always add a public version of onNewIntent method.

48575: MATT doesn't generate onNewIntent on singleTop app

The MakeAppTouchTestable utility will now sanitize the Activity names that contain the package names as well. For example:
android:name="com.example.soastastop.MainActivity"

48556: iOS test running on Android devices when 'Any' is specified in Target

An iOS test was unexpectedly run on an Android device when "Any" was specified in its underlying mobile target.

48549: Collector disks are filling up

The default mPulse settings would cause the Collector disk to fill up. The defaults are now a bit smarter, causing the larger disk partition to be used on EC2 instances.

48538: MATT is unable to parse the AppDelegate class name from the header file

The MakeAppTouchTestable utility was not able to parse the AppDelegate class name if the header file declared the class as following more than one protocol.

48268: Cannot read property 'results' of null

A null error occurred in the Dashboard. We will now handle null return bean as well as undefined.

48235: Library folders Copy and Paste problem

Copying and pasting folders from one Library folder to another would ask to rename the folder(s), even if those folder(s) did not exist.

47902: Waterfall legend rendering problems when text is too wide

The Waterfall legend text exceeded the boundaries of the legend margin.

47827: Post compile doesn't handle Android-referenced project as Library

In earlier releases, the MakeAppTouchTestable utility was not able to compile projects that had dependent Android project libraries. Where a library was dependent our post-compile library would fail without throwing an error leaving the user no clue other than that recording and playback would fail. Now, Android project libraries and their dependencies are handled.

46822: Results Service R/W failure when on the same machine as the Main

Monitor and RUM data batches were passing there own repository info object, but this object had not had its repository URL set for the callee. So if we had a server from a remote location calling an RS, the RS had an incorrect URL for contacting the repository. The fix resolves the situation where the Main and the Database were on the same instance and a grid was started in a different location.

46624: Globe doesn't show Starfield

The Starfield background didn't appear as selected in Globe settings.

46354: Jenkins Android test composition deadlock

A concurrency problem in the TTTaskHandlerThread caused a deadlock in a running Jenkins test composition on Android in some circumstances.

Build 6179.43

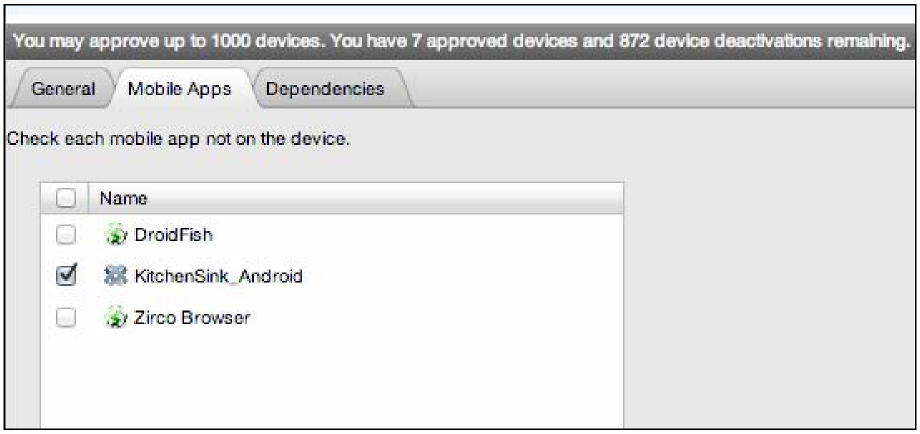
TouchTest

Test Creation

Device Agent, Mobile Apps List Now an Exclude List (Case 47444)

In prior TouchTest releases, the association between a mobile app and a device agent was performed in the Device Agents list, Mobile Apps tab by inclusion. For example, by viewing the device agent's Mobile Apps list in the lower panel, and then checking each box for the mobile app to use.

As of this release, per Device Agent mobile apps are indicated by exclusion. Check any mobile app that is *not* installed on the device in order to exclude it.



You may approve up to 1000 devices. You have 7 approved devices and 872 device deactivations remaining.

Check each mobile app not on the device.

□	Name
□	DroidFish
☑	KitchenSink_Android
□	Zirco Browser

Bugs Fixed

48386: Device agent display issue in Central

The Central > Device Agents list would unexpectedly display unescaped HTML in device names in some cases.

48369: Cannot call method 'stop' of undefined

This timing bug would unexpectedly redraw the Globe while it was loading.

48338: Cannot select/copy viewHierarchy in Firefox

This fix enables text selection for disabled inputs and textareas in the Result Details dashboard's lower panel in Firefox, such as that found in the output for viewHierarchy.

48262: Ability to multi-select Targets in Message/Actions to remove them

As of this release, targets in the Clip Editor lower panel, Messages/Actions tab, Included Targets list can be multi-selected and then right-clicked to apply contextual tasks including deletion.

48236: For input string: "13200 "

This error occurred when a user left a space at the end of a proxy port. This field is now trimmed.

48188: WMI Powershell script getting ERROR: Error Accessing the registry

This error occurred when a Windows version mismatch (e.g. Web Server 2008 R2) was encountered. Now, we will only check for Server 2008 R2 when dealing with Windows Server 2008 R2.

48031: NS_ERROR_XPC_NOT_ENOUGH_ARGS: Not enough arguments; JS line 512

This error occurred while selecting the Globe widget in the dashboard while the Edit Panel was open.

48019: MATT will now use the pre-existing launch URL in case of iOS apps

The MakeAppTouchTestable utility will now use any pre-existing iOS app launch URL—possibly written by MATT in prior iterations—as of this release.

48001: Domain/API key mismatch

This fix changes the response for a domain/API key mismatch to be 403: Forbidden instead of 204: No Content.

47972: Performance by minute scatterplot is missing beacon count and MoE

This fix adds Margin of Error and Beacon Count to the tooltip on per-minute chart.

47657: Session Template wizard trying to re-name an object to empty string

This error occurred when a Seed Template wizard unexpectedly allowed an empty string as a template name.

46802: TouchTest Driver Fails to Initialize

This release includes improvements to the MakeAppTouchTestable application node's lookup algorithm, which failed to link TouchTest Driver to the projects Main activity in some cases. Users will now see the following message indicating a workaround:

```
Warning:
    TouchTest requires all activities to have implemented onResume()
    If its not already present, add the following empty method

    @Override
    public void onResume() {
        super.onResume();
    }
```

Build 6179.33

Bugs Fixed

48270: Tap on Android Gallery does nothing

Gallery taps in an Android app were not captured by TouchTest as expected. This case was similar to other cases involving the AbsListView in apps. Gallery taps are now handled.

48249: Android Type do not trigger key events

Keyboard events were not triggered thus requiring the user to manually add a keybdReturn pressed app action.

48200: Widget moves up and down

When using the scrollbar to zoom in & out ona Globe dashboard wth a 3-column layout, the whole widget unexpectedly moved up and down. This fix ensures that page scrolling doesn't occur when zooming the globe.

48178: Tap not performed on Android custom widget

Touch events or clicks were not generated when a tap was performed in a mobile app's EditTextView, and on playback only the keyboard was shown.

48173: Update boomerang loader JavaScript snippet

The JavaScript snippet used to add boomerang to a web site has been updated to handle document.domain.

48165: GridView scroll recorded as a swipe (requires re-MATT)

Android GridView scrolling, in this case from AbsListView, was recorded as a swipe. This fix requires re-applying the latest MakeAppTouchTestable utility to the project.

48021: Can't add Scripts or Clips to the clip when moving Scripts or Clips

Moving a script or clip in the Library list while the Clip Editor has that same folder expanded in the Clip Editor lower panel would unexpectedly resulte in the inability to add a script or (nested) clip from that folder to the test clip open in the Clip Editor.

48003: Android recording crash (requires re-MATT)

A recording session using the given Android app would crash after a few actions were performed. This fix requires re-applying the latest MakeAppTouchTestable utility to the project.

47653: Uncaught TypeError: Cannot call method 'getElementsByTagName' of null; JS line 2141

Adding an app action to a new clip, and then adding a validation to it using verifyElementContentMode, would result in this exception error when the clip was saved, closed and reopened, and the app action was subsequently reopened.

47608: BoomerangAntTaks not working with TouchTestAntTasks for instrumenting jars for AspectJ

This fix adds code to set the path of TouchTestDriver jars if they exist in order to weave AspectJ for our jars.

47567: iOS Demo app not working

The Titanium iOS demo app, KitchenSink, didn't work as expected after it had the AMP utility applied to it. This fix updates the Add mPulse code in order to attach Boomerang iOS lib to iOS apps created by Titanium.

47483: Cache Dynamic Resources not set at the Composition Level

The enabling or disabling of the "Cache Dynamic Resources" option had no effect either way in the Composition Editor. After saving the composition, closing it and then reopening it, the "Use Individual Clip Settings" default was back. The Composition Editor now correctly checks this drop down and correctly sets its value in the nderlying XML on save.

Build 6179.31

CloudTest

Test Creation

Auto Refresh for the Composition (Composition Builder Tab)

The Composition Editor lower panel lists used to add clips into an open composition will now auto-refresh as do the Clip Editor lower panel lists (as of the Italia release).

After refresh, the Date Modified field will display the new date/time (for any changed or any new scripts or clips that have been created since the test composition was opened.

Bugs Fixed

48150: MATT Android code generation error – onNewIntent (requires re-MATT)

The MakeAppTouchTestable utility was generating duplicate onNewIntent methods even when they were already present. This fix requires re-application of the latest MakeAppTouchTestable utility.

48077: Android GridView problems at playback (requires re-MATT)

Playback of the GridView used in some Android apps was not successful. This fix requires re-application of the latest MakeAppTouchTestable utility.

48025: Result Details Dashboard when using Control Clip Element

A problem arose in the Result Details dashboard when a control clip element was in the test clip as played. This issue was experienced in Italia builds only.

48010: Don't poll Globe and mPulse widgets when not visible

Leaving and then returning to an mPulse dashboard after some time would result in all of the beacons received in the interim firing at once.

48006: Object #<SegmentCompartmentBase> has no method 'getSegmentKey'

This error occurred after a user expanded a Transaction that unexpectedly appeared in the HTML Document area. This situation areose when elements were placed inside transactions while recording HTTP into the Clip Editor. The transaction was originally in the Static Resources of the page, after closing and opening the clip it moved to the HTML Document area of the page.

47941: MATT adds multiple post_compile steps if run multiple times

As of this release, the MakeAppTouchTestable utility will not re-create post-compile task nodes if one is already present

47893: 'undefined' is not an object; JS line 2893

This error occurred while adding an mPulse dashboard to a test composition that didn't have mPulse implemented. Now, opening an mPulse dashboard on a server that doesn't have mPulse won't throw an error.

47842: Pie legend is wrapping text

Now the numbers will never wrap, they will take over space in the table and force the labels to be middle-ellipsized. Once the legend gets small enough that even ellipsizing doesn't get it thin enough, it will scroll along the x axis. The ellipsized words have a mouseover tooltip with the actual string.

47757: mPulse Widgets should not continue to poll for data for past dates

As of this release, mPulse polling for updates to Summary, Geography, or tabular mPulse widgets will not occur on past days.

47756: App crashes on launch shows java.lang.NullPointerException (requires re-MATT)

Due to an error in calculating where to inject code, running MakeAppTouchTestable on a given Android project (using Eclipse) resulted in errors. This fix requires re-application of the latest MakeAppTouchTestable utility.

47567: iOS Demo app created by Titanium not working (requires re-MATT)

This fix updates the Add mPulse Utility's code in order to attach Boomerang iOS lib to iOS apps created by Titanium. This fix requires re-application of the latest MakeAppTouchTestable utility.

47373: Grid Allocation Metrics Format Misaligned

An underlying font change (from Arial to Helvetica fonts) resulted in an alignment issue in the Grid Manager.

46558: TouchTest fails to interact with Spinner Menu Items during playback (requires re-MATT)

The problem here was that Spinner menu items who do not belong to the View Hierarchy were also not returning true for being visible. When that happens, we were throwing exception saying the element is not visible and we can't interact with it. We will now treat Spinner/Dialog elements as an exception to the rule and will not check their visibility. This fix requires re-application of the latest MakeAppTouchTestable utility.

46392: A Soap fault has occurred. faultString: The requested operation would result in an integrity constraint violation

This error occurred while applying seed data to a test clip when the Apply button appeared—but was not inactive—and the user inadvertently clicked it a second time.

46111: Selenium JavaScript dies by performing a click in Internet Explorer

This error would occur while running a browser action test in cases where the previous click closes the browser window. So that, when the next click happens, there was no window and no JavaScript to execute.

46097: New Targets are not being created in the folder where the clip was saved

New targets were unexpectedly created in the root repository folder instead of the folder where the clip was created.

8041: Leaving Grid tab resets journal scrollbar

The scroll position in the Journal tab was lost whenever the user left the Grid Manager tab and then returned (e.g. by clicking CloudTest, Central before returning to the Grid tab).

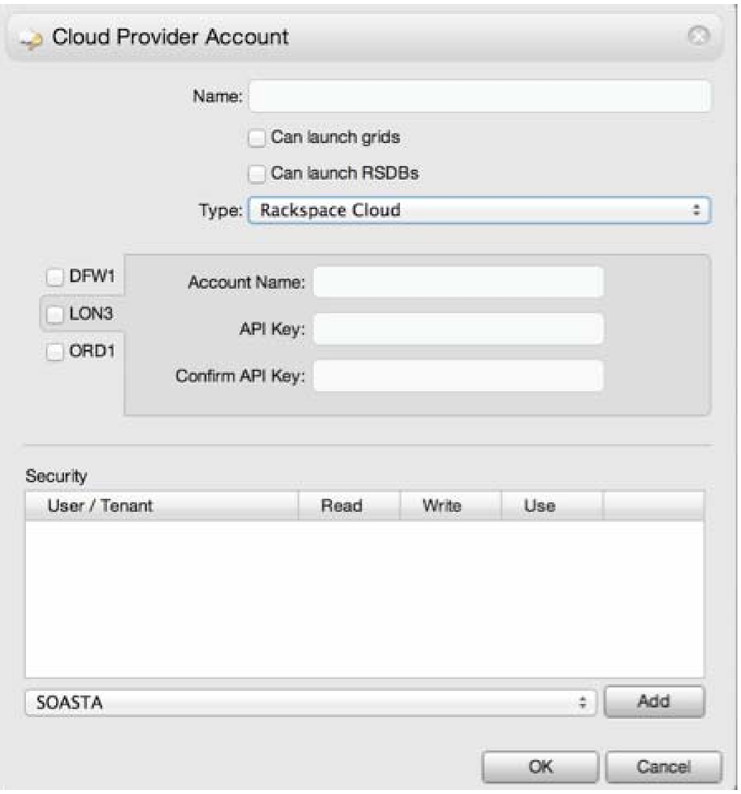
Build 6179.24

CloudTest

Test Execution

New Rackspace Cloud (OpenStack), London Location

As of this release, CloudTest Pro users can create Cloud Provider Accounts for the Rackspace Cloud (OpenStack) using locations in London (LON3) in addition to prior locations offered in Dallas/Fort Worth (DFW1) and Chicago (ORD1).



Cloud Provider Account

Name:

□ Can launch grids

□ Can launch RSDBs

Type: Rackspace Cloud

□ DFW1

□ LON3

□ ORD1

Account Name:

API Key:

Confirm API Key:

Security

User / Tenant	Read	Write	Use

SOASTA

The new location will appear in the Cloud Provider Account box whenever the type is set to Rackspace Cloud.

Bugs Fixed

47979: Communication errors on mPulse server

An error would unexpectedly indicate that mPulse was having trouble communicating with its server. This is now ignored.

47908: Histogram missing Axis label

In the prior Italia builds, the Histogram (a.k.a Beacons widget) was missing the Axis label. This expected feature now appears in the lower right corner of the widget.

47826: iPad App is not recording - Connection Times Out

MATT was adding openURL method to the last class in the AppDelegate file assuming there will only be 1 class in the file. Now, so we will look for the AppDelegate class name and add the method to that class.

47781: Text conditions being used in locators that don't work

Playback failed in cases where text conditions were in use that had non-working locators. This fix requires re-application of the latest MakeAppTouchTestable utility to any affected project.

43453: Back button not being recorded on android application

In prior releases, TouchTest was unable to record Android AlertDialogs but they could be added manually using an app action. Now, the alert action is recorded.

41058: iOS 6 / iPod does not take OpenGL screenshot

Screenshots failed unexpectedly in iOS 6 on iPod devices.

34578: Invalid xpath should be failing, still getting a result

In some cases, invalid Xpath in unbalanced brackets would still return a value when they should fail. If there was no observed value the underlying XSL layer was putting the expected value in as the observed value.

Build 6179.20

Bugs Fixed

47912: Wrong Xpath in screenshot validation

A fix for another case 45818 caused this issue, which mangled the validation-failure-action at the XML level. Both cases are now fixed.

47805: Unable to type in subject field (UIWebDocumentView)

The user was unable to type in a subject field in the UIWebDocumentView in a given iOS app.

Build 6179.17

Bugs Fixed

Opening a clip from Central forces re-login

After logging in, opening a test clip from the Central tab, Clips list would unexpectedly log the user out.

Build 6179.15

Bugs Fixed

47892: Clip Editor error when using Record Mobile App

This error prevented the user from initiating recording via the Record Mobile App command.

Build 6179.12

Bugs Fixed

47830: Mobile Web Recording Error

While recording a mobile web site, an exception TypeError message would unexpectedly appear whenever the user scrolled on the first page.

47814: **L.Icon is undefined; JS line 1989**

When Firefox was checking min-resolution for retina detection, if the window wasn't visible, a silent error would occur. This fix adds a null check so that it doesn't fail.

47228: Results Differ in General Tab and detailed output

Because the user interface was double-escaping an XPath, a discrepancy occurred between General results and detail results for items in a test.

45818: Target output and action output mixup the optional locator

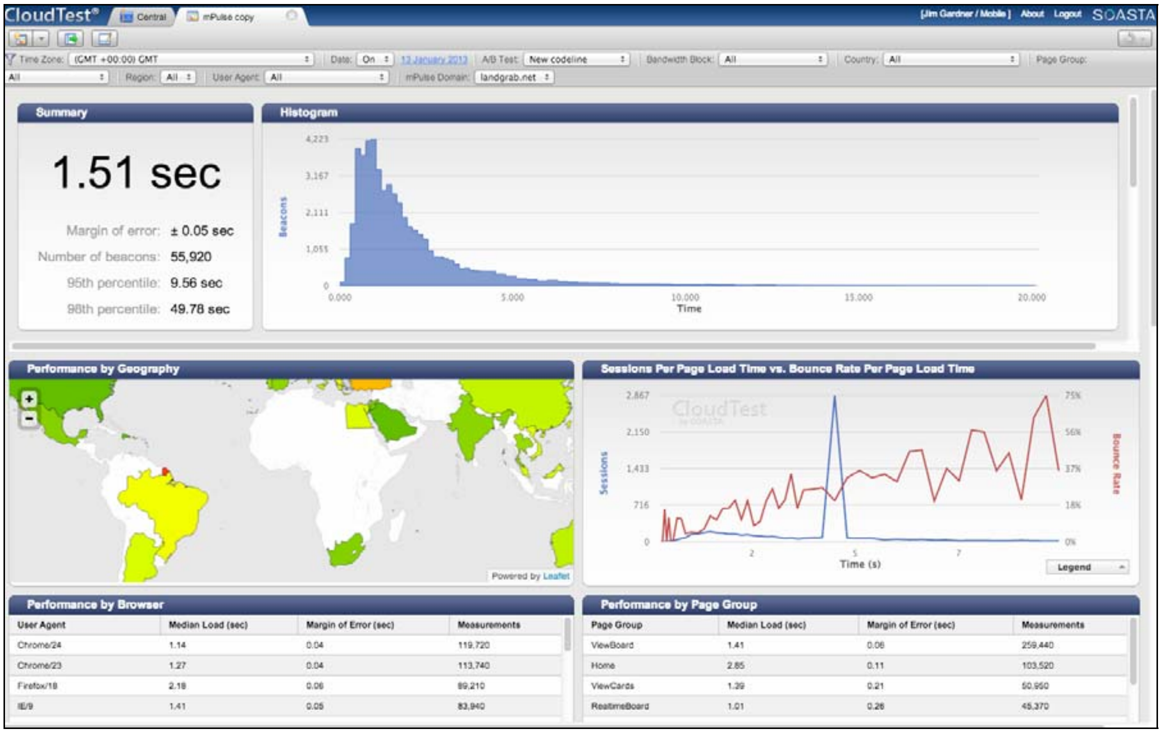
The issue was that the outputs both had the same name in the XML so the results viewer was not able to distinguish between them and showed the first for both.

Build 6179.9

mPulse

Introducing SOASTA mPulse™

SOASTA mPulse™ combines the power behind SOASTA's real-time analytics with real user measurement (RUM) beacons for web sites and native apps in iOS and Android.



Time Zone: (GMT +00:00) GMT | Date: On 13 January 2013 | A/B Test: New codeline | Bandwidth Block: All | Country: All | Page Group: All | Region: All | User Agent: All | mPulse Domain: landgrab.net

Summary

1.51 sec

Margin of error: ± 0.05 sec
Number of beacons: 55,920
95th percentile: 9.56 sec
98th percentile: 49.78 sec

Performance by Browser

User Agent	Median Load (sec)	Margin of Error (sec)	Measurements
Chrome/24	1.14	0.04	119,720
Chrome/23	1.27	0.04	113,740
Firefox/18	2.18	0.06	89,210
IE/9	1.41	0.05	83,940

Performance by Page Group

Page Group	Median Load (sec)	Margin of Error (sec)	Measurements
ViewBoard	1.41	0.06	259,440
Home	2.85	0.11	103,520
ViewCards	1.39	0.21	50,950
RealtimeBoard	1.01	0.26	45,370

A beacon is a message sent from a client (e.g. a browser or mobile application) to an analytics server (e.g. the mPulse service) that includes one or more analytic dimensions. A beacon is often sent as an HTTP request, but with no usable response. The purpose of the beacon is to send information from client to server

In the case of mPulse, beacons are created in your code by inserting a monitoring JavaScript into your pages and apps that runs on the client and sends back monitoring data as beacons.

The result is real-time measurement of real user experiences via beacon collection. This beacon collection and analysis is the core of SOASTA mPulse and results in intuitive analytics delivered visually and using our patented cross-cloud grid technology.

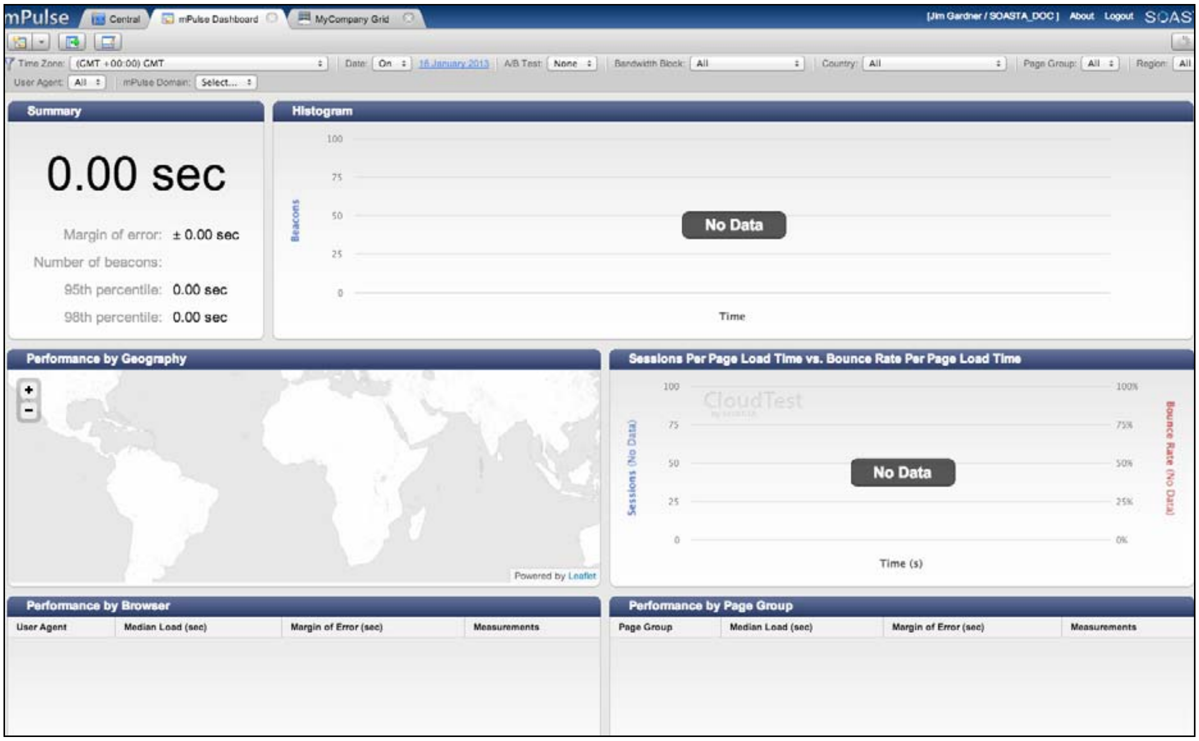
With just a few simple project modifications you can add mPulse capabilities to your native app projects, and quickly begin to collect mPulse™ beacons that provide rich insights into how real users interact within your web presence and native apps.

Once seeded, mPulse quickly tracks RUM statistics from user behavior as it occurs in real time. Beacon code can also be easily added to the header section of your web site or any subset of your web site by logical grouping for comparison of different site versions. With mPulse, traditional performance metrics such as bandwidth and site, page- or native-app load time come alive in tandem with engagement metrics such as bounce, exit, and conversion rates.

What Does mPulse Measure?

SOASTA mPulse™ measures the timing of actual gestures and events invoked in native apps and web sites by domain (including native apps) via an API key.

For mPulse™ users, the mPulse™ Dashboard will appear by default after login. Once a production web site or distributed native app have beacon code embedded, the dashboard will immediately begin to aggregate that data.



Time Zone: (GMT +00:00) GMT | Date: On | 16 January 2013 | A/B Test: None | Bandwidth Block: All | Country: All | Page Group: All | Region: All
User Agent: All | mPulse Domain: Select...

0.00 sec

Margin of error: ± 0.00 sec
Number of beacons:
95th percentile: 0.00 sec
98th percentile: 0.00 sec

User Agent	Median Load (sec)	Margin of Error (sec)	Measurements

Page Group	Median Load (sec)	Margin of Error (sec)	Measurements

Getting Started with mPulse™ in Native Apps and Web Sites

SOASTA mPulse™ uses domain-specific aggregation in order to provide analytic information about your entire online presence.

- For native app developers, begin with the Using Add mPulse™ Utility section below. When using this utility to add beacon code to your native app's source code, most of the steps to deploying beacons are automated, including the creation of the CloudTest "Domain" repository object whose key is crucial to aggregating all the related beacon data.
- For web site developers, begin with the Configure Domain box (from Central > Domains). Refer to the Add Beacons to A Web Site or Page section below.

Using the Add mPulse™ Utility (Developer Only)

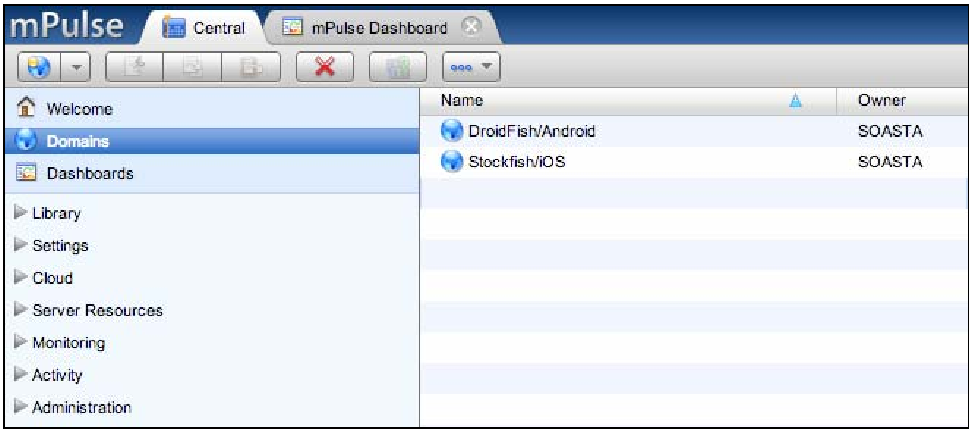
SOASTA mPulse™ includes the Add mPulse™ utility, which will automatically repurpose an existing Xcode or Android Eclipse project to send beacon data for aggregation.

Note that the mPulse™ JavaScript created using the Configure Domains box can also be added to your web site header and organized by domain (or sub-domains).

Creating a Domain for an mPulse App (iOS and Android)

Before repurposing your Xcode or Eclipse project using the Add mPulse utility you must first create a domain for the native app in mPulse™ Central. This is necessary because the utility requires an API key and mPulse Domain as arguments.

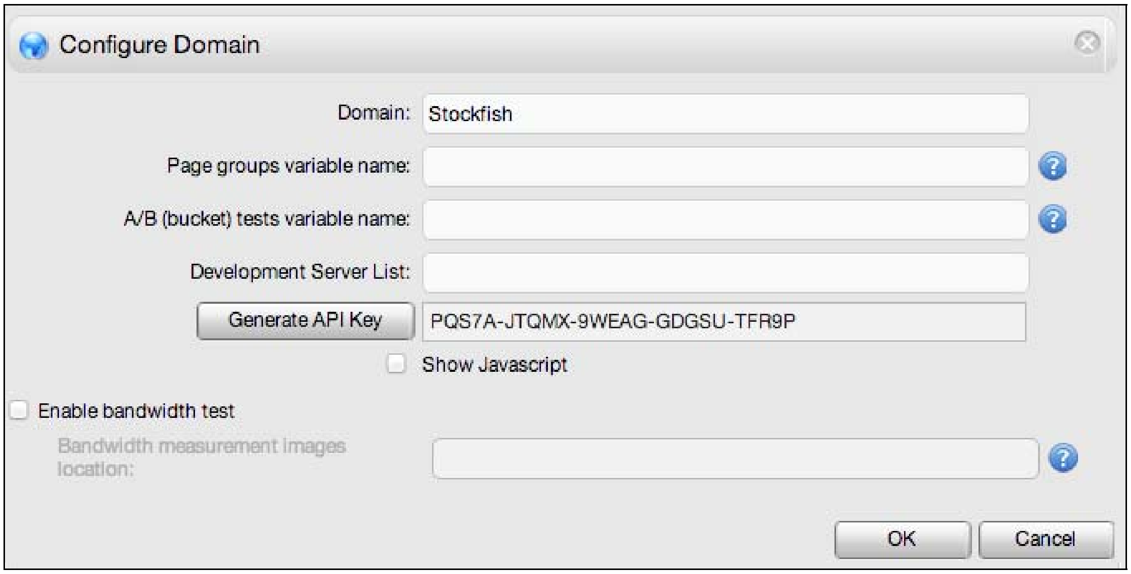
1. In the mPulse > Central tab, select Domains and then click New.



Name	Owner
DroidFish/Android	SOASTA
Stockfish/iOS	SOASTA

When you do so, the Configure Domain dialog box appears.

2. Enter a domain name for the app. For example, you can name the app's domain with the same name of its target.



Domain: Stockfish

Page groups variable name:

A/B (bucket) tests variable name:

Development Server List:

Generate API Key: PQS7A-JTQMX-9WEAG-GDGSU-TFR9P

□ Show Javascript

□ Enable bandwidth test

Bandwidth measurement images location:

3. Note the mPulse domain and the auto-generated API key for use in the Add mPulse command in the steps below.

Note: For Droidfish, you'll use "Droidfish" as the domain name and also take note of the API key for later use.

4. Click OK to complete the creation of your app's domain.

Get the Sample Project

You can use GitHub to download either of the following projects, or use the git command from within Terminal using the following syntax (and presuming that the git command is in your PATH).

- For iOS users, we recommend you download the following Stockfish Xcode project:

```
git clone https://github.com/elitecoder/stockfishchess-ios
```

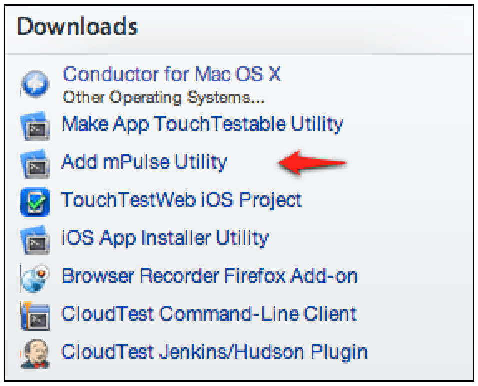
- For Android users, we recommend you download the following Droidfish Android project:

```
git clone https://github.com/elitecoder/droidfishchess_android
```

Note: You can also use Add mPulse on your own Xcode or Eclipse project for use with the steps in this tutorial.

Download the Add mPulse™ Utility

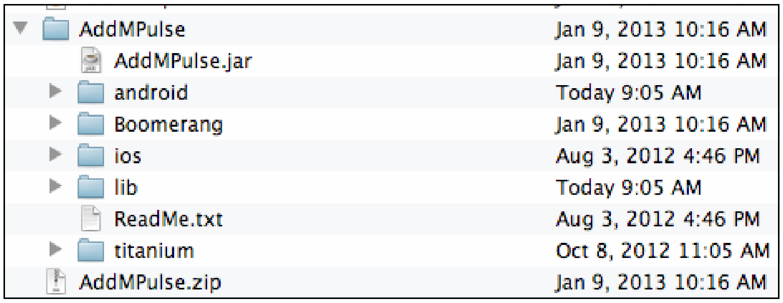
1. Login to your CloudTest instance using your SOASTA CloudTest® username and password and then open Central > Welcome.
2. Download the *Add mPulse Utility* from the Central > Welcome page, Downloads section.



Downloads

- Conductor for Mac OS X
  Other Operating Systems...
- Make App TouchTestable Utility
- Add mPulse Utility
- TouchTestWeb iOS Project
- iOS App Installer Utility
- Browser Recorder Firefox Add-on
- CloudTest Command-Line Client
- CloudTest Jenkins/Hudson Plugin

3. Unarchive the ZIP file.



▼ AddMPulse	Jan 9, 2013 10:16 AM
AddMPulse.jar	Jan 9, 2013 10:16 AM
▶ android	Today 9:05 AM
▶ Boomerang	Jan 9, 2013 10:16 AM
▶ ios	Aug 3, 2012 4:46 PM
▶ lib	Today 9:05 AM
ReadMe.txt	Aug 3, 2012 4:46 PM
▶ titanium	Oct 8, 2012 11:05 AM
AddMPulse.zip	Jan 9, 2013 10:16 AM

In addition to the platform specific folders shown above this archive contains the AddMPulse.jar file that will be used to modify your project. Additionally, the Boomerang folder will be copied to the project folder when the AddMPulse.jar utility is run against your project. AddMPulse.jar will make the necessary project modifications and create a Domain entry in the Central, Domains list.

Note: It is not necessary to open any of the contents shown above.

Using Add mPulse™ on an iOS Project

Use the following steps to Add mPulse capabilities to the mobile app and to add the mobile app to the Central > Domains list. The Domain entry for the given mobile app includes a Generated API Key that matches the key for the deployed mobile app. This key must be the same in the Domain entry and on each of the mobile devices to which your app is deployed.

From the Add mPulse folder, run:

```
java -jar addmpulse.jar -project <Xcode project path>  -target <target
name> -url <CloudTest URL> -apikey <mPulse API key> -domain <mPulse
domain>
```

where:

- `<Xcode project path>` is the path to the ".xcodeproj" file representing your project.
- <target> is the Xcode project target to modify.

Note: In general, you'll be specifying your Xcode production target.

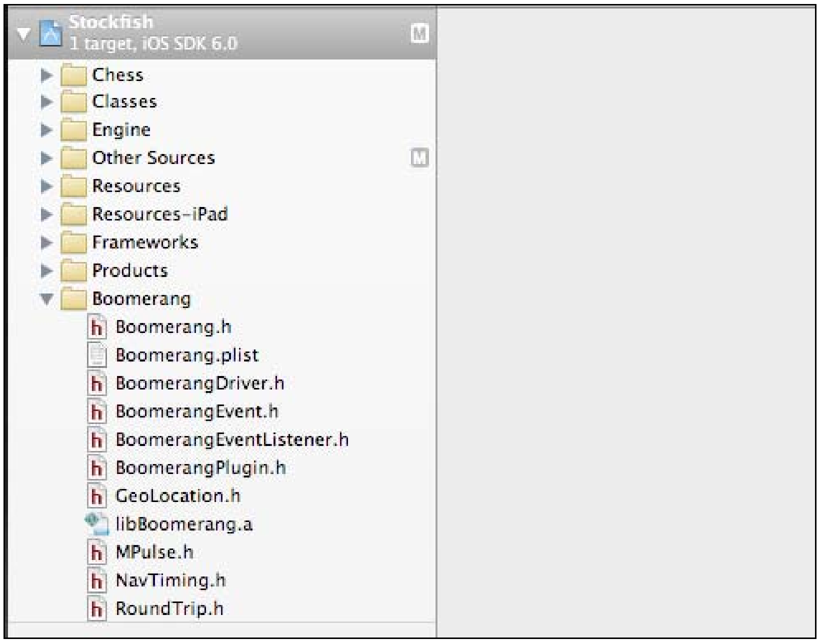
- <url> is the CloudTest or CloudTest Lite instance URL to specify.
- <apikey> is the API Key in effect for this app's mPulse domain, which can be located and opened from Central > Domains. If the domain doesn't exist, create it now before proceeding.
- <domain> is the domain name in effect fro this app's mPulse domain, which can be located and opened from Central > Domains. If the domain doesn't exist, create it now before proceeding.

Here is a complete example:

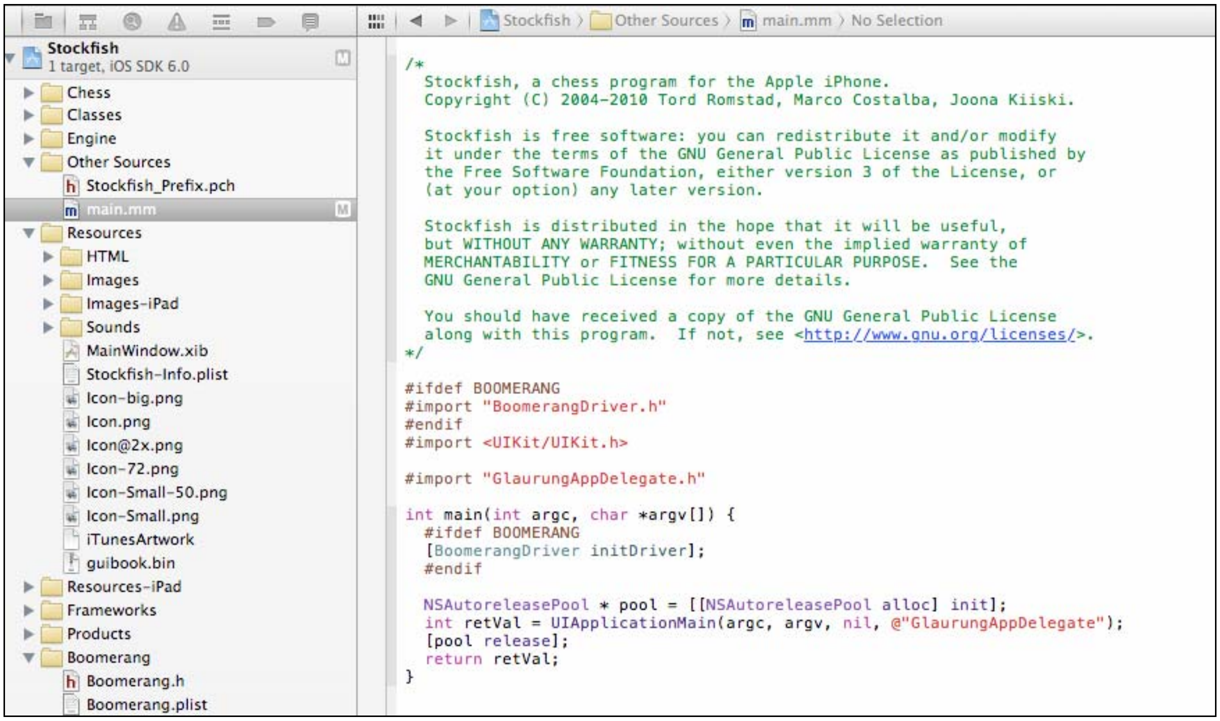
```
java -jar addmpulse.jar -project ~/Documents/Demo/stockfishchess-
ios/Stockfish.xcodeproj  -target Stockfish -url
http://192.168.1.145/concerto -apikey XXXXXXXX-XXXX-XXXX-XXXX-
20f7hf8c74dd -domain Stockfish/iOS
```

Add mPulse will configure your project using the information specified. Now that the specified Xcode project has been modified, let's take a look at it.

In the screenshot below, note that a new project folder now exists for Boomerang. This folder includes header, library, and configuration files necessary for beacon generation.

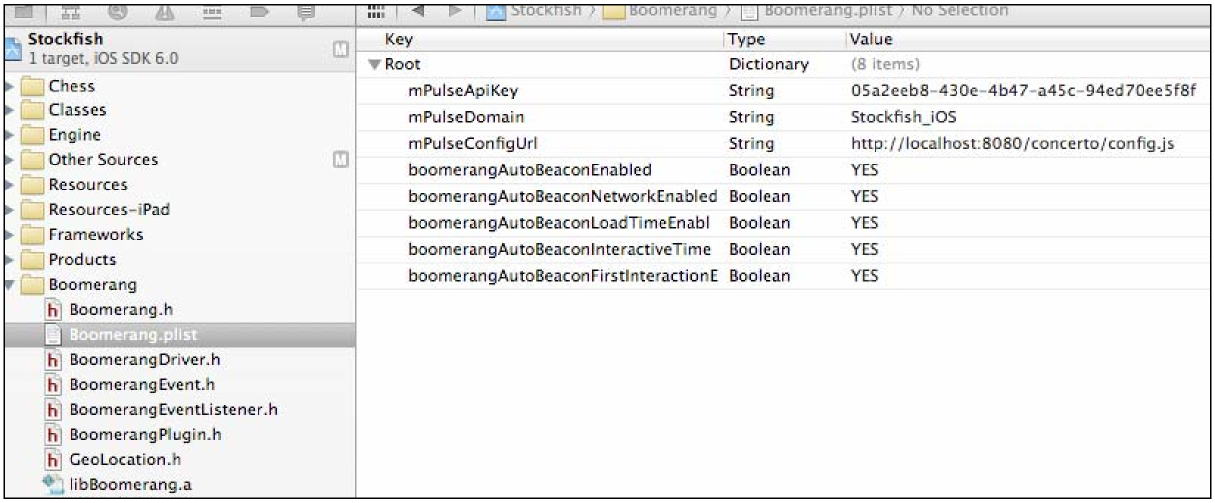


An #Ifdef section is added to the main file (whether main.mm or main.m) and the Boomerang driver is initialized.



```
/*
  Stockfish, a chess program for the Apple iPhone.
  Copyright (C) 2004-2010 Tord Romstad, Marco Costalba, Joona Kiiski.

  Stockfish is free software: you can redistribute it and/or modify
  it under the terms of the GNU General Public License as published by
  the Free Software Foundation, either version 3 of the License, or
  (at your option) any later version.

  Stockfish is distributed in the hope that it will be useful,
  but WITHOUT ANY WARRANTY; without even the implied warranty of
  MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
  GNU General Public License for more details.

  You should have received a copy of the GNU General Public License
  along with this program.  If not, see <http://www.gnu.org/licenses/>.
*/

#ifdef BOOMERANG
#import "BoomerangDriver.h"
#endif
#import <UIKit/UIKit.h>

#import "GlaurungAppDelegate.h"

int main(int argc, char *argv[]) {
  #ifdef BOOMERANG
  [BoomerangDriver initDriver];
  #endif

  NSAutoreleasePool * pool = [[NSAutoreleasePool alloc] init];
  int retVal = UIApplicationMain(argc, argv, nil, @"GlaurungAppDelegate");
  [pool release];
  return retVal;
}
```

Additionally, the Boomerang.plist file contains the API key and domain fields. Note that the API key in this file must agree with the API key field in the Domain detail.



Key	Type	Value
▼Root	Dictionary	(8 items)
mPulseApiKey	String	05a2eeb8-430e-4b47-a45c-94ed70ee5f8f
mPulseDomain	String	Stockfish_iOS
mPulseConfigUrl	String	http://localhost:8080/concerto/config.js
boomerangAutoBeaconEnabled	Boolean	YES
boomerangAutoBeaconNetworkEnabled	Boolean	YES
boomerangAutoBeaconLoadTimeEnabl	Boolean	YES
boomerangAutoBeaconInteractiveTime	Boolean	YES
boomerangAutoBeaconFirstInteractionE	Boolean	YES

Note: These settings are identical for both iOS and Android and are detailed at the end of the next section.

Using Add mPulse on an Android Project

Use the following steps to Add mPulse capabilities to the mobile app and to add the mobile app to the Central > Domains list. The Domain entry for the given mobile app includes a Generated API Key that matches the key for the deployed mobile app. This key must be the same in the Domain entry and on each of the mobile devices to which your app is deployed.

```
From the Add mPulse folder, run:

java -jar addmpulse.jar -project <Android project directory>  -url
<CloudTest URL> -apikey <mPulse API key> -domain <mPulse domain>
```

where:

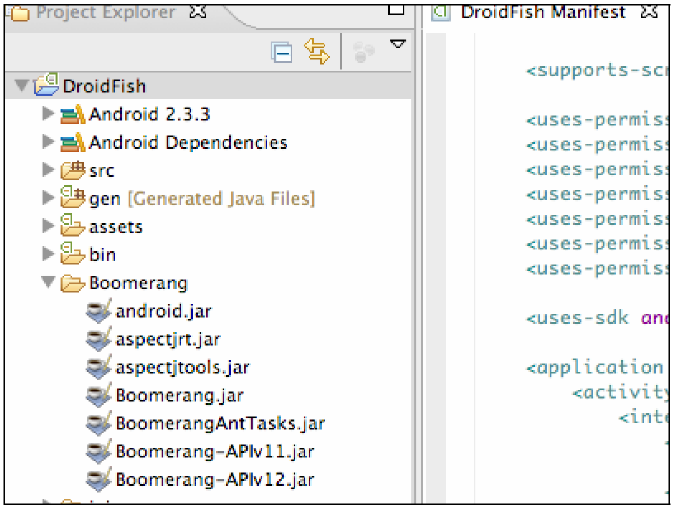
- `<Android project directory>` is the path to the Android folder representing your project
- `<url>` is the CloudTest or CloudTest Lite instance URL to specify.
- `<apikey>` is the API Key in effect for this app's mPulse domain, which can be located and opened from Central > Domains. If the domain doesn't exist, create it now before proceeding.
- `<domain>` is the mPulse domain name in effect for this app in the CloudTest or CloudTest Lite instance's repository, which can be located and opened from Central > Domains. If the domain doesn't exist, create it now before proceeding.

Here is a complete example:

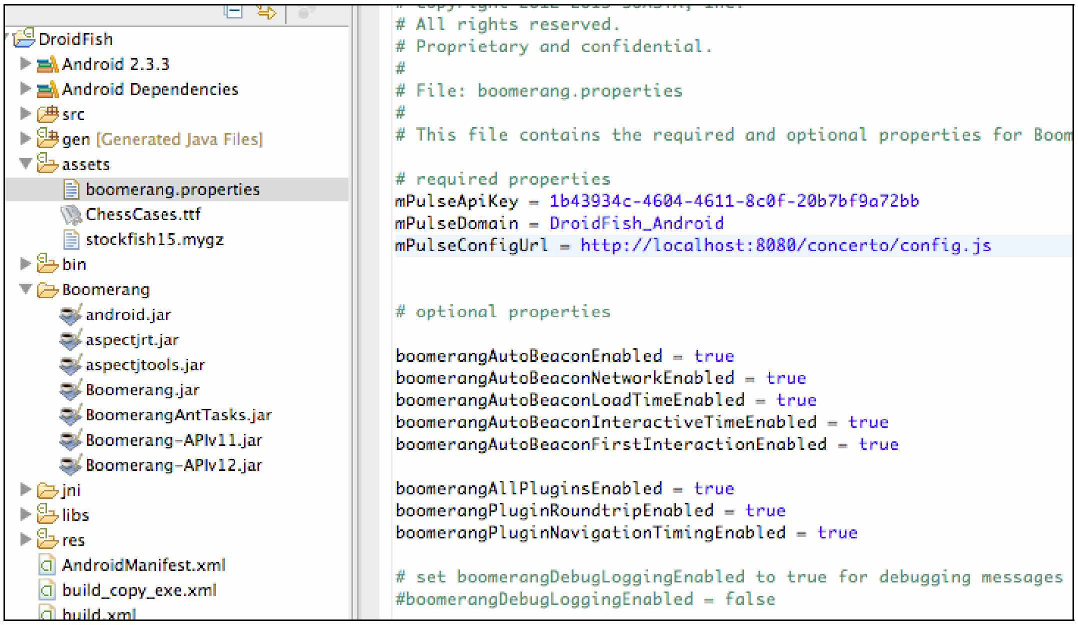
```
java -jar addmpulse.jar -project ~/Documents/Demo/droidfishchess_android
-url http://192.168.1.145/concerto -apikey <mPulse API key> -domain
<mPulse domain>
```

Add mPulse will configure your project using the specified information. Now that the specified Android project has been modified, let’s take a look at it.

In the screenshot below, note that a new project folder now exists for Boomerang. This folder includes header, library, and configuration files necessary for beacon generation.



Additionally, the Boomerang.properties file (in the Assets folder) contains the API key and domain fields. Note that the API key in this file must agree with the API key field in the Domain detail.



```
# Copyright 2012-2013 SOASTA, Inc.
# All rights reserved.
# Proprietary and confidential.
#
# File: boomerang.properties
#
# This file contains the required and optional properties for Boom

# required properties
mPulseApiKey = 1b43934c-4604-4611-8c0f-20b7bf9a72bb
mPulseDomain = DroidFish_Android
mPulseConfigUrl = http://localhost:8080/concerto/config.js


# optional properties

boomerangAutoBeaconEnabled = true
boomerangAutoBeaconNetworkEnabled = true
boomerangAutoBeaconLoadTimeEnabled = true
boomerangAutoBeaconInteractiveTimeEnabled = true
boomerangAutoBeaconFirstInteractionEnabled = true

boomerangAllPluginsEnabled = true
boomerangPluginRoundtripEnabled = true
boomerangPluginNavigationTimingEnabled = true

# set boomerangDebugLoggingEnabled to true for debugging messages
#boomerangDebugLoggingEnabled = false
```

Boomerang Properties

This section details the Boomerang properties added to your app's project configuration, whether in Xcode or in Android. The Boomerang properties are identical in both Xcode (where they are stored in boomerang.plist) and in Android projects (where they are stored in boomerang.properties).

mPulseAPIKey – The API key in the project must agree with the API key field Domain object in the CloudTest repository or beacon collection will not occur.

mPulse Domain – A configured domain within the mPulse instance, created via the Central > Domains, Configure Domains box. Each native app is a different domain (i.e. UICatalog/iOS or UICatalog/Android but not UICatalog).

Note In the case of platform-specific native apps, such as the UICatalog example above, the mPulse Domain *could be* manually merged by changing this entry to match, however, timings that come from different native (or web or both) timings will reduce the value of data in widgets such as Summary.

In order to time specific events, such as a button click users may wish to modify source code for a given function (i.e. PickerViewerController to time how long a user spins a picker). See the Manual Timings API section below.

mPulseConfigURL – The configuration URL points the app to the CloudTest server instance that will aggregate its beacons.

Boomerang Auto Beacons

The remaining configurations are known as Boomerang Auto Beacons. These configurations facilitate the automatic recording of beacon data. All or a subset of these auto settings can be turned off by setting any of these settings to No.

boomerangAutoBeaconEnabled – True by default. This enables Boomerang Auto Beacons.

boomerangAutoBeaconNetworkEnabled – True by default. If a network call is made, such as in an HTTP request to some service then we will time that and send a beacon that it took a given duration to make the request.

boomerangAutoBeaconLoadTimeEnabled – True by default. Load time is how long it takes to get to the next page when clicking between View Controller events.

boomerangAutoBeaconInteractionEnabled – True by default. This records a separate beacon for each user interaction.

boomerangAutoBeaconFirstInteractionEnabled – True by default. This records how long it takes a user to react for the first time on a given page.

Add Beacons to A Web Site or Page

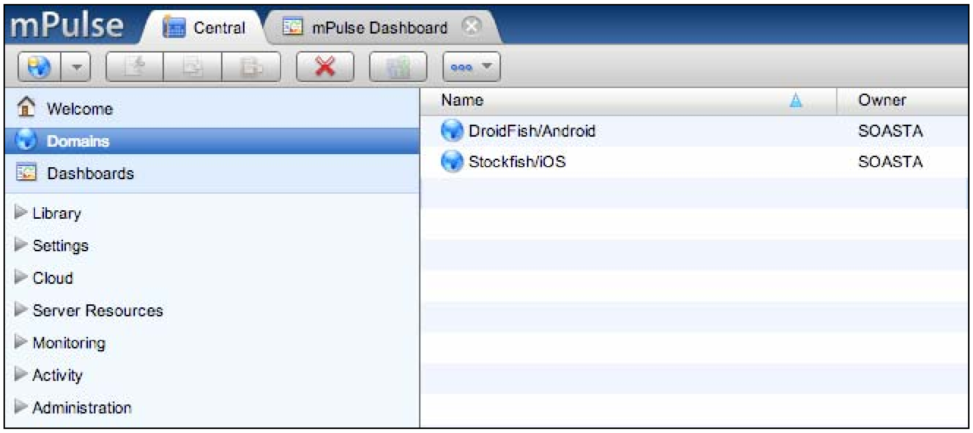
For web site developers, it will be necessary to manually create an mPulse Domain using the Configure Domains box (found in Central > Domains).

The Configure Domain generates the necessary JavaScript to embed in HTML headers per page (based on the configured settings).

TIP: For some sites, such as content managed sites, it may be possible to place the JavaScript for beacon collection into a header template that is automatically added to the rendered page. In either case, the code is generated and then copied from the Configure Domains box in Central.

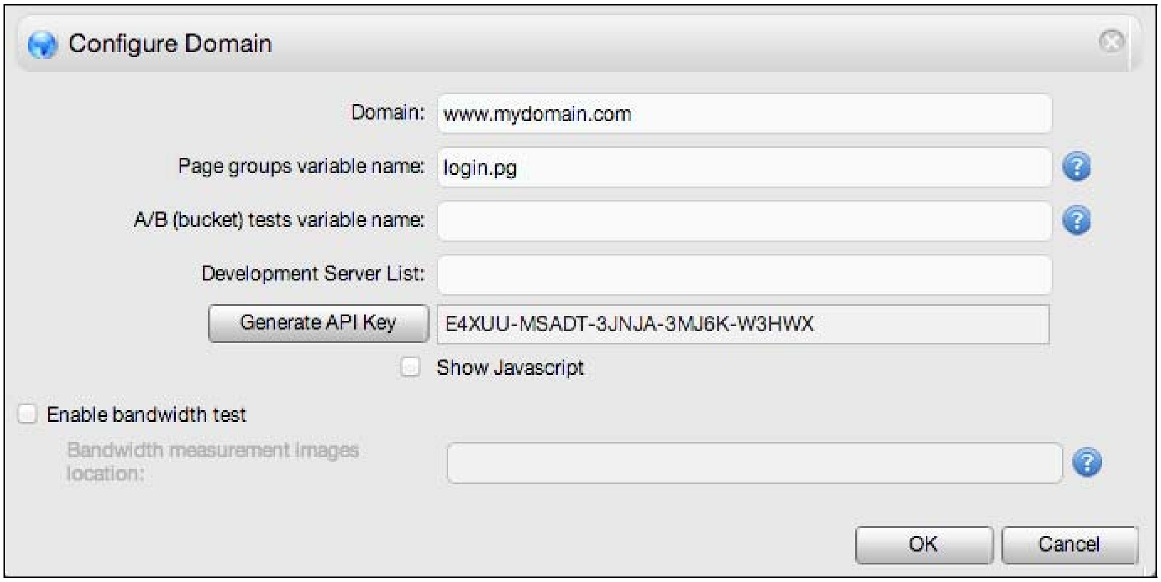
Manually Configuring a Domain for mPulse

1. In the mPulse > Central tab, select Domains and then click New.



Name	Owner
DroidFish/Android	SOASTA
Stockfish/iOS	SOASTA

When you do so, the Configure Domain dialog box appears.



Configure Domain

Domain: www.mydomain.com

Page groups variable name: login.pg

A/B (bucket) tests variable name:

Development Server List:

Generate API Key: E4XUU-MSADT-3JNJA-3MJ6K-W3HWX

□ Show Javascript

□ Enable bandwidth test

Bandwidth measurement images location:

TIP: For help with variable names, click the Help (?) icon.

2. Define a Page group variable name. This should be a JavaScript variable that also exists on your page that contains the name of the page group. This variable name may be name spaced.

   Page Groups help you summarize the performance characteristics of groups of pages that belong together. Your home page may make up one group, while your product pages make up a second. Your search results and checkout pages may also have their own groups. These logical groupings are entirely up to you.

   For more information, see Configuring mPulse to use page groups.

3. Optionally, define an A/B (bucket) Tests variable name. A/B testing is a great way to compare two (or more) versions of your site to see if one is more popular with users than another.

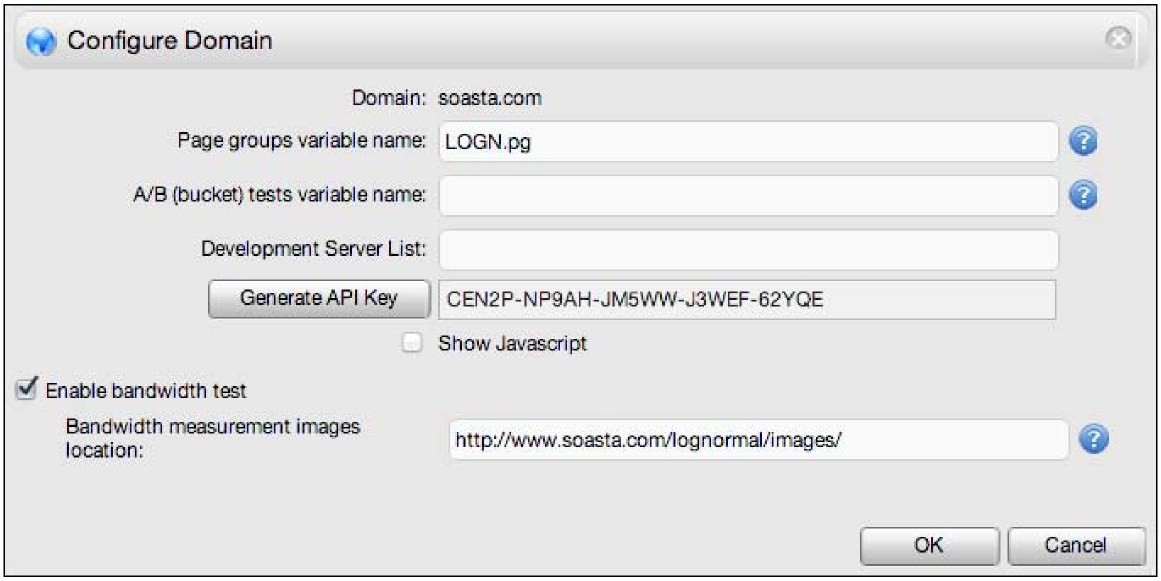
   For more information, see Configuring mPulse to measure A/B bucket tests.

4. If you'd like to also do bandwidth measurement, first check the Enable bandwidth test box and then also specify the web-accessible location of the site's image folder.

Note: Follow the instructions for downloading and placing the bandwidth images on your domain in the link below.

5. Provide a comma-separated list of development servers, if necessary.

For more information, see Configuring mPulse to measure user bandwidth.



Domain: soasta.com

Page groups variable name: LOGN.pg

A/B (bucket) tests variable name:

Development Server List:

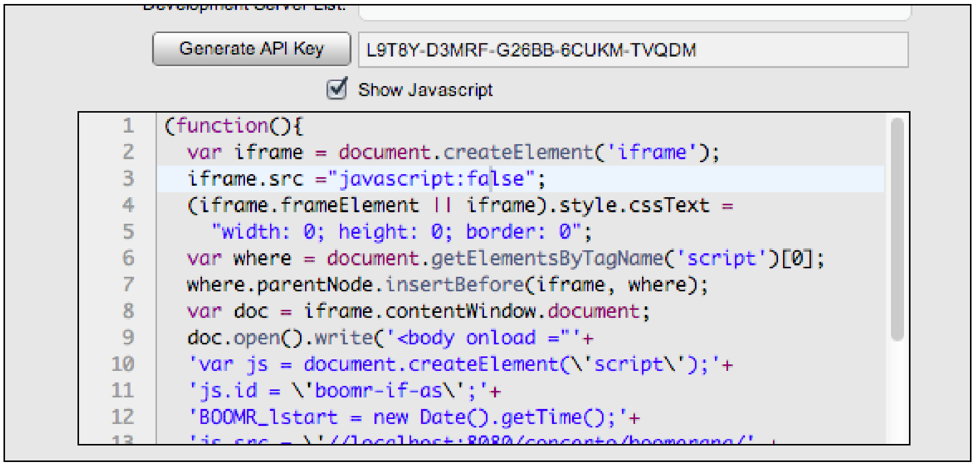
CEN2P-NP9AH-JM5WW-J3WEF-62YQE

□ Show Javascript

☑ Enable bandwidth test

Bandwidth measurement images location: http://www.soasta.com/lognormal/images/

Once ready, check the Show JavaScript box.



Development Server List:

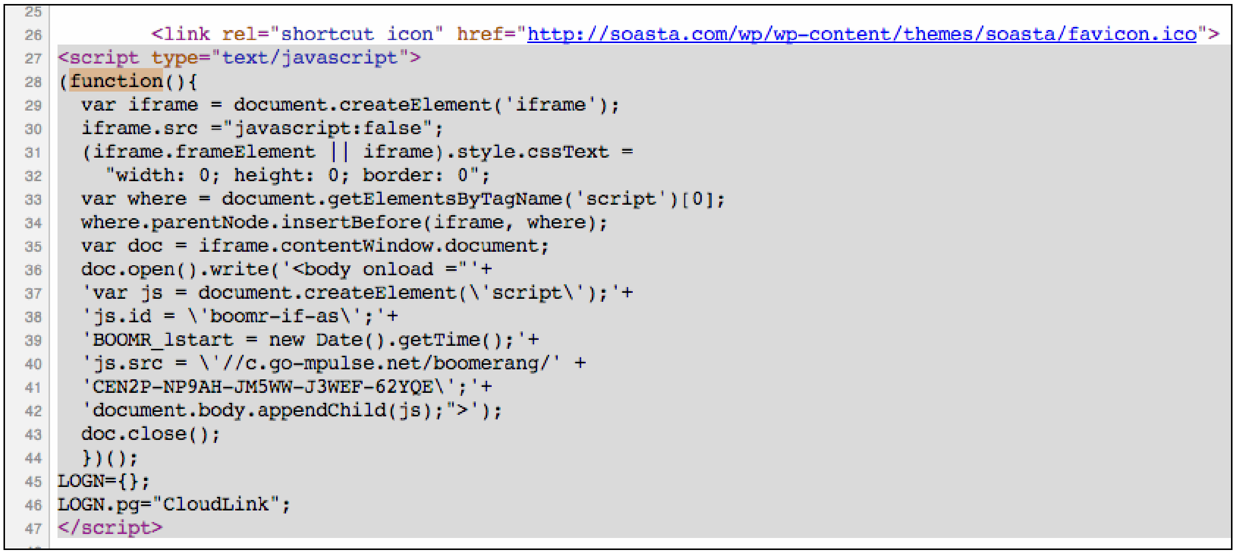
L9T8Y-D3MRF-G26BB-6CUKM-TVQDM

☑ Show Javascript

```
(function(){
  var iframe = document.createElement('iframe');
  iframe.src ="javascript:false";
  (iframe.frameElement || iframe).style.cssText =
    "width: 0; height: 0; border: 0";
  var where = document.getElementsByTagName('script')[0];
  where.parentNode.insertBefore(iframe, where);
  var doc = iframe.contentWindow.document;
  doc.open().write('<body onload ="'+
  'var js = document.createElement(\'script\');'+
  'js.id = \'boomr-if-as\';'+
  'BOOMR_lstart = new Date().getTime();'+
  'js.src = \'//localhost:8080/concerto/boomerang/' +
```

6. Copy the JavaScript from this field and utilize it in the Header for each page from which you'd like to collect beacons.

For example, the screenshot below shows the mPulse JavaScript generated for the SOASTA CloudLink support site.



```
        <link rel="shortcut icon" href="http://soasta.com/wp/wp-content/themes/soasta/favicon.ico">
<script type="text/javascript">
(function(){
  var iframe = document.createElement('iframe');
  iframe.src ="javascript:false";
  (iframe.frameElement || iframe).style.cssText =
    "width: 0; height: 0; border: 0";
  var where = document.getElementsByTagName('script')[0];
  where.parentNode.insertBefore(iframe, where);
  var doc = iframe.contentWindow.document;
  doc.open().write('<body onload ="'+
  'var js = document.createElement(\'script\');'+
  'js.id = \'boomr-if-as\';'+
  'BOOMR_lstart = new Date().getTime();'+
  'js.src = \'//c.go-mpulse.net/boomerang/' +
  'CEN2P-NP9AH-JM5WW-J3WEF-62YQE\';'+
  'document.body.appendChild(js);">');
  doc.close();
  })();
LOGN={};
LOGN.pg="CloudLink";
</script>
```

Manual Timing for iOS

In some cases, the developer may wish to modify project source code where a simple timer within a single method, or between two separate methods, is desired. The following code presents an example of how to do so in either case.

Intra-method timings

To send a simple timer within a single method, do the following:

```
-(void) foo {
   Boomerang *boomerang = [Boomerang startSimpleTimerBeacon:@"BoomerangCategory"];

    // Do stuff
    [boomerang endSimpleTimerBeacon];
}
```

Inter-method timings

To send a timer that starts in one method, and ends in another method, do the following:

```
(void) foo {
    // Do stuff

    Boomerang *boomerang = [Boomerang 
startSimpleTimerBeacon:@"BoomerangCategory"];
    [[BoomerangDriver INSTANCE] 
setBoomerang:@"mySpecialBoomerangToken":boomerang];

    // Do more stuff
}

-(void) foo2 {
    // Do stuff

    Boomerang *boomerang = [[BoomerangDriver INSTANCE] 
getBoomerang:@"mySpecialBoomerangToken"]
    [boomerang endSimpleTimerBeacon];

    // Do more stuff
}
```

Manual Timing for Android

In some cases, the developer may wish to modify project source code where a simple timer within a single method, or between two separate methods, is desired. The following code presents an example of how to do so in either case.

Intra-method timings

To send a simple timer within a single method, do the following:

```
void foo {
    Boomerang boomerang = Boomerang.startSimpleTimerBeacon("BoomerangCategory");

    // Do stuff

    boomerang.endSimpleTimerBeacon();
}
```

Inter-method timings

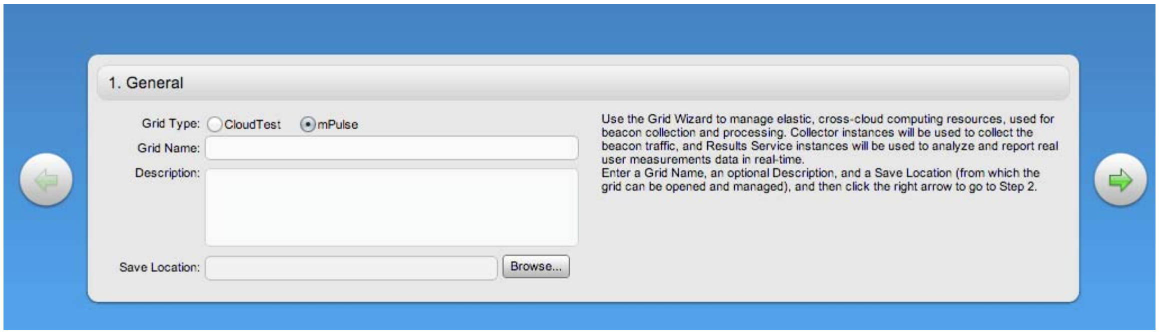
To send a timer that starts in one method, and ends in another method, do the following:

```
-(void) foo {
    // Do stuff

    Boomerang boomerang = Boomerang.startSimpleTimerBeacon("BoomerangCategory");
BoomerangDriver.getInstance().setBoomerang("mySpecialBoomerangToken",
boomerang);

    // Do more stuff
}

-(void) foo2 {
    // Do stuff

Boomerang boomerang =
BoomerangDriver.getInstance().getBoomerang("mySpecialBoomerangToken");
    boomerang.endSimpleTimerBeacon();

    // Do more stuff
}
```

Using mPulse in a Grid (Server Resource Admins)

The Grid Manager configuration now allows mPulse grid configuration for those users in an mPulse environment with Domain Administrator privileges.

1. Check the mPulse radio button to configure an mPulse grid (in some environments where only mPulse access exists no radio button will appear).



1. General

Grid Type: ○ CloudTest ● mPulse

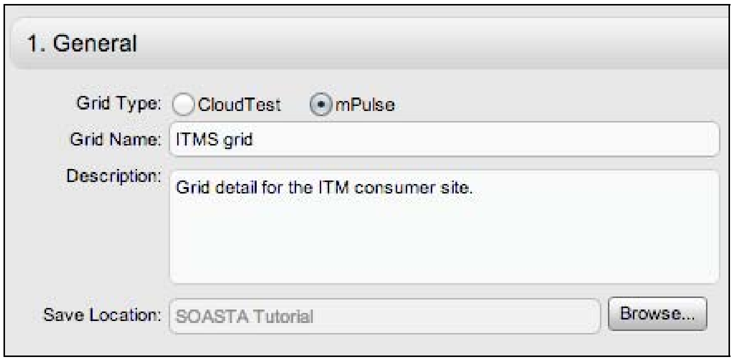
Grid Name:

Description:

Save Location:

Use the Grid Wizard to manage elastic, cross-cloud computing resources, used for beacon collection and processing. Collector instances will be used to collect the beacon traffic, and Results Service instances will be used to analyze and report real user measurements data in real-time.
Enter a Grid Name, an optional Description, and a Save Location (from which the grid can be opened and managed), and then click the right arrow to go to Step 2.

1. In the General screen, give the mPulse grid a name, and optionally, add a description and a repository folder location using Save Location. Click the right arrow to proceed.



1. General

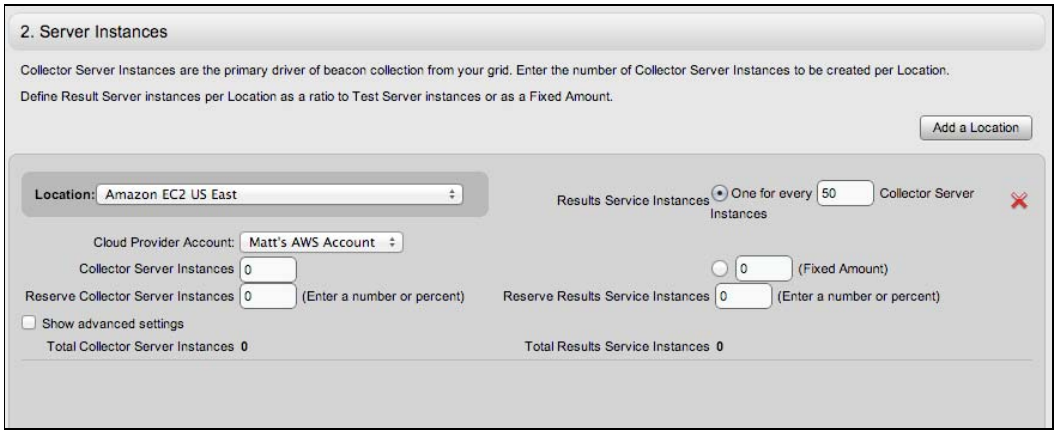
Grid Type: ○ CloudTest ● mPulse

Grid Name: ITMS grid

Description: Grid detail for the ITM consumer site.

Save Location: SOASTA Tutorial

2. In the Server Instances screen, select a Location from among those already configured. If you haven't created a Location, do so now using the instructions in Using Locations.



2. Server Instances

Collector Server Instances are the primary driver of beacon collection from your grid. Enter the number of Collector Server Instances to be created per Location.

Define Result Server instances per Location as a ratio to Test Server instances or as a Fixed Amount.

Location: Amazon EC2 US East

Results Service Instances ● One for every 50 Collector Server Instances

○ 0 (Fixed Amount)

Cloud Provider Account: Matt's AWS Account

Collector Server Instances 0

Reserve Collector Server Instances 0 (Enter a number or percent)

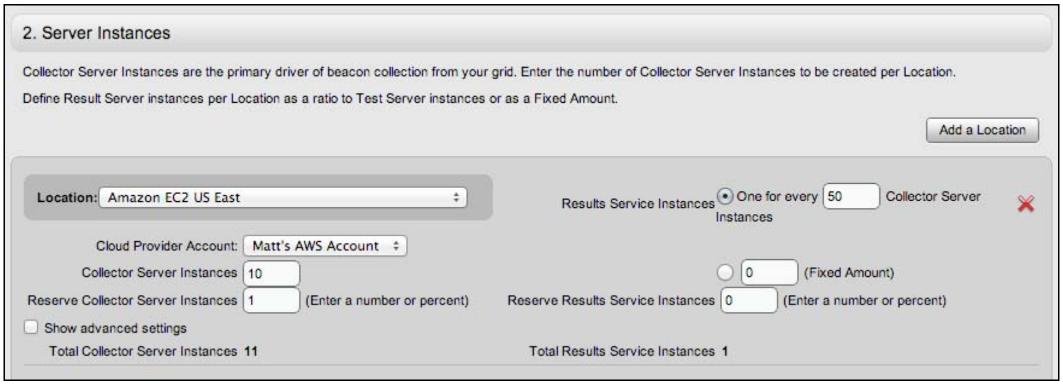
Reserve Results Service Instances 0 (Enter a number or percent)

□ Show advanced settings

Total Collector Server Instances 0

Total Results Service Instances 0

3. Once a location is selected, also select the Cloud Provider Account (from among those already configured). For example, a location "Amazon EC US East" is selected below.
4. Select the Cloud Provider Account (if there is more than one).



2. Server Instances

Collector Server Instances are the primary driver of beacon collection from your grid. Enter the number of Collector Server Instances to be created per Location.

Define Result Server instances per Location as a ratio to Test Server instances or as a Fixed Amount.

Location: Amazon EC2 US East

Results Service Instances ● One for every 50 Collector Server Instances

○ 0 (Fixed Amount)

Cloud Provider Account: Matt's AWS Account

Collector Server Instances 10

Reserve Collector Server Instances 1 (Enter a number or percent)

Reserve Results Service Instances 0 (Enter a number or percent)

□ Show advanced settings

Total Collector Server Instances 11

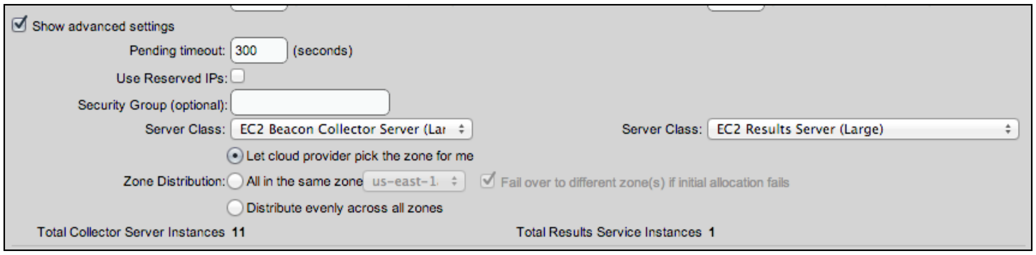
Total Results Service Instances 1

Next, based on your cloud provider and your testing needs, configure the server instances including whether or not to use reserve instances.

5. Specify the Collector Server Instances required by this grid for beacon collection. In the example above, 10 Collector Server Instances are defined (along with one reserve instance). The Server Instances form displays the total number of server instances allotted counting reserve instances.
6. Define Result Server Instances per Location as a ratio to Collector Server Instances or as a fixed amount. Note that the Total Collector Server Instances and Total Results Service Instances clearly indicate the combined server count.
7. Optionally, in the Server Instances page, check Show Advanced Settings (per Location) to perform any of the following tasks:
   - To specify server classes for Collector Server or Results Service instances

   Configured Server Classes can be selected from the Server Class drop-down. See Server Classes.

- To specify a zone in which servers will be launched



☑ Show advanced settings

Pending timeout: 300 (seconds)

Use Reserved IPs: □

Security Group (optional):

Server Class: EC2 Beacon Collector Server (Lar

Server Class: EC2 Results Server (Large)

Zone Distribution: ● Let cloud provider pick the zone for me

○ All in the same zone us-east-1 ☑ Fail over to different zone(s) if initial allocation fails

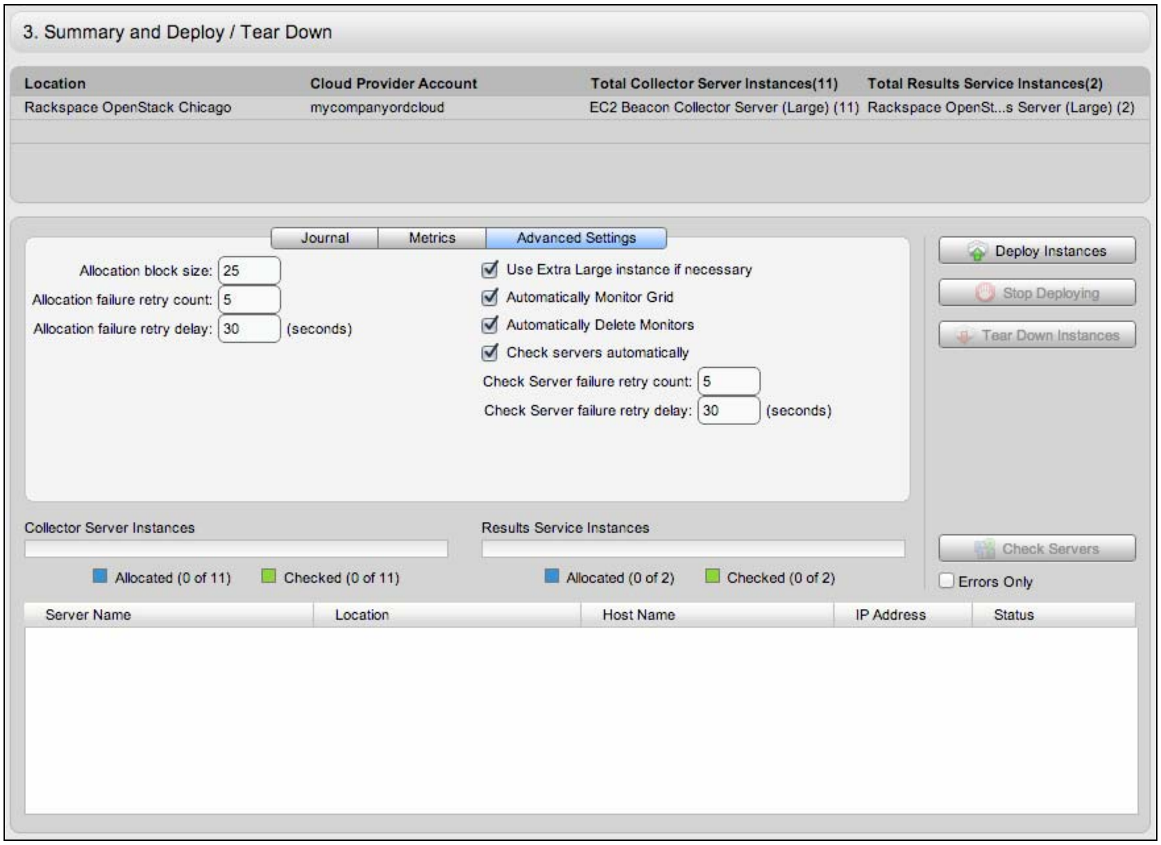
○ Distribute evenly across all zones

Total Collector Server Instances 11

Total Results Service Instances 1

- Specify the Pending Timeout in seconds for the given selection. This defaults to 300.

8. Once ready, click the right arrow to proceed to the Summary and Deploy / Tear Down screen. The Journal tab appears by default.



3. Summary and Deploy / Tear Down

Location	Cloud Provider Account	Total Collector Server Instances(11)	Total Results Service Instances(2)
Rackspace OpenStack Chicago	mycompanyordcloud	EC2 Beacon Collector Server (Large) (11)	Rackspace OpenSt...s Server (Large) (2)

Allocation block size: 25

Allocation failure retry count: 5

Allocation failure retry delay: 30 (seconds)

☑ Use Extra Large instance if necessary

☑ Automatically Monitor Grid

☑ Automatically Delete Monitors

☑ Check servers automatically

Check Server failure retry count: 5

Check Server failure retry delay: 30 (seconds)

□ Errors Only

Collector Server Instances

🟦 Allocated (0 of 11) 🟩 Checked (0 of 11)

Results Service Instances

🟦 Allocated (0 of 2) 🟩 Checked (0 of 2)

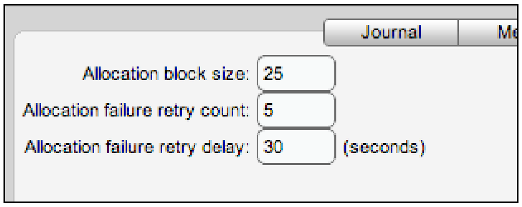
Server Name	Location	Host Name	IP Address	Status

Note that the Advanced Settings tab of the Summary section has some additional settings that can be tweaked (optional).

- **Allocation block size**

This setting will specify the server block size (e.g. the number of server instances to try at once).

For example, the user wants 500 servers. Typically, if the user wants a large number of servers, we can't ask for them all at once. If we ask for 500 Test Server instances all at once, the request will probably be rejected ("insufficient capacity", etc.). But, if we ask for them in blocks of 25, then some will succeed and some will fail.



Allocation block size: 25

Allocation failure retry count: 5

Allocation failure retry delay: 30 (seconds)

- **Allocation failure retry count**

For the total allocation request, specify a maximum number of times to retry.

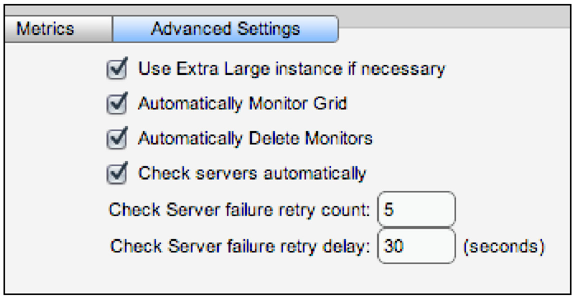
The re-try algorithm described above in the Block Size description includes two types of errors (in the case of Amazon EC2):

- Failures that are on the Amazon side, e.g. "Insufficient capacity". For these errors, we immediately fail over to a different zone.
- Failures that are probably due to networking issues (e.g. network connection reset). For these errors, we will re-try in the same zone, but only a certain number of times.

- **Allocation failure retry delay**

For the set of allocation requests, specify a number in seconds between retries.

For same-zone re-tries, delay this number of seconds first.



☑ Use Extra Large instance if necessary

☑ Automatically Monitor Grid

☑ Automatically Delete Monitors

☑ Check servers automatically

Check Server failure retry count: 5

Check Server failure retry delay: 30 (seconds)

- **Use XL Instances If Necessary**

This default, if checked, provides the ability to Fail Over to XL Instances. This setting permits XL instances to be called upon if allocation to L instances is insufficient.

- **Automatically Monitor Grid**

Start the default monitors for each server. See Default Monitoring

- **Automatically Delete Monitors**

When checked, automatically delete default monitors when the **grid** is shut down. To review the monitoring data later on, turn off this setting. This is usually left on, because the monitoring data is usually used just to "keep an eye on things" during the test.

- **Check Servers automatically**

Initiate "check servers" as part of this server deployment.

This setting should be left on. If it's checked, then after all servers have reached the "Running" state, we do a "health check" of the CloudTest services (e.g. Test Server) on each server.

- **Check Server failure retry count**

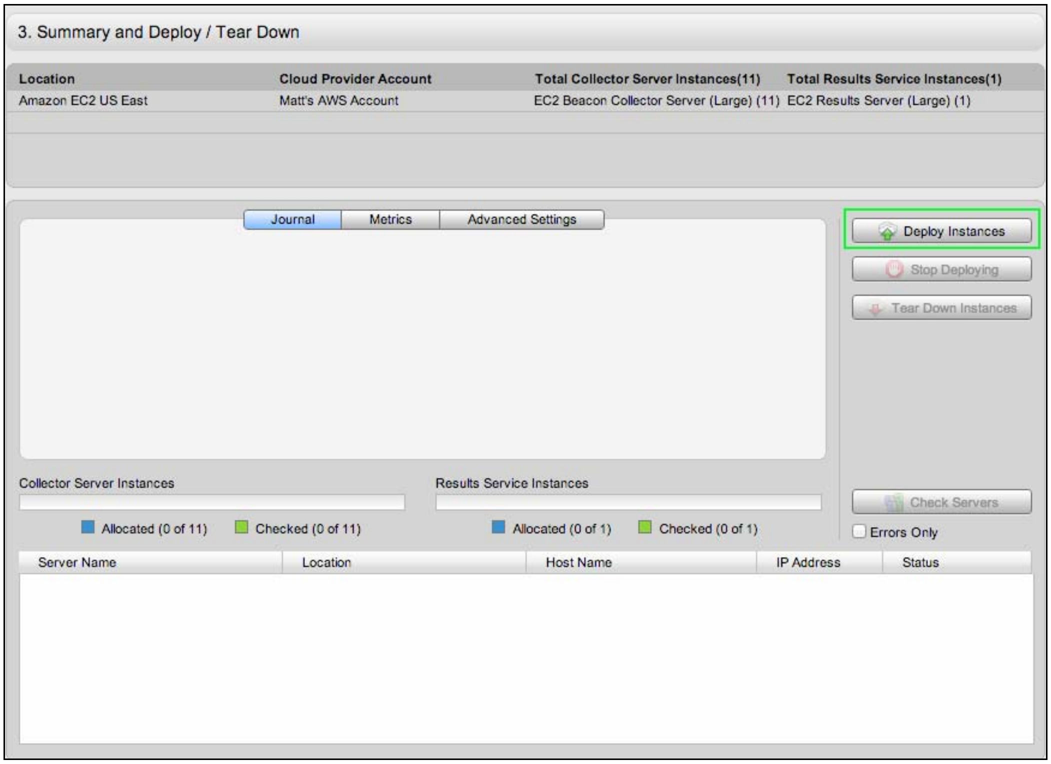
Specify the number of times to retry the server allocation.

Usually, the first "health check" of a server will fail—just because the machine has booted, it doesn't mean that JBoss has finished starting, etc. So, CloudTest will re-try, if necessary. The max number of retries is this setting.

- **Check Server retry delay**

Specify the time in seconds to delay between retries.

9. Click Deploy Instances when ready. A spinner will appear while the default monitor is starting and stops when that phase is complete. The green checkmark appears only when default monitoring is deployed.



3. Summary and Deploy / Tear Down

Location	Cloud Provider Account	Total Collector Server Instances(11)	Total Results Service Instances(1)
Amazon EC2 US East	Matt's AWS Account	EC2 Beacon Collector Server (Large) (11)	EC2 Results Server (Large) (1)

□ Errors Only

Collector Server Instances

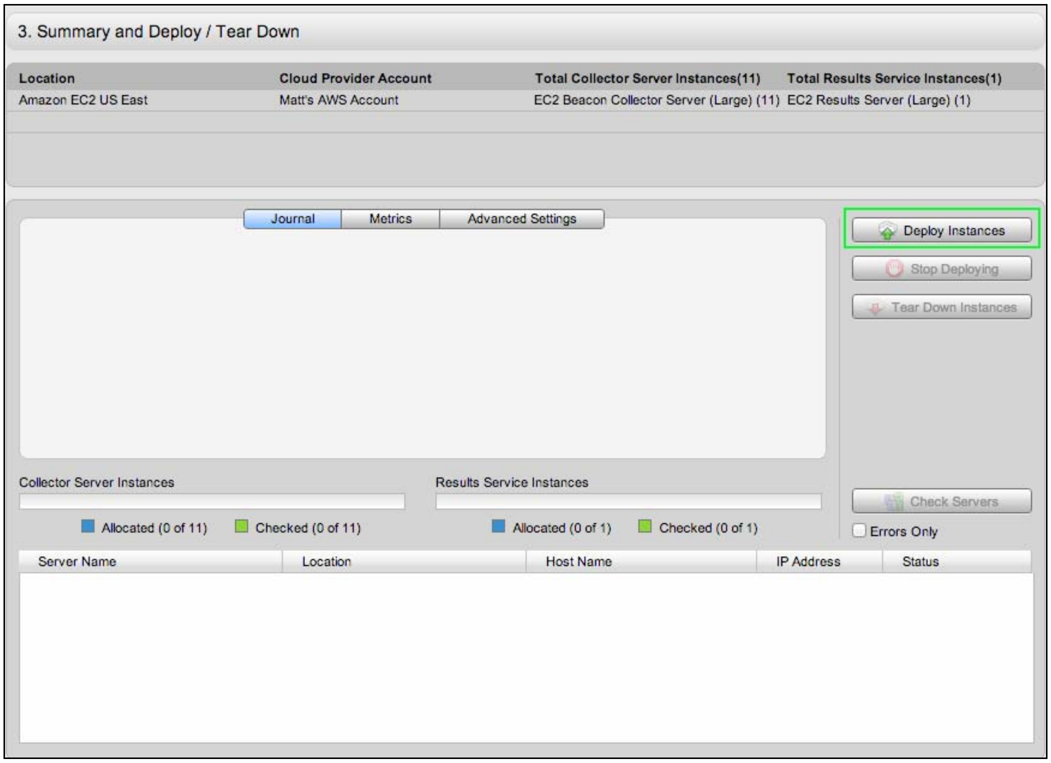
🟦 Allocated (0 of 11) 🟩 Checked (0 of 11)

Results Service Instances

🟦 Allocated (0 of 1) 🟩 Checked (0 of 1)

Server Name	Location	Host Name	IP Address	Status

Grid Deployment will begin and the Journal tab will indicate progress.



3. Summary and Deploy / Tear Down

Location	Cloud Provider Account	Total Collector Server Instances(11)	Total Results Service Instances(1)
Amazon EC2 US East	Matt's AWS Account	EC2 Beacon Collector Server (Large) (11)	EC2 Results Server (Large) (1)

□ Errors Only

Collector Server Instances

🟦 Allocated (0 of 11) 🟩 Checked (0 of 11)

Results Service Instances

🟦 Allocated (0 of 1) 🟩 Checked (0 of 1)

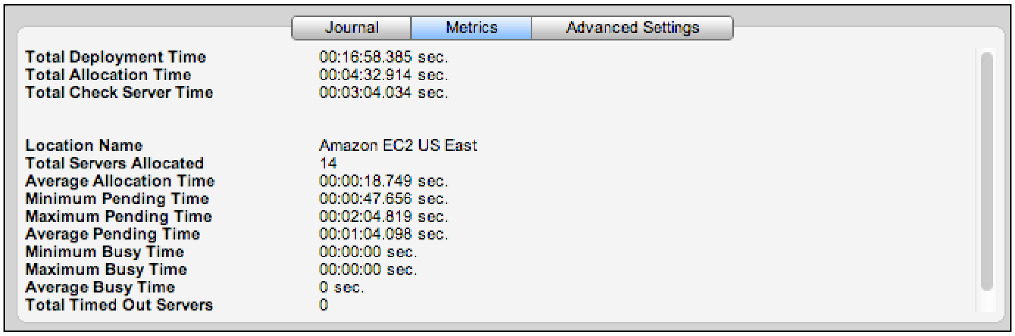
Server Name	Location	Host Name	IP Address	Status

10. The Grid Ready icon will display when the requested servers are allocated successfully. For example, 10 0f 10 allocated Test Servers were successfully checked and allocated below.

- The **Grid** Ready, with failures icon will display whenever allocation and checking finished without getting all of the requested servers. For example, 2 of 10 requested servers were checked and allocated.

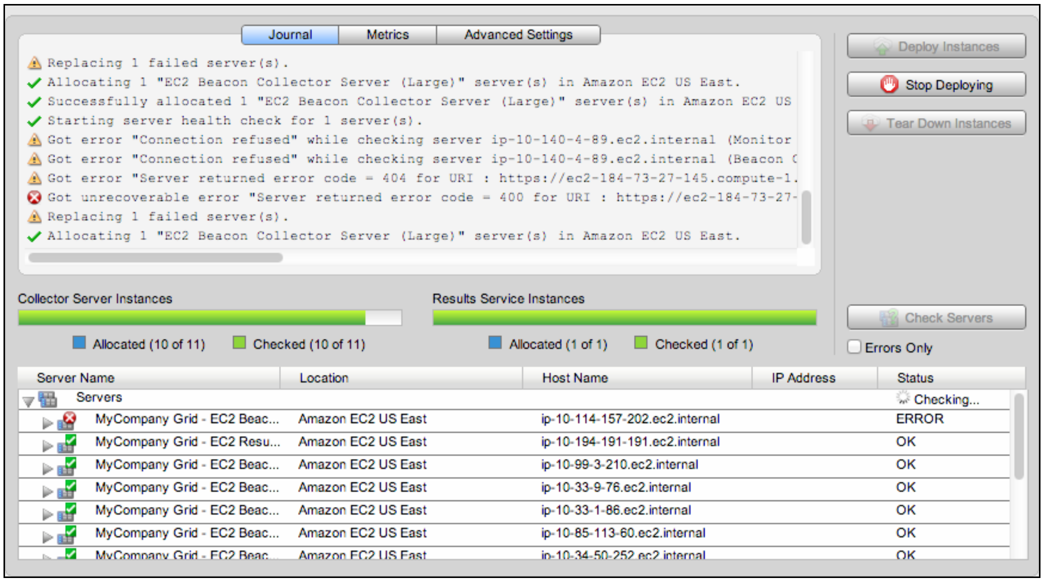
- The Stopped icon will display whenever all of the requested servers failed to be allocated or the Stop Deploying button is clicked.

- When grid use is complete, click the Tear Down Instances button. When you do so, the grid indicates progress in the status area of the Journal tab.



```
Total Deployment Time          00:16:58.385 sec.
Total Allocation Time          00:04:32.914 sec.
Total Check Server Time        00:03:04.034 sec.

Location Name                  Amazon EC2 US East
Total Servers Allocated        14
Average Allocation Time        00:00:18.749 sec.
Minimum Pending Time           00:00:47.656 sec.
Maximum Pending Time           00:02:04.819 sec.
Average Pending Time           00:01:04.098 sec.
Minimum Busy Time              00:00:00 sec.
Maximum Busy Time              00:00:00 sec.
Average Busy Time              0 sec.
Total Timed Out Servers        0
```

Note that metrics and journaling tabs are provided for grids while in deploy and provide useful detail information about grid performance.



```
⚠ Replacing 1 failed server(s).
✓ Allocating 1 "EC2 Beacon Collector Server (Large)" server(s) in Amazon EC2 US East.
✓ Successfully allocated 1 "EC2 Beacon Collector Server (Large)" server(s) in Amazon EC2 US
✓ Starting server health check for 1 server(s).
⚠ Got error "Connection refused" while checking server ip-10-140-4-89.ec2.internal (Monitor
⚠ Got error "Connection refused" while checking server ip-10-140-4-89.ec2.internal (Beacon (
⚠ Got error "Server returned error code = 404 for URI : https://ec2-184-73-27-145.compute-1.
☒ Got unrecoverable error "Server returned error code = 400 for URI : https://ec2-184-73-27-
⚠ Replacing 1 failed server(s).
✓ Allocating 1 "EC2 Beacon Collector Server (Large)" server(s) in Amazon EC2 US East.
```

Collector Server Instances

🟦 Allocated (10 of 11) 🟩 Checked (10 of 11)

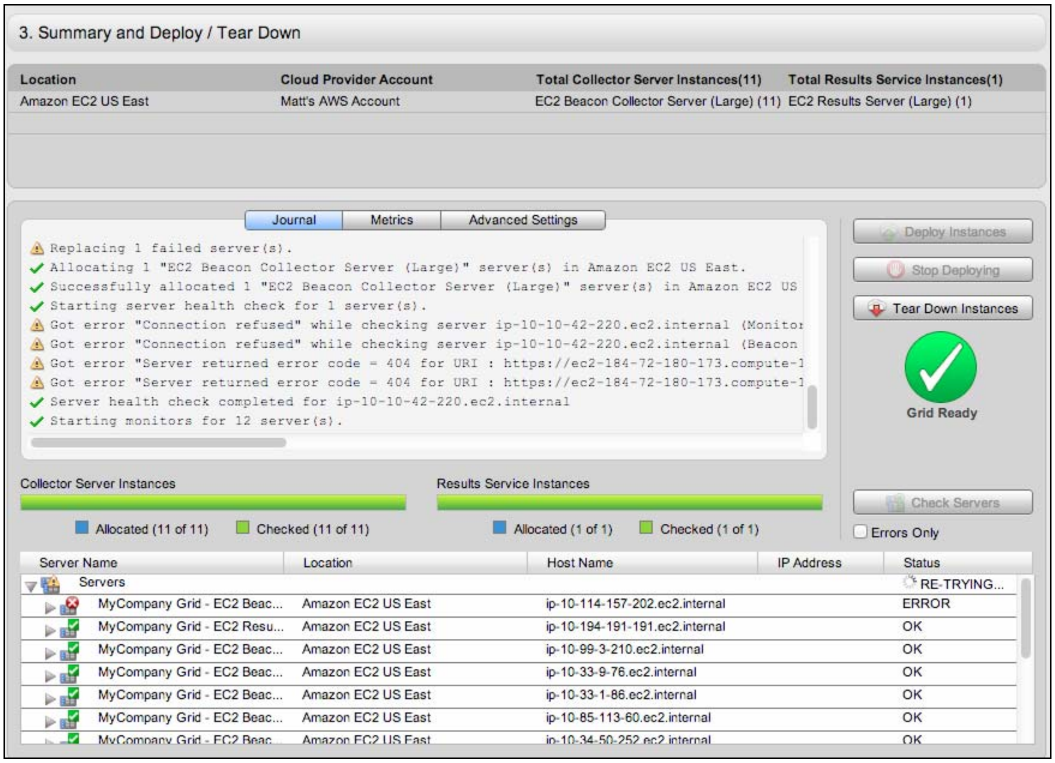
Results Service Instances

🟦 Allocated (1 of 1) 🟩 Checked (1 of 1)

□ Errors Only

Server Name	Location	Host Name	IP Address	Status
Servers				Checking...
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-114-157-202.ec2.internal		ERROR
MyCompany Grid - EC2 Resu...	Amazon EC2 US East	ip-10-194-191-191.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-99-3-210.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-33-9-76.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-33-1-86.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-85-113-60.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-34-50-252.ec2.internal		OK

In the following shot an mPulse grid with 11 of 11 Collector Servers and one Results Server instance allocated is shown.



3. Summary and Deploy / Tear Down

Location	Cloud Provider Account	Total Collector Server Instances(11)	Total Results Service Instances(1)
Amazon EC2 US East	Matt's AWS Account	EC2 Beacon Collector Server (Large) (11)	EC2 Results Server (Large) (1)

```
⚠ Replacing 1 failed server(s).
✓ Allocating 1 "EC2 Beacon Collector Server (Large)" server(s) in Amazon EC2 US East.
✓ Successfully allocated 1 "EC2 Beacon Collector Server (Large)" server(s) in Amazon EC2 US
✓ Starting server health check for 1 server(s).
⚠ Got error "Connection refused" while checking server ip-10-10-42-220.ec2.internal (Monitor
⚠ Got error "Connection refused" while checking server ip-10-10-42-220.ec2.internal (Beacon
⚠ Got error "Server returned error code = 404 for URI : https://ec2-184-72-180-173.compute-1
⚠ Got error "Server returned error code = 404 for URI : https://ec2-184-72-180-173.compute-1
✓ Server health check completed for ip-10-10-42-220.ec2.internal
✓ Starting monitors for 12 server(s).
```

Collector Server Instances

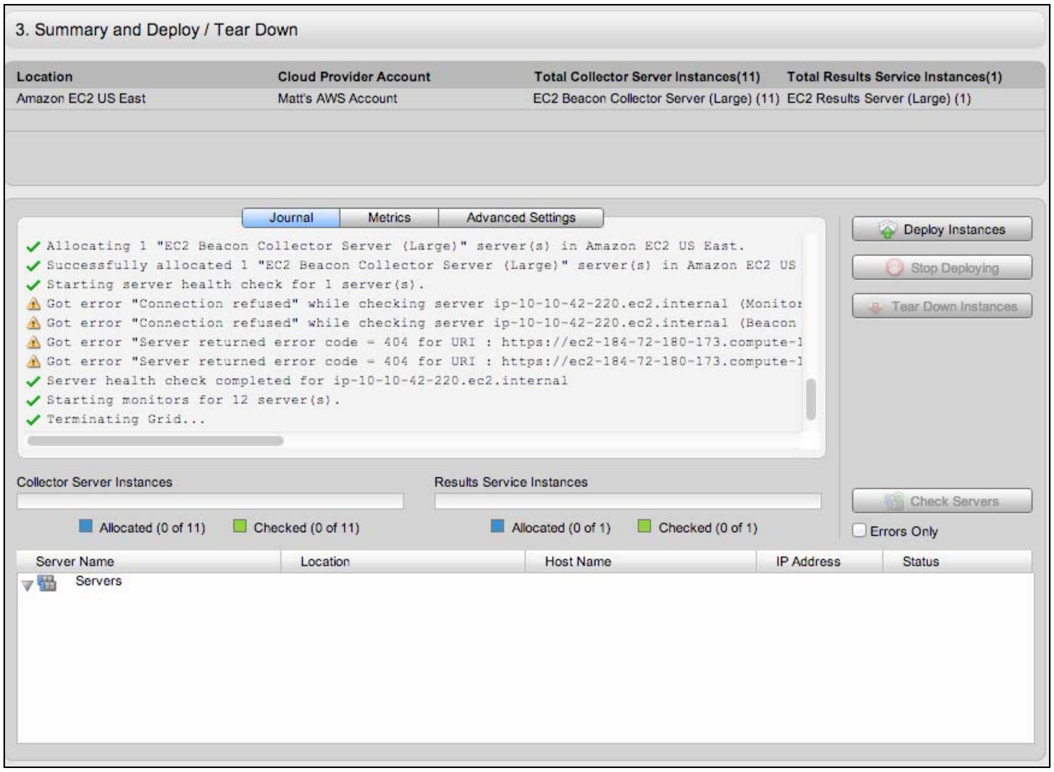
🟦 Allocated (11 of 11) 🟩 Checked (11 of 11)

Results Service Instances

🟦 Allocated (1 of 1) 🟩 Checked (1 of 1)

Server Name	Location	Host Name	IP Address	Status
Servers				RE-TRYING...
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-114-157-202.ec2.internal		ERROR
MyCompany Grid - EC2 Resu...	Amazon EC2 US East	ip-10-194-191-191.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-99-3-210.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-33-9-76.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-33-1-86.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-85-113-60.ec2.internal		OK
MyCompany Grid - EC2 Beac...	Amazon EC2 US East	ip-10-34-50-252.ec2.internal		OK

When an mPulse grid is no longer needed, it can be torn down using the Tear Down Instances button (as with any non-mPulse grid). The journaling grid will indicate the Terminating Grid… status until the grid is fully down.



3. Summary and Deploy / Tear Down

Location	Cloud Provider Account	Total Collector Server Instances(11)	Total Results Service Instances(1)
Amazon EC2 US East	Matt's AWS Account	EC2 Beacon Collector Server (Large) (11)	EC2 Results Server (Large) (1)

```
✓ Allocating 1 "EC2 Beacon Collector Server (Large)" server(s) in Amazon EC2 US East.
✓ Successfully allocated 1 "EC2 Beacon Collector Server (Large)" server(s) in Amazon EC2 US
✓ Starting server health check for 1 server(s).
⚠ Got error "Connection refused" while checking server ip-10-10-42-220.ec2.internal (Monitor
⚠ Got error "Connection refused" while checking server ip-10-10-42-220.ec2.internal (Beacon
⚠ Got error "Server returned error code = 404 for URI : https://ec2-184-72-180-173.compute-1
⚠ Got error "Server returned error code = 404 for URI : https://ec2-184-72-180-173.compute-1
✓ Server health check completed for ip-10-10-42-220.ec2.internal
✓ Starting monitors for 12 server(s).
✓ Terminating Grid...
```

Collector Server Instances

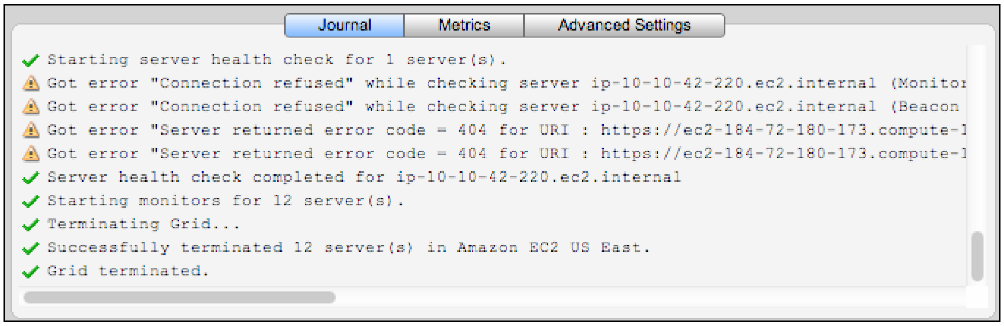
🟦 Allocated (0 of 11) 🟩 Checked (0 of 11)

Results Service Instances

🟦 Allocated (0 of 1) 🟩 Checked (0 of 1)

Server Name	Location	Host Name	IP Address	Status
Servers				

Once grid termination is complete this status is indicated.



```
✓ Starting server health check for 1 server(s).
⚠ Got error "Connection refused" while checking server ip-10-10-42-220.ec2.internal (Monitor
⚠ Got error "Connection refused" while checking server ip-10-10-42-220.ec2.internal (Beacon
⚠ Got error "Server returned error code = 404 for URI : https://ec2-184-72-180-173.compute-1
⚠ Got error "Server returned error code = 404 for URI : https://ec2-184-72-180-173.compute-1
✓ Server health check completed for ip-10-10-42-220.ec2.internal
✓ Starting monitors for 12 server(s).
✓ Terminating Grid...
✓ Successfully terminated 12 server(s) in Amazon EC2 US East.
✓ Grid terminated.
```

Analytics

SOASTA mPulse™ provides the analytics tools necessary to evaluate the real-user measurement data collected from your beacons by providing two system dashboards—the Globe Dashboard and the mPulse Dashboard. Both the globe and the individual widgets included in the mPulse Dashboard can be added to custom dashboards you can filter and arrange like any other SOASTA dashboard.

Globe Dashboard

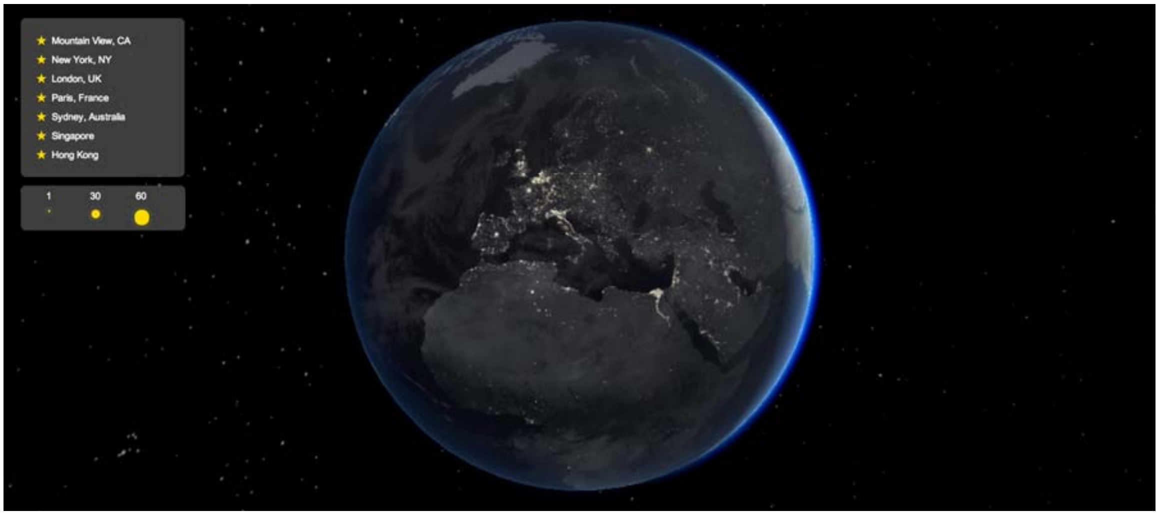
The Globe Dashboard presents your real-user measurement data stream in one dramatic, three-dimensional, WebGL-based global format with fly-to animation.

Note: Globe support is provided currently within Chrome and Firefox only.

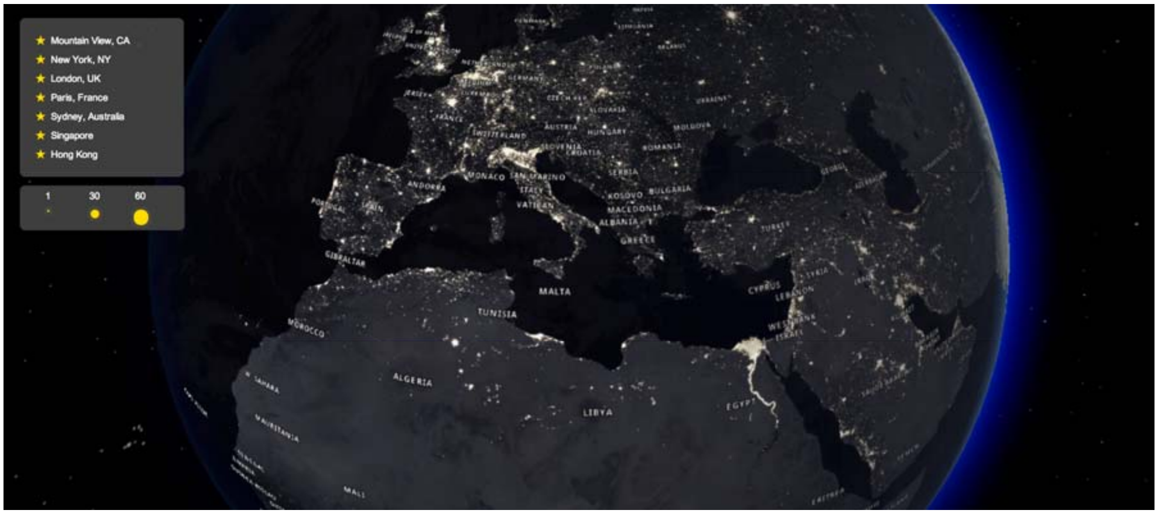
In its default state, the Globe spins, clearly and accurately showing the current solar terminator point between night and day as well as clearly representing the twilight zone, or moving line, between the two. Click to stop the globe's rotation and use gestures to zoom. Alternately, click one of the fly-to locations on the Legend to move to it.

Controlling the Globe

Navigate the Globe by scrolling, by clicking a legend fly-to location, as well as by other user interactions such as pinch gestures on your trackpad.

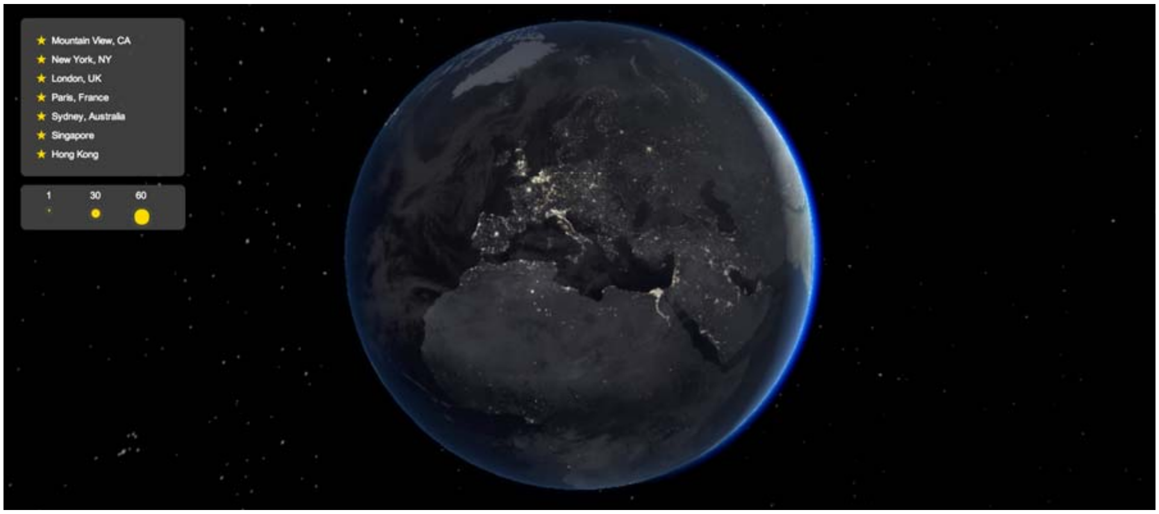


To zoom to a location drag the globe into the desired position and click a Legend location or scroll to zoom.



TIP: Legend locations can be added in the Edit Panel for the Globe by entering a new Favorite Location in the dashboard-level filter panel. You can distinguish the default legend favorite United States (includes Hawaii and Alaska) by adding Continental United States (showing only the 48 contiguous states)

Continue to zoom by clicking a geographic location such as Italy.



Setting Globe Widget Properties

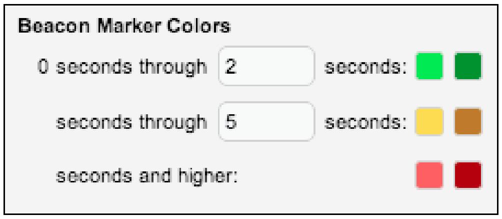
The Globe widget has many properties that control beacon color, beacons size, globe rotation speed and gamma correction controls (used to make the widget lighter or darker in response to your work environment), as well as properties to show regional labels, political borders, globe imagery, and to set favorite locations in the legend.

For all properties, click Apply to make your changes effective immediately.

Beacon Marker Colors

When beacon data streams into the globe it is presented in the common green (good), yellow (marginal), and red (bad) color ranges common to traffic systems.

Since mPulse beacons measure time, and performance expectations for response time can vary due to many factors, such as location or bandwidth, beacon marker colors can be controlled by setting a range in seconds.



Beacon Marker Colors

0 seconds through 2 seconds: 🟩 🟩

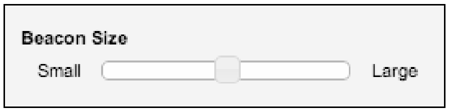
seconds through 5 seconds: 🟨 🟧

seconds and higher: 🟥 🟥

- By default, green beacons are matched lighter to darker with the 0 seconds through 2 second range. Change the top number of this range according to need.
- By default, yellow beacons are matched lighter to darker from the top of the green range (2 seconds by default) through 5 seconds. If the prior range has been changed then the start of this range resumes at that point (so, for example if green now ends at 6 then the yellow range will start at 6). Be sure to adjust the subsequent ranges accordingly.
- By default, red beacons are matched lighter to darker from the top of the yellow range and anything higher.

Beacon Size

Use the beacon size slider to control the size display of beacon data from small to large.

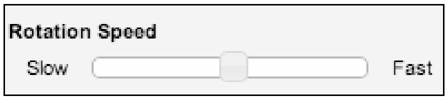


Beacon Size

Small Large

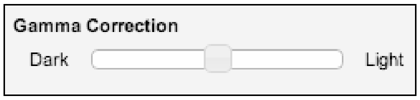
Rotation Speed

Use the rotation speed to control the rate at which the globe spins.



Gamma Correction

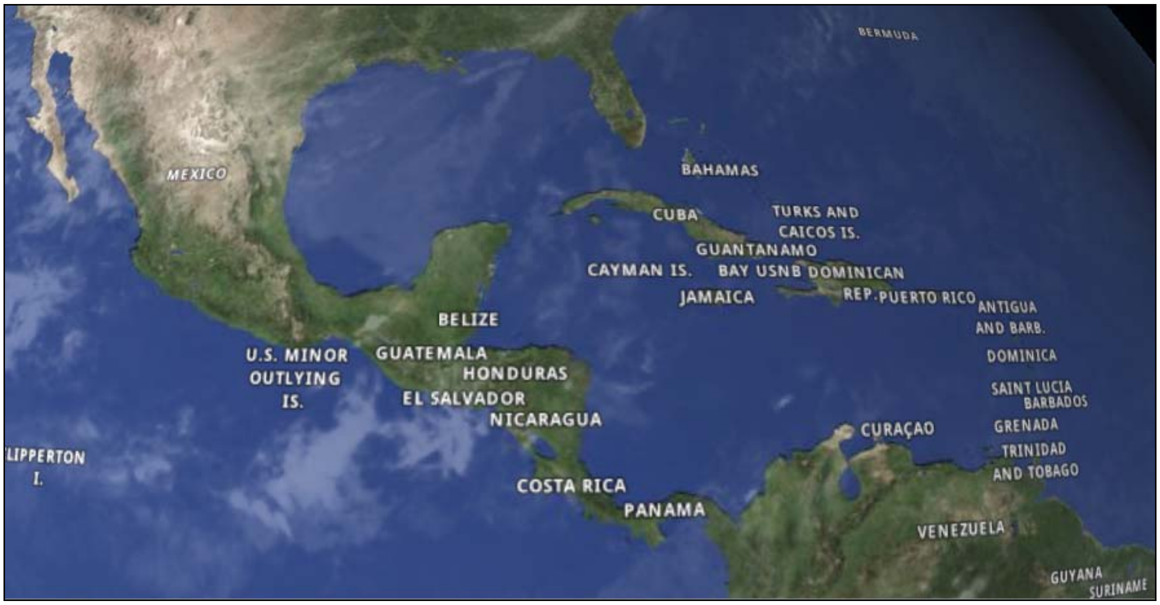
Use gamma correction to control the dark to light range of the Globe display itself.



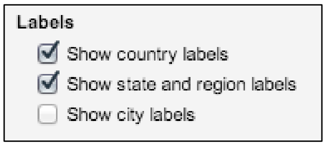
This setting is useful when your work environment is darker or lighter than the average setting, such as is common in corporate "NOCs" (i.e. network operation centers that require low lighting levels).

Labels

Country labels and state and region labels are on by default when your globe loads. However, during fly-to and zoom sequences text labels begin to show at the appropriate level of detail.



Country, state, and region labels are on by default. Uncheck them if this is not your preference.

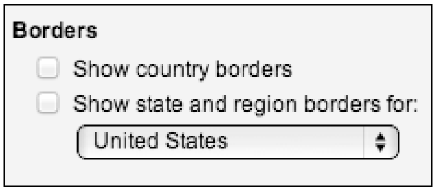

Labels

☑ Show country labels
☑ Show state and region labels
□ Show city labels

City labels are not shown by default. Check Show city labels if you prefer to show them. Additional labels will display on zoom.

Borders

Political borders are not shown by default. Check Show country borders or Show state and region borders for: to enable them.



Borders

□ Show country borders

□ Show state and region borders for:

United States

Note that state and region borders are only applicable to one country at a time. Click the drop-down to make your selection (United States by default).

Imagery

The Imagery section contains background and base imagery settings for Globe control.

- Background – Sets the background for the globe itself. Choose from among Starfield (shows a black background in a field of stars), White, Black (with no stars), and Transparent (for combining with other charts and interpolating data).
- Base Imagery – Sets the base imagery for the globe itself. Choose from among Blue Marble (the classic global nickname for our planet displays Earth as if from a satellite or a traveling spacecraft), mPulse Light, mPulse Dark, MapQuest Aerial, and MapQuest Street).

Favorite Locations

Favorite Locations are displayed in the Globe Legend as convenient click points for fly-to animation. Click any default or custom location to fly to (out if you're already zoomed into a location, in if you're at satellite view) to the desired location. The defaults are Mountain View, CA; New York, NY; London, UK; Paris, France; Sydney, Australia; Singapore, and Hong Kong.

To add a custom favorite location, enter the place name in the entry field at the bottom. For example, type "United States" (shows all 50 states) or "Continental United States" (to show only the 48 states minus Alaska and Hawaii).

Cycle fly-to every *n* seconds

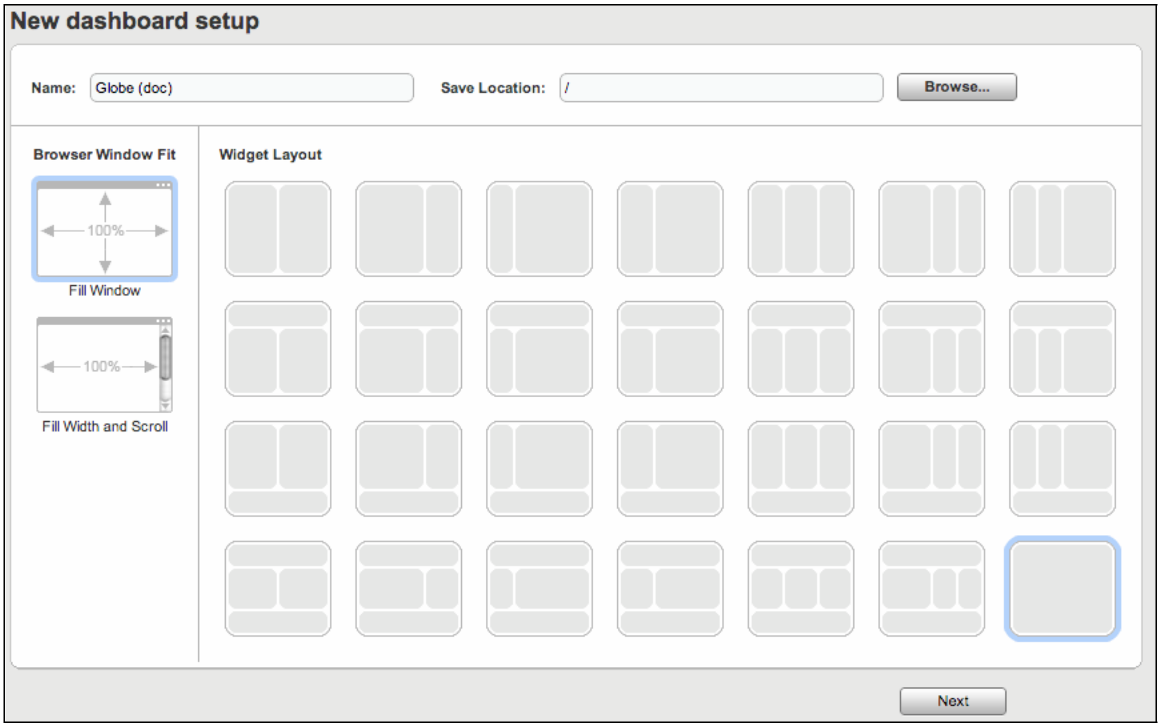
Enter an integer in seconds to control the fly-to sequence's cycle speed.

Creating a Custom Globe Dashboard

In addition to the default Globe Dashboard, users can create custom dashboards using the Globe widget.

Use the following steps to create a custom dashboard for the Globe.

1. Select Central > Dashboards and then click New (top left toolbar button).
2. Enter a dashboard name, select Browser Window Fit and the no column widget layout (bottom far right). This is important because the Globe works best when it utilizes all of the available space.

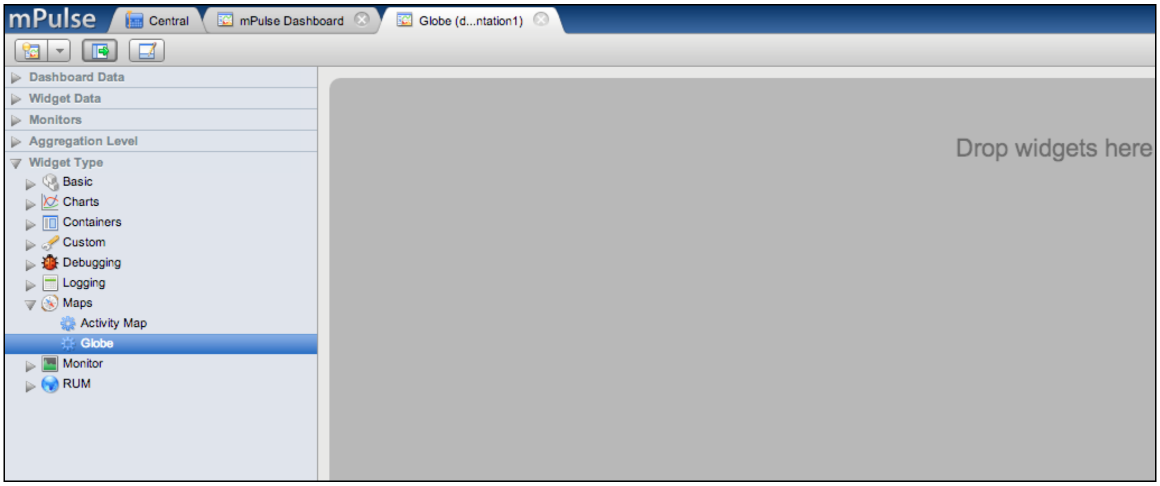


New dashboard setup

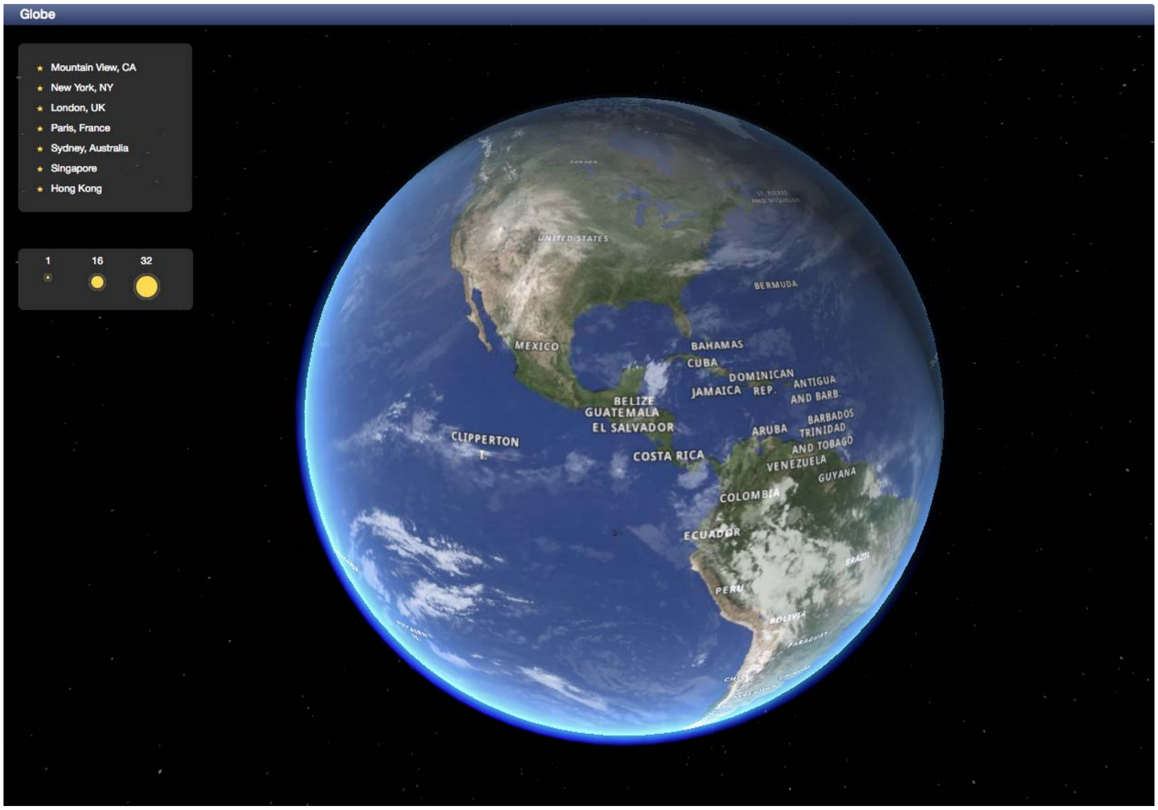
Name: Globe (doc)

Save Location: /

3. The new empty dashboard tab opens with the Widget Selection Panel toggled on. Locate the Globe widget in the Widget Type Selection Panel's Maps section.

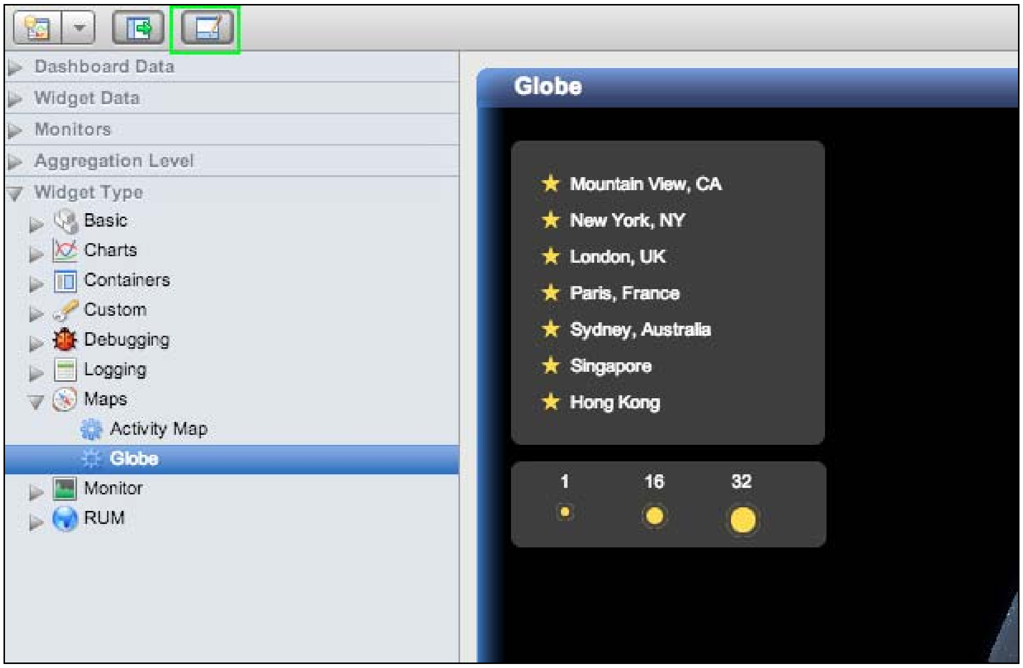


4. Drag the Globe widget into the dashboard. The widget is added and the globe begins to spin at its default rate.

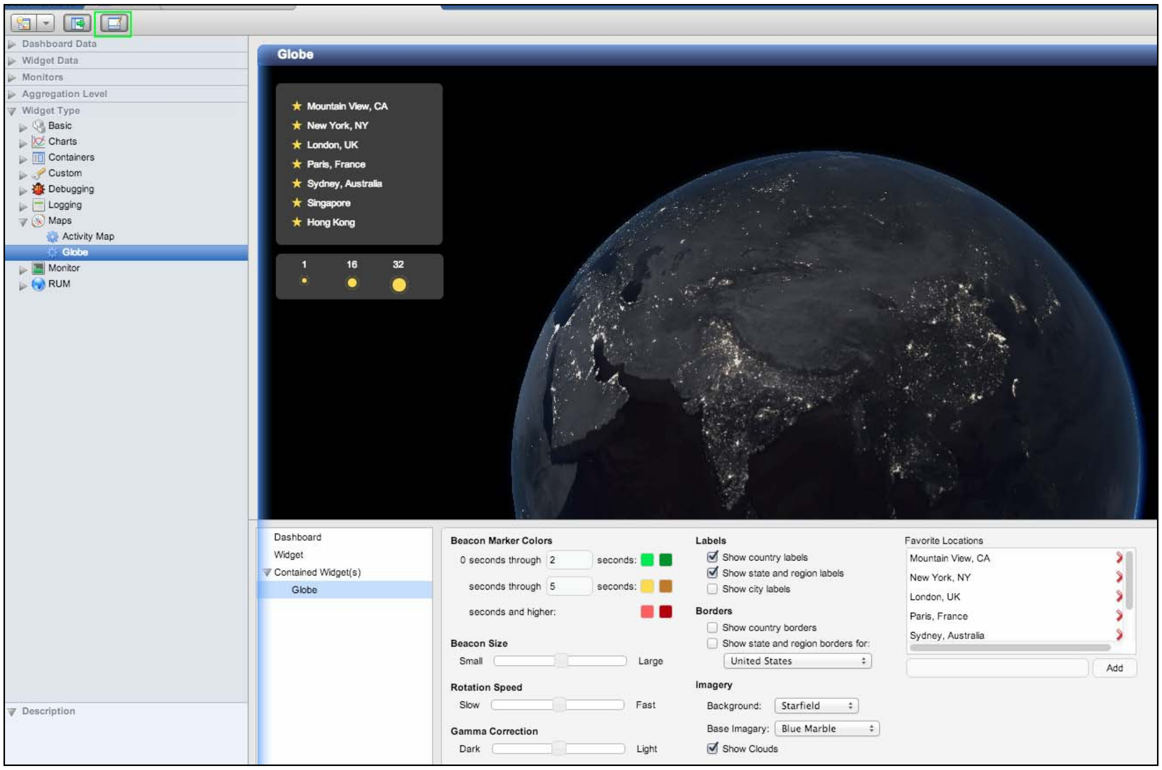


As shown above, the default label settings are in effect and the blue marble globe appears against the Starfield background display. The default legend shows some common locations (click any of them to fly-to that location). Additionally, the legend shows the default beacon size (by measurement).

5. Now that the dashboard is in place, select the widget by clicking its title bar and then click Toggle Dashboard Edit Mode.



When you do so, the dashboard Edit Panel opens with the Globe widget selected. These properties are specific to the Globe widget.



Beacon Marker Colors

0 seconds through 2 seconds: 🟩 🟩

seconds through 5 seconds: 🟨 🟧

seconds and higher: 🟥 🟥

Beacon Size

Small — Large

Rotation Speed

Slow — Fast

Gamma Correction

Dark — Light

Labels

☑ Show country labels
☑ Show state and region labels
□ Show city labels

Borders

□ Show country borders
□ Show state and region borders for: United States

Imagery

Background: Starfield
Base Imagery: Blue Marble
☑ Show Clouds

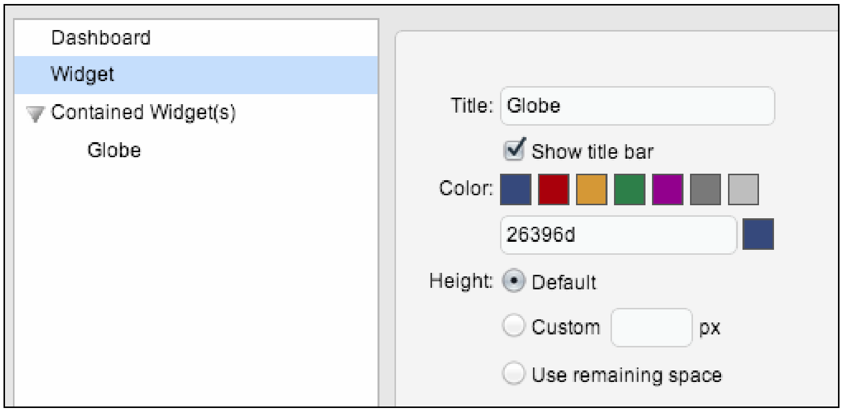
Favorite Locations

Mountain View, CA
New York, NY
London, UK
Paris, France
Sydney, Australia

Add

Binding a Custom Globe Dashboard to mPulse Beacons

1. To bind your globe widget to beacons already being collected, toggle the Edit Panel on and select the Widget node in the Edit Panel list.



Dashboard
Widget
Contained Widget(s)
Globe

Title: Globe

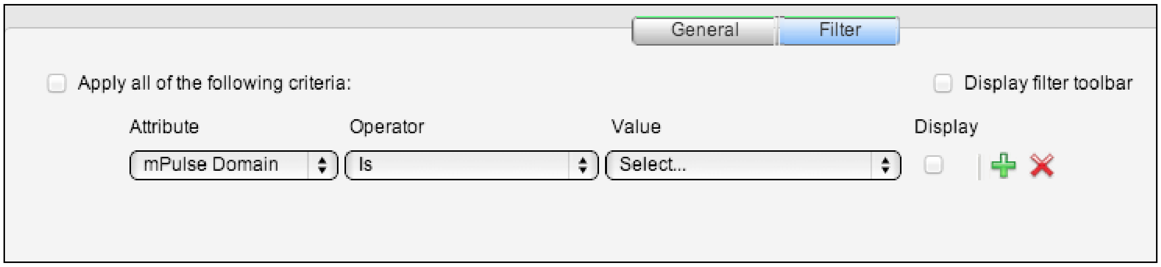
☑ Show title bar

Color: 🟦 🟥 🟧 🟩 🟪 ⬛ ⬜

26396d 🟦

Height: ● Default
○ Custom px
○ Use remaining space

2. In the widget panel on the right, click the Filter tab.

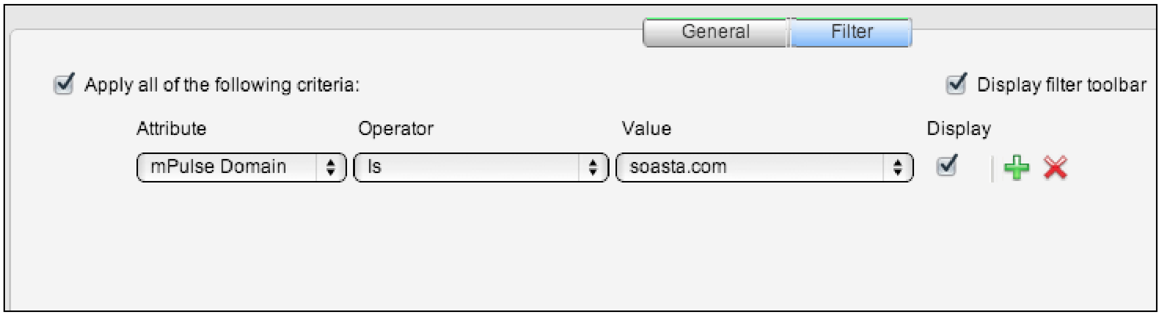


□ Apply all of the following criteria:

□ Display filter toolbar

Attribute	Operator	Value	Display
mPulse Domain	Is	Select...	□

3. With the mPulse Domain as the attribute, select a value from among the configured mPulse Domains (domains can be configured using either the Add mPulse utility for mobile apps or manually per domain using the instructions in Manually Configure a Domain above). Any configured mPulse domain accessible from this server will display here.
4. Check Apply all of the following criteria.
5. If you have more than one domain, you can also check Display filter toolbar. This will display the same controls shown on the default mPulse Dashboard.



☑ Apply all of the following criteria:

☑ Display filter toolbar

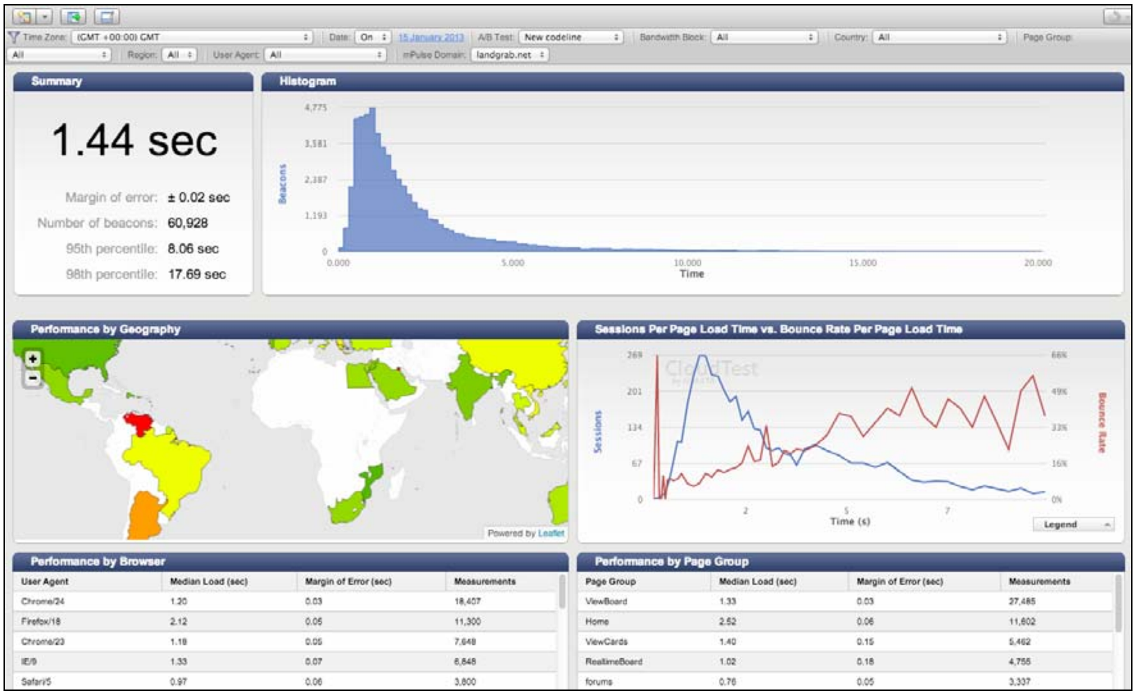
Attribute	Operator	Value	Display
mPulse Domain	Is	soasta.com	☑

6. Click Apply.
7. Click OK to exit the Edit Panel.

mPulse Default Dashboard

The real-time mPulse dashboard is an interactive in-memory monitoring dashboard that captures the actual web user as well as the mobile user experience. A second-by-second view of real user activity is broken down by continent, region, country or city in a variety of analytic widgets.

For users in an mPulse only environment, the mPulse Dashboard appears immediately after the first login.



Time Zone: (GMT +00:00) GMT | Date: On | 15 January 2013 | A/B Test: New codeline | Bandwidth Block: All | Country: All | Page Group: All | Region: All | User Agent: All | mPulse Domain: landgrab.net

Summary

1.44 sec

Margin of error: ± 0.02 sec
Number of beacons: 60,928
95th percentile: 8.06 sec
98th percentile: 17.69 sec

Performance by Browser

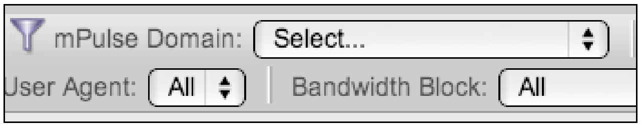
User Agent	Median Load (sec)	Margin of Error (sec)	Measurements
Chrome/24	1.20	0.03	18,407
Firefox/18	2.12	0.05	11,300
Chrome/23	1.18	0.05	7,648
IE/9	1.33	0.07	6,848
Safari/5	0.97	0.06	3,800

Performance by Page Group

Page Group	Median Load (sec)	Margin of Error (sec)	Measurements
ViewBoard	1.33	0.03	27,485
Home	2.52	0.06	11,602
ViewCards	1.40	0.15	5,462
RealtimeBoard	1.02	0.18	4,755
forums	0.76	0.05	3,337

In some cases the dashboard will appear with no data until an mPulse Domain has been defined by your Domain Administrator and then selected in the dashboard from the mPulse Domain dropdown.

Where mPulse Domain configuration has been done for you, you need only select the configured domain.



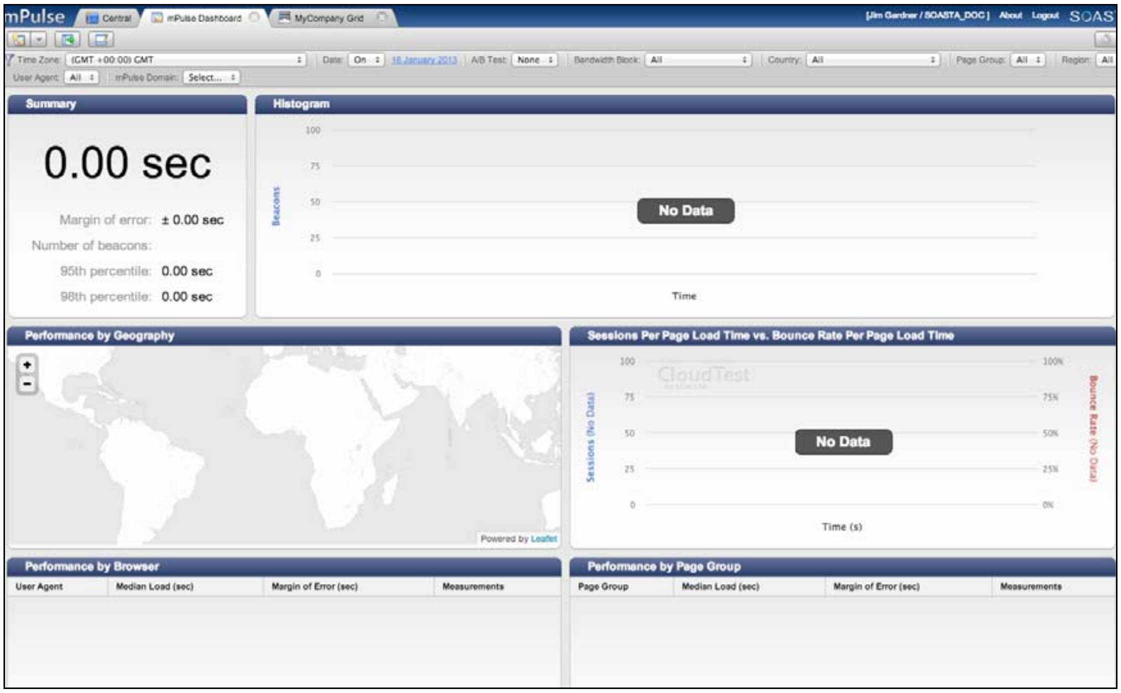
mPulse Domain: Select...

User Agent: All

Bandwidth Block: All

An mPulse Domain can be a web site or native app for iOS or Android. In either case, the beacon code is seeded into the web site (using a site or individual page header) or distributed into an app via the Add mPulse utility.

In some cases, custom mPulse dashboards may also appear with no data in the dashboard.



Time Zone: (GMT +00:00) GMT | Date: On 16 January 2013 | A/B Test: None | Bandwidth Block: All | Country: All | Page Group: All | Region: All

User Agent: All | mPulse Domain: Select...

Summary

0.00 sec

Margin of error: ± 0.00 sec

Number of beacons:

95th percentile: 0.00 sec

98th percentile: 0.00 sec

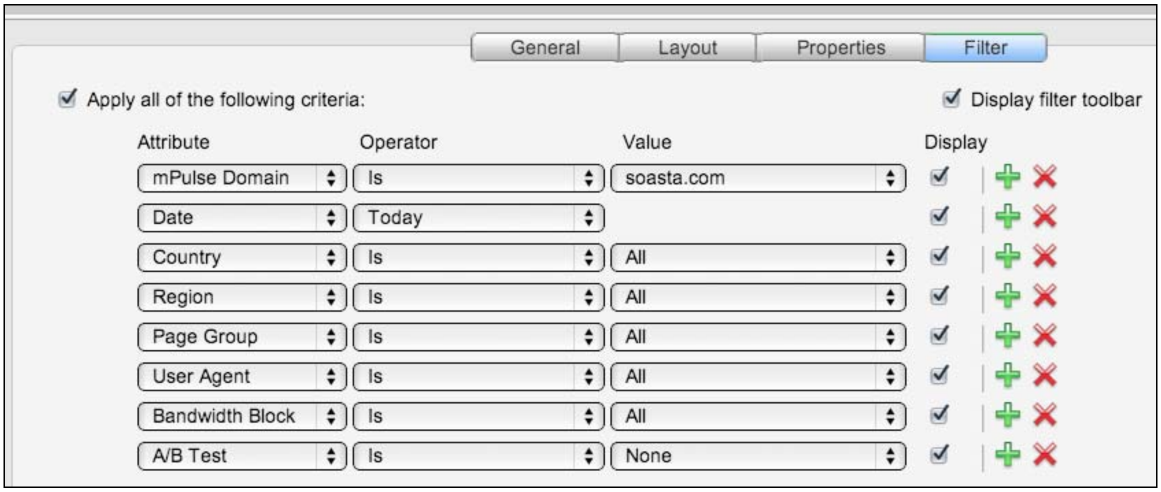
User Agent	Median Load (sec)	Margin of Error (sec)	Measurements

Page Group	Median Load (sec)	Margin of Error (sec)	Measurements

Once selected, the mPulse domain's beacon data will display in the default RUM widgets included in the default dashboard.

mPulse Dashboard and Widget Attribute Filters

By default, the mPulse dashboard displays its filters on the Display Filter toolbar at the top of the dashboard. These default dashboard-level controls originate from the dashboard's Edit Filter Panel (shown below) and can be utilized in any mPulse dashboard. Filters selected at the dashboard level apply to all the widgets.

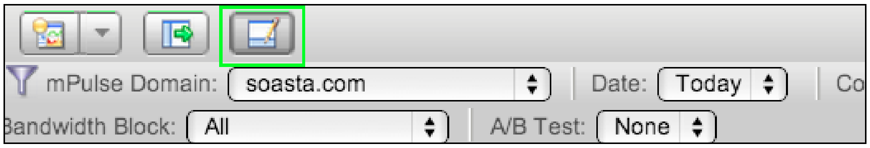


☑ Apply all of the following criteria:

☑ Display filter toolbar

Attribute	Operator	Value	Display	
mPulse Domain	Is	soasta.com	☑	+ ✗
Date	Today		☑	+ ✗
Country	Is	All	☑	+ ✗
Region	Is	All	☑	+ ✗
Page Group	Is	All	☑	+ ✗
User Agent	Is	All	☑	+ ✗
Bandwidth Block	Is	All	☑	+ ✗
A/B Test	Is	None	☑	+ ✗

TIP: In the case of the default mPulse Dashboard, clicking the Toggle Dashboard Edit Mode button will prompt you to create your own mPulse dashboard, which will also inherit these default settings.

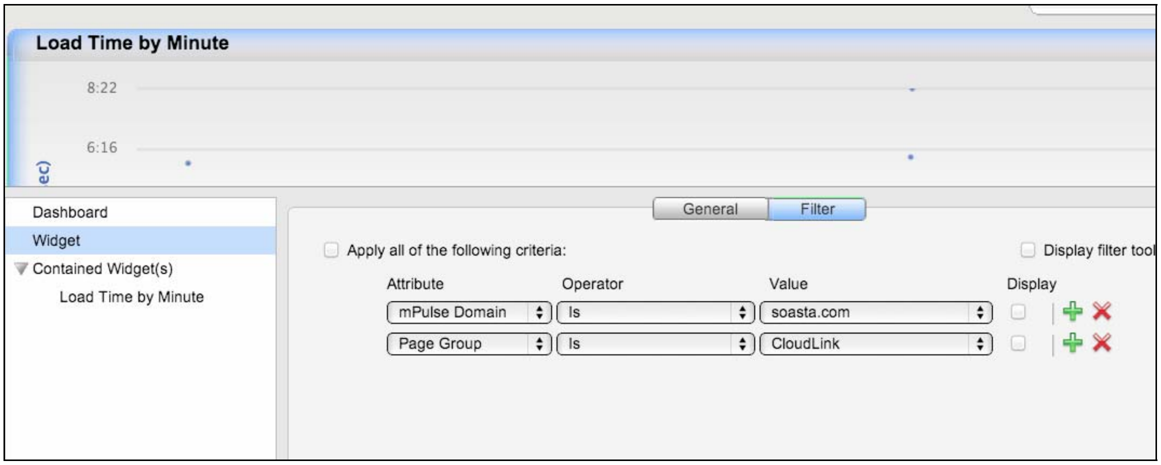


mPulse Domain: soasta.com | Date: Today | Co

Bandwidth Block: All | A/B Test: None

If you'd like to create a dashboard that doesn't inherit these settings first select Central > Dashboards, and then click New, to begin from scratch. Once your new dashboard exists, invoke the Dashboard Edit Mode, ensure that Dashboard is selected on the left, and then click the Filter tab. Use the green Plus (+) icon to add and the red X icon to delete a filter row.

The same attribute filters can be selected per widget whenever the given widget is selected while the Edit Filter Panel is active. For example, in the shot below the Load Time by Minute widget is about to be filtered by mPulse Domain and Page Group within that time.



□ Apply all of the following criteria:

□ Display filter tool

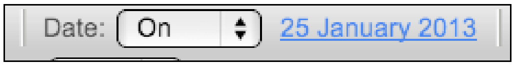
Attribute	Operator	Value	Display
mPulse Domain	Is	soasta.com	□
Page Group	Is	CloudLink	□

mPulse Domain

As noted above, any administrator configured web or app registered as a domain in the SOASTA repository will appear in this dropdown.

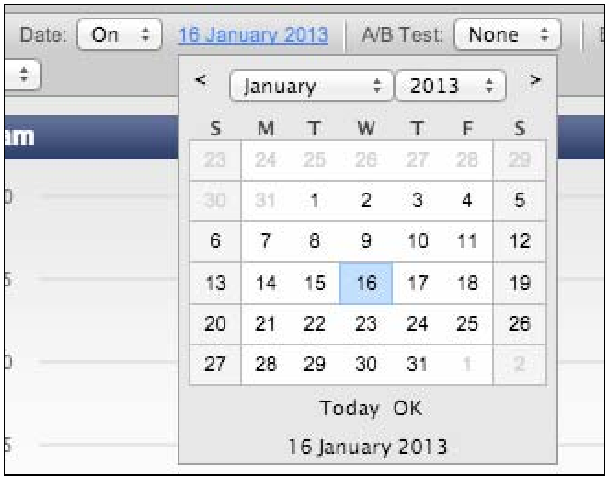
Date

By default, the Date setting is "Today." Changing the filter to "On," whether from the filter toolbar or within the Filter tab will cause the toolbar display to also show the current date (or the currently selected date if one was previously selected.



Date: On 25 January 2013

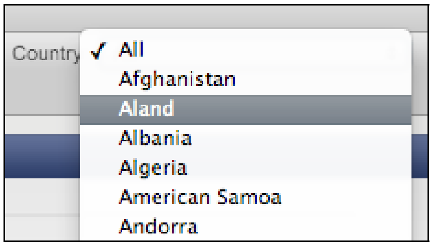
Click the date to show a calendar to select a new date for the dashboard.



Date: On 16 January 2013 A/B Test: None

Country

Narrow the data stream to show only a selected country.



Region

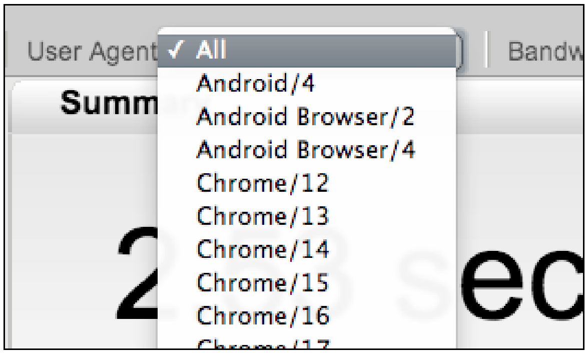
Select from among the currently available regions.

Page Group

Select from among those page groups configured for use with the selected domain. Page Groups help you summarize the performance characteristics of groups of pages that belong together. Your home page may make up one group, while your product pages make up a second. Your search results and checkout pages may also have their own groups. Refer to Configuring mPulse to Use Page Groups.

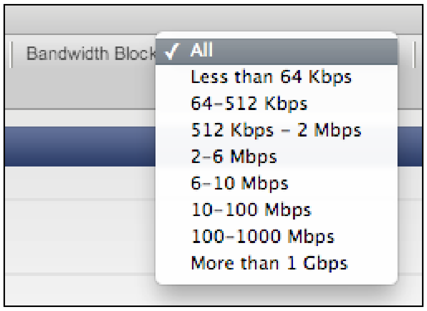
User Agent

Select from among the listed user agents (i.e. browser types and native apps) to filter the dashboard for only instances of that agent.



Bandwidth Block

Narrow the data stream to show real user measurement for a specific bandwidth range.

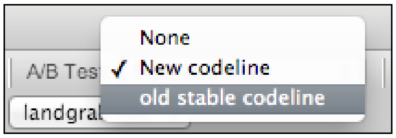


A/B Test

mPulse's A/B test integration allows you to compare different site versions for performance by tagging your mPulse code with the name of the currently running test so we can report on each test separately.

Select from among those A/B buckets configured for this domain.

Use the Configure Domains box to define an A/B bucket for a given site and deploy the JavaScript header to the given site. Refer to Configuring mPulse to Measure A/B Bucket Groups.



For example, in the A/B Test drop down above the server instance has two A/B buckets defined for either of two codelines.

mPulse Dashboard widgets

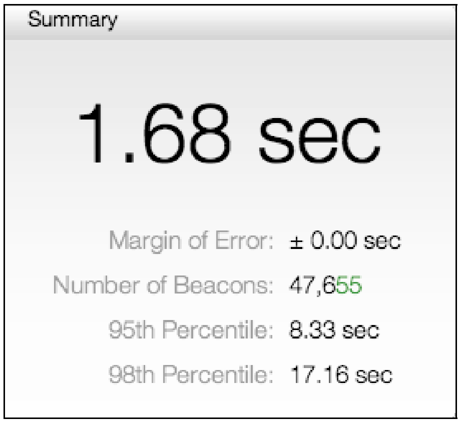
This dashboard includes the following default widgets. The mPulse widgets can also be added to custom dashboards via the Widget Selection Panel, Widget Type, RUM category using drag-and-drop.

The first two default dashboard widgets—Summary and Beacons are presented in a single dashboard container that is selected and filtered for the pair.

Summary

This performance summary widget calculates the following summary data:

- Margin of error – The margin of error in calculating the median page load time that's displayed on the current summary widget.
- Number of beacons – The number of beacons for the currently selected controls (i.e. mPulse domain, time, A/B test, etc.)



Summary

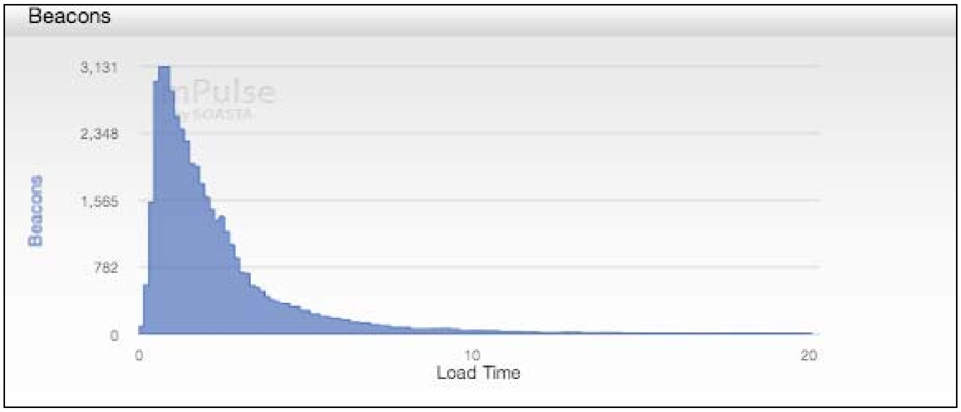
1.68 sec

Margin of Error:	± 0.00 sec
Number of Beacons:	47,655
95th Percentile:	8.33 sec
98th Percentile:	17.16 sec

- 95th Percentile – This metric measures the upper bound time value. 95th percentile says that 95% of users had a load time faster than this value.
- 98th Percentile - This metric measures the upper bound time value. 98th percentile says that 98% of users had a load time faster than this value.

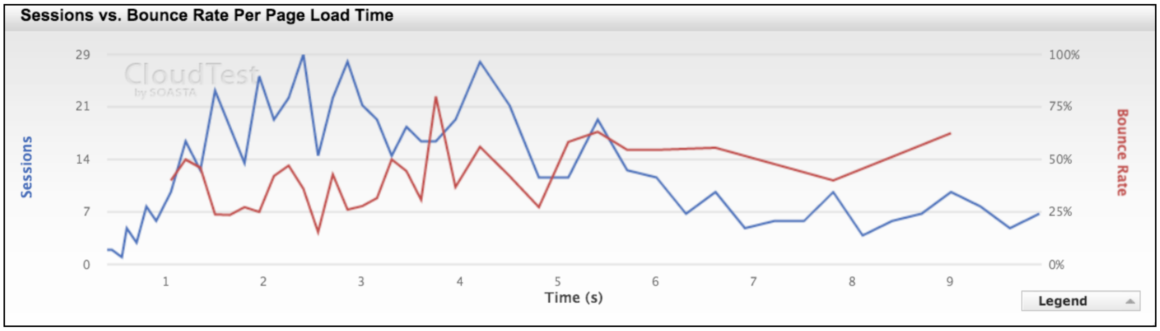
Beacons

This widget indicates the number of beacons that lie within a given time range in seconds.

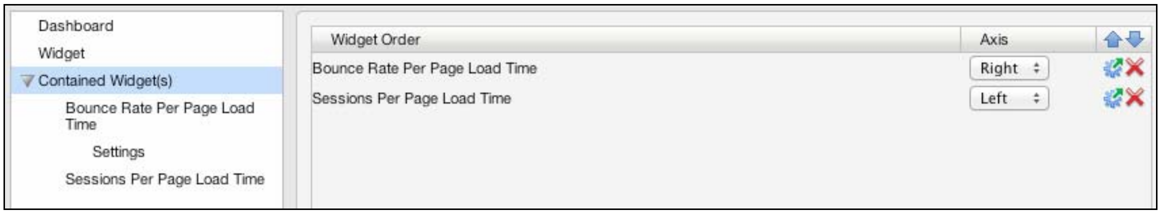


Sessions vs. Bounce Rate Per Page Load Time

This widget measures sessions based on the median page load time.



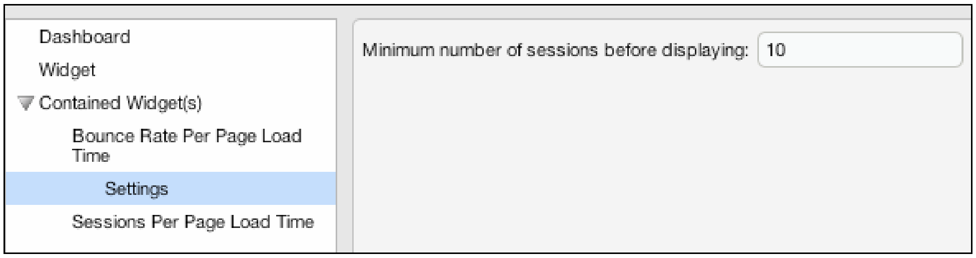
As with any contained widget combination in SOASTA analytics, the Widget Order of this chart can be reversed in the filter panel.



Widget Order	Axis
Bounce Rate Per Page Load Time	Right
Sessions Per Page Load Time	Left

To change the line chart Bounce Rate Per Page Load Time select it and change the Chart Type as with any other chart.

The Bounce Rate chart has a minimum sessions number that can be changed (it's 10 sessions by default).

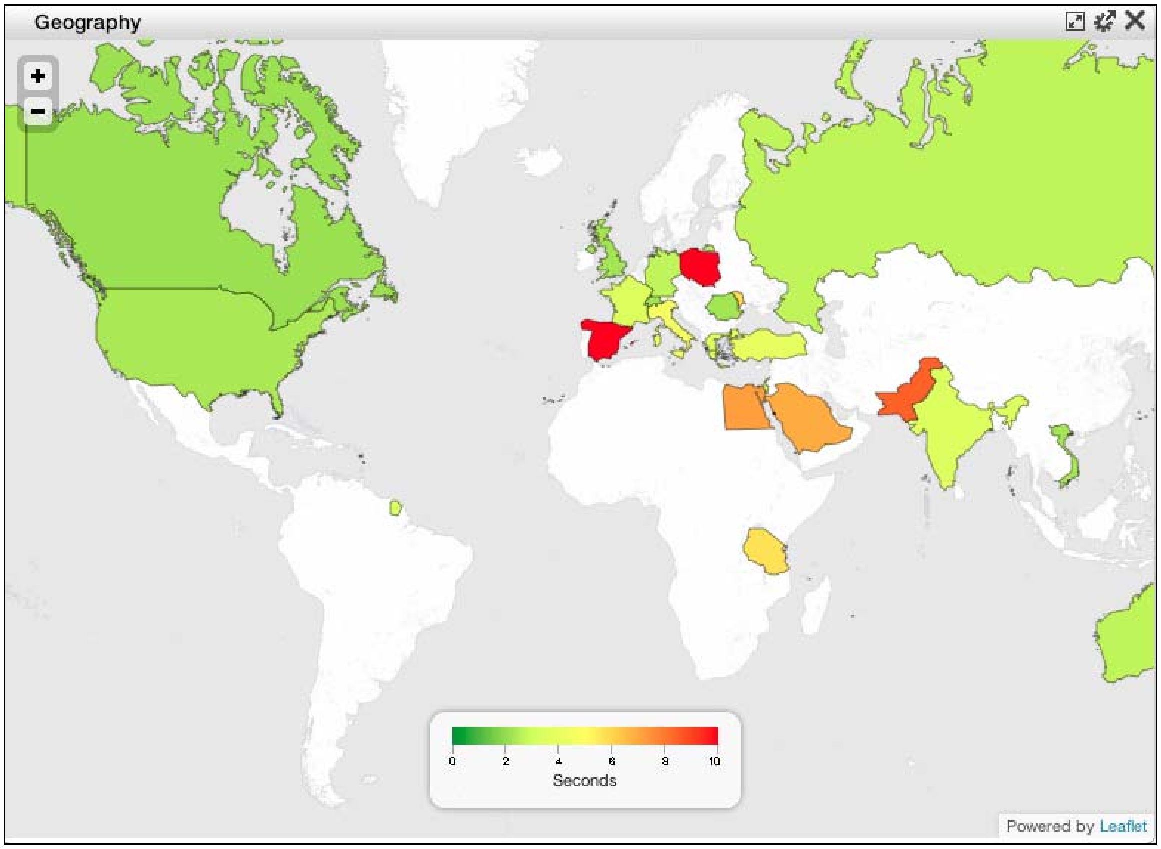


Minimum number of sessions before displaying: 10

To change the line chart Sessions Per Page Load Time select it and change the Chart Type as with any other chart.

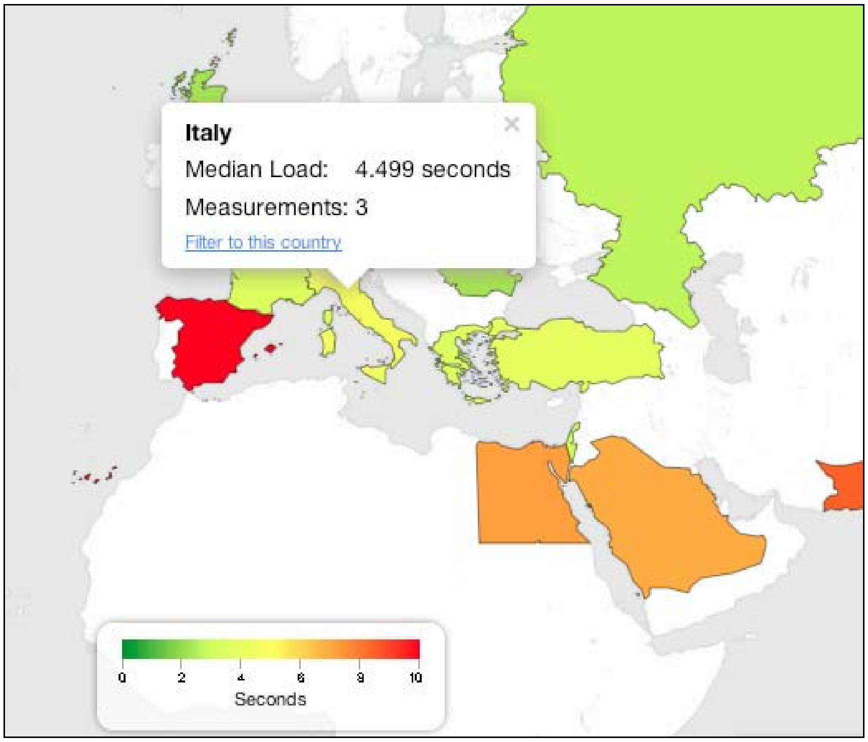
Geography

The interactive Geography widget shows median load performance by geographic unit. The widget legend shows performance in second and assigns a color for the given range. As with other mPulse performance analytics, color is coded to indicate performance by geography, from darker green (great) to lighter green (good) to yellow (fair) and darker yellow (poor) and on to red (extremely poor).



Click the Plus (+) or Minus (-) controls as you would with any interactive map.

Click a country to inspect performance details for Median Load and Measurements (i.e. the number of beacons collected per the selection).



Italy

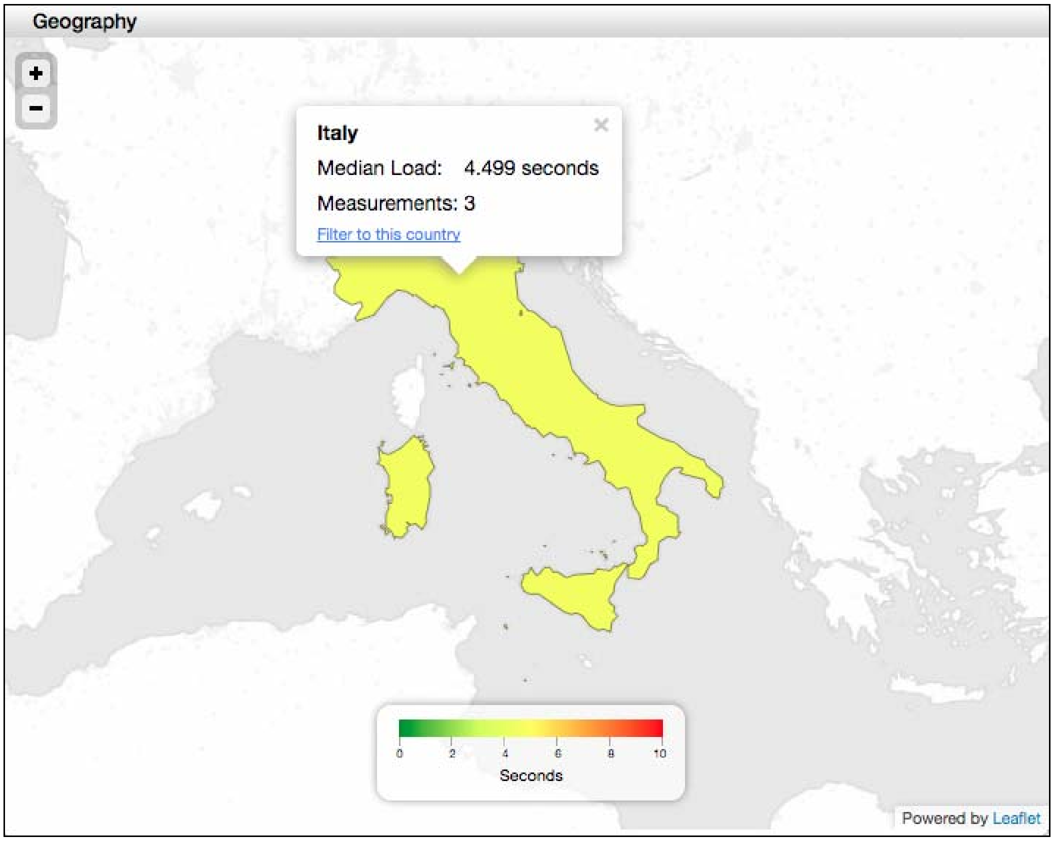
Median Load: 4.499 seconds

Measurements: 3

Filter to this country

Note that the 4.499 second median load above matches the location in the color range shown on the legend.

Click Filter to this Country show only the current selection in this widget and to filter the other dashboard widgets to this country.


Geography

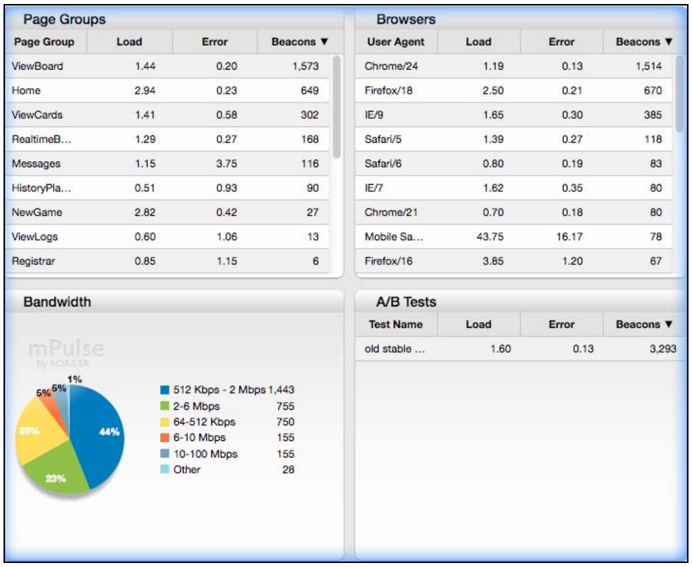
Italy

Median Load: 4.499 seconds

Measurements: 3

Filter to this country

The next four widgets, Page Groups, Browsers, Bandwidth, and A/B Tests are also grouped using a dashboard container.


Page Groups

Page Group	Load	Error	Beacons ▼
ViewBoard	1.44	0.20	1,573
Home	2.94	0.23	649
ViewCards	1.41	0.58	302
RealtimeB...	1.29	0.27	168
Messages	1.15	3.75	116
HistoryPla...	0.51	0.93	90
NewGame	2.82	0.42	27
ViewLogs	0.60	1.06	13
Registrar	0.85	1.15	6

Browsers

User Agent	Load	Error	Beacons ▼
Chrome/24	1.19	0.13	1,514
Firefox/18	2.50	0.21	670
IE/9	1.65	0.30	385
Safari/5	1.39	0.27	118
Safari/6	0.80	0.19	83
IE/7	1.62	0.35	80
Chrome/21	0.70	0.18	80
Mobile Sa...	43.75	16.17	78
Firefox/16	3.85	1.20	67

Bandwidth

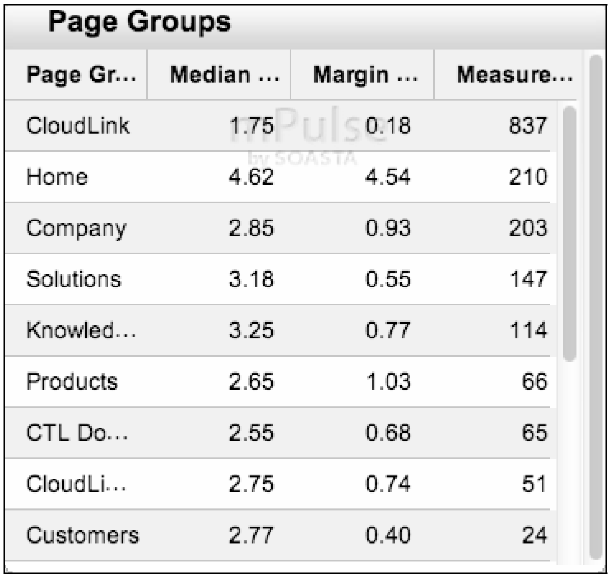
🟦 512 Kbps - 2 Mbps	1,443
🟩 2-6 Mbps	755
🟨 64-512 Kbps	750
🟧 6-10 Mbps	155
🟦 10-100 Mbps	155
🟦 Other	28

A/B Tests

Test Name	Load	Error	Beacons ▼
old stable ...	1.60	0.13	3,293

Page Groups

This widget provides real user management filterable by the administrator defined page groups. The Page Groups widget columns are Median Load (sec), Margin of Error (sec), and Measurements. Refer to Configuring mPulse to Use Page Groups.

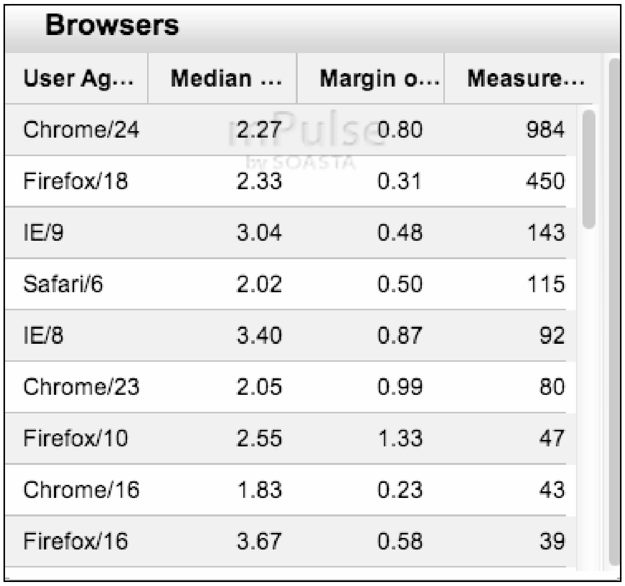


Page Groups

Page Gr...	Median ...	Margin ...	Measure...
CloudLink	1.75	0.18	837
Home	4.62	4.54	210
Company	2.85	0.93	203
Solutions	3.18	0.55	147
Knowled...	3.25	0.77	114
Products	2.65	1.03	66
CTL Do...	2.55	0.68	65
CloudLi...	2.75	0.74	51
Customers	2.77	0.40	24

Browsers

This widget provides real user management filterable by the given user agent (i.e. a browser/version or a native app). The Browsers widget columns are User Agent, Median Load (sec), Margin of Error (sec), and Measurements.

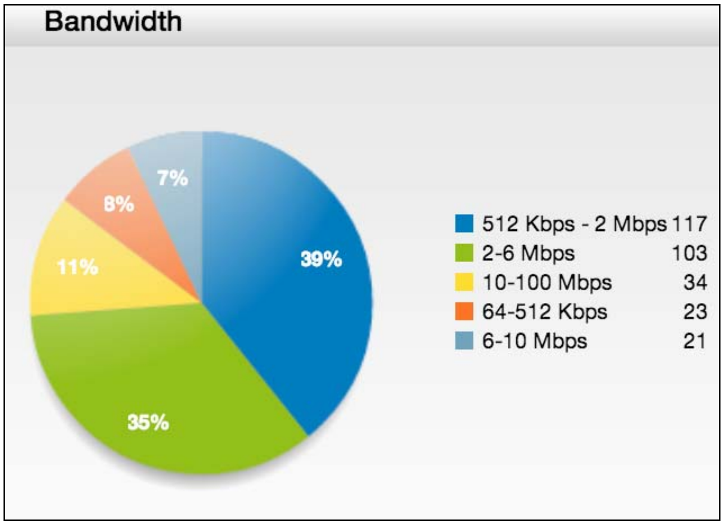


Browsers

User Ag...	Median ...	Margin o...	Measure...
Chrome/24	2.27	0.80	984
Firefox/18	2.33	0.31	450
IE/9	3.04	0.48	143
Safari/6	2.02	0.50	115
IE/8	3.40	0.87	92
Chrome/23	2.05	0.99	80
Firefox/10	2.55	1.33	47
Chrome/16	1.83	0.23	43
Firefox/16	3.67	0.58	39

Bandwidth

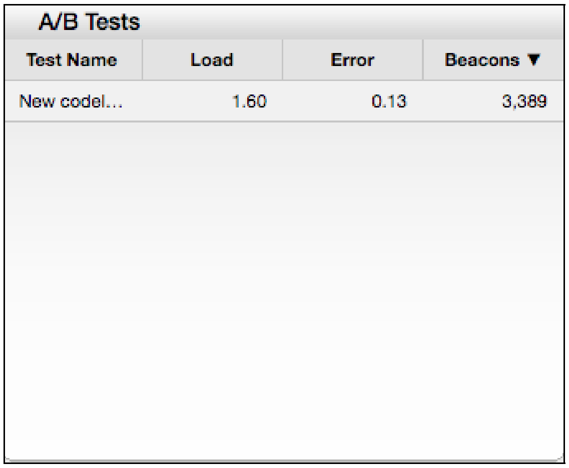
This pie chart widget provides real user management filterable by the given network speed of a connection.



A/B Tests

This metric shows statistics broken down by user-defined bucket test. Bucket tests are administrator- and/or developer-assigned categories that distinguish one site or app configuration from another.

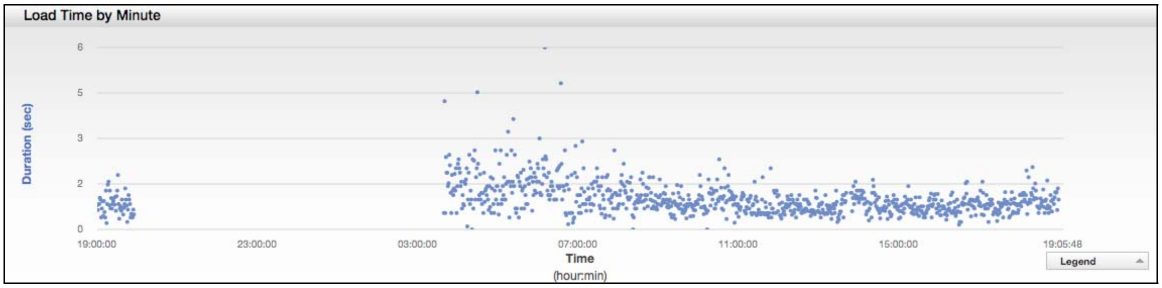
For more information, see [Configuring mPulse to measure A/B bucket tests]().


A/B Tests

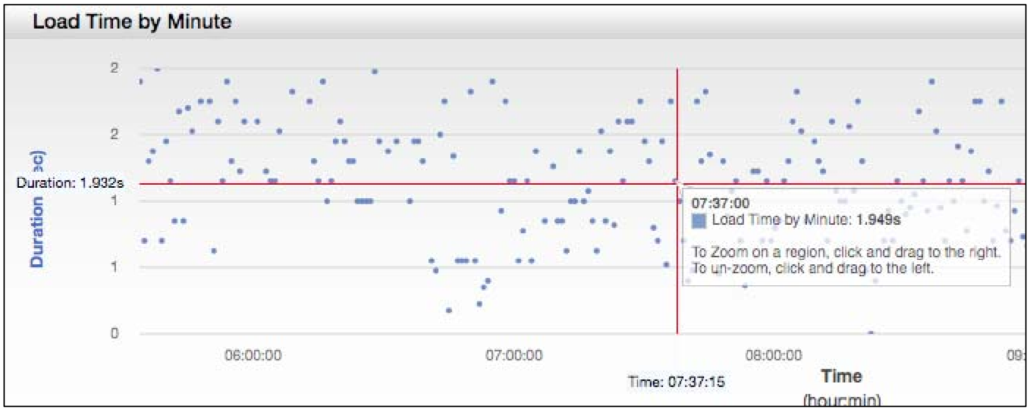
Test Name	Load	Error	Beacons ▼
New codel…	1.60	0.13	3,389

Load Time by Minute

This widget provides per-minute real user measurement statistics for page load time by second and date.



As with other charts in SOASTA analytics, click and drag to zoom a region of the chart. Hover over any data point to show additional detail.


Load Time by Minute
Duration
Duration: 1.932s
2
2
1
1
0
06:00:00
07:00:00
08:00:00
09:
Time: 07:37:15
Time
(hour:min)
07:37:00
Load Time by Minute: 1.949s
To Zoom on a region, click and drag to the right.
To un-zoom, click and drag to the left.

This widget is presented as a scatter chart by default but like all SOASTA charts can be changed (i.e. to Area, Bar, etc.).

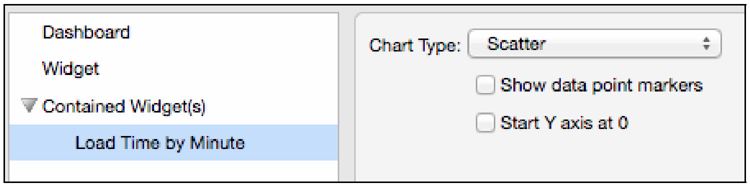


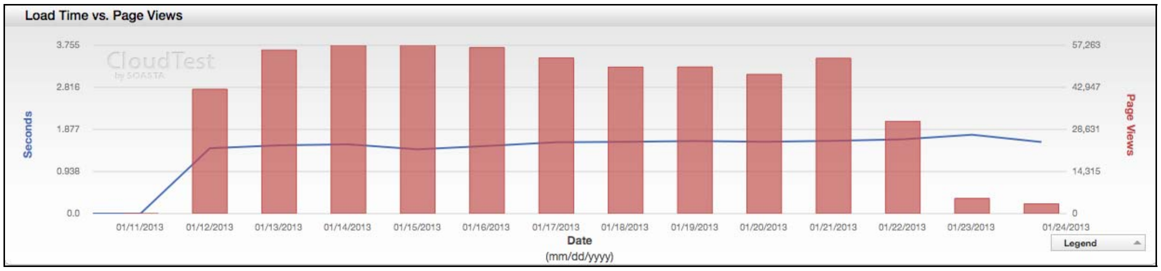
Chart Type: Scatter

□ Show data point markers

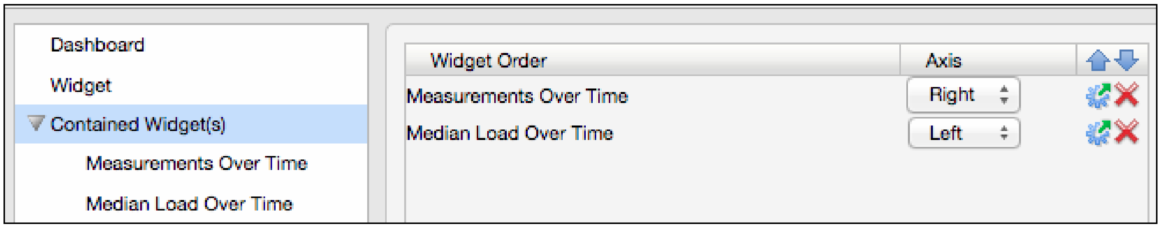
□ Start Y axis at 0

Load Time vs. Page Views

This contained widget combines Median Load Over Time and the number of Measurements Taken Over Time.



As with any contained widget combination in SOASTA analytics, the Widget Order of this chart can be reversed in the filter panel.



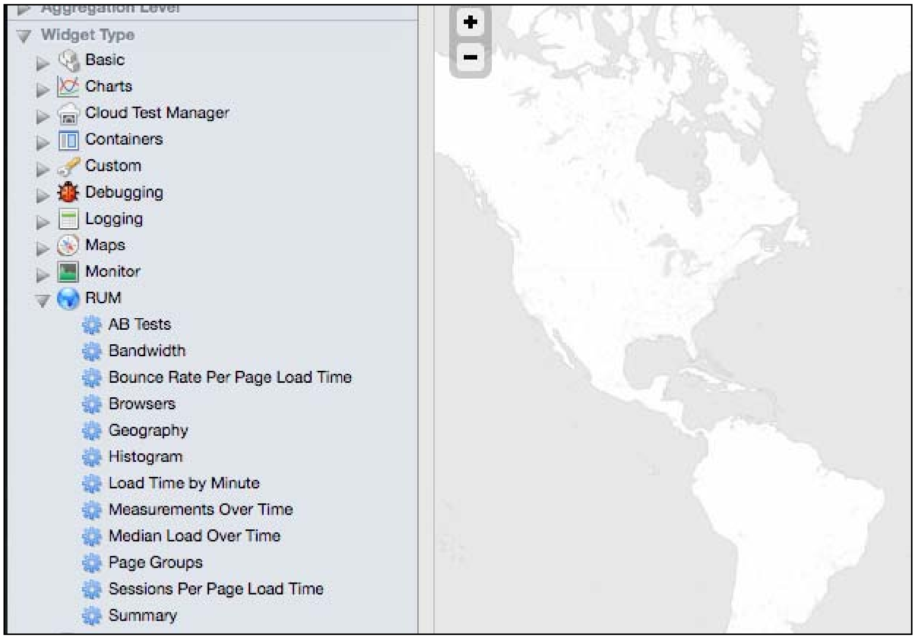
Dashboard
Widget
Contained Widget(s)
Measurements Over Time
Median Load Over Time

Widget Order	Axis
Measurements Over Time	Right
Median Load Over Time	Left

- To change the bar chart Measurements Over Time select it and change the Chart Type as with any other chart.
- To change the line chart Median Load Over Time select it and change the Chart Type as with any other chart.

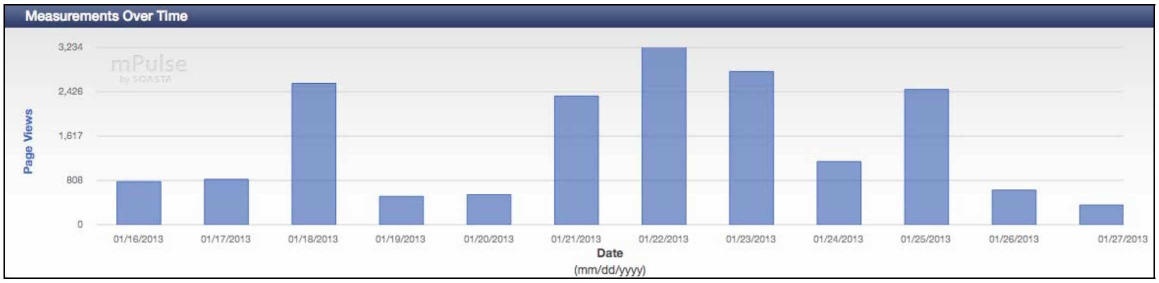
Other RUM Widgets

Additional real-user measurement widgets can be found in the Widget Selection Panel, Widget Type, RUM category and added to any custom mPulse dashboard.



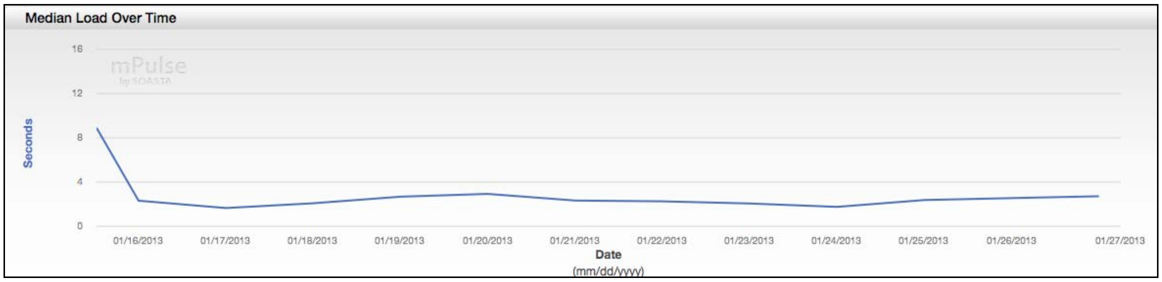
Measurements Over Time

The Measurements Over Time widget presents the number of page measurements taken for the current selection and time period shown.

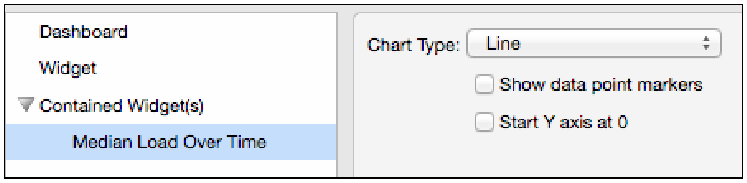


Median Load Over Time

The Median Load Over Time widget presents median load statistics for the current selection and time period shown.



This widget is presented as a line chart by default but like all SOASTA line charts can be changed (i.e. to Area, Bar, etc.).



Dashboard

Widget

Contained Widget(s)

Median Load Over Time

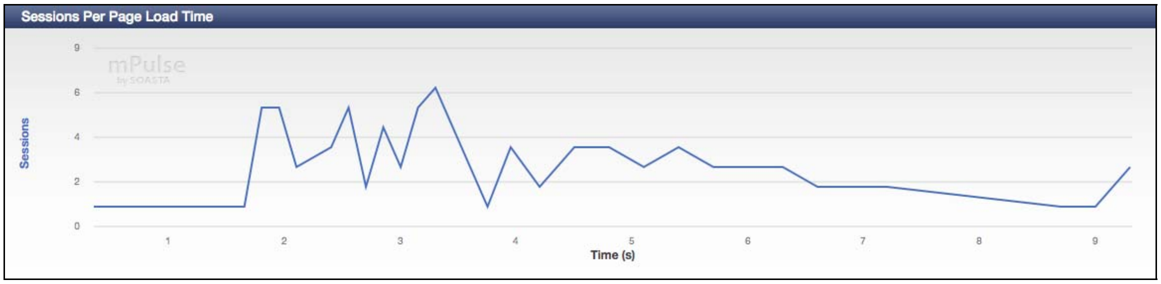
Chart Type: Line

□ Show data point markers

□ Start Y axis at 0

Sessions Per Page Load Time

The Sessions Per Page Load Time widget presents the number of sessions per load time bucket based on the mean load time across the session.



Note: A median is useful when summarizing across different members of a population, and a mean is useful when summarizing multiple actions by the same individual. A single session's load time is best defined by the mean across the entire session since every page view, including the fastest and the slowest, affect that individual user's experience. The population's load time, across all page views for all users is better defined by the median across all users because outliers tend not to affect the population as a whole.

This widget is presented as a line chart by default but like all SOASTA line charts can be changed (i.e. to Area, Bar, etc.).

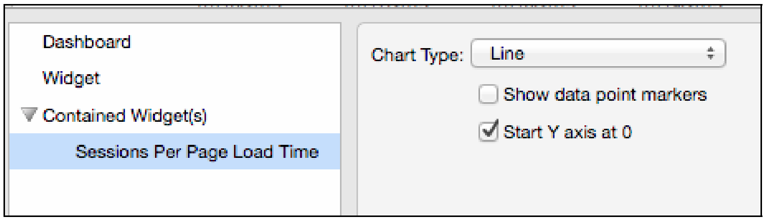


Chart Type: Line

☐ Show data point markers

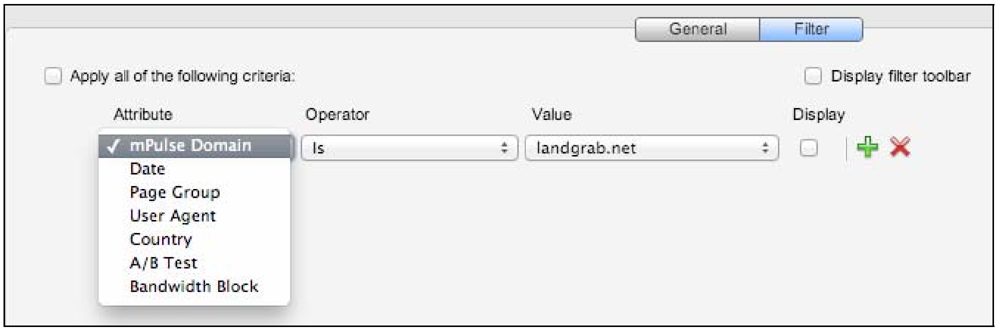
☑ Start Y axis at 0

Bounce Rate Per Page Load Time

The Bounce Rate Per Page Load Time widget correlates the bounce rate, or exit rate, of users for the given domain as compared to the median page load time.

RUM Widget Filters

Widgets appearing in the Widget Selection Panel, Widget Types, RUM category also include real-user management related filters. These filters are also provided in the control bar at the top of the default mPulse dashboard.



Attribute	Operator	Value	Display
✓ mPulse Domain	Is	landgrab.net	□

mPulse Domain – Filters widget content by the domain value (selection is limited to configured domains)

Date – Filters the widget by the date range.

Page Group – Filters the widget by the page group (selection is limited to configured page groups for any given domain)

User Agent – Filters the widget by browser or native app if applicable (i.e. user agent)

Country – Filters the widget to a specific country value.

A/B Test – Filters the widget to a specific, configured A/B bucket.

Bandwidth Block – Filters the widget to a specific bandwidth range from among the provided ranges.

CloudTest

Test Creation

HTTP Recording into the Clip Editor

HTTP Recording can now be performed into the Clip Editor without the necessity to then convert the recording to a test clip. Messages are created inline in the Clip Editor.

Note: When using this feature note that the clip is created *as if* it were recorded in the Recording Editor and then converted using ALL THE wizard conversion DEFAULTS.

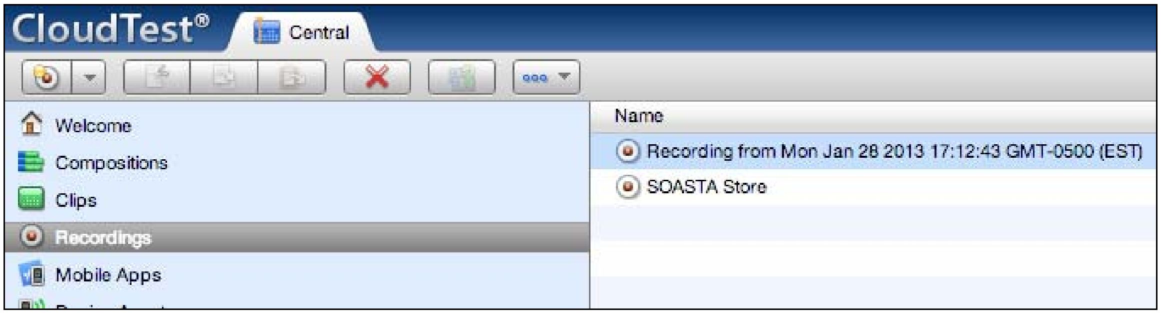
HTTP Recording sessions are started using the Record drop-down, HTTP Recording command and will capture data from both HTTP and HTTPS streams.

If you are creating an HTTPS recording, note the following prerequisites:

- HTTP(S) **recording** requires that the website being **recorded** has a valid SSL certificate. Refer to Creating an HTTP(S) Recording for more information on HTTP(S) recording. This means that:
- The certificate has not expired.
- The certificate is assigned to the host name that is being used when creating the **recording**. In other words, if the SSL certificate is issued to mysite.com, the **recording** cannot be created using the IP address or an internal host name.
- Self-signed certificates are supported, provided that these two requirements are met.

TIP: Users interested in packet-level recording that captures non-secure HTTP along with other packet types (i.e. UDP) will continue to use the Recording Editor to do so. Refer to Creating a Packet-Level Recording.

HTTP(S) recordings created using the Clip Editor will *also* create an underlying recording object (shown below), which is stored in the same folder that the clip was in at the time of the recording session.

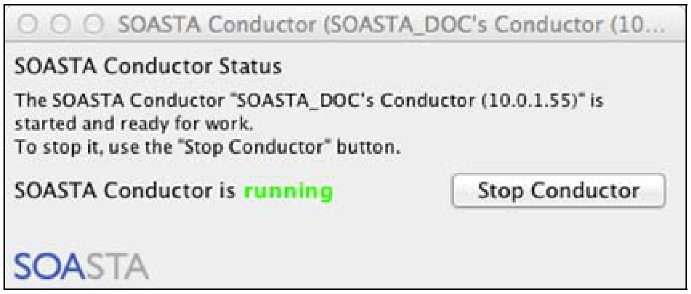


Recording from Mon Jan 28 2013 17:12:43 GMT-0500 (EST)

SOASTA Store

Note: HTTP(S) Recording requires the SOASTA Conductor on the desktop client machine. Download it from the CloudTest, Welcome page. Refer to Installing SOASTA Conductor for further instructions.

1. In general, HTTP(S) recording should be done from any supported browser other than the one running CloudTest. Start the browser to record from, being sure to drop cache if necessary (i.e. if this is a site you frequently use with the given browser then you'll want a clean cache when you record).
2. Start the SOASTA Conductor you will use to record. Once successfully logged on, the Conductor's status will be *running*.

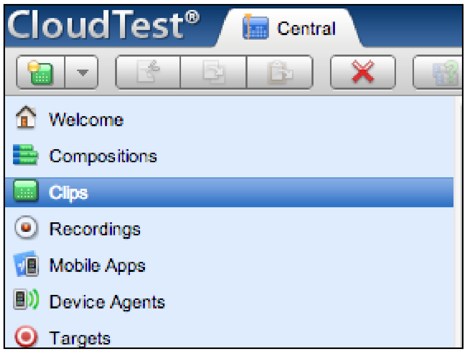


SOASTA Conductor Status

The SOASTA Conductor "SOASTA_DOC's Conductor (10.0.1.55)" is started and ready for work.
To stop it, use the "Stop Conductor" button.

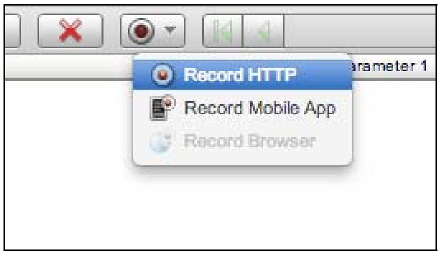
SOASTA Conductor is running

3. In CloudTest, select Central > Clips, and click the New icon.

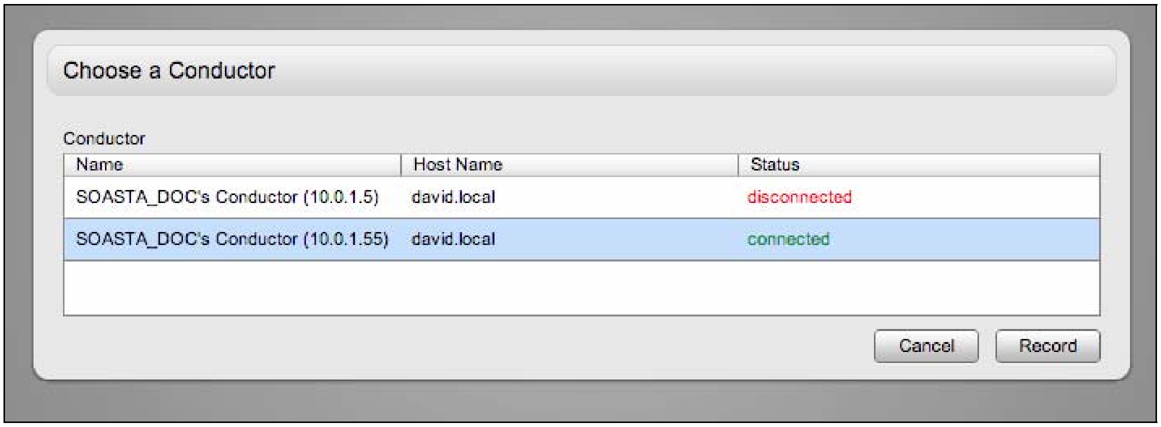


A new Untitled Test Clip opens in a Clip Editor tab. The Clip Editor, Record pop-up identifies the Record drop-down.

4. Click the Record drop-down and select the Record HTTP command.



When you do so, the Choose a Conductor dialog box appears.



Choose a Conductor

Conductor

Name	Host Name	Status
SOASTA_DOC's Conductor (10.0.1.5)	david.local	disconnected
SOASTA_DOC's Conductor (10.0.1.55)	david.local	connected

5. Select your Conductor and ensure that its status is "connected," which is also visually indicated by the green font color. This will activate the Record button in the box.

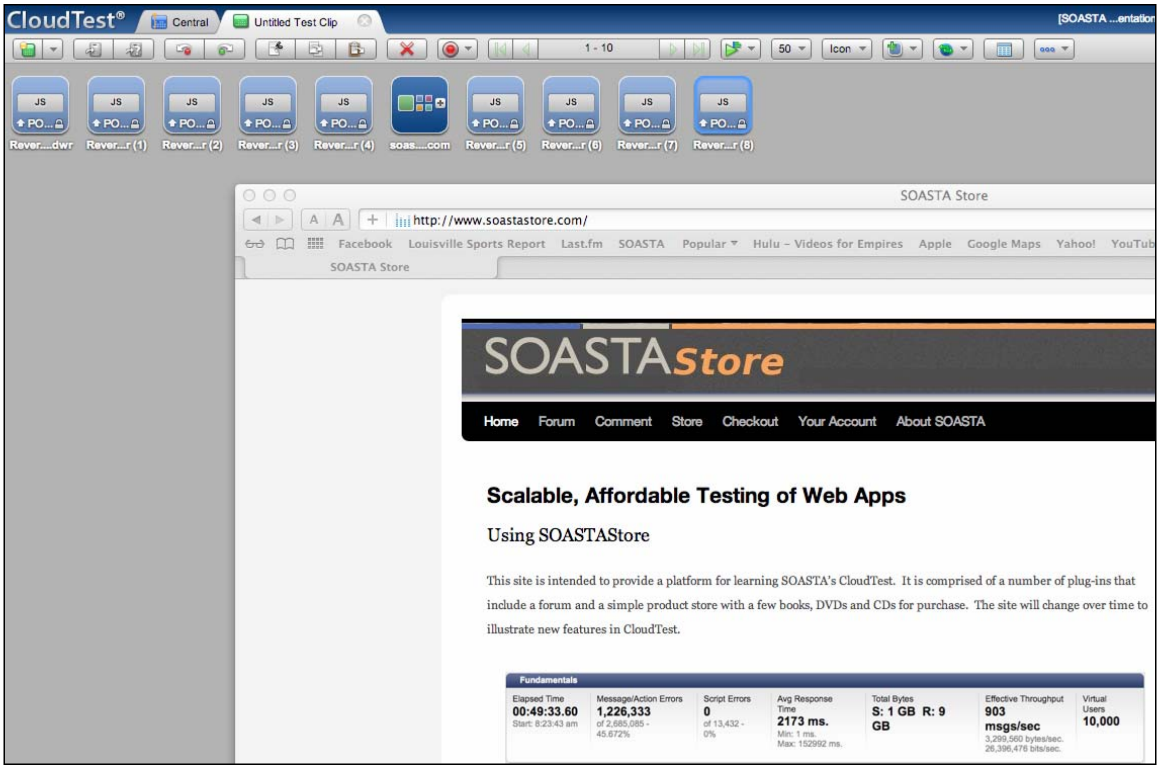
TIP: If the Conductor doesn't appear or isn't shown "Connected" ensure that it is connected as well as pointed to your CloudTest instance (in Conductor Preferences). Refer to Changing SOASTA Conductor for OS-specific instructions to do so on Macintosh, Windows, and Linux Conductors.

6. Click Record to begin. The Choose a Conductor box will disappear and the Clip Editor goes into Record mode, which is indicated by the Clip Editor toolbar, Record drop-down button.
7. In the browser to record from, open the target site.

TIP: Position the CloudTest window in such a way that you can easily view the Clip Editor while you interact with the target site in the second browser.

8. Perform the test actions on the target site. When you do so, the resulting messages will appear in the Clip Editor.

For example, in our clip we opened the Safari browser to the SOASTA Store sample site (http://www.soastastore.com/) and positioned it over the CloudTest browser window (which in this case is running Chrome).



Scalable, Affordable Testing of Web Apps

Using SOASTAStore

This site is intended to provide a platform for learning SOASTA's CloudTest. It is comprised of a number of plug-ins that include a forum and a simple product store with a few books, DVDs and CDs for purchase. The site will change over time to illustrate new features in CloudTest.

Fundamentals

Elapsed Time	Message/Action Errors	Script Errors	Avg Response Time	Total Bytes	Effective Throughput	Virtual Users
00:49:33.60 Start: 8:23:43 am	1,226,333 of 2,685,085 - 45.672%	0 of 13,432 - 0%	2173 ms. Min: 1 ms. Max: 152992 ms.	S: 1 GB R: 9 GB	903 msgs/sec 3,299,560 bytes/sec. 26,396,476 bits/sec.	10,000

The clip elements shown above are those recorded by the Clip Editor for the shown page.

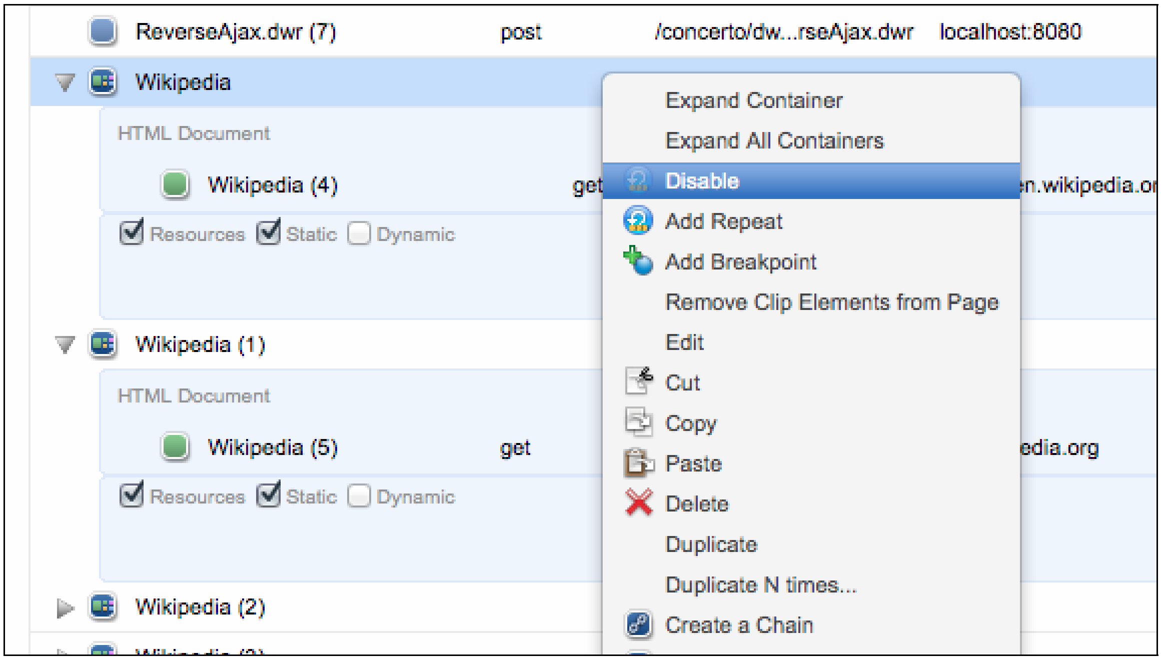
As noted above, the corresponding HTTP recording can be found in Central > Recordings.

Disable/Enable Clip Elements Command

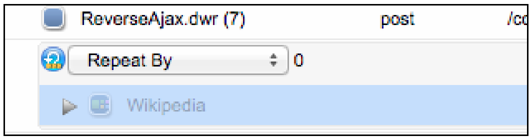
In prior releases, there was no ability to quickly disable or enable an item. Users often employed a workaround to indirectly disable set repeat count of a clip element to 0.

As of this release, a new context menu toggle command Enable/Disable Item appears whenever a selected clip element is right-clicked. By using the Disable command the item can now be conveniently set to repeat count = 0.

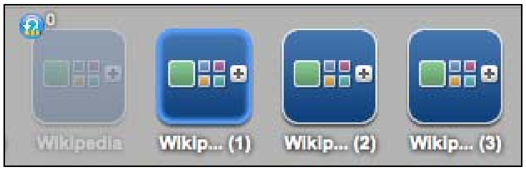
Clip elements can be individually disabled or enabled or multiply selected to disable them. If the selection is currently enabled, choose Disable. Once disabled, a clip element and its children will not be played or appear in test results.



Once disabled, a clip element will appear inactive in the List view (indicated by a grayed out font and icon).



A disabled clip element also appears inactive in Icon view.



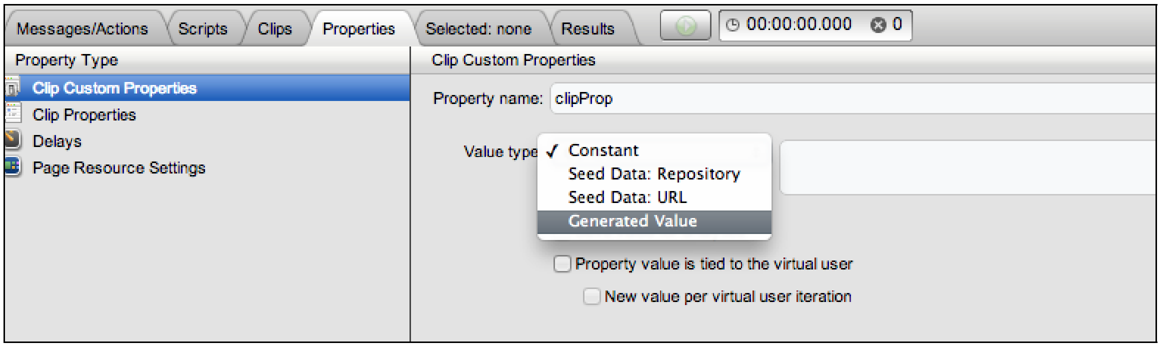
Similarly, one or more disabled clip elements can be selected, right-clicked, and enabled via the context menu.

Generated Custom Property Values

In prior releases when you defined a Custom Property, you chose from one of the following three basic choices:

1. Constant
2. Seed Data: Repository
3. Seed Data: URL

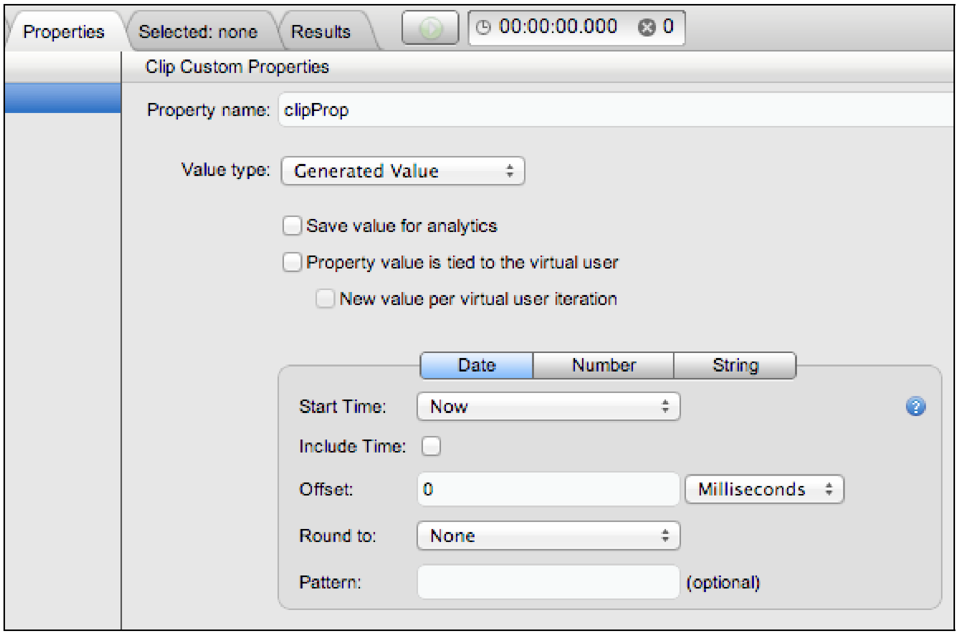
This release includes a new fourth option, Generated Value, which provides the ability to define generated values of various types from the message/action level to the track level. An additional Generated Value field now appears in the Value Type drop-down.



Property name: clipProp

Once generated value is selected, the default Date/Time tab appears with the other tabs shown. This UI is the same in each of the supported custom properties types (i.e. message or action, container – including nested clip, clip, and track).

Custom property generation can be accomplished by using any of the three tabs in the Generated Value tabs: Date/Time, String, or Number.


Properties
Selected: none
Results
00:00:00.000
0
Clip Custom Properties
□ Save value for analytics
□ Property value is tied to the virtual user
□ New value per virtual user iteration
Date
Number
String
(optional)

Property name: clipProp

Value type: Generated Value

Start Time: Now

Include Time: □

Offset: 0 Milliseconds

Round to: None

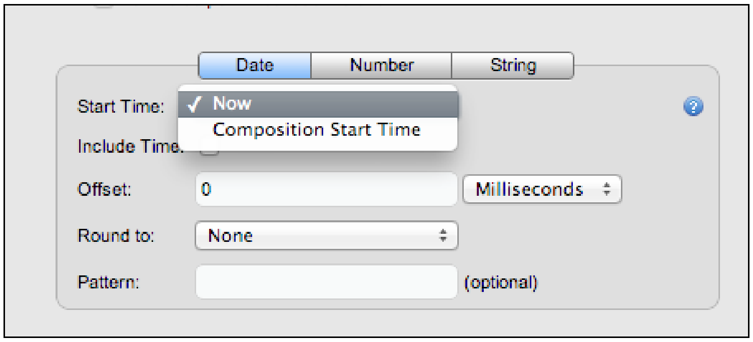
Pattern:

Generated Value: Date/Time Tab

When Date/Time values are set, the Custom property is initialized to a Date/Time value, or the string representation of a Date/Time value.

Start Time

The Start Time is a required field set either to *Now* or *Composition Start Time*.



Start Time: Now

Include Time: □

Offset: 0 Milliseconds

Round to: None

Pattern: (optional)

Now – The time at which the property is created (it's owning object comes into existence during Composition play). For example, if it is a Clip Custom Property, the time at which the instance of the Clip is created.

Composition Start Time – The time at which Composition play started.

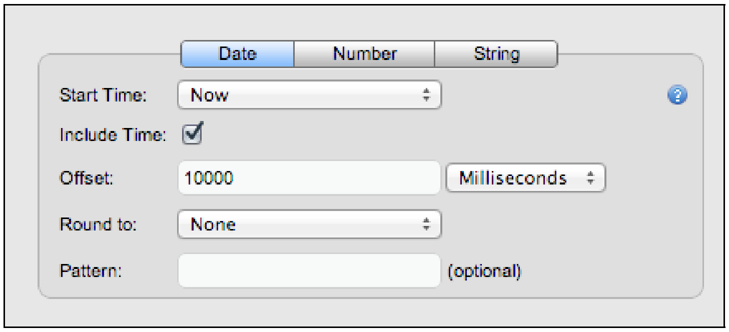
Note: All times are the times on the Maestro server.

Include Time

The Include Time checkbox is true/false according to whether the time is to be included. If false, the time is set to 12:00 am (00:00).

Offset

The Optional offset to add to the Start Time value. Can be positive to go into the future, or negative to go into the past.



Start Time: Now

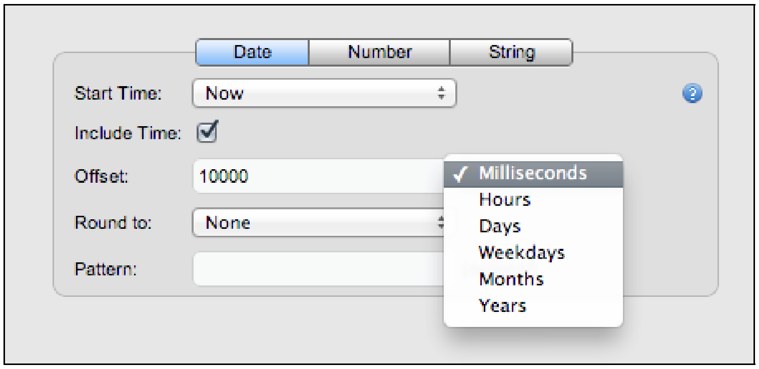
Include Time: ☑

Offset: 10000 Milliseconds

Round to: None

Pattern: (optional)

Set the integer amount of the offset and set a unit of time (defaults to milliseconds) to use:



Start Time: Now

Include Time: ☑

Offset: 10000

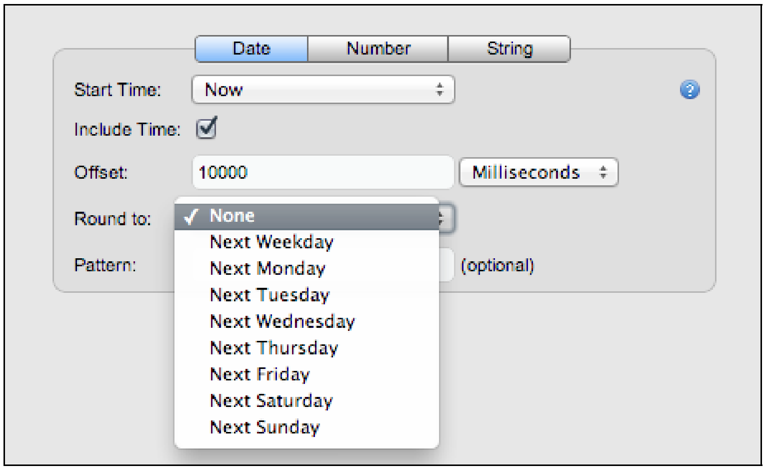
Round to: None

Pattern:

Note that this value can be positive to go into the future, or negative to go into the past.

Round To

This optional value will round the date forward to a particular day of the week.



Start Time: Now

Include Time: ☑

Offset: 10000 Milliseconds

Round to: None

Pattern: (optional)

Note that Next Weekday applies only to Monday-Friday.

The rounding is done after any offset is applied. The rounding is always done forward regardless of whether any offset, if given, is positive or negative. If the Date/Time value is already one of the specified days, it is not changed.

Pattern

If this optional formatting pattern is given, the Custom Property’s value will be a string, rather than a Date/Time, and the string will be the Date/Time value formatted as specified by the pattern.

The standard Java object “SimpleDateFormat” is used to do the formatting, and any pattern accepted by that object can be used.

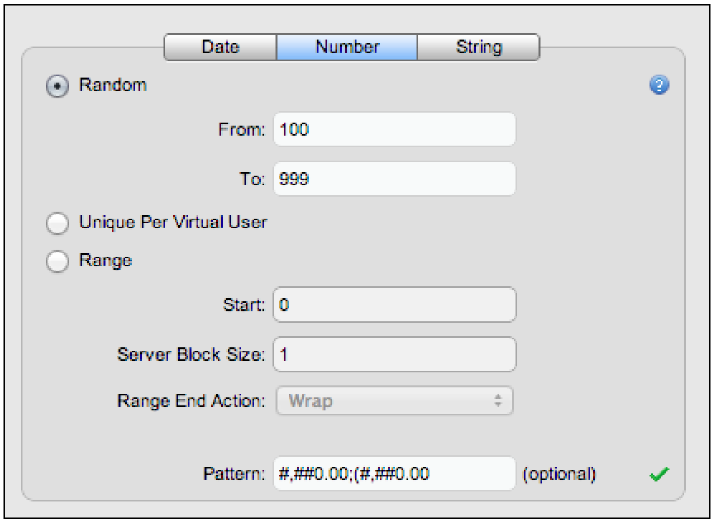
The Generated Value form will validate any entered pattern to ensure that it is valid, so that you don't have to wait until the Composition is played to discover an invalid pattern.

Generated Value: Number Tab

This tab's three radio buttons (Random, Unique Per Virtual User, and Range) allow the user to generate a custom property value using an random integer number (from a defined range), or as a string representation of one; or, as a Unique Per Virtual User or by using a Range.

Random Button

Select the Random radio button (default) to set a random integer range using *From:* and *To:* fields as well as to provide an optional pattern (at the bottom of the form).



● Random

From: 100

To: 999

○ Unique Per Virtual User

○ Range

Start: 0

Server Block Size: 1

Range End Action: Wrap

Pattern: #,##0.00;(#,##0.00 (optional) ✓

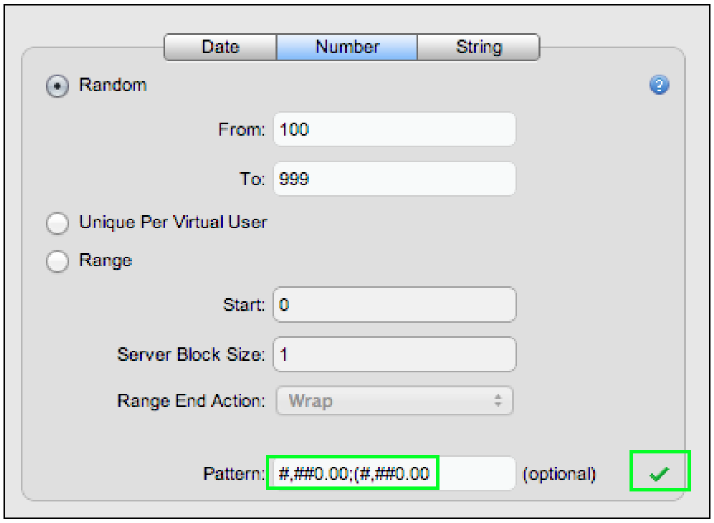
Note: The term “integer” is used here in the mathematical sense. The value is actually a Java long type.

You are required to provide the minimum and maximum values. Either can be positive or negative, but the minimum must be less than or equal to the maximum.

Pattern

If this is given, the Custom Property’s value will be a string, rather than a number, and the string will be the number formatted as specified by the pattern.

The standard Java object “DecimalFormat” is used to do the formatting, and any pattern accepted by that object can be used.



Date | Number | String

● Random

From: 100

To: 999

○ Unique Per Virtual User

○ Range

Start: 0

Server Block Size: 1

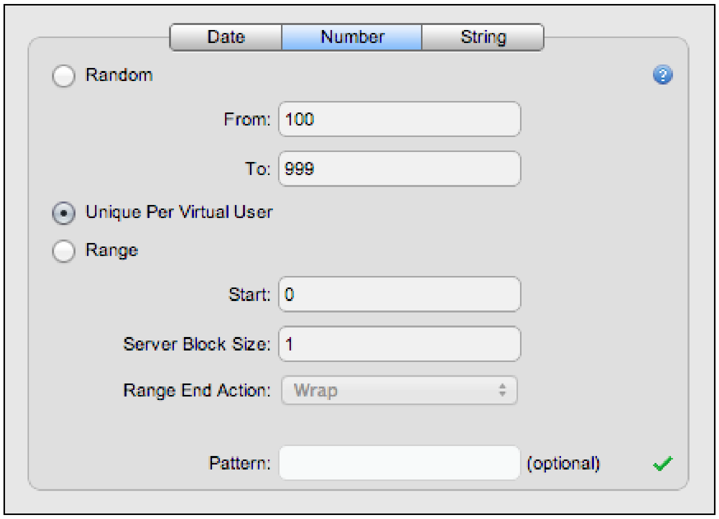
Range End Action: Wrap

Pattern: #,##0.00;(#,##0.00 (optional) ✓

The Generated Values form will validate any entered pattern, and display the green check mark (shown above) to indicate a valid pattern. Note that if the pattern is played without this validation an error will appear when the Composition is played.

Unique Per Virtual User Button

Select the Unique Per Virtual User radio button to use the “VUNumber” Track System Property for the Track in which this Custom Property resides.



Date | Number | String

○ Random

From: 100

To: 999

● Unique Per Virtual User

○ Range

Start: 0

Server Block Size: 1

Range End Action: Wrap

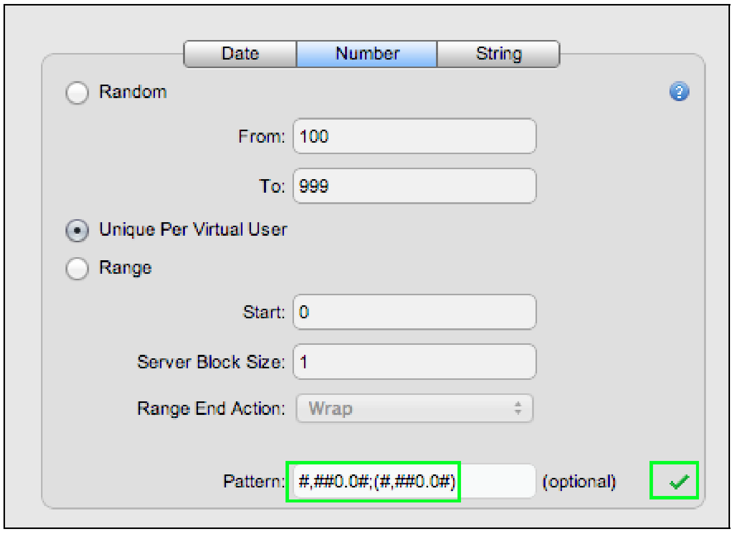
Pattern: (optional) ✓

The value will be either a number or the string representation of one.

Pattern

If this is given, the Custom Property’s value will be a string, rather than a number, and the string will be the number formatted as specified by the pattern.

The standard Java object “DecimalFormat” is used to do the formatting, and any pattern accepted by that object can be used.



○ Random

From: 100

To: 999

● Unique Per Virtual User

○ Range

Start: 0

Server Block Size: 1

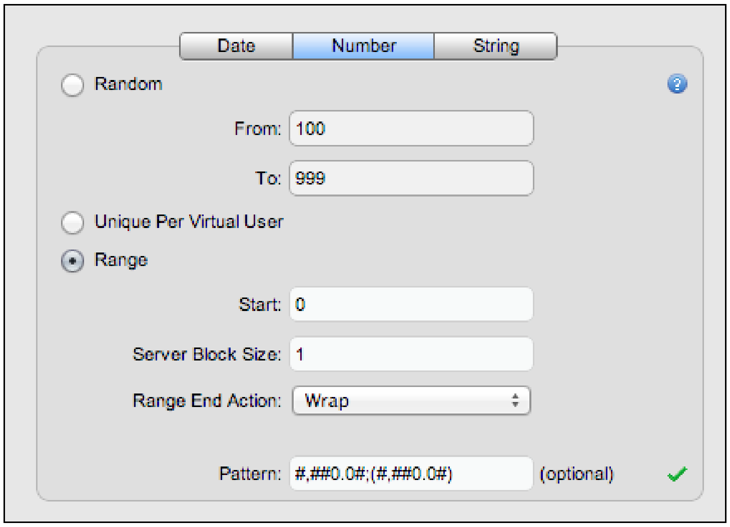
Range End Action: Wrap

Pattern: #,##0.0#;(#,##0.0#) (optional) ✓

The Generated Values form will validate any entered pattern, and display the green check mark (shown above) to indicate a valid pattern. Note that if the pattern is played without this validation an error will appear when the Composition is played.

Range Button

Select the Range radio button (default) to set a unique, sequential integer number, within “blocks” of numbers allocated to each Maestro Server.



○ Random

From: 100

To: 999

○ Unique Per Virtual User

● Range

Start: 0

Server Block Size: 1

Range End Action: Wrap

Pattern: #,##0.0#;(#,##0.0#) (optional) ✓

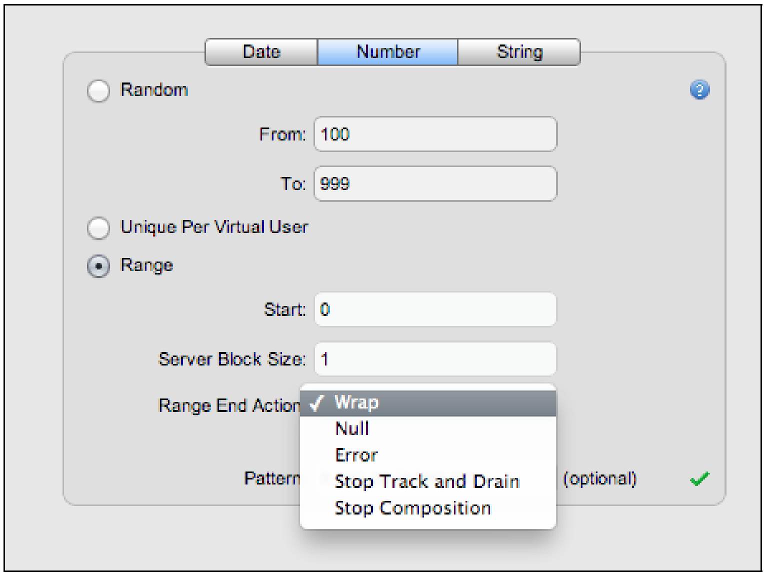
The value will be either a number or the string representation of one.

Note: The term “integer” is used here in the mathematical sense. The value is actually a Java long type.

Start - The required starting number (the first number to be allocated).

Server Block Size - The required size of the block of numbers to be allocated to each Maestro Server in the Composition. Each server will allocate numbers from its assigned block.

Range End Action - Specifies what is to happen if a server reaches the end of its block of numbers.



○ Random

From: 100

To: 999

○ Unique Per Virtual User

● Range

Start: 0

Server Block Size: 1

Range End Action: ✓ Wrap

Pattern (optional) ✓

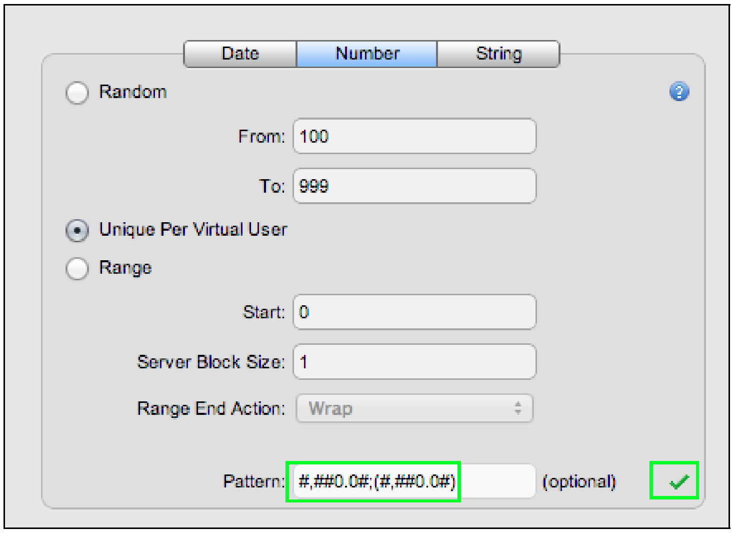
The options are very similar to what happens for the similar situation when using Seed Data:

- **Wrap** - Property values will start over at the beginning of the data range.
- **Null** - The value of the Custom Property will be set to null.
- **Error** - The item containing the Custom Property will fail. Error handling will proceed according to the regular "Failure action" settings of the item, it's parents, and the Composition.
- **Stop Track and Drain** - The current instance of the item's parent Track on the current server (and everything in it) is stopped. No new repeats or parallel repeat renewals will occur for that Track on this server. Other instances of the Track on this server that already exist will continue to their normal end, but no new instances will be started on this server. In other words, if using the recommended approach of having each Track represent a "Virtual User", and if using "Parallel Repeat Renewal" to cause each Virtual User to be automatically replaced when it ends, then this setting will cause no new Virtual Users to be created on this server when its seed data runs out.
- **Stop Composition** - The entire Composition (on all servers) will be stopped immediately (as if the "Stop" button had been pressed).

Pattern

If this is given, the Custom Property's value will be a string, rather than a number, and the string will be the number formatted as specified by the pattern.

The standard Java object "DecimalFormat" is used to do the formatting, and any pattern accepted by that object can be used.



○ Random

From: 100

To: 999

● Unique Per Virtual User

○ Range

Start: 0

Server Block Size: 1

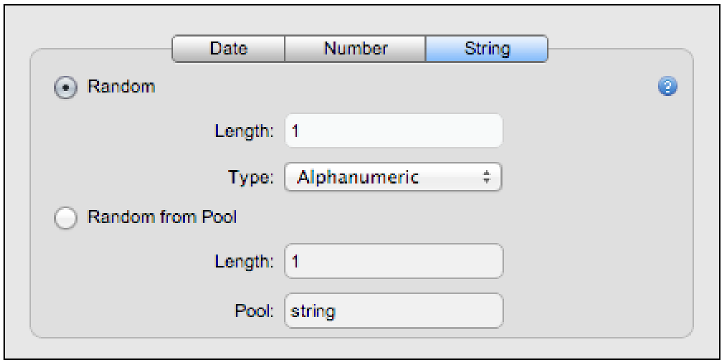
Range End Action: Wrap

Pattern: #,##0.0#;(#,##0.0#) (optional) ✓

The Generated Values form will validate any entered pattern, and display the green check mark (shown above) to indicate a valid pattern. Note that if the pattern is played without this validation an error will appear when the Composition is played.

Generated Value: String Tab

The String Tab's two radio buttons allow the user to either generate random text based on length and type (i.e. alphanumeric, alpha, decimal, or hex), or, to generate random text from a random pool by length and pool.



● Random

Length: 1

Type: Alphanumeric

○ Random from Pool

Length: 1

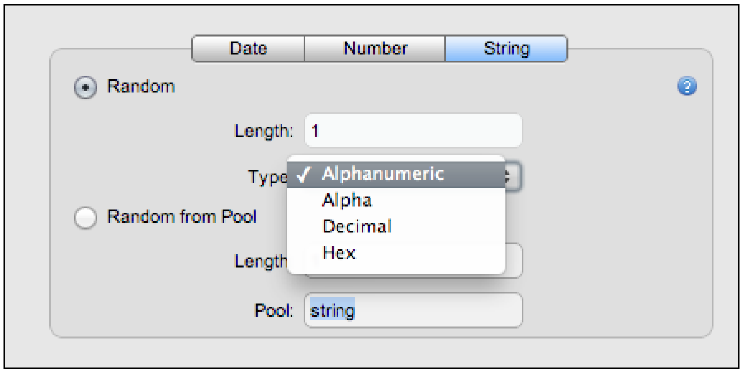
Pool: string

Random

Select the Random button to set a string of random characters by length and type (both required).

Length - The length of the string to be generated. Must be at least 1.

Type – The type of string to generate:



● Random

Length: 1

Type: Alphanumeric

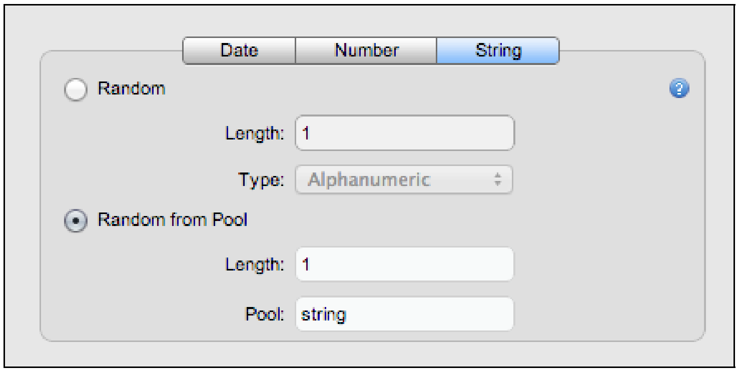
○ Random from Pool

Length:

Pool: string

Random from Pool

Select the Random from Pool button to set a string of random characters chosen from the given set of characters by length and pool (both required).



○ Random

Length: 1

Type: Alphanumeric

● Random from Pool

Length: 1

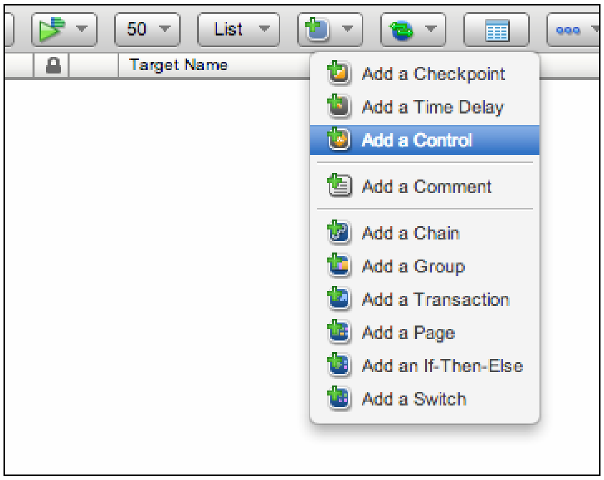
Pool: string

Length - The length of the string to be generated. Must be at least 1.

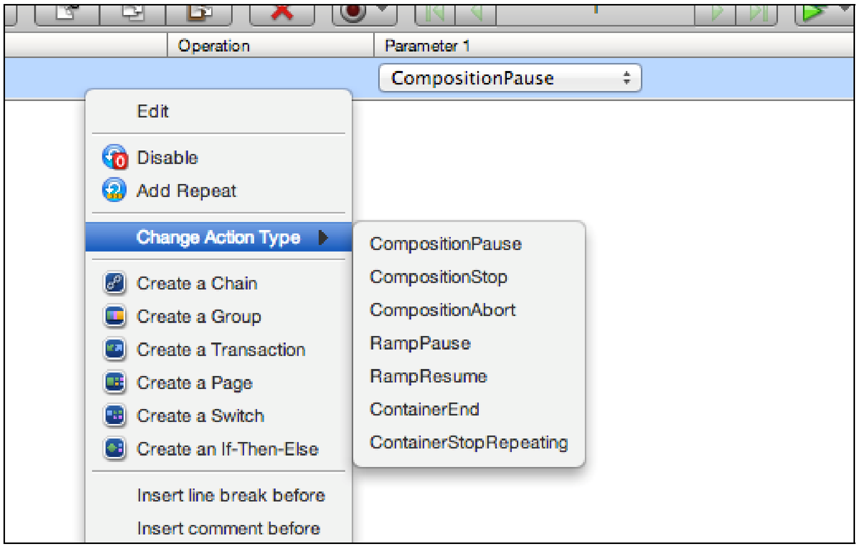
Pool - The list of characters from which to randomly choose in order to construct the string. Must contain at least one character. Typically, there would be no duplicates in the list, but there can be, in which case the odds of that character being randomly chosen will be increased proportionally to how many times it appears in the list.

Control Clip Element

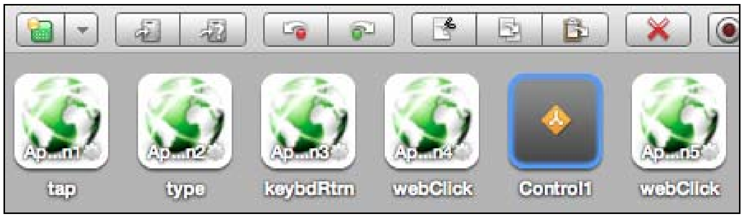
The Clip Editor, Add menu now includes an additional command, Add a Control, which can be used to enforce test composition play control when placed within a given point in a test.



You can also change the the control action type via right-click from list or icon mode.

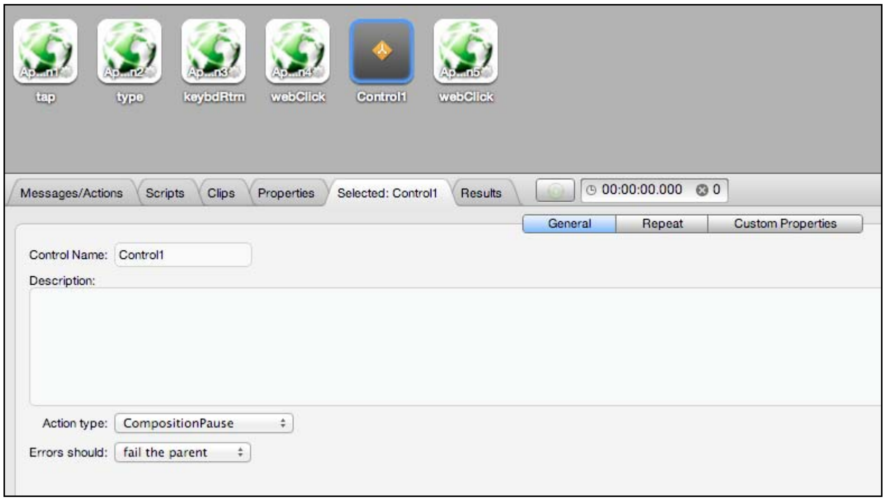


Select the clip element to place the new control after it.



TIP: If you'd like to add the control to a container, expand it first before adding control.

To set the control in Icon view, double click its icon to open it in the Clip Editor lower panel.



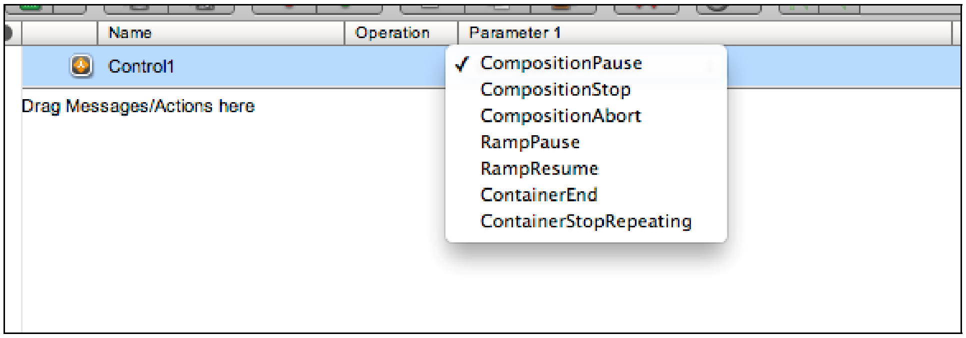
Control Name: Control1

Description:

Action type: CompositionPause

Errors should: fail the parent

If the Clip Editor is in List view then the control can be set using the row's drop-down.



Control Parameters

The Control clip element has the following settings:

CompositionPause

Click to fully pause a composition. A full pause pauses everything. All users, even existing users, pause what they are doing, and all activity (sending, etc.) is paused.

Alternately, use Ramp Pause. Ramp pausing and full pausing can be done at any time, and can overlap, partially or fully. A full pause is performed with the Pause button on the Player Control.

CompositionStop

Stop conditionally terminates a composition that is still responsive while preserving its data stream. When Stop is clicked, message sends are halted and unwritten test data is presented. For larger tests, there will be some additional time before results appear.

CompositionAbort

Terminates the Composition as if there were an error and gives up writing the result. It is otherwise identical to CompositionStop.

RampPause

Pauses the Composition’s “ramp”, if any, as if the user had pressed the “pause ramp” button. Note that this merely starts the ramp pausing. The ramp will not actually be completely paused until all portions of the Composition on all servers have paused the ramp. This method may be called at any time, including when the ramp is already paused or pausing, or when it is resuming. “Ramp up” is defined as Track parallel repeating with an “interval”.

RampResume

Resumes the Composition's "ramp", if any, as if the user had pressed the "resume ramp" button.

This merely starts the ramp resuming. The ramp will not actually be completely resumed until all portions of the Composition on all servers have resumed the ramp.

This method may be called at any time, including when the ramp is not paused or pausing, or when it is already resuming.

"Ramp" is defined as Track parallel repeating with an "interval".

ContainerEnd

Terminates the Container at the control insertion point as if there were an error. The message and detail text given in the parameters are inserted into the Result object.

ContainerStopRepeating

Terminates any subsequent repeats of the container in which the control resides.

Auto Refresh in Clip Editor lower panel tabs

In prior releases, the Clip Editor lower panel lists used to add scripts and nested clips into an open test clip were not refreshed after the Clip Editor tab was opened. This caused users some inconvenience to users who were forced to save, exit, and reopen the test clip in order to see content created after a given tab was opened.

For Italia, the Clip Editor lower panel toolbar will now auto-refresh when update items in either the Scripts list or the Clips list are available. So, for example, a test clip author can discover a need for a new or updated script—create it in a separate tab and see that item or updated item refresh in the lower panel Scripts or Clips list.

After refresh, the Date Modified field will display the new date/time (for any changed script) or list any new scripts or clips that have been created since the test clip was opened).

Session Template Package Wizard Scanner Improvements

The following special session templates relevant to .NET clips now have a flag that allows them to be used repeatedly during blind apply, instead of being used once:

__VIEWSTATE

__EVENTTARGET

__EVENTARGUMENT

__EVENTVALIDATION

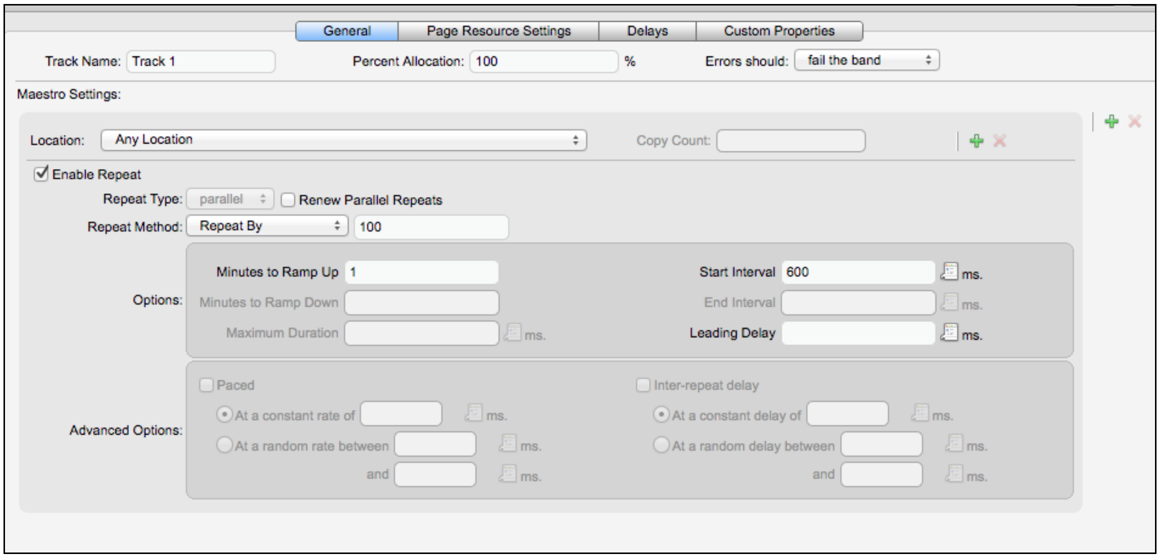
In the case of scanning a .NET clip, if the session template being applied finds a match, it continues throughout the rest of the clip looking for more matches (in prior releases we stopped after the first match).

Test Execution

Ramp Down for Parallel Repeats

This release introduces new ramp down settings for all items that use parallel repeats. By far the most common use of parallel repeats is in tracks, which are used to implement virtual users. However, the same feature can be used with parallel repeats at the clip- and message-levels.

Track-level properties in the Composition Editor now include the ability to specify both the Minutes to Ramp Up (formerly Minutes to Ramp) as well as two new fields for Minutes to Ramp Down and a corresponding End Interval field. Additionally, ramp down is now available for timed clips in clip-level composition properties.



Track Name: Track 1

Percent Allocation: 100 %

Errors should: fail the band

Maestro Settings:

Location: Any Location

Copy Count:

☑ Enable Repeat

Repeat Type: parallel

□ Renew Parallel Repeats

Repeat Method: Repeat By 100

Options:

Minutes to Ramp Up 1

Start Interval 600 ms.

Minutes to Ramp Down

End Interval ms.

Maximum Duration ms.

Leading Delay ms.

Advanced Options:

□ Paced

● At a constant rate of ms.

○ At a random rate between ms.

and ms.

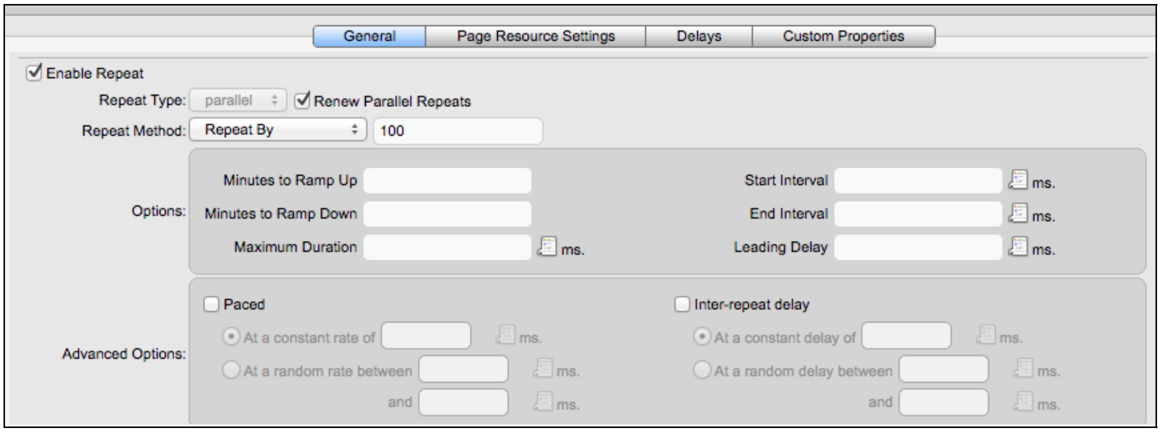
□ Inter-repeat delay

● At a constant delay of ms.

○ At a random delay between ms.

and ms.

Track-level ramp settings are found in the General tab when a sequenced test clip is in use, Enable Repeat is checked, and Ramp fields are made active whenever parallel is the repeat type and Renew Parallel Repeats is checked (shown below). If these conditions aren't met, then the relevant fields will appear inactive (shown above).



☑ Enable Repeat

Repeat Type: parallel ☑ Renew Parallel Repeats

Repeat Method: Repeat By 100

Options:

Minutes to Ramp Up

Minutes to Ramp Down

Maximum Duration ms.

Start Interval ms.

End Interval ms.

Leading Delay ms.

Advanced Options:

□ Paced

○ At a constant rate of ms.

○ At a random rate between ms. and ms.

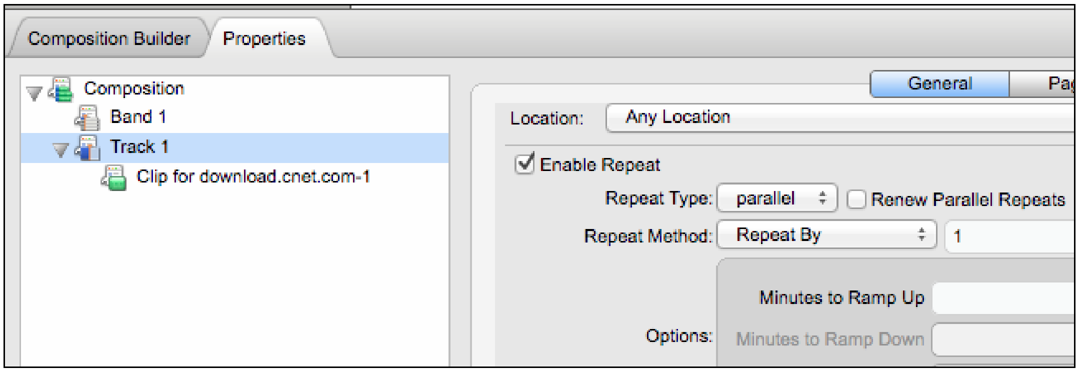
□ Inter-repeat delay

○ At a constant delay of ms.

○ At a random delay between ms. and ms.

Defining a Ramp

Both ramp and ramp down can now be defined for a track in the Composition Editor, track-level properties, General tab.



Location: Any Location

☑ Enable Repeat

Repeat Type: parallel □ Renew Parallel Repeats

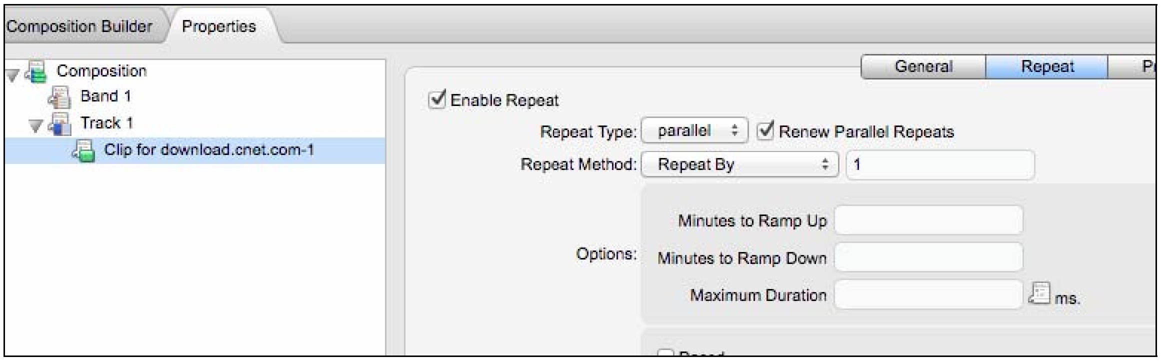
Repeat Method: Repeat By 1

Options:

Minutes to Ramp Up

Minutes to Ramp Down

Additionally, both ramp and ramp down can be defined for any timed clip, whether manually or evenly timed, in the Composition Editor, clip-level properties, Repeat tab.



☑ Enable Repeat

Repeat Type: parallel ☑ Renew Parallel Repeats

Repeat Method: Repeat By 1

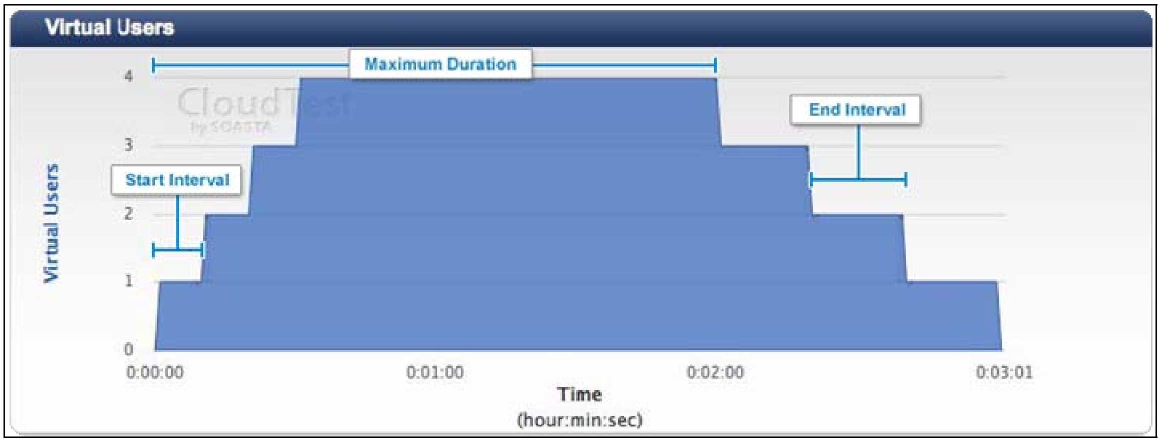
Options:

Minutes to Ramp Up

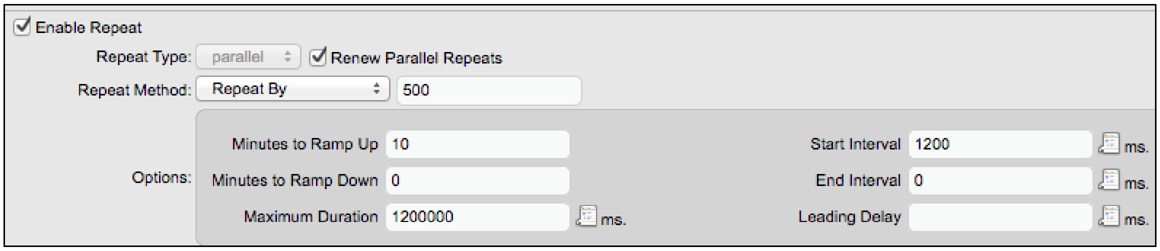
Minutes to Ramp Down

Maximum Duration ms.

To define a track- or clip-level ramp in prior releases, one specified the number of minutes of the ramp as well as a start interval (same as in prior releases) for the ramp (i.e. the interval between the start of each virtual user).



- **Minutes to Ramp Up** – Specify the minutes as an integer to ramp.
- **Start Interval** – Specify an interval between starts of the repeat(s) of a track. Causes "ramp."
- **Maximum Duration** – Specify the maximum length that tracks are to run. Once the maximum has been reached, new repeats will not be created. Note that maximum duration is measured from the start of the first repeat and does not include “ramp down." Ramp down, if any, starts after the maximum duration has been reached.



☑ Enable Repeat

Repeat Type: parallel ☑ Renew Parallel Repeats

Repeat Method: Repeat By 500

Options:

Minutes to Ramp Up 10

Minutes to Ramp Down 0

Maximum Duration 1200000 ms.

Start Interval 1200 ms.

End Interval 0 ms.

Leading Delay ms.

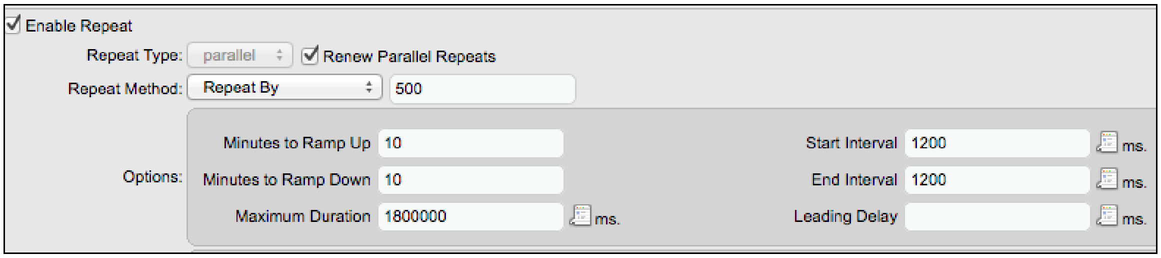
The maximum duration is the sum of the ramp PLUS the intended plateau (expressed as milliseconds). For example, the screenshot above shows a ramp to 500 virtual users over 10 minutes, and then holds for 10 minutes. Note that in this example no ramp down is in use—which means this example works as in prior releases. Be sure to adjust the maximum duration accordingly if a ramp down will also be used (shown in the example below).

To define a ramp down, specify the number of minutes of the ramp down or an end interval (when one is entered the UI automatically fills in the opposite one).

The goal of "ramp down" is to *increment to less* than the current actual number of users. Maestro doesn't "interrupt" or "abort" tracks so it must wait for individual track repeats to end naturally—which means it may not match the rate requested exactly.

Ramp down assumes that parallel repeat renewal is in use since the ramp down determines whether another track repeat is spawned

- **Minutes to Ramp Down** – Either specify the minutes as an integer to ramp.
- **End Interval** – Or, specify an interval between stops of the repeat(s) of a track. Causes "ramp down."
- **Maximum Duration** – Specify the maximum length that tracks are to run. Once the maximum has been reached, new repeats will not be created. Note that maximum duration is measured from the start of the first repeat.



☑ Enable Repeat

Repeat Type: parallel ☑ Renew Parallel Repeats

Repeat Method: Repeat By 500

Options:

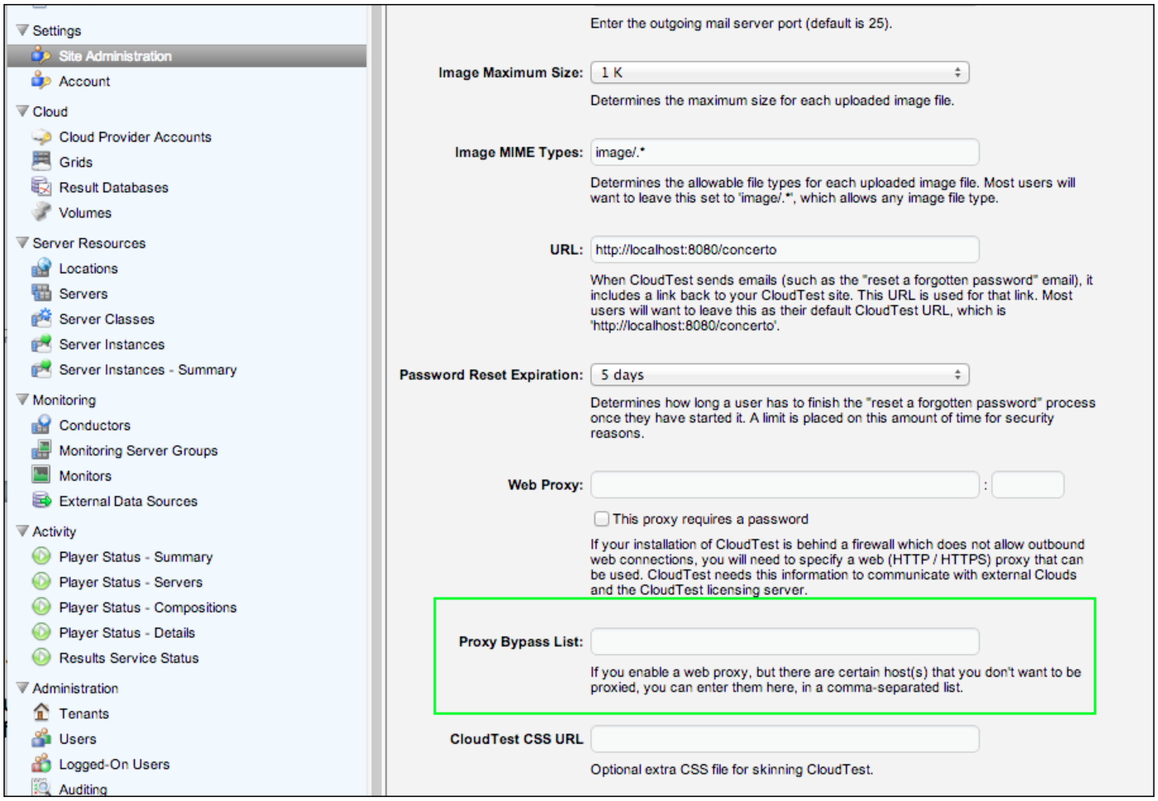
Minutes to Ramp Up	10		Start Interval	1200	ms.
Minutes to Ramp Down	10		End Interval	1200	ms.
Maximum Duration	1800000	ms.	Leading Delay		ms.

The maximum duration is the sum of the ramp (if one is in use) PLUS the intended plateau (expressed as milliseconds) as well as the ramp down. For example, a ramp involving 500 virtual users that ramped up over 10 minutes and had a plateau of 10 minutes and a ramp down of 10 minutes would then have a maximum duration of 30 minutes (entered as 1800000 milliseconds).

Note: A "ramp" is in use when one or more tracks have been specified to repeat in parallel within a specified Start Interval (provided as milliseconds). Parallel repeats, or virtual users, on a track start at the Start Interval rather than all at once.

Enhanced proxy settings in Site Administration

The Central > Site Administration form now includes a new Proxy Bypass List that can be used by site administrators to specify a comma separated lists of host exceptions for an enabled Web Proxy.



Enter the outgoing mail server port (default is 25).

Image Maximum Size: 1 K

Determines the maximum size for each uploaded image file.

Image MIME Types: image/.*

Determines the allowable file types for each uploaded image file. Most users will want to leave this set to 'image/.*', which allows any image file type.

URL: http://localhost:8080/concerto

When CloudTest sends emails (such as the "reset a forgotten password" email), it includes a link back to your CloudTest site. This URL is used for that link. Most users will want to leave this as their default CloudTest URL, which is 'http://localhost:8080/concerto'.

Password Reset Expiration: 5 days

Determines how long a user has to finish the "reset a forgotten password" process once they have started it. A limit is placed on this amount of time for security reasons.

Web Proxy: :

□ This proxy requires a password

If your installation of CloudTest is behind a firewall which does not allow outbound web connections, you will need to specify a web (HTTP / HTTPS) proxy that can be used. CloudTest needs this information to communicate with external Clouds and the CloudTest licensing server.

Proxy Bypass List:

If you enable a web proxy, but there are certain host(s) that you don't want to be proxied, you can enter them here, in a comma-separated list.

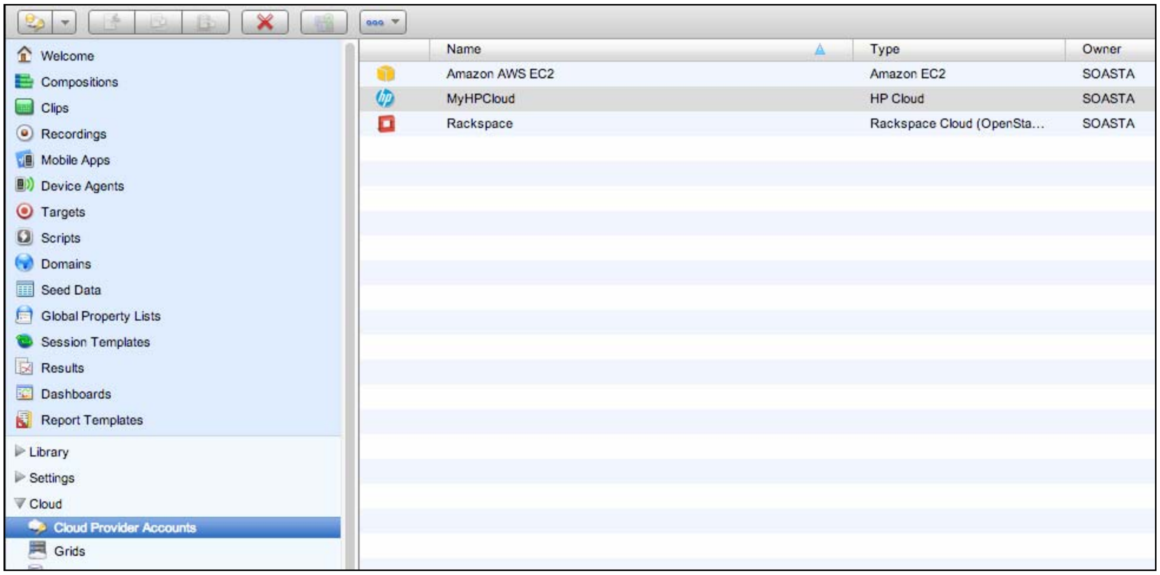
CloudTest CSS URL

Optional extra CSS file for skinning CloudTest.

This feature permits an internal proxy to communicate with CloudTest servers for license checks and for installing updates, but to bypass that proxy for inter-server communication (usually inside a firewall).

HP Cloud (Open Stack) Support (CloudTest Pro/Enterprise)

As of this release, CloudTest Pro users can create Cloud Provider Accounts for the HP Cloud (OpenStack).



Name	Type	Owner
Amazon AWS EC2	Amazon EC2	SOASTA
MyHPCloud	HP Cloud	SOASTA
Rackspace	Rackspace Cloud (OpenSta...	SOASTA

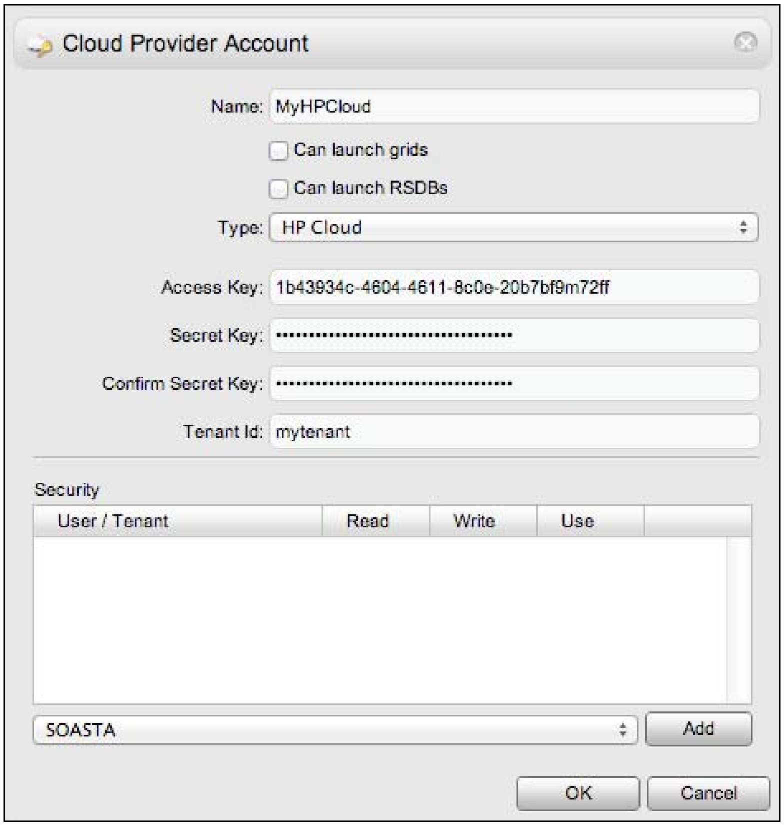
By entering valid cloud provider account information for HP Cloud, locations are automatically created and can then easily be used to provision servers via the Grid Manager.

Setup HP Cloud as a Cloud Provider

Use the following steps to enter your valid HP Cloud credentials as a CloudTest Pro/Enterprise Cloud Provider Account.

1. Select Central > Cloud Provider Accounts and then click New to launch the Cloud Provider Account dialog box.
2. Enter a name for the account. This name is used in locations and also appears in the Cloud Provider Account drop-down in the Grid Manager.

3. Change the “Type” drop-down to “HP Cloud”. The dialog box changes to reflect the available HP Cloud key and tenant fields.



Cloud Provider Account

Name: MyHPCloud

□ Can launch grids

□ Can launch RSDBs

Type: HP Cloud

Access Key: 1b43934c-4604-4611-8c0e-20b7bf9m72ff

Secret Key: ••••••••••••••••••••••••••••••••••••

Confirm Secret Key: ••••••••••••••••••••••••••••••••••••

Tenant Id: mytenant

Security

User / Tenant	Read	Write	Use

SOASTA

4. Check the Can launch grids box to enable grid use for this account and/or check the Can launch RSDBS box if this account will be also launch additional result database servers.

5. To find your API key,

   a. Log in to the HP Cloud management portal.

   b. Locate your API Keys information and enter it in the corresponding Cloud Provider Account field (shown above).

6. You can optionally configure an access control list to restrict which CloudTest users are able to launch HP Cloud servers with this account. This step is not required if you are the only CloudTest user that will be launching servers. To configure an access control list:

   a. Select the CloudTest user you want to grant access to in the drop-down at the bottom of the dialog.

   b. Click the Add button.

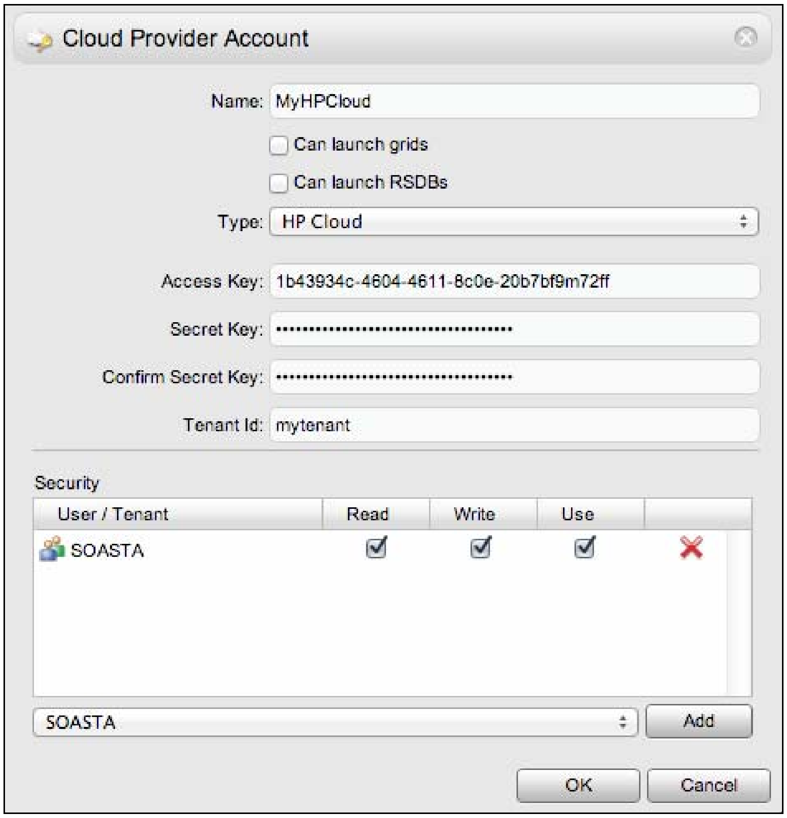
   c. A new row will appear in the list above the drop-down.

   d. To allow the user to view the Cloud Provider Account object (but not necessarily use it), check the Read box. Note that even with this box checked, the user will **not** be able to view secure information (such as the HP Cloud shared secret).

e. To allow the user to modify, delete, or re-name the Cloud Provider Account, check the Write box.

f. To allow the user to launch new servers using this Cloud Provider Account, check the Use box.

g. Repeat steps a-f for each CloudTest user that you want to grant access to.



Cloud Provider Account

Name: MyHPCloud

□ Can launch grids

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Type: HP Cloud

Access Key: 1b43934c-4604-4611-8c0e-20b7bf9m72ff

Secret Key: ••••••••••••••••••••••••••••••••••••

Confirm Secret Key: ••••••••••••••••••••••••••••••••••••

Tenant Id: mytenant

Security

User / Tenant	Read	Write	Use	
SOASTA	☑	☑	☑	✖

SOASTA

7. Click OK to complete configuration of the Cloud Provider Account. Issuing a call to HP Cloud will validate the account information. If the credentials are invalid, a warning will be shown. You can choose to go back and correct the credentials, or continue.

8. After the Cloud Provider Account is saved, a new Location for each HP Cloud data center will be automatically created, if it does not already exist.

   This location must be specified during Grid Manager configuration of grids. For more information about Locations, refer to Using Locations.

Miscellaneous

Webmin Administrative Console

The Webmin administrative console is now included for the convenience of CloudTest Lite users who may need to modify some environment-specific settings.

Specifically – if the CloudTest Lite instance needs a static IP to connect to its network, the user can now log in to Webmin on their CloudTest Lite instance (i.e. in VMWare, etc.) and assign that static IP to themselves.

Additionally, CloudTest Lite users will now automatically logged in as the CloudTest Administrator on the CloudTest Lite virtual machine, which provides CloudTest Lite users the ability to modify various settings specific to Webmin.

TouchTest

Test Creation

TouchTest™ Web for Android

TouchTest™ Web is an Android app that brings the revolutionary functional test automation capabilities of CloudTest Mobile™ to web-based apps and sites on your Android device. TouchTest Web delivers the rapid test creation, rich visual interface, real-time analytics for test automation, and performance testing throughout the application development lifecycle that the test community has come to expect from SOASTA.

Once deployed, TouchTest Web works with TouchTest Agent and your CloudTest desktop to enable you to capture browser actions easily and play them back onto any Android device(s) in just a few simple steps.

For a complete introduction refer to the TouchTest™ Web for Android Tutorial. This tutorial presents complete end-user instructions for building and deploying the mobile app on your device or simulator, as well as for test creation using TouchTest Web.

Improved TouchTest for Android Support

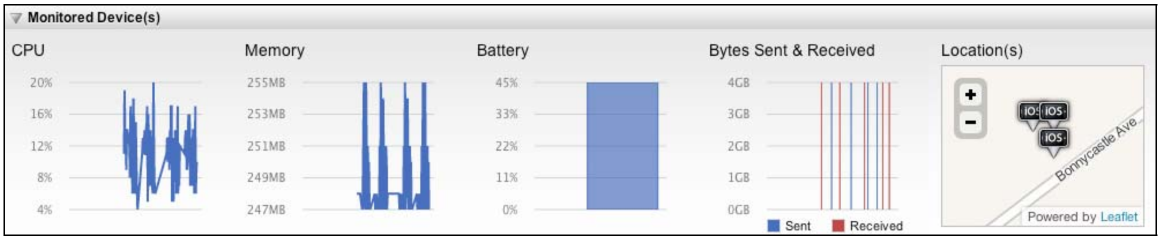
The Italia release features improved TouchTest support for both iOS and Android platforms including incremental improvements for Android mobile apps that use hybrid features (hybrid support was introduced in the Vanquish).

Additionally, Touch Locator support for test clip creation as well as Mobile Monitoring is now offered on Android devices (iOS Mobile Monitoring was released in Vanquish). As noted above, mobile monitoring is now supported for via TouchTest Web clips on both iOS and Android devices.

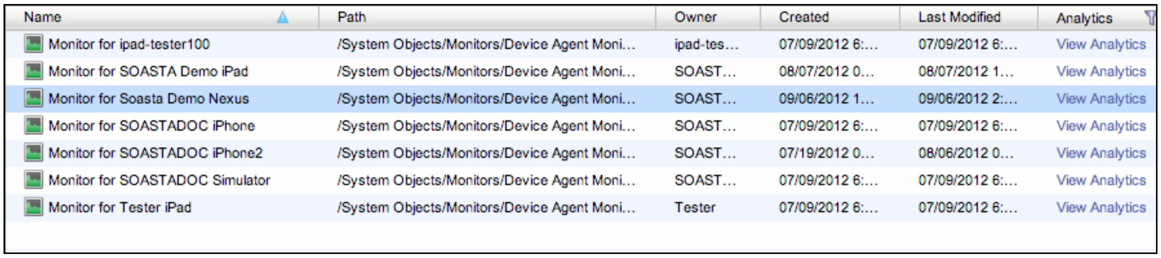
Test Analytics

Mobile Monitoring for Android

This release adds mobile monitoring capabilities to the CloudTest Mobile feature set for Android.

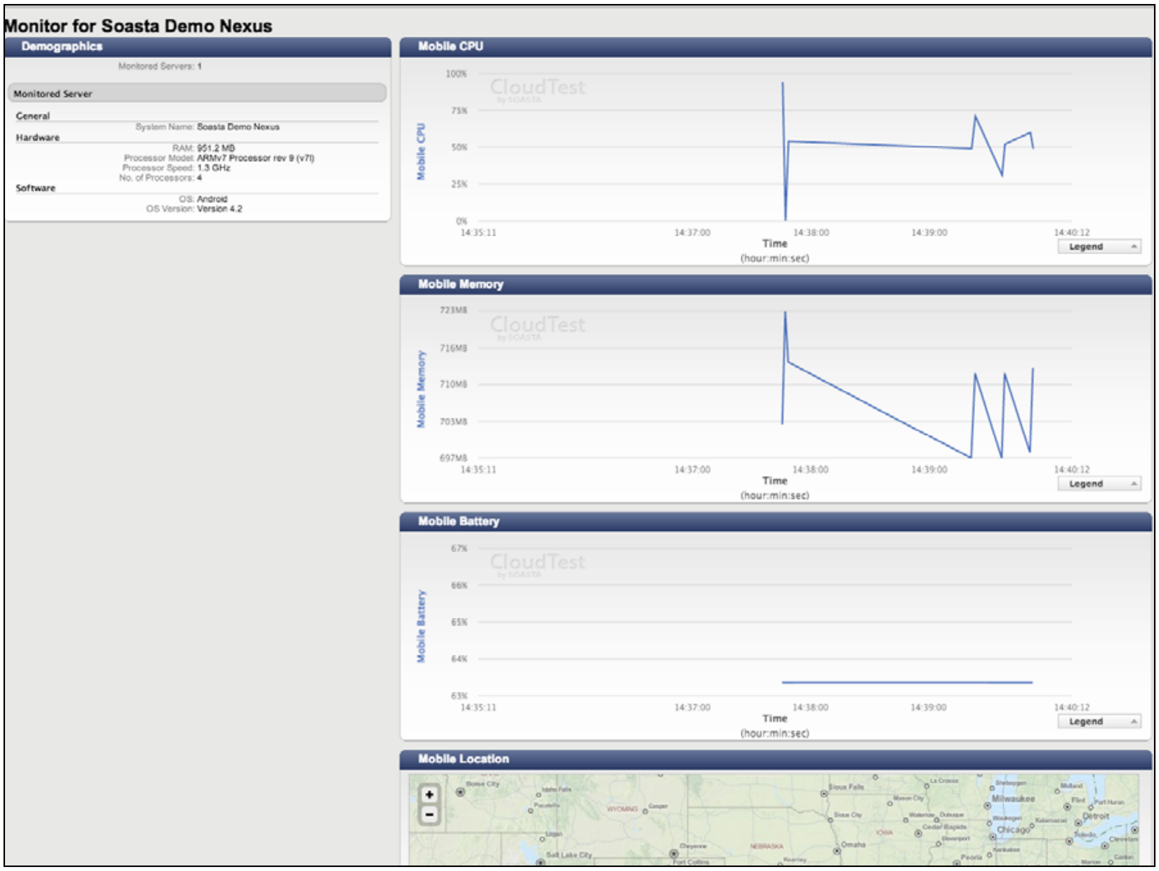


Monitor server groups and monitor instances are now automatically created at the time of Android Device Agent creation and mobile monitor results now appear by default in the Result Details widget, including for CPU, Memory, Battery, Bytes Sent & Receive, and Location(s).



Name	Path	Owner	Created	Last Modified	Analytics
Monitor for ipad-tester100	/System Objects/Monitors/Device Agent Moni...	ipad-tes...	07/09/2012 6:...	07/09/2012 6:...	View Analytics
Monitor for SOASTA Demo iPad	/System Objects/Monitors/Device Agent Moni...	SOAST...	08/07/2012 0...	08/07/2012 1...	View Analytics
Monitor for Soasta Demo Nexus	/System Objects/Monitors/Device Agent Moni...	SOAST...	09/06/2012 1...	09/06/2012 2:...	View Analytics
Monitor for SOASTADOC iPhone	/System Objects/Monitors/Device Agent Moni...	SOAST...	07/09/2012 6:...	07/09/2012 6:...	View Analytics
Monitor for SOASTADOC iPhone2	/System Objects/Monitors/Device Agent Moni...	SOAST...	07/19/2012 0...	08/06/2012 0...	View Analytics
Monitor for SOASTADOC Simulator	/System Objects/Monitors/Device Agent Moni...	SOAST...	07/09/2012 6:...	07/09/2012 6:...	View Analytics
Monitor for Tester iPad	/System Objects/Monitors/Device Agent Moni...	Tester	07/09/2012 6:...	07/09/2012 6:...	View Analytics

TIP: You can also click View Analytics in the Monitor Service list to view per-device monitors in the Central tab, Monitors Service list.



Monitor for Soasta Demo Nexus

Demographics

Monitored Servers: 1

Monitored Server

General

System Name: Soasta Demo Nexus

Hardware

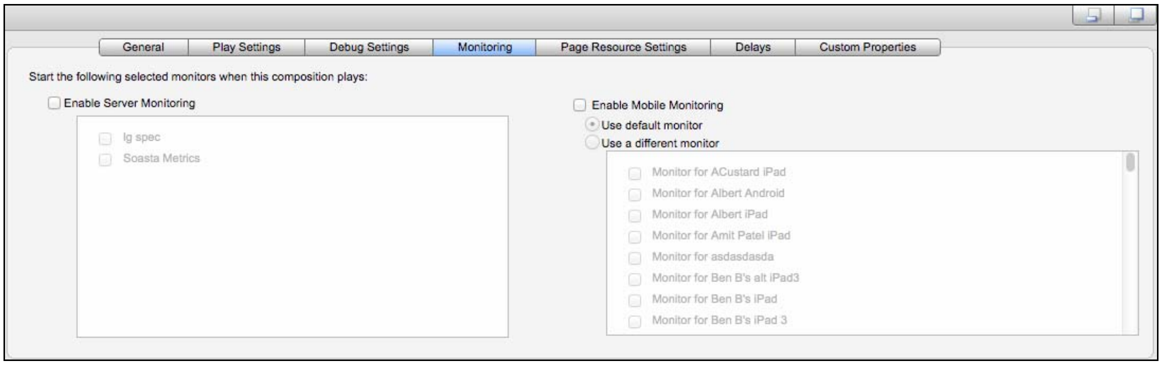
RAM: 951.2 MB
Processor Model: ARMv7 Processor rev 9 (v7l)
Processor Speed: 1.3 GHz
No. of Processors: 4

Software

OS: Android
OS Version: Version 4.2

Composition Monitoring Tab

Composition-level monitoring can be switched on or off in the given composition's Monitoring properties tab.



Start the following selected monitors when this composition plays:

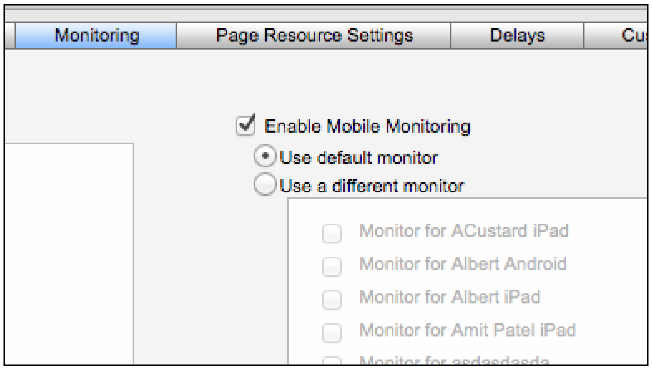
☐ Enable Server Monitoring

☐ lg spec
☐ Soasta Metrics

☐ Enable Mobile Monitoring
● Use default monitor
○ Use a different monitor

☐ Monitor for ACustard iPad
☐ Monitor for Albert Android
☐ Monitor for Albert iPad
☐ Monitor for Amit Patel iPad
☐ Monitor for asdasdasda
☐ Monitor for Ben B's alt iPad3
☐ Monitor for Ben B's iPad
☐ Monitor for Ben B's iPad 3

Ensure that the monitoring type to use is enabled by checking the corresponding box for the given composition.



☑ Enable Mobile Monitoring

● Use default monitor

○ Use a different monitor

☐ Monitor for ACustard iPad

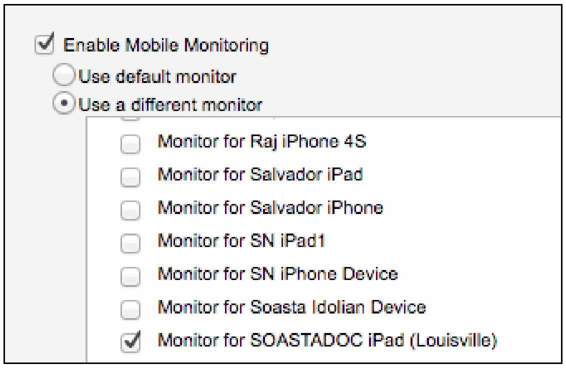
☐ Monitor for Albert Android

☐ Monitor for Albert iPad

☐ Monitor for Amit Patel iPad

☐ Monitor for asdasdasda

For mobile monitoring, enabling the monitor will cause the default monitor to be used unless *Use a different monitor* is selected instead.



☑ Enable Mobile Monitoring

○ Use default monitor

● Use a different monitor

☐ Monitor for Raj iPhone 4S

☐ Monitor for Salvador iPad

☐ Monitor for Salvador iPhone

☐ Monitor for SN iPad1

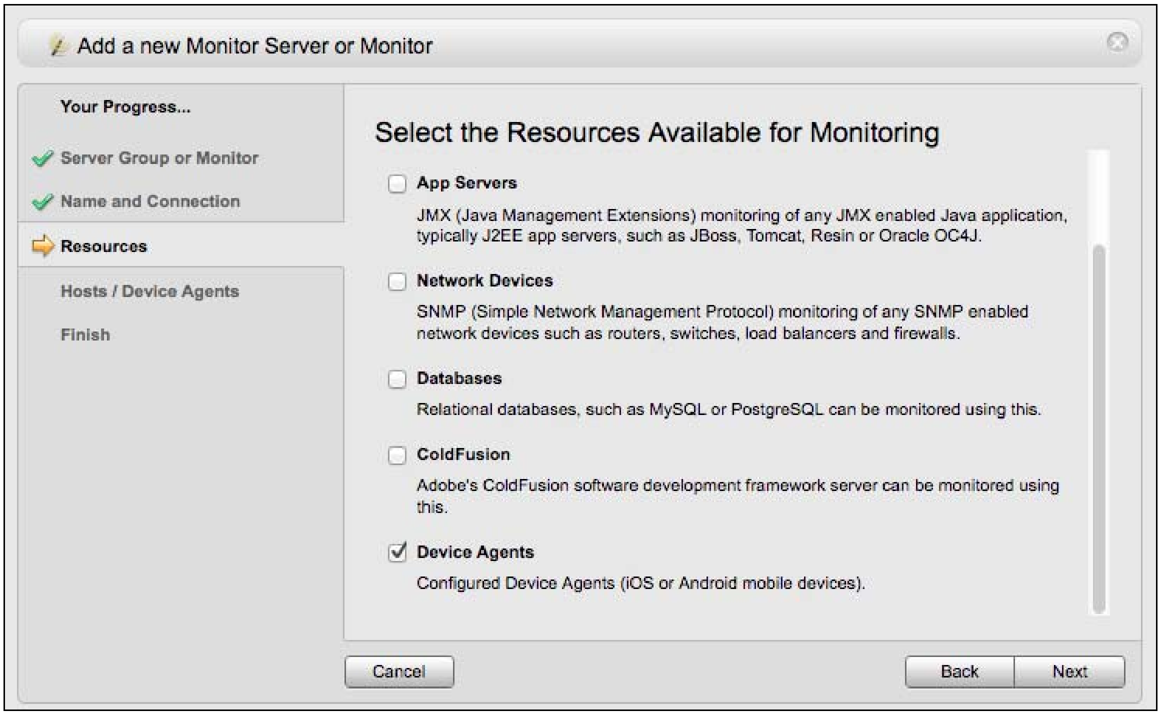
☐ Monitor for SN iPhone Device

☐ Monitor for Soasta Idolian Device

☑ Monitor for SOASTADOC iPad (Louisville)

Mobile monitors can be manually created or revised using the monitor wizard just as with all monitors in prior releases. Device Agents are included among those *Resources Available for Monitoring* during the Monitoring Server Group creation process.

Monitor multiple devices in a test by defining a group to use the Device Agent resource (shown below).



Select the Resources Available for Monitoring

□ **App Servers**

JMX (Java Management Extensions) monitoring of any JMX enabled Java application, typically J2EE app servers, such as JBoss, Tomcat, Resin or Oracle OC4J.

□ **Network Devices**

SNMP (Simple Network Management Protocol) monitoring of any SNMP enabled network devices such as routers, switches, load balancers and firewalls.

□ **Databases**

Relational databases, such as MySQL or PostgreSQL can be monitored using this.

□ **ColdFusion**

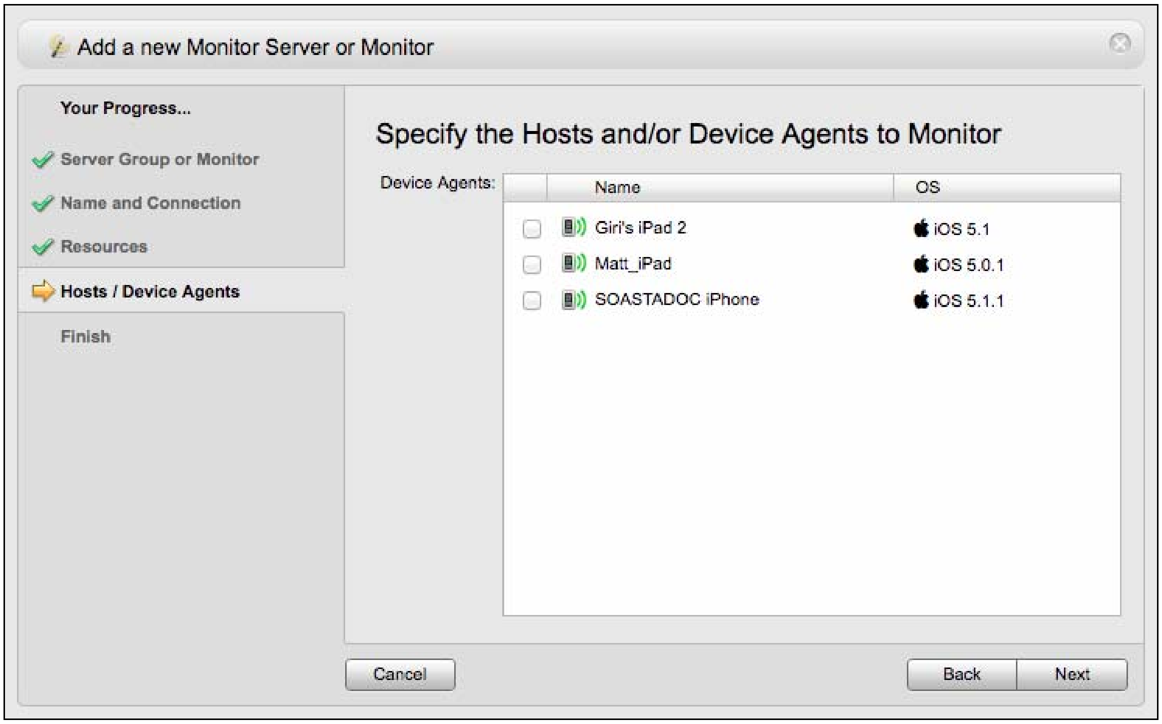
Adobe's ColdFusion software development framework server can be monitored using this.

☑ **Device Agents**

Configured Device Agents (iOS or Android mobile devices).

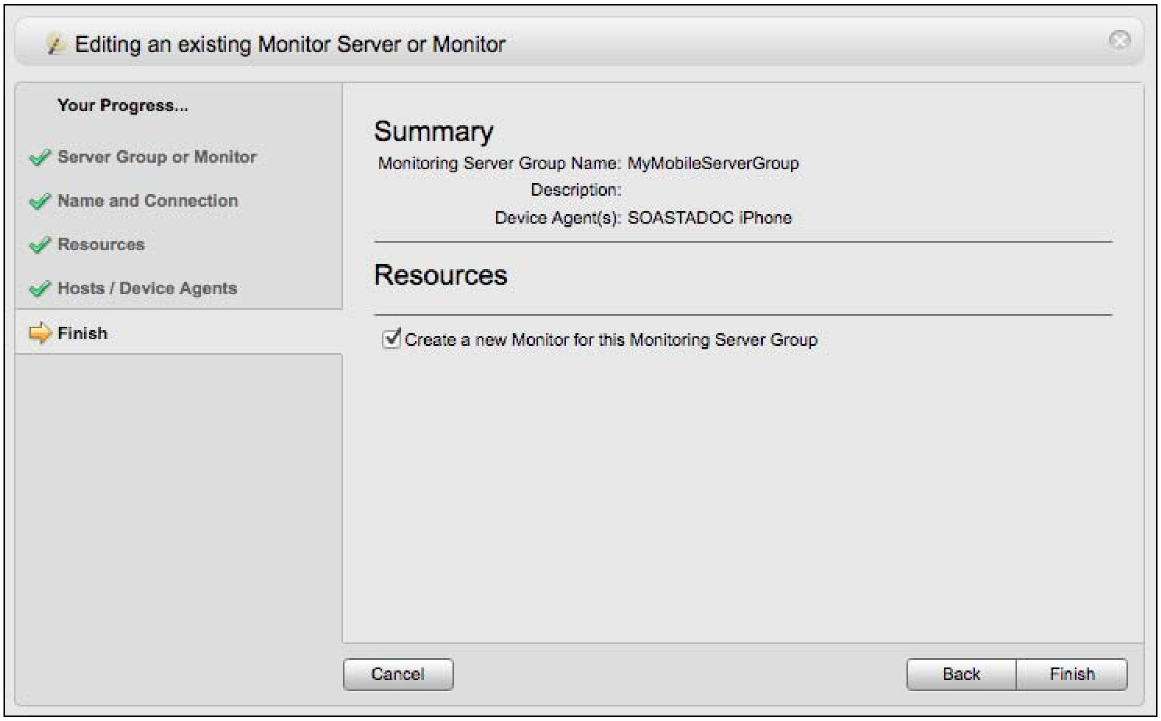
In SOASTA CloudTest, a Monitor Server Group defines the hardware or software end-point that will be monitored—if “Device Agents” is checked that end-point corresponds to a specific mobile device (or set of mobile devices).

Those devices in a group are specified via the Hosts/Device Agents page in the wizard. Check or uncheck the given device(s) in the Device Agents list to include them in this group.


Add a new Monitor Server or Monitor
Your Progress...
✓ Server Group or Monitor
✓ Name and Connection
✓ Resources
Hosts / Device Agents
Finish
Specify the Hosts and/or Device Agents to Monitor
Device Agents:
Cancel
Back
Next

	Name	OS
□	Giri's iPad 2	iOS 5.1
□	Matt_iPad	iOS 5.0.1
□	SOASTADOC iPhone	iOS 5.1.1

Note: Monitor Server Groups and an accompanying monitor instance are created along with the Device Agent with default resource selection that monitors the mobile battery, CPU, memory, network bytes received and bytes sent.



Summary

Monitoring Server Group Name: MyMobileServerGroup

Description:

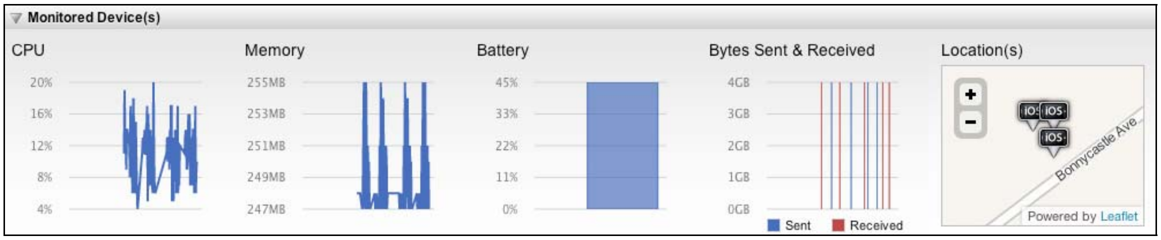
Device Agent(s): SOASTADOC iPhone

Resources

☑ Create a new Monitor for this Monitoring Server Group

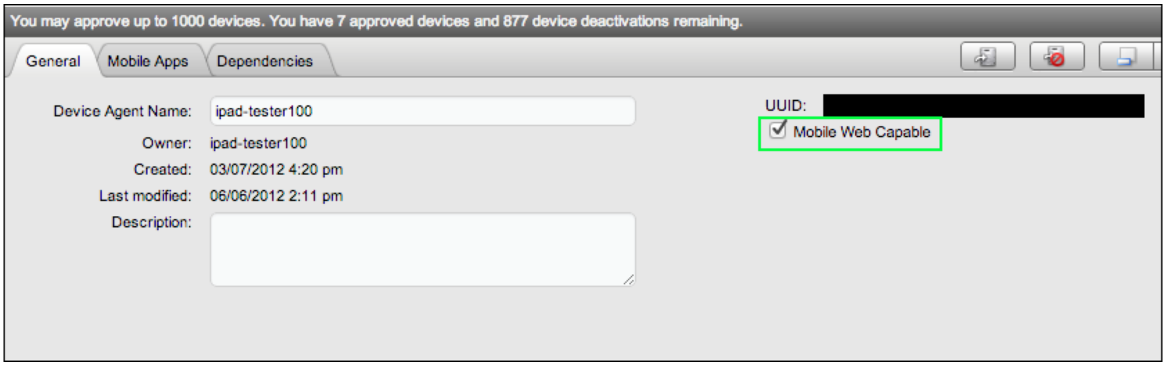
Mobile Monitoring for TouchTest Web (iOS)

This release adds mobile monitoring capabilities to the CloudTest Mobile feature set for TouchTest Web in iOS.



Monitor server groups and monitor instances are now created for use in iOS Device Agents that are Mobile Web enabled.

TIP: Check the Mobile Web Capable box in the Device Agent's lower panel, General tab to make it web enabled. The TouchTest Web app must be installed on your device. Refer to the TouchTest Web Tutorial for a complete guide to TouchTest Web testing.



You may approve up to 1000 devices. You have 7 approved devices and 877 device deactivations remaining.

Device Agent Name: ipad-tester100

Owner: ipad-tester100

Created: 03/07/2012 4:20 pm

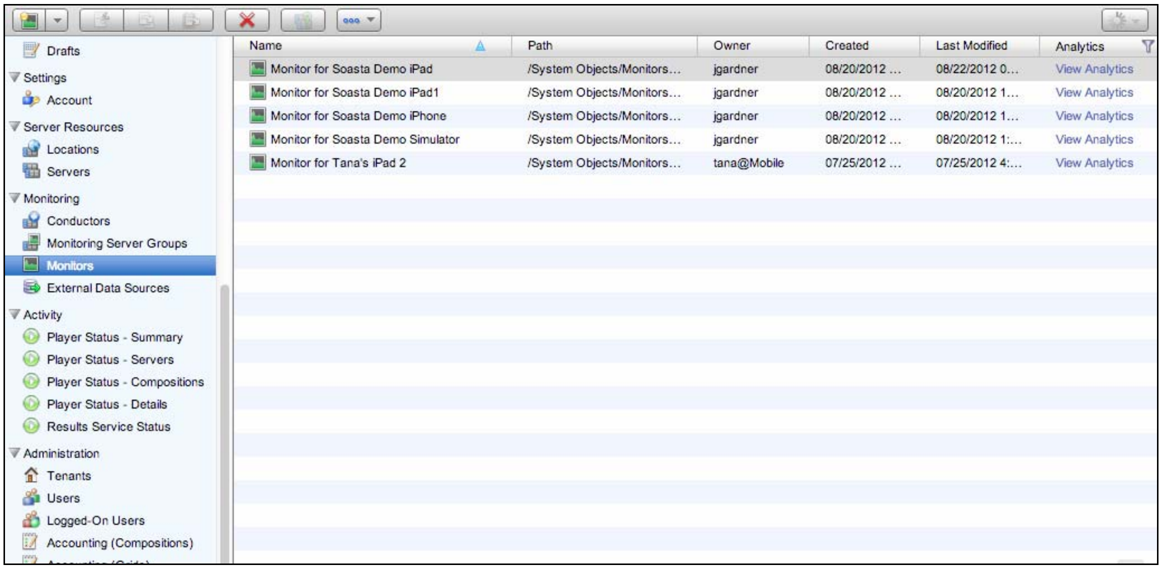
Last modified: 06/06/2012 2:11 pm

Description:

UUID: [redacted]

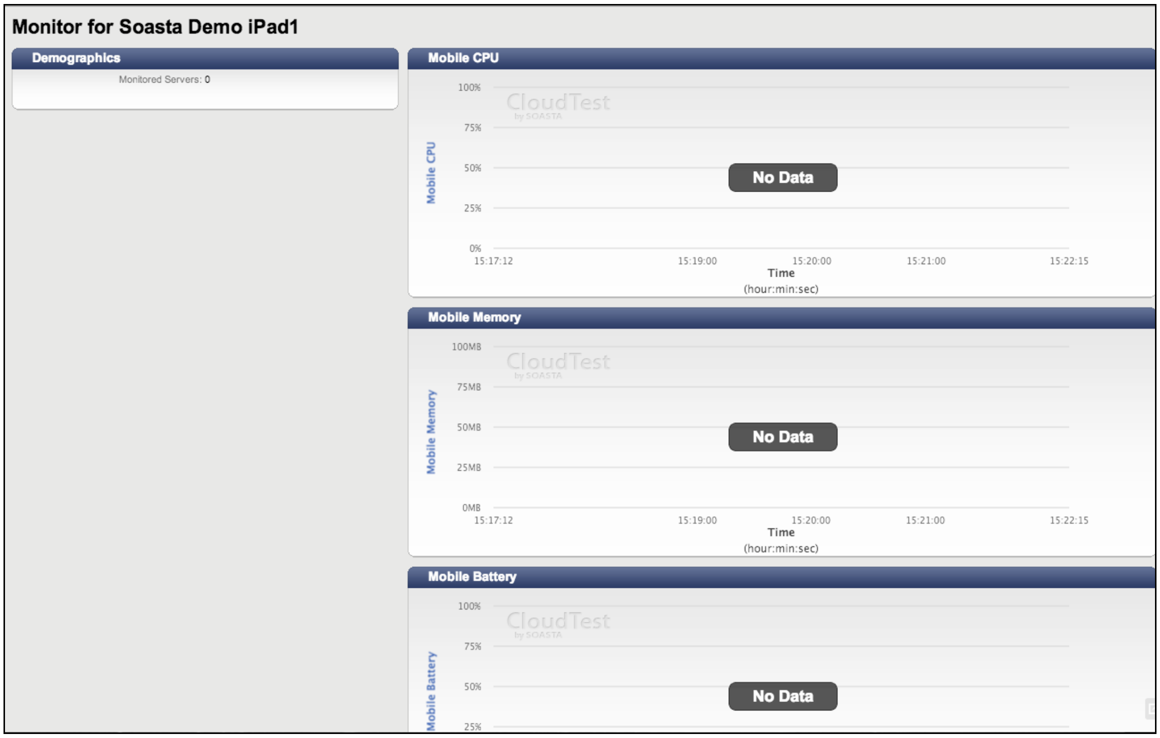
☑ Mobile Web Capable

now appear by default in TouchTest Web clips in the Result Details widget, including for CPU, Memory, Battery, Bytes Sent & Receive, and Location(s).



Name	Path	Owner	Created	Last Modified	Analytics
Monitor for Soasta Demo iPad	/System Objects/Monitors...	jgardner	08/20/2012 ...	08/22/2012 0...	View Analytics
Monitor for Soasta Demo iPad1	/System Objects/Monitors...	jgardner	08/20/2012 ...	08/20/2012 1...	View Analytics
Monitor for Soasta Demo iPhone	/System Objects/Monitors...	jgardner	08/20/2012 ...	08/20/2012 1...	View Analytics
Monitor for Soasta Demo Simulator	/System Objects/Monitors...	jgardner	08/20/2012 ...	08/20/2012 1:...	View Analytics
Monitor for Tana's iPad 2	/System Objects/Monitors...	tana@Mobile	07/25/2012 ...	07/25/2012 4:...	View Analytics

TIP: You can also click View Analytics in the Monitor Service list to view per-device monitors in the Central tab, Monitors Service list.



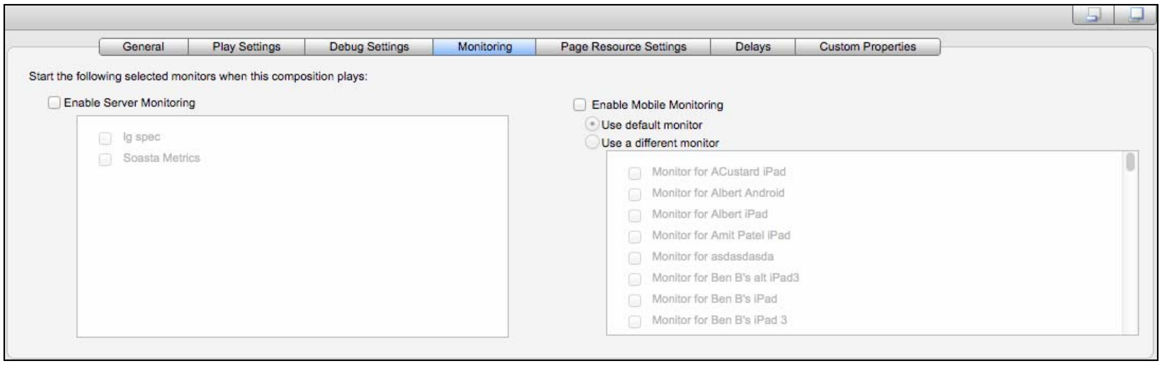
Monitor for Soasta Demo iPad1

Demographics

Monitored Servers: 0

Composition Monitoring Tab

Composition-level monitoring can be switched on or off in the given composition's Monitoring properties tab.



Start the following selected monitors when this composition plays:

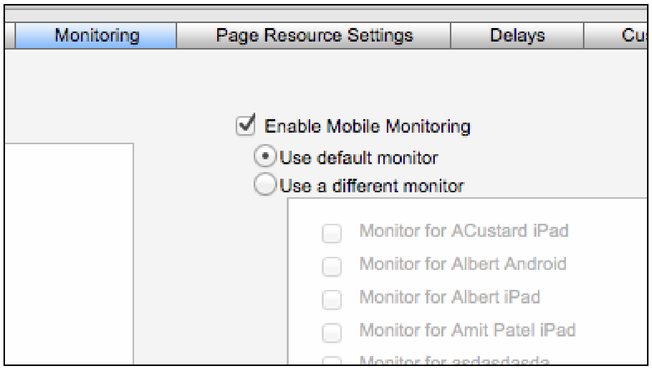
□ Enable Server Monitoring

- □ lg spec
- □ Soasta Metrics

□ Enable Mobile Monitoring

- ● Use default monitor
- ○ Use a different monitor
  - □ Monitor for ACustard iPad
  - □ Monitor for Albert Android
  - □ Monitor for Albert iPad
  - □ Monitor for Amit Patel iPad
  - □ Monitor for asdasdasda
  - □ Monitor for Ben B's alt iPad3
  - □ Monitor for Ben B's iPad
  - □ Monitor for Ben B's iPad 3

Ensure that the monitoring type to use is enabled by checking the corresponding box for the given composition.



☑ Enable Mobile Monitoring

● Use default monitor

○ Use a different monitor

- □ Monitor for ACustard iPad
- □ Monitor for Albert Android
- □ Monitor for Albert iPad
- □ Monitor for Amit Patel iPad
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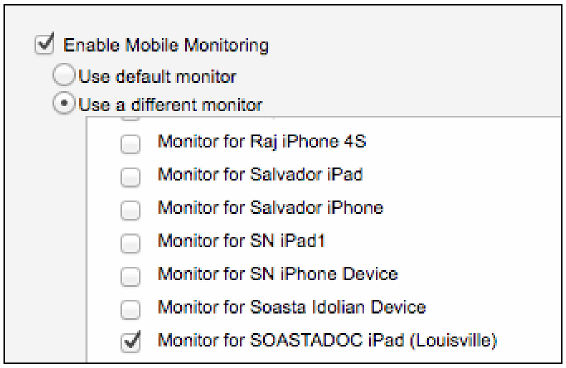
For mobile monitoring, enabling the monitor will cause the default monitor to be used unless Use a different monitor is selected instead.



☑ Enable Mobile Monitoring

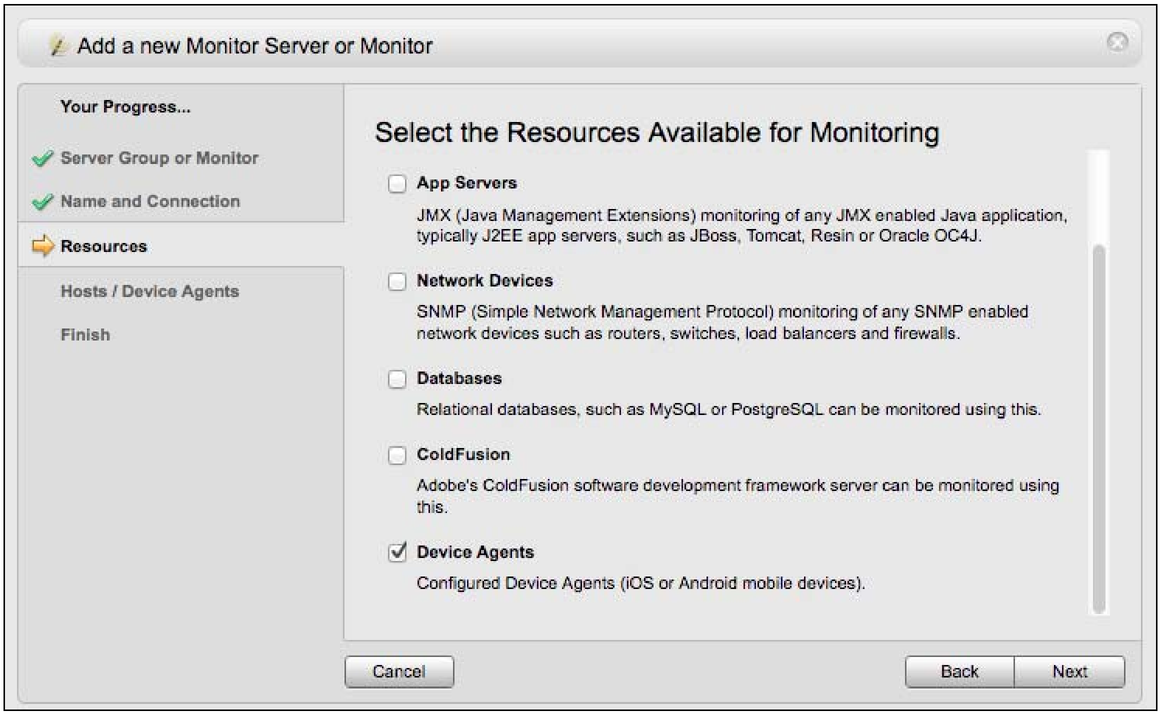
○ Use default monitor

● Use a different monitor

- □ Monitor for Raj iPhone 4S
- □ Monitor for Salvador iPad
- □ Monitor for Salvador iPhone
- □ Monitor for SN iPad1
- □ Monitor for SN iPhone Device
- □ Monitor for Soasta Idolian Device
- ☑ Monitor for SOASTADOC iPad (Louisville)

Mobile monitors can be manually created or revised using the monitor wizard just as with all monitors in prior releases. Device Agents are now included among those Resources Available for Monitoring during the Monitoring Server Group creation process.

Monitor multiple devices in a test by defining a group to use the Device Agent resource (shown below).



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Relational databases, such as MySQL or PostgreSQL can be monitored using this.

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Adobe's ColdFusion software development framework server can be monitored using this.

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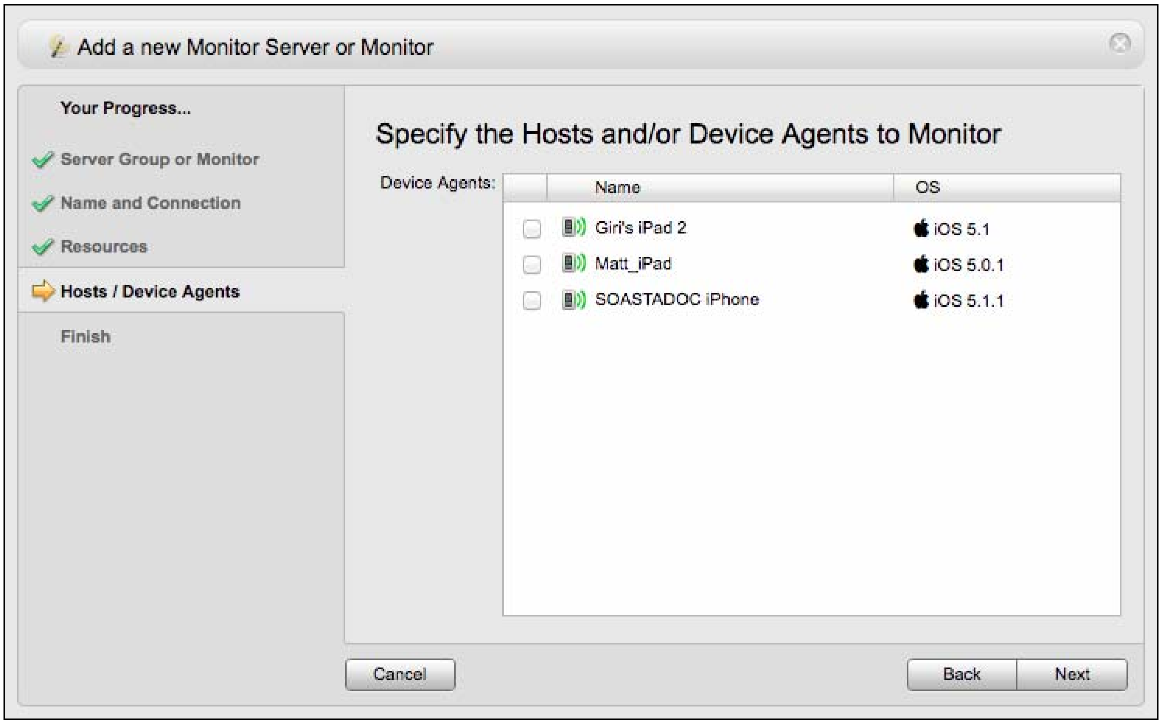
Configured Device Agents (iOS or Android mobile devices).

In SOASTA CloudTest, a Monitor Server Group defines the hardware or software end-point that will be monitored—if “Device Agents” is checked that end-point corresponds to a specific mobile device (or set of mobile devices).

Those devices in a group are specified via the Hosts/Device Agents page in the wizard. Check or uncheck the given device(s) in the Device Agents list to include them in this group.

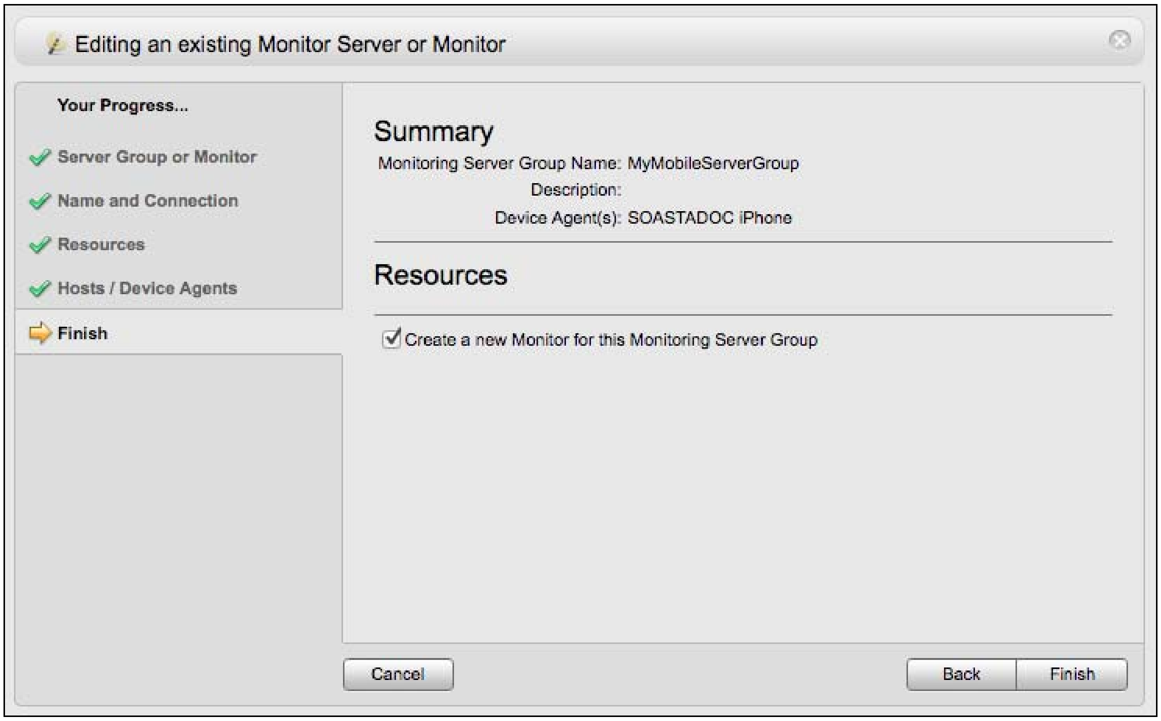


Specify the Hosts and/or Device Agents to Monitor

Device Agents:

	Name	OS
□	Giri's iPad 2	iOS 5.1
□	Matt_iPad	iOS 5.0.1
□	SOASTADOC iPhone	iOS 5.1.1

Note: Monitor Server Groups and an accompanying monitor instance are created along with the Device Agent with default resource selection that monitors the mobile battery, CPU, memory, network bytes received and bytes sent.


Editing an existing Monitor Server or Monitor

Your Progress...

- ✓ Server Group or Monitor
- ✓ Name and Connection
- ✓ Resources
- ✓ Hosts / Device Agents
- Finish

Summary

Monitoring Server Group Name: MyMobileServerGroup
Description:
Device Agent(s): SOASTADOC iPhone

Resources

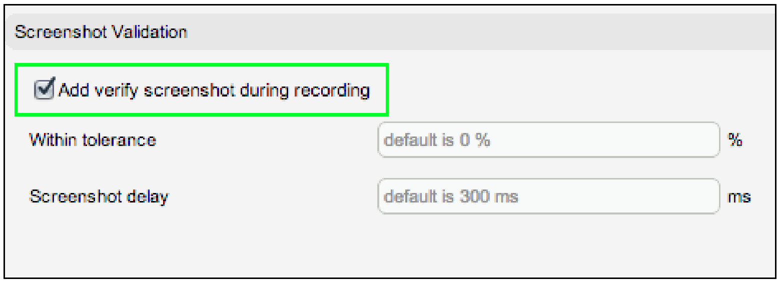
☑ Create a new Monitor for this Monitoring Server Group

Partial Image Validation

Partial image validation is now available for validation of selected portions of a view in both iOS and Android native apps.

Setting Up the Clip for Partial Image Validation

1. Open the test clip in which partial image validation will be performed.
2. If screenshot validation is enabled at the target level, turn it off by unchecking Add verify screenshot during recording. If a change was made, click Save.


Screenshot Validation

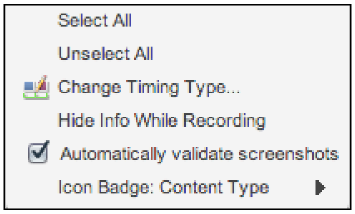
☑ Add verify screenshot during recording

Within tolerance: default is 0 % %

Screenshot delay: default is 300 ms ms

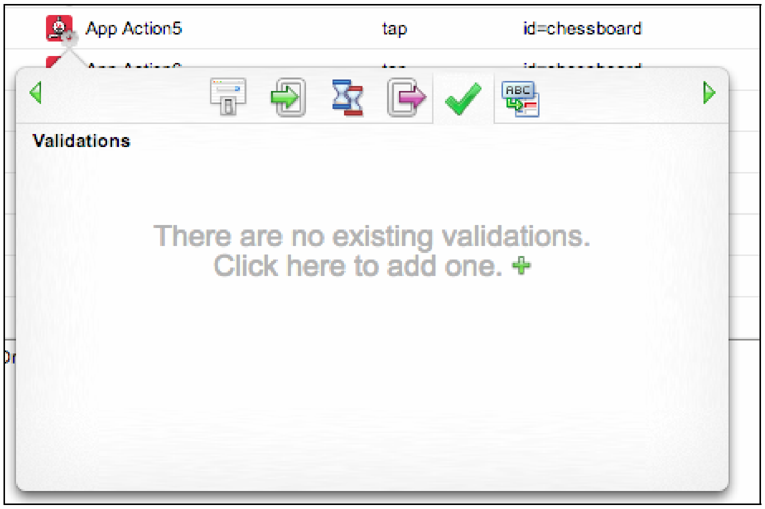
3. With the device's TouchTest Agent active, click Record in the Clip Editor toolbar. When you do so, the Choose a Device Agent and Mobile App box appears with the clip's device agent/mobile app combination pre-selected.
4. Click the Record button in the Choose a Device Agent and Mobile App box.

5. If screenshot validation is enabled on the Clip Editor, Etc (…) menu, uncheck Automatically validate screenshots. If a change was made, click Save.



6. Select the app action to add a verifyScreenshot validation and click the Gear icon to invoke the Info Window (this can also be done in the lower panel Action Editor).

7. Select the Validation tab and click the green Plus icon to add a validation form.

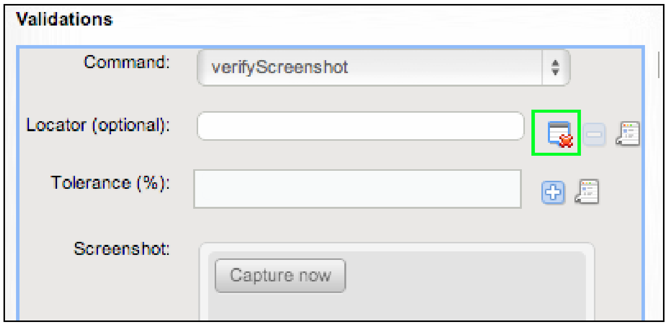


There are no existing validations.
Click here to add one. +

8. Click into the verifyScreenshot's Locator field and invoke the Touch Locator.

9. Click the Command drop-down to add verifyScreenshot.

10. Click the Touch Locator icon in the Locator row to enter Locator mode. The blue Locator border appears in the app on the device.



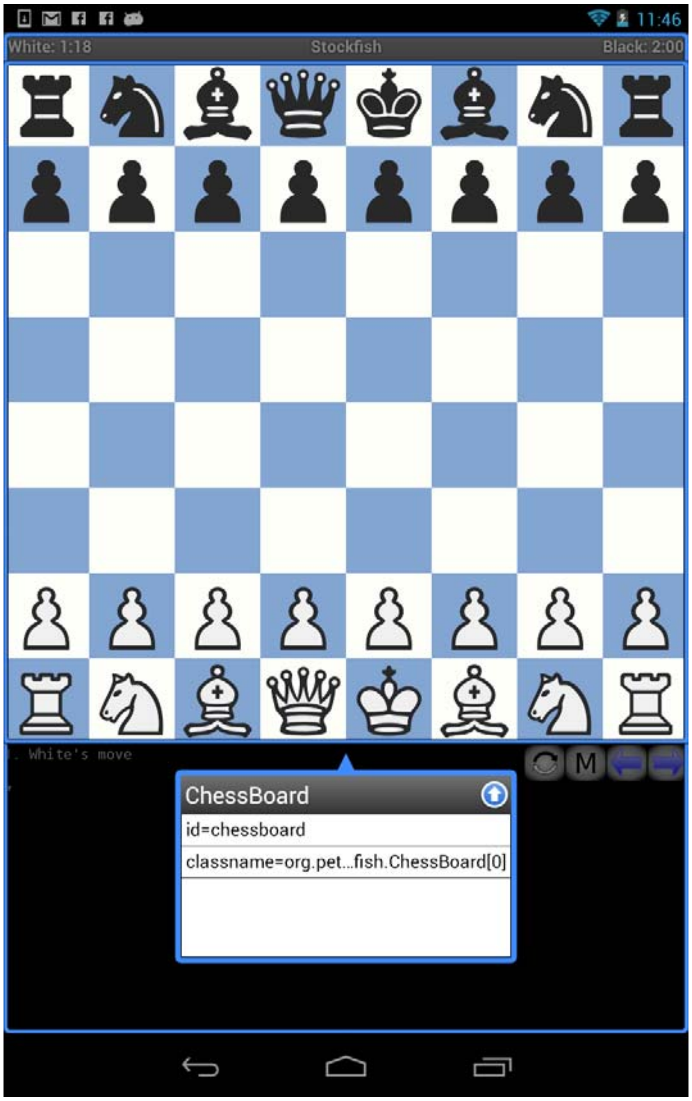
Command: verifyScreenshot

Locator (optional):

Tolerance (%):

Screenshot:

11. Select the view in the app until the Locator detail appears for the Chessboard view.



ChessBoard

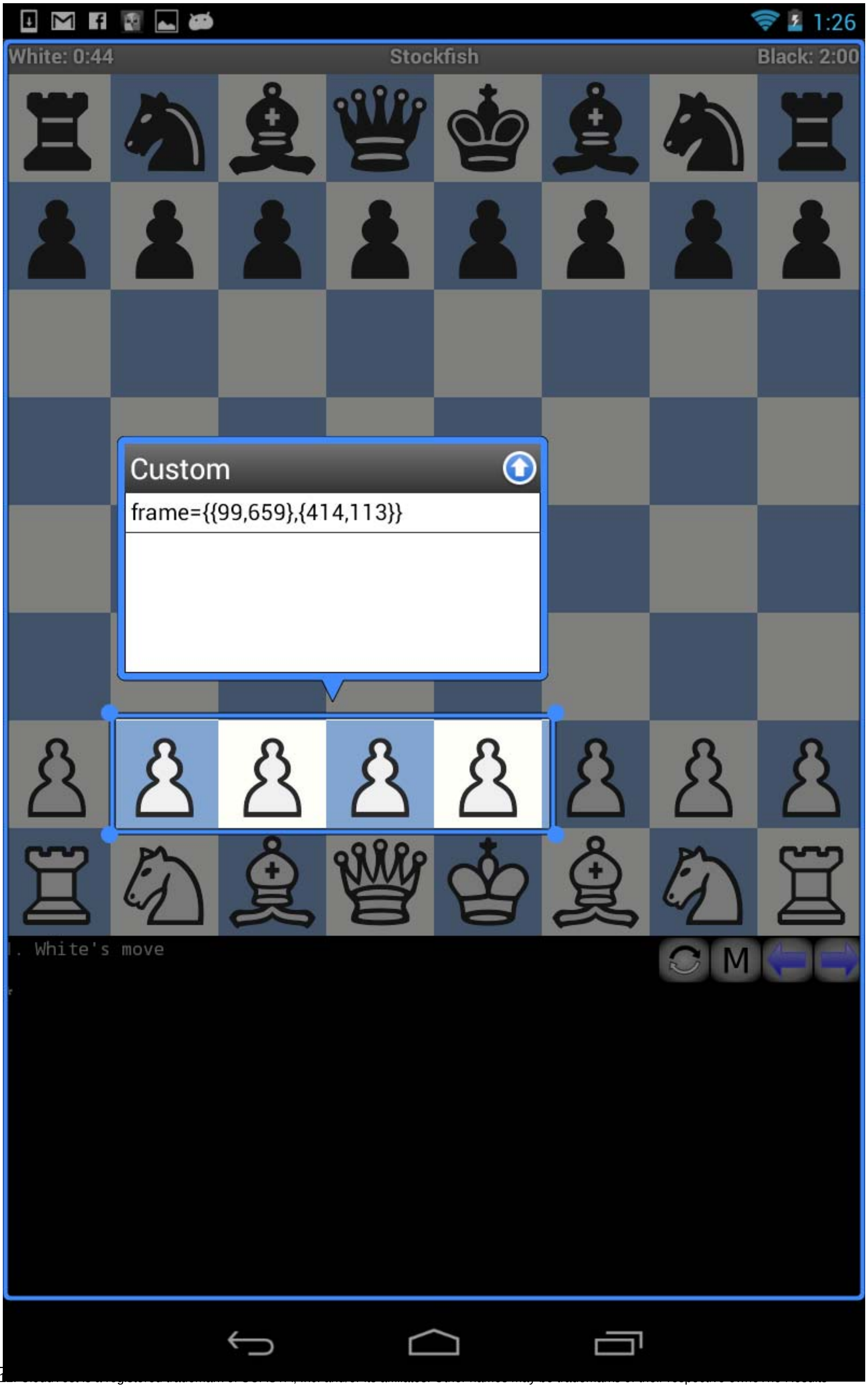
id=chessboard

classname=org.pet...fish.ChessBoard[0]

Next, we will perform the steps to select a custom, or partial, view. This custom view should be a region smaller than the width/height of the screen.

12. Ensure that the mobile app is in the state you want to capture. For example, in the capture below no pieces have been moved and nothing has been selected (i.e. we are just cropping a portion of the Chessboard view before any moves are made).

13. Do a long press until the blue border adjusts and the Locator box appears with a Custom view locator box.

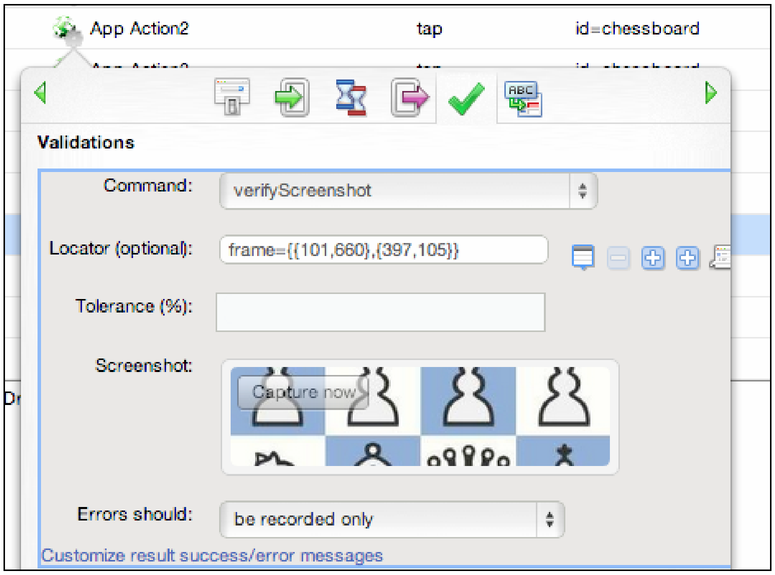


frame={{99,659},{414,113}}

14. Use drag and pan actions to arrange all four corners (each of which is indicated by a blue dot) until the Custom frame is in the desired position.

15. When ready, click the Up arrow in the Custom title bar to add the locator to the clip on your desktop client and exit Touch Locator mode. This will also exit Record mode in the Clip Editor.

16. The screenshot will be populated into the Screenshot field in the Validation form.



App Action2 tap id=chessboard

Validations

Command: verifyScreenshot

Locator (optional): frame={{101,660},{397,105}}

Tolerance (%):

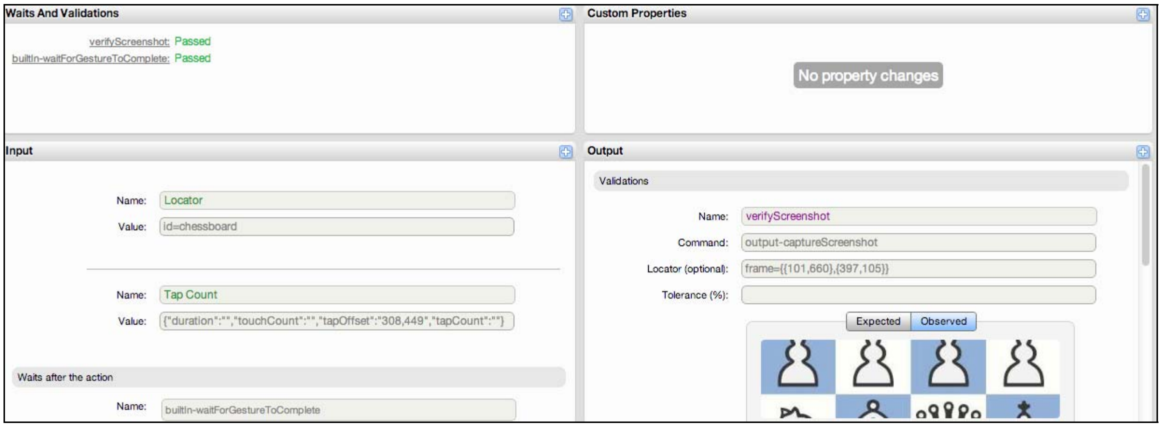
Screenshot:

Errors should: be recorded only

As with other image validation in TouchTest, you can optionally assign a tolerance level for the image validation match. If the match doesn't fall within the specific range then the validation will fail.

17. Save the test clip before exiting the Clip Editor.

When the test clip is played in a test composition, the validation will appear in Result Details with the result for the given app action.



Waits And Validations

verifyScreenshot: Passed
builtIn-waitForGestureToComplete: Passed

Custom Properties

No property changes

Input

Name: Locator
Value: id=chessboard

Name: Tap Count
Value: {"duration":"","touchCount":"","tapOffset":"308,449","tapCount":""}

Waits after the action

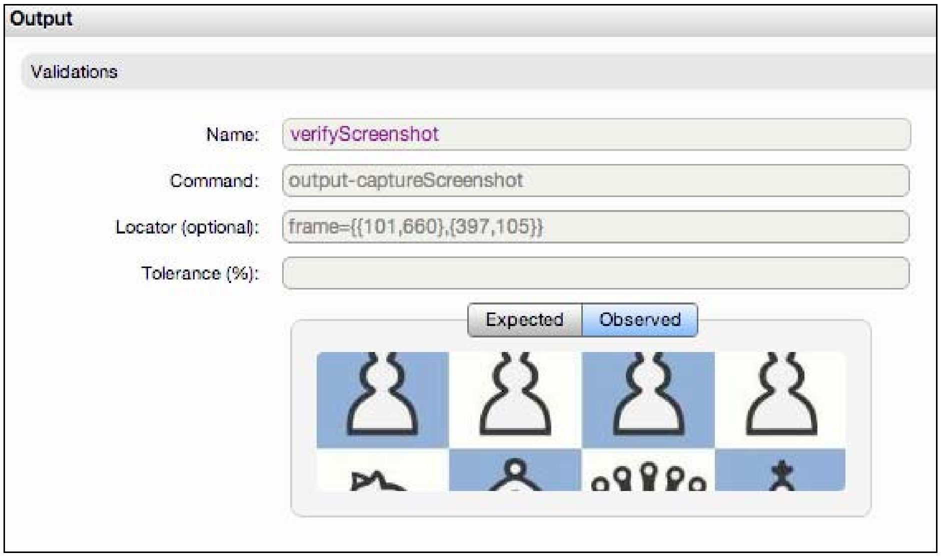
Name: builtIn-waitForGestureToComplete

Output

Validations

Name: verifyScreenshot
Command: output-captureScreenshot
Locator (optional): frame={{101,660},{397,105}}
Tolerance (%):

You can maximize the Outputs section to get a better view.



Output

Validations

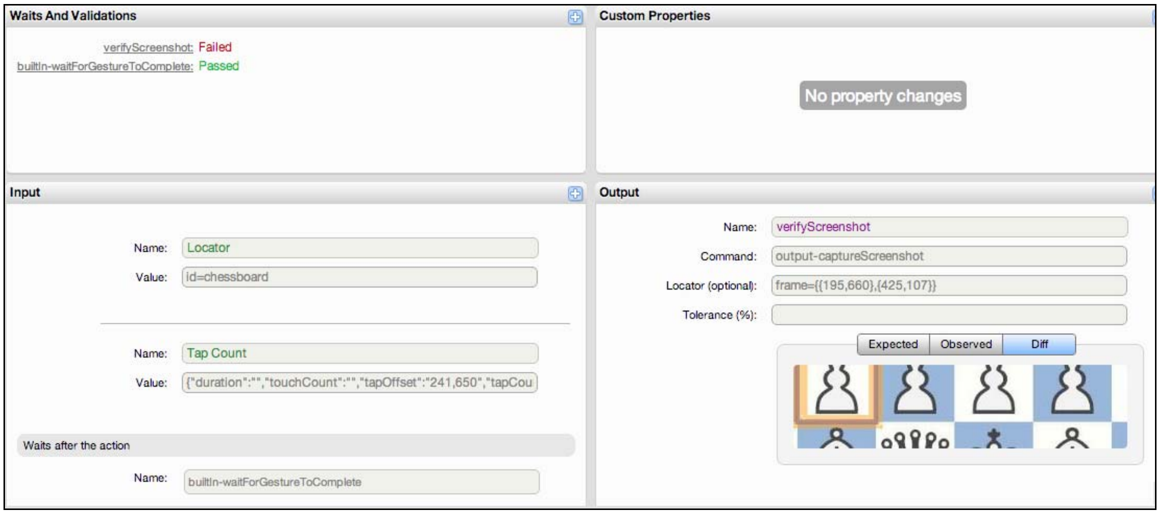
Name: verifyScreenshot

Command: output-captureScreenshot

Locator (optional): frame={{101,660},{397,105}}

Tolerance (%):

If the partial image validation didn't pass, the verifyScreenshot (in the Result Details dashboard, Waits and Validations section will indicate so.



Waits And Validations

verifyScreenshot: Failed

builtIn-waitForGestureToComplete: Passed

Custom Properties

No property changes

Input

Name: Locator

Value: id=chessboard

Name: Tap Count

Value: {"duration":"","touchCount":"","tapOffset":"241,650","tapCou

Waits after the action

Name: builtIn-waitForGestureToComplete

Output

Name: verifyScreenshot

Command: output-captureScreenshot

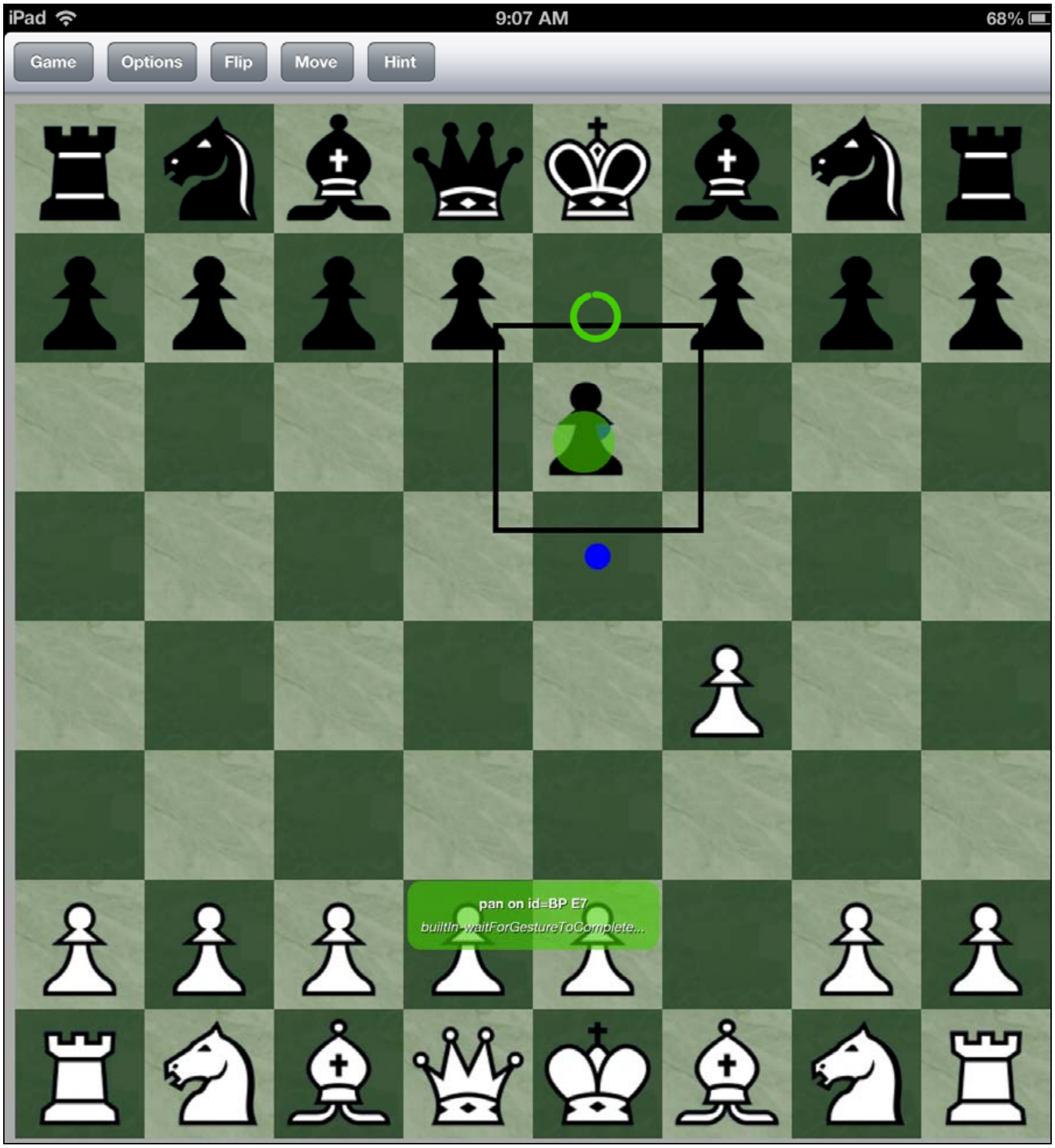
Locator (optional): frame={{195,660},{425,107}}

Tolerance (%):

In the Output section the Diff tab is presented with a brown border around the offending portion of the screenshot.

Heads Up Display

This release introduces Heads Up Display (HUD) as a visual enhancement of TouchTest playback for mobile and hybrid apps. HUD refers to mobile test playback and involves the display of semi-transparent dots and color-coded panels that display useful clip element detail about user actions on the device screen while playback occurs.



pan on id=BP E7

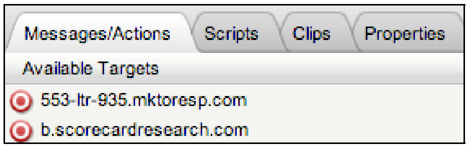
builtIn-waitForGestureToComplete...

Heads Up Display can be performed at either the target level to easily enable it for all clip elements, or, by using the new hudOn and hudOff actions, which now appear in the Clip Editor lower panel, Actions list, HUD can be inserted into the clip at any point to enable it in the display.

Setting Up Heads Up Display per Action in a Clip

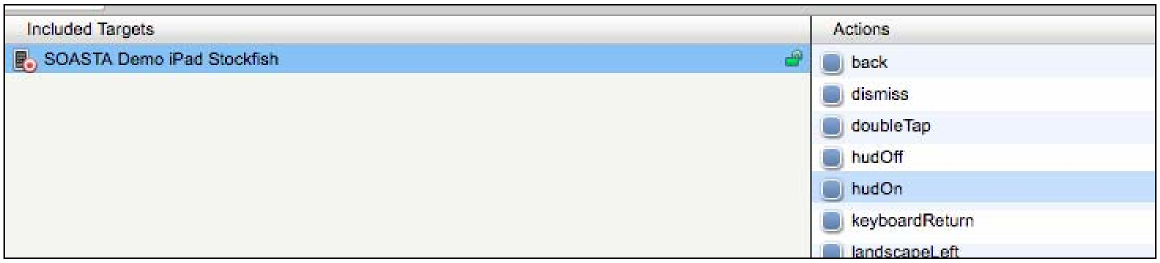
Heads up display can be added to an existing test clip using the following steps.

1. Open the test clip to use.
2. Click the Messages/Actions tab in the Clip Editor lower panel.



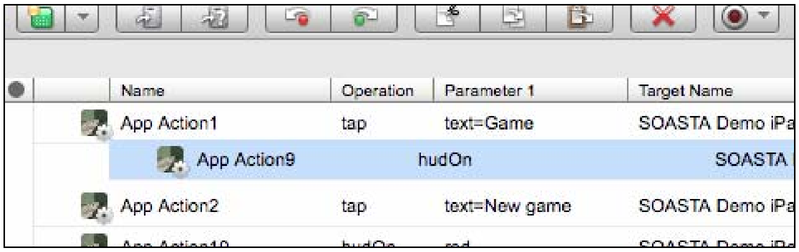
Available Targets
- 553-ltr-935.mktoresp.com
- b.scorecardresearch.com

3. In the Actions list (far right), select the hudOn action.



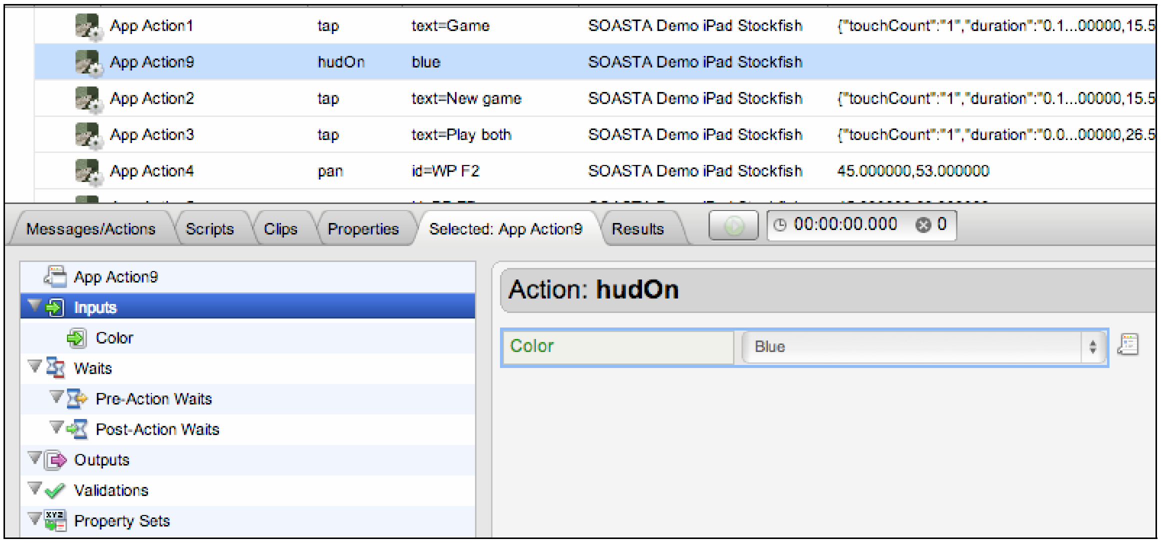
Included Targets	Actions
SOASTA Demo iPad Stockfish	back
	dismiss
	doubleTap
	hudOff
	hudOn
	keyboardReturn
	landscapeLeft

4. Double click to insert it after the current selection in the workspace, or, drag and drop it into the desired location.



Name	Operation	Parameter 1	Target Name
App Action1	tap	text=Game	SOASTA Demo iPa
App Action9	hudOn		SOASTA
App Action2	tap	text=New game	SOASTA Demo iPa
App Action10	hudOn	red	SOASTA Demo iPa

5. Once the hudOn action has been added to the test clip, double click it to open it in the lower panel Action Editor. In the screenshot below, hudOn has been added as App Action9 in the test clip and the default color, Blue, is set.

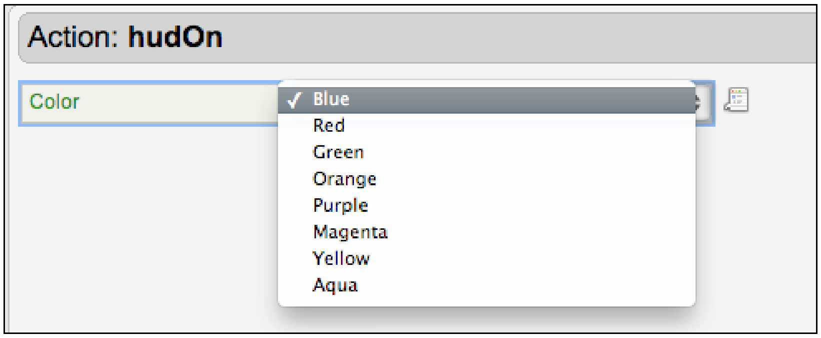


App Action1	tap	text=Game	SOASTA Demo iPad Stockfish	{"touchCount":"1","duration":"0.1...00000,15.5
App Action9	hudOn	blue	SOASTA Demo iPad Stockfish	
App Action2	tap	text=New game	SOASTA Demo iPad Stockfish	{"touchCount":"1","duration":"0.1...00000,15.5
App Action3	tap	text=Play both	SOASTA Demo iPad Stockfish	{"touchCount":"1","duration":"0.0...00000,26.5
App Action4	pan	id=WP F2	SOASTA Demo iPad Stockfish	45.000000,53.000000

Action: **hudOn**

Color: Blue

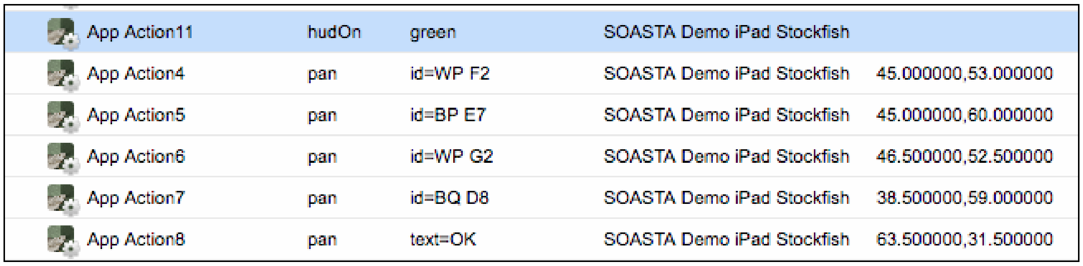
The Inputs, Color drop-down also includes Blue, Red, Green, Orange, Purple, Magenta, Yellow, and Aqua.



Action: **hudOn**

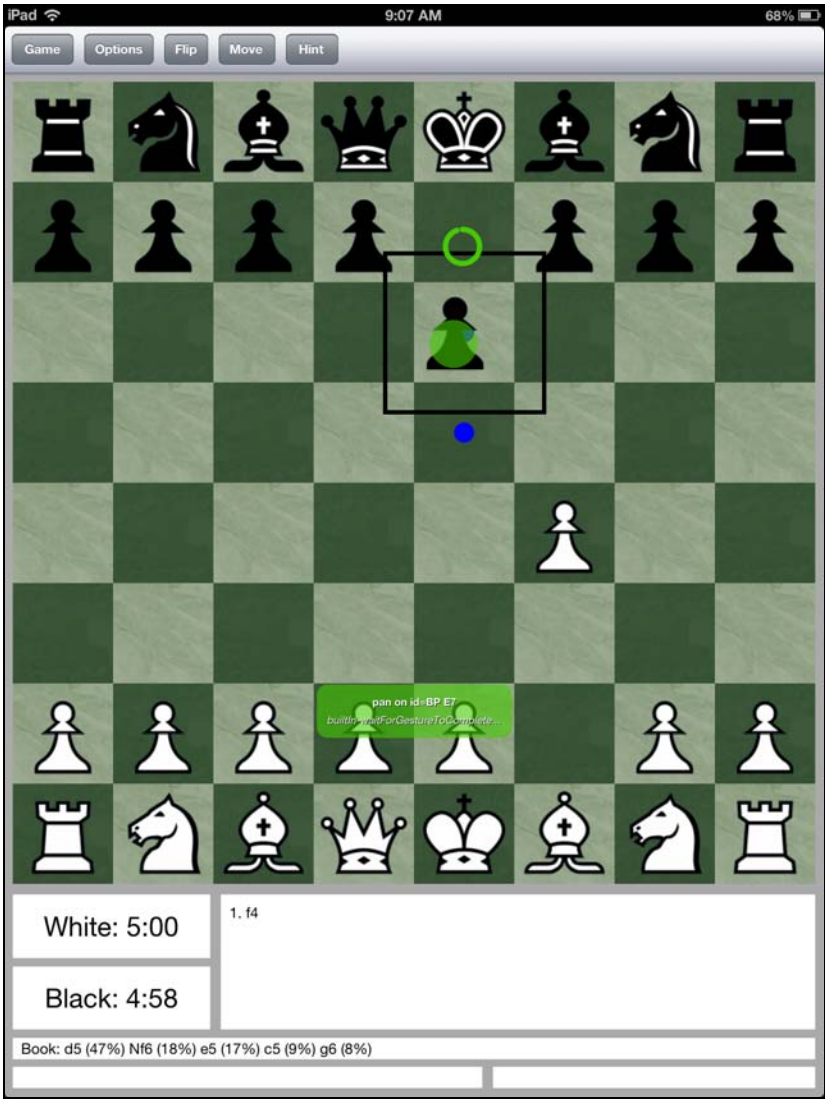
Add additional hudOn app actions and select a new color in order to distinguish the display.

You may do so using any logical grouping you desire, such as assigning a specific color for a given operation type such as pan, which in the case of Stockfish applies to chess moves.



App Action11	hudOn	green	SOASTA Demo iPad Stockfish	
App Action4	pan	id=WP F2	SOASTA Demo iPad Stockfish	45.000000,53.000000
App Action5	pan	id=BP E7	SOASTA Demo iPad Stockfish	45.000000,60.000000
App Action6	pan	id=WP G2	SOASTA Demo iPad Stockfish	46.500000,52.500000
App Action7	pan	id=BQ D8	SOASTA Demo iPad Stockfish	38.500000,59.000000
App Action8	pan	text=OK	SOASTA Demo iPad Stockfish	63.500000,31.500000

Selecting green as the Input color results in the green display shown below.



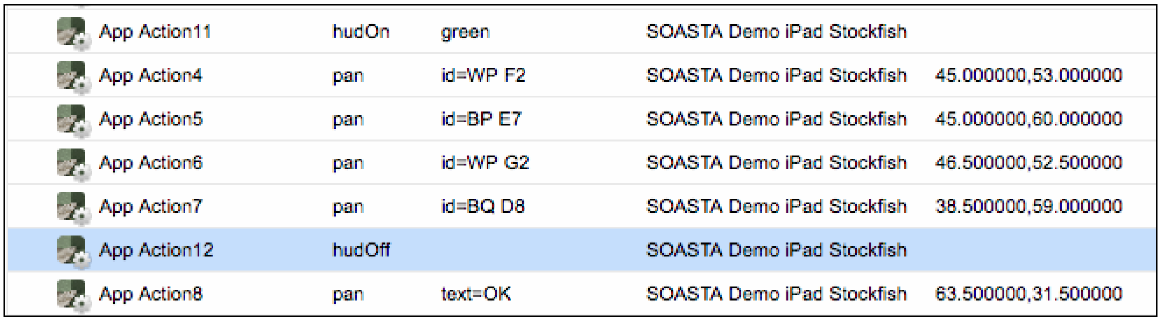
White: 5:00

Black: 4:58

1. f4

Book: d5 (47%) Nf6 (18%) e5 (17%) c5 (9%) g6 (8%)

To end heads up display at any point, use the hudOff action. Doing so will omit heads up display for all subsequent actions.



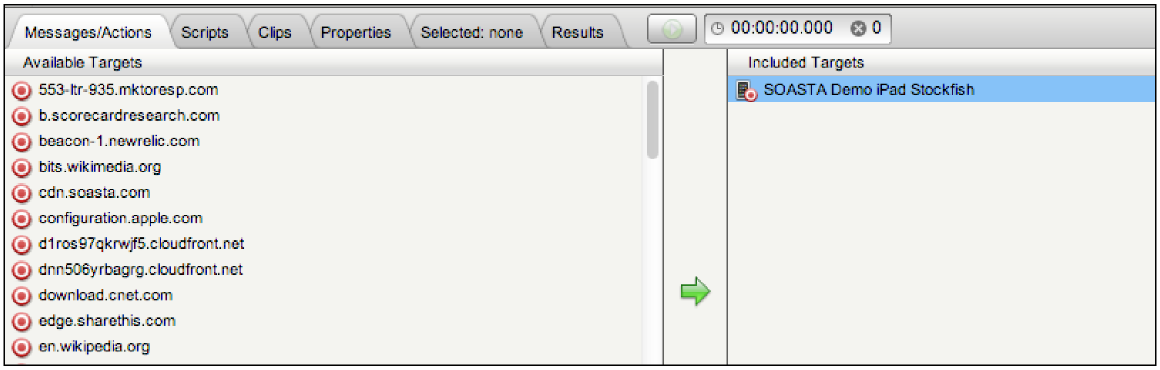
App Action11	hudOn	green	SOASTA Demo iPad Stockfish	
App Action4	pan	id=WP F2	SOASTA Demo iPad Stockfish	45.000000,53.000000
App Action5	pan	id=BP E7	SOASTA Demo iPad Stockfish	45.000000,60.000000
App Action6	pan	id=WP G2	SOASTA Demo iPad Stockfish	46.500000,52.500000
App Action7	pan	id=BQ D8	SOASTA Demo iPad Stockfish	38.500000,59.000000
App Action12	hudOff		SOASTA Demo iPad Stockfish	
App Action8	pan	text=OK	SOASTA Demo iPad Stockfish	63.500000,31.500000

Setting Up Heads Up Display at the Target Level

Heads Up Display (HUD) can be easily enabled in a test by checking Enable HUD at the target level.

Heads up display can be added at the target level using the following steps.

1. Open the test clip to use.
2. Click the Messages/Actions tab at the bottom of the Clip Editor.



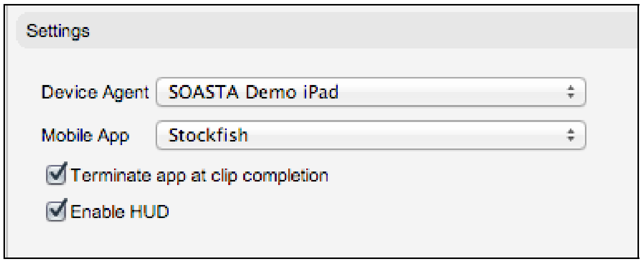
Available Targets

- 553-ltr-935.mktoresp.com
- b.scorecardresearch.com
- beacon-1.newrelic.com
- bits.wikimedia.org
- cdn.soasta.com
- configuration.apple.com
- d1ros97qkrwjf5.cloudfront.net
- dnn506yrbagrg.cloudfront.net
- download.cnet.com
- edge.sharethis.com
- en.wikipedia.org

Included Targets

- SOASTA Demo iPad Stockfish

3. Click the target in the Included Targets list.
4. In the target's Settings section, check Enable HUD.



Settings

Device Agent: SOASTA Demo iPad

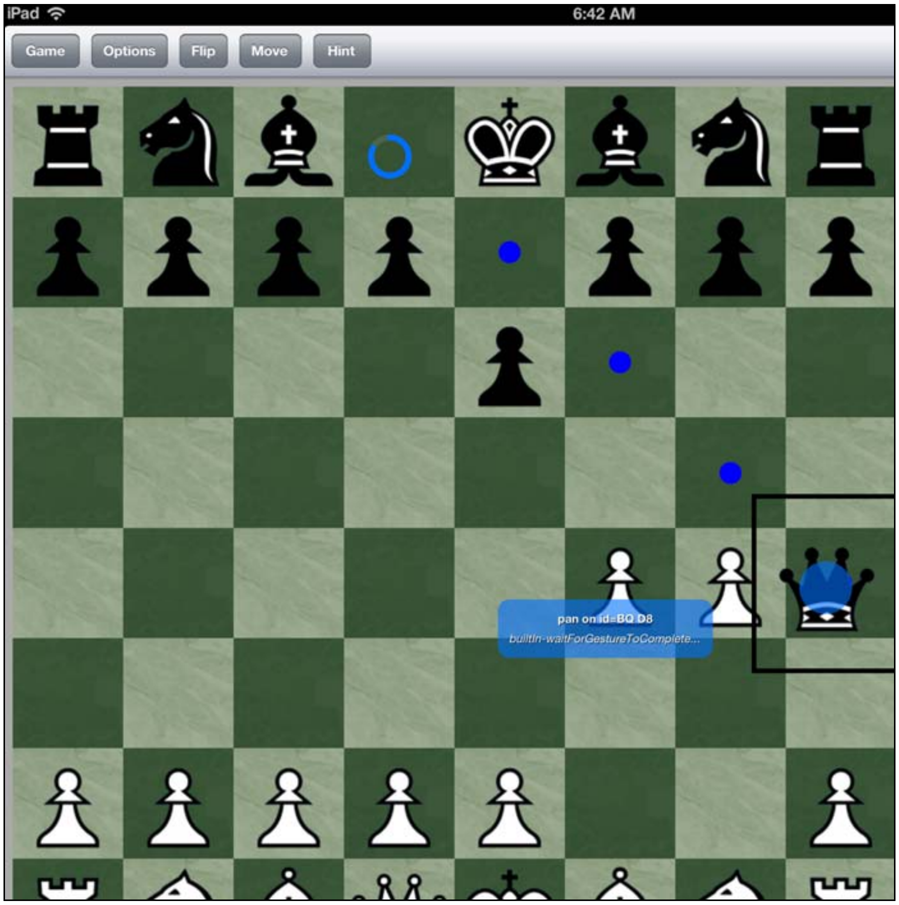
Mobile App: Stockfish

☑ Terminate app at clip completion

☑ Enable HUD

5. Click Save in the target after making this change.

Target-level HUD uses only the color blue on playback.



pan on id=BQ D8

builtin-waitForGestureToComplete...

Bugs Fixed

47261: Invalid Rackspace OpenStack credentials are not handled correctly

Entering invalid Rackspace credentials unexpectedly resulted in this unhandled error in Orphaned Servers (i.e. by indicating to the user that the credentials were not accepted).

47068: Duplicating a Composition causes Library list formatting to go wacko

Duplicating a composition using right-mouse "Duplicate unexpectedly caused Library list items to become misaligned.

46891: Virus inside Conductor selenium jars

The hudsuckr.exe included in a Selenium distribution distributed with SOASTA Conductor was unexpectedly (and falsely) detected as malware by some antivirus (Kaspersky, DrWeb) software.

46391: Null pointer error in ReverseAjaxUtils.getRepositoryChangeMessageForO

This null pointer exception occurred while creating a Reserved IP proxy.

46091: 'ItemScroller' is undefined; JS line 1029

This error could occur in a Central or lower panel editor list whenever a scroll bar was invoked.

46065: Cannot call method 'each' of null

An error occurred in a dashboard filtered by time zone.

46034: Dashboard content error

This error occurred while deleting a dashboard.

46009: TypeError: b.originatingElements is undefined; JS line 4306

This error occurred while dragging compositions in playlists (Central > Playlists) with nothing selected.

45755: Link and load dashboard error

An error occurred while loading a results dashboard.

45670: 'oFlowControl' is undefined; JS line 2077

This flow control error occurred while loading a dashboard in Internet Explorer 8 only.

45669: Object doesn't support this property or method

This error likely occurred while loading the navigation tree in the Result Details dashboard in Internet Explorer 8 only.

45061: Error while viewing a result with test in progress

This error could occur while viewing a composition result in the Composition Editor, Play or Results tabs if another user stopped the test.

44880: TypeError: b.getDataHandler is not a function; JS line 7112

Most likely the chart went away while doing an export to CSV.

44106: Uncaught TypeError: Cannot call method 'onClickInputItem' of undefined; JS line 1

This error likely occurred while loading a dashboard in CloudTest Lite.

44001: "Show in slideshow" menu option shown for things that are not dashboards

The Show in Slideshow context menu command unexpectedly appeared in contexts where it didn't apply.

43992: Uncaught TypeError: Cannot read property 'parent' of null; JS line 653

This error likely occurred while loading widget data into a dashboard.

43981: Re-naming a CPA in the lower panel does not work

An attempt to rename a Cloud Provider Account using the Central > Cloud Provider Accounts lower panel for the selection unexpectedly failed.

43930: TypeError: this.m_oWidgetLogic is undefined; JS line 652

This error likely occurred while loading widget data into a dashboard.

43858: Global.oFormEditor.oInputForm is undefined; JS line 1

This error likely occurred loading mobile monitoring data.

43836: Result Details timing error

A timing issue occurred while attempting to look at a result in the Result Details dashboard just prior to that result being created.

43785: a.offset is undefined; JS line 1142

A dashboard alignment error occurred.

43561: Stop the browser from logging you out when you press the backspace key

Pressing the Backspace key by accident, with fat fingers, would throw the user out of CloudTest resulting in the inadvertent loss of unsaved work.

43778: TypeError: $("export_which_all") is null; JS line 44

An error occurred while attempting to export a test result.

42933: Uncaught TypeError: Cannot set property 'width' of undefined; JS line 1565

More null checking has been added on this style attribute for the tab bar.

42913: this.m_oChart.SoastaMinimizeLegend is not a function; JS line 5500

An error occurred while minimizing a chart legend after expanding it. This has been resolved by droping the text description on how to zoom from the pop-ups and also put the X axis label in front of the X axis value.

42901: A Soap fault has occurred. faultString: Current user/tenant does not have permission to read

An invalid permission was not handled as expected in a Central lower panel.

42861: Column Sorting is not working on Logged in Users page

Column sorting arrows appeared on the Logged in Users list although sorting was never supported for the page.

42443: Not able to select multiple Monitors on Composition

This was an issue with the HTML of the monitors, the checkbox was being half-covered by the padding-top of the checkbox below it. Now the whole checkbox is clickable.

42361: Conductor doesn't update tenantname

If we are in Preferences mode (which essentially means that Conductor has been registered previously), and the user changed the username or coordinator URL, this means that we are either now connecting to a new server or a new tenant in most cases. In that case, we should reset the preferences mode flag and perform the Conductor registration from scratch.

42402: Description under Composition -> Properties pane, description should resize by itself and or use the space or persist its view state

Now the description field in the general tab for compositions takes up the whole lower panel and is not manually resizable, but it resizes with the window. The description textareas for other object types are now a little bigger but are also not manually resizable.

42298: c is null; JS line 1833

This null error occurred in the Recording Editor while recording.

42150: Uncaught TypeError: Cannot set property 'width' of undefined; JS line 1563

A likely timing error occurred while loading or unloading.

42078: Invalid argument.; JS line 32

An invalid width for Internet Explorer 8 was encountered.

42057: Exception thrown when exporting results via scommand

This error occurred while using the sCommand utility export command.

41982: Uncaught TypeError: Cannot read property '0' of null; JS line 6304

This error likely occurred when a chart was removed from a dashboard.

41869: Cannot read property 'm_iId' of null

A null error occurred while recording in the Recording Editor.

41658: CRLF expected at end of chunk: 78/84

A repository access error occurred in CloudTest Lite. Now, the RepositoryAccessor / SOAP repository access mechanism has been removed.

41597: JavaScript error when opening a monitor

With two browsers running CloudTest, deleting a monitor in one would result in this error opening it in another.

41511: Results Service internal error

An error occurred in a new environment when a query occurred before the Server List was loaded.

41471: Component returned failure code

The network was broken on XHR command in Firefox.

41456: a.parentNode is null; JS line 475

An undefined element error occurred in the Results tree.

41451: this.m_oWidget is null; JS line 5032

This null error occurred in the Dashboard Edit Panel.

41445: Uncaught TypeError: Cannot call method 'onClickInputItem' of undefined; JS line 1

This issue was resolved by the the removal of form editor click handlers from Result Details.

41409: Unable to set value of the property 'checked': object is null or undefined; JS line 4060

An old user with Tenant Admin right without newer User Admin rights could experience this (harmless) error.

41087: A result with ID 'ERROR: relation "targetdimension1" does not exist

A result was deleted while getting the operations.

41025: YAHOO.widget.TreeView.getNode("CompositionTreeContainer", 32) is null; JS line 1

This was happening if, in the composition tree on the left side of the lower panel properties pane in the Composition Editor, you deleted a selected item then very quickly click on the item again before it has finished being deleted.

40887: TypeError: d.m_oSettings[b] is undefined; JS line 397

This error occurred setting a custom property in seed data.

40776: Uncaught TypeError: Cannot read property 'log' of null; JS line 61

Additional null checking has been added to detect further occurrences of this logging error.

40767: A result with ID 'ERROR: relation "eventfact26" does not exist

Result was deleted in that short period between when the Result Details dashboard gets the result object and then two lines of code later gets the events for that result.

40640: Cannot read property 'id' of undefined

Additional null DOM checking code has been added to detect further occurrences of this Tab bar error.

40593: Null Pointer in External Data

A null pointer error occurred in DashboardEditorProxy.java that rendered the widget id invalid.

40248: A Soap fault has occurred. faultString: Exception: A monitor with ID '57770' does not exist in the Results Server database

This error occurred while deleting a monitor that is already deleted, which could occur under various timing scenarios. Now, we ignore the fault for the monitor not existing just like we do with results in this situation.

39015: Dashboard issue with negative numbers

This resolves a potential error with negative numbers in a dashboard. Since a "stdv" with a count of 1 should yield 0 since there is no deviation. The formula can not come up with a negative number in theory - but using floating points, very small numbers might do this.

13618: Monitoring data not showing up after import

Run a test with a comp, then rename the monitor, then export the result. Then import the result into a system which had the monitor but with the new name. Before it would not find this monitor to fix up the references. Now it does.