SIGOS App Experience

Test Automation REST API

Test Automation 9.1.0

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March 2018, Revision 1.0

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1 Overview

The App Experience Test Automation REST API complements our existing app monitoring REST API and testing Java API and is a simple way to access your SIGOS real mobile test devices and to execute your App Experience test scripts. API functions enable you to acquire and release devices, load mobile applications, launch mobile applications, execute App Experience test scripts, and also Appium test scripts.

2 How to Issue Requests

The App Experience REST API uses a REST architecture—you issue API commands as HTTP GET or POST requests.

2.1 Prerequisites

To use App Experience REST API, you require the following:

- ▪ A user account enabling you to log in and execute REST API calls.

- ▪ API calls are made to three different servers, depending on the action/command you are executing. You will need to know the server/host name of Access Server and Live-Test Server. The Ensemble Server/host name is returned by a call to lock-device.

2.2 Syntax

2.2.1 Access Server

Access Server API calls can be made in the following format:

https://<AccessServerHostname>:<Port Number>/resource/<APIMethodType>/<sessionID>/<API-call>

We can break this request down into segments:

- ▪ <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.

- ▪ Access Server's default port number is 6232 on all systems hosted by SIGOS.

- ▪ The type of Access Server API call; replace <APIMethodType>/ with:

    - ▪ applications/ for calls related to working with applications

    - ▪ device/ for calls performing device operations

    - ▪ portal/ for session-related calls

- ▪ The <sessionID> parameter is returned by the establish-api-session call and required for subsequent Access Server API calls.

- API method invoked: /<API-call>, e.g., /lock-device. Please refer to the list of available REST APIs for the correct <APICallType>.

NOTE: Prerequisites for executing any REST API is a valid API session. Use the Access Server's establish-api-session to start REST API session.

2.2.2 Ensemble Server

Ensemble Server calls are of the format:

<baseURL>/<API-call>

Components of this string are:

- <baseURL> is returned by the Access Server's lock-device REST API

   Example: https://18.x.x.x:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg. The <baseURL> contains the Ensemble Session ID, e.g., -ItWMdrgol65EVLrI8D4wg in the string above.

- API method invoked: /<API-call>, i.e., /launch-url

NOTE: Prerequisites for executing an Ensemble Server's REST API is to lock the target device using the Access Server's lock-device.

2.2.3 Live-Test Server

https://<Live-Test Hostname>:<Port Number>/da/livetest/device/<api session ID>/<API-call>

- Please refer to your deployment for <Live-Test Hostname>.
- Port number's default is 80 (http) or 8443 (https).
- The <api session ID> parameter is returned by the establish-api-session call and required for all REST API calls.
- /<API-call> is the API method invoked: e.g., /lock-device.
- Example of API call:

   https://18.0.0.1:443/da/livetest/device/-ItWMdrgol65EVLrI8D4wg/execute-testcycle

NOTE: Prerequisites for executing a Live Test Server's REST API is a valid API session. Use the Access Server's establish-api-session to start REST API session.

2.3 Authentication

Authentication is established through the establish-api-session call, which must always be run at the beginning of any App Experience REST API session. Users must provide the credentials used to access Studio in the email and password parameters of the establish-api-session call.

2.4 Responses

SIGOS supports plain text and JSON response formats for the App Experience REST API. When constructing API calls in your browser, you'll find JSON results much easier to view with a JSON browser plugin. For example, try this Google query: https://www.google.com/search?q=json+plugin (**DISCLAIMER**: *This will take you to a website that is not operated by SIGOS. We are note responbible for the content or availability of linked sites*)

2.5 Timeout

There is an inactivity timeout of 10 minutes. If you log in for an API session and issue no calls for 10 minutes, your device is automatically released, and you need to log in again to continue.

3 List of REST APIs

3.1 Access Server REST API

Access Server API calls can be made in the following format:

http or https://<AccessServerHostname>:<Port Number>/resource/<APIMethodType>/<sessionID>/<API-call>

We can break this request down into segments:

- <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.

- Access Server's default port number is 6232 on all systems hosted by SIGOS.

- The type of Access Server API call; replace <APIMethodType>/ with:

    - applications/ for calls related to working with applications

    - device/ for calls performing device operations

    - portal/ for session-related calls

- The <sessionID> parameter is returned by the establish-api-session call and required for subsequent Access Server API calls.

- API method invoked: /<API-call>, e.g., /lock-device. Please refer to the list of available REST APIs for the correct <APICallType>.

NOTE: Prerequisites for executing any REST API is a valid API session. Use the Access Server's establish-api-session to start REST API session.

3.1.1 establish-api-session

This must be the first API call at the start of an App Experience REST API session. It returns the sessionID parameter, which is used in subsequent API calls.

Request

https://<AccessServerHostname>:<Port Number>/resource/portal/establish-api-session

- ▪ Request type: POST
- ▪ Response type: JSON

Parameters

Name	Description	Required?
Email	App Experience login ID (Studio credentials)	Yes
password	App Experience password (Studio credentials)	Yes

Response

- ▪ Response type: JSON
- ▪ Sample response:

    {"status":"SUCCESS","reason":"","sessionID":"LDpdd1lHLLM9fZ0apca4Eg"}

Important response parameters:

Name	Description
status	SUCCESS or FAILURE
reason	Reason for status If Success, reason is blank (""). If Failure, reason is provided.
sessionID	Access Server session ID is 22 characters long, e.g., LDpdd1lHLLM9fZ0apca4Eg Required to construct subsequent Access Server API calls.

3.1.2 logout-api-session

This call logs the user out of the App Experience REST API session.

Request

https://<AccessServerHostname>:<Port Number>/resource/portal/logout-api-session

- Request type: POST

Parameters

Name	Description	Required?
sessionID	Session ID returned by the establish-api-session call	Yes

Response

- Response type: JSON
- Sample response:

{"status":" SUCCESS ","reason":"<Reason for failure>","sessionID":"<Always empty>"}

Important response parameters:

Name	Description
status	SUCCESS or FAILURE
reason	Reason for failure if call fails If status is Success, reason is blank ("").
sessionID	Always empty

3.1.3 lock-device

This call locks the device with MCD specified as part of the URL. The call returns device details and the base URL to be used for issuing Ensemble Server calls.

Request

https://<AccessServerHostname>:<Port Number>/resource/device/lock-device/<mcd>

- Request type: POST
- <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.
- Access Server's default port number is 6232 on all systems hosted by SIGOS.
- The <mcd> parameter is the MCD number of your test device. You can check the MCD number of a device in Studio by right-clicking the device in the device list and viewing Device Info.

- Example call:

  https://tceaccess.deviceanywhere.com:6232/resource/device/lock-device/7474

Parameters

Name	Description	Required?
sessionID	Session ID returned by the establish-api-session call	Yes

Response

- Response type: JSON
- Sample response:

```
{

        "reason": null,

        "licenseStatus": true,

        "sessionId": "-ItWMdrgol65EVLrI8D4wg",

         "frameRate": 15,

        "deviceUpdate": {

                "deviceName": "Samsung SGH-I747 (Galaxy S III)",

                "serverPort": 443,

                "customerUsageID": 0,

                "isSimSwitch": false,

                "serverLocation": "San Mateo",

                "ensembleUserID": 0,

                "serverTokenStr": "v1V62DPtGCxkWddCTxuAAA~1",

                "ownerCustomerID": 11,

                "customerPakcageInstanceID": 0,

                "bridgeComponentState":

        "8|4|;9|4|;2|1|;6|1|;1|1|;7|1|;5|1|;3|4|;4|4|;0|1|;",

                "bridgeConnectionState": "ONLINE",

                "accessibiltyService": "Offline",

                "serverAddress": "18.x.x.x",

                "serverSslPort": 0,

                "ensembleType": "E",

                 "isSecure": false,

                "mcd": 7686,
```

"userUsageID": 0,

"isOnline": true,

"isAvailable": false,

"isBeingReset": false,

"queueSize": 0,

"detectedOs": "",

"expectedOs": "null",

"ownerUserID": 0,

"ownerDisplay": "test@qatest.com_RestFulAPISession",

"netObject": null,

"webSslPort": 444,

"timeEstimate": 0,

"appiumPort": 0,

"webPort": 80,

"reservingServerPath": "",

"reservingUserID": 0,

"isLockedbyAPIOrScriptRunner": false,

"isWebPortSecure": false,

"ownerLockAcquiredTime": 10388852816,

"ownerLastKeyPressTime": 10388853022,

"localSimPresent": true,

"simSwitchJumper": 0,

"isSimConnected": false,

"connectedPosition": 0,   "hasKnownIssues": false

},

"success": true,

"ensembleServerURL": "https://18.x.x.x:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg",

"message": null

}

Important response parameters:

Name	Description
success	If true, call succeeded, else response is false.

reason	Reason for status
	If success is true, reason is null.
	If success is false, reason is provided.
ensembleServerURL	Base Ensemble Server URL, e.g., https://18.x.x.x:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg, required to construct Ensemble Server API calls. The 22 characters at the end is the Ensemble Server session ID.

3.1.4 release-device

This call releases the device with MCD specified as part of the URL.

Request

https://<AccessServerHostname>:<Port Number>/resource/device/release-device/<mcd>

- ▪ Request type: POST
- ▪ For example,

    https://tceaccess.deviceanywhere.com:6232/resource/device/release-device/7474

Parameters

Name	Description	Required?
sessionID	Session ID returned by the establish-api-session call	Yes

Response

- ▪ Response type: Plain text
- ▪ SUCCESS or FAILURE

3.1.5 get-device-skin

This call returns device properties and an image of the device skin.

Request

https://<AccessServerHostname>:<Port Number>/resource/device/<sessionID>/get-device-skin/<mcd>/<closedOrOpenImage>

- ▪ Request type: POST
- ▪ <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.

- ▪ The <mcd> parameter is the MCD number of your test device. You can check the MCD number of a device in Studio by right-clicking the device in the device list and viewing Device Info.

- ▪ The <sessionID> parameter is returned by the establish-api-session call and required for subsequent Access Server API calls.

- ▪ The <closedOrOpenImage> parameter specifies whether you want an image of the device closed ('true' to use "FrontClosed" image) or open ('false' to use "Front" image). Use "true" only if you have a device that can be flipped open or has a pull-out keyboard.

Parameters

There are no parameters in addition to those specified as part of the URL.

Response

- ▪ Response type: JSON

- ▪ Sample response:

```
{

"applicationFileExt" : [ "ipa" ],
"applicationPlatformID" : 17,
"applicationType" : "IPHONE",
"deviceGroupID" : 536,
"deviceKeys" : [ { "height" : 129,
        "isClosed" : false,
        "keyMaskIndex" : 1,
        "keyVirtualId" : "Power",
        "offsetX" : 938,
        "offsetY" : 482,
        "width" : 15,
        "zoomLevel" : 0
},

{

"height" : 131,
"isClosed" : false,
"keyMaskIndex" : 2,
"keyVirtualId" : "SideUp",
"offsetX" : 94,
 "offsetY" : 482,
"width" : 15,
"zoomLevel" : 0
},

{
```

```
        "height" : 131,
        "isClosed" : false,
        "keyMaskIndex" : 3,
        "keyVirtualId" : "SideDown",
        "offsetX" : 94,
        "offsetY" : 640,
        "width" : 15,
        "zoomLevel" : 0
    },
    {
        "height" : 124,
        "isClosed" : false,
        "keyMaskIndex" : 4,
        "keyVirtualId" : "Flick",
        "offsetX" : 1030,
        "offsetY" : 1201,
        "width" : 122,
        "zoomLevel" : 0
    },
    {
        "height" : 124,
        "isClosed" : false,
        "keyMaskIndex" : 5,
        "keyVirtualId" : "ZoomIn",
        "offsetX" : 1030,
        "offsetY" : 1384,
        "width" : 122,
        "zoomLevel" : 0
    },
    {
        "height" : 124,
        "isClosed" : false,
        "keyMaskIndex" : 6,
        "keyVirtualId" : "ZoomOut",
        "offsetX" : 1030,
        "offsetY" : 1525,
        "width" : 122,
        "zoomLevel" : 0
    },
    {
```

```
        "height" : 137,
        "isClosed" : false,
        "keyMaskIndex" : 7,
        "keyVirtualId" : "Home",
        "offsetX" : 457,
        "offsetY" : 1660,
        "width" : 135,
        "zoomLevel" : 0
    }

    ],

    "ensemble" : { "hostname" : "smqamaces.deviceanywhere.com",
            "id" : 0,
            "isSslPort" : false,
            "location" : null,
            "name" : null,
            "port" : 0,
            "webPort" : 80,
            "webSecurePort" : 443
    },

    "front" : { "imageBytes" :
"R0lGODlh4wTCB+cBAAAAAP////jj5XRsbfvr7XNgY6Sdnufd3zoqLjMiKODa3jszObu2uvv2+uvm
aCgfr29eLe3S8gHd/CMIQinCEJCyhCU+IwhSqcIUsbKELXwjDGMpwhjSsoQ1viMMc6nCHPOyhD38IxCAKcYhE
LKIRj4jE JCpxiUxsohOfCMUoSnGKVKyiFa+IxSxqcYtc7KIXvwjGMIpxjGQsoxnPiMY0qnGNbGyjG98IxzjKc
Y50rKMd74jHPOpxj3zsox//CMhACnKQhCykIQ+JyEQqcpGMbKQjHwlJ4wUEADs=",

            "imageFormat" : "GIF"
    },

            "imageHeight" : 1986,
            "imageWidth" : 1251,
            "isAccelerometer" : true,
            "isAppium" : false,
            "isBacklight" : true,
            "isBatteryControl" : true,
            "isCameraLight" : false,
            "isClosed" : false,
            "isDataCcontrol" : true,
            "isFlipControl" : false,
            "isPower" : true,
            "isWallControl" : false,
            "logPlatformID" : 0,
            "mcd" : 9215,
```

```
        "osType" : "iPhone",
        "phoneNumber" : "16506960934",
        "screenHeight" : 1334,
        "screenWidth" : 750,
        "screenX" : 146,
        "screenY" : 318,
        "success" : true
    }
```

NOTE In the sample response above, the binary content of the image file has been truncated.

Important response parameters:

Name	Description
imageFormat	Image format, e.g., GIF, DAT
imageBytes	Base 64-encoded binary image file data
isClosed	Whether the returned image is closed (true) or open (false)
keyVirtualId	Name of the hardware key as it appears in Studio, e.g., Home, Power—returned for each hardware key on the device.
offsetX	X coordinate of the device key in the image—returned for each hardware key on the device.
offsetY	Y coordinate of the device key in the image—returned for each hardware key on the device.
width	Width of key—returned for each hardware key on the device.
height	Height of key—returned for each hardware key on the device.
screenX	X coordinate of the screen in the image
screenY	Y coordinate of the screen in the image
imageWidth	Width of phone image in pixels
imageHeight	Height of phone image in pixels
screenWidth	Width of screen in image in pixels
screenHeight	Height of screen in image in pixels
isAccelerometer	Whether device accelerometer can be controlled remotely (true/false)
isFlipControl	Whether device can be flipped open/close remotely (true/false)
isBatteryControl	Whether device battery (plug/unplug) can be controlled remotely (true/false)
isCameraLight	Whether light in device casing can be turned on/off remotely to check camera

	function (true/false)
isDataControl	Whether device data cable (plug/unplug) can be controlled remotely (true/false)
isPower	Whether device can be charged remotely (true/false)
osType	Operating system—android, windows, iphone
applicationFileExt	Supported application extensions on the device, e.g., apk, zip, ipa
phoneNumber	Device phone number
isAppium	Whether device supports Appium scripting (true/false)

3.1.6 add-application

This call uploads a specified mobile application file to the App Experience repository (from where it can be delivered to the device using the download-data call). The add-application method returns the application ID. The application ID is passed as a parameter to the download-data call, used to install an application from the repository onto a device.

Request

https://<AccessServerHostname>:<Port Number>/resource/device/<sessionID>/add-application

- Request type: POST
- <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.
- The <sessionID> parameter is returned by the establish-api-session call and required for subsequent Access Server API calls.

Parameters

Name	Description	Required?
isSignApp	Use for iOS applications only. Values are true for a signed application, false for an unsigned application.	Yes (iOS only)
isEnableApp	Use for iOS applications only. Values are true for an application enabled for object-based scripting, false for an application not enabled for object-based scripting.	Yes (iOS only)
appName	Provide an application name.	Yes
appType	Specify application type. Supported application types are ANDROID_APK or IPHONE.	Yes
appVersion	Enter an application version.	Yes
filename	Name of application file with extension, e.g., calculator.apk.	Yes

fileContent	Base 64-encoded file content—this is the only encoding method supported for binary file data.	Yes

Response

- Response type: Plain text

- Application ID is returned if successful, else Failure is returned.

3.1.7 get-application-id

This call returns the application ID of an application previously uploaded to the App Experience application repository. The application ID is passed as a parameter to the download-data call, used to install an application from the repository onto a device.

Request

https://<AccessServerHostname>:<Port Number>/resource/applications/<sessionID>/get-application-id

- Request type: POST

- <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.

- The <sessionID> parameter is returned by the establish-api-session call and required for subsequent Access Server API calls.

Parameters

Name	Description	Required?
appName	Provide an application name.	Yes
appType	Specify application type. Supported application types are ANDROID_APK or IPHONE.	Yes
appVersion	Enter an application version.	Yes

Response

- Response type: JSON

- Application ID is returned if SUCCESS, else FAILURE is returned.

3.1.8 get-application-url

This call returns URL from which to download a previously uploaded application onto a device. You can pass this URL to an Appium script for application installation on a device.

Request

https://<AccessServerHostname>:<Port Number>/resource/applications/<sessionID>/get-application-url

- Request type: POST

- <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.

- The <sessionID> parameter is returned by the establish-api-session call and required for subsequent Access Server API calls.

Parameters

Name	Description	Required?
appName	Provide an application name.	Yes
appType	Specify application type. Supported application types are ANDROID_APK or IPHONE.	Yes
appVersion	Enter an application version.	Yes

Response

- Response type: JSON

- Application URL is returned if successful, else Failure is returned.

3.2 Ensemble Server REST API

Ensemble Server calls are of the format:

<ensembleServerURL>/<API-call>

Components of this string are:

- <ensembleServerURL> is returned by the Access Server's lock-device REST API

- Format of <ensembleServerURL>:

    https://<EnsembleHostname>/da/ensemble/device/<sessionID>

- API method invoked: /<API-call>, i.e., /launch-url

- Example of API call:

    https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/launch-url

Prerequisites

The start-appium call is run on a selected device, which you need to acquire using the lock-device call before issuing the start-appium call. The sequence of calls would be:

- establish-api-session
- lock-device

▪   Ensemble Server's REST API

3.2.1 launch-url

This call opens the device browser on the specified test URL. Supported browsers are Chrome and Firefox on Android and Safari on iOS.

Request

<ensembleServerURL>/launch-url

- ▪   Request type: POST
- ▪   <ensembleServerURL> is returned by the Access Server's lock-device REST API
- ▪   Example of API call:

    https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/launch-url

Parameters

Name	Description	Required?
url	Test URL to be opened	Yes
browserType	Browser to open Values are FireFox, Chrome, or Safari. If you pass empty string in this parameter, the URL is opened in the default browser.	Yes

Response

- ▪   Response type: Plain text
- ▪   SUCCESS or FAILURE is returned. If the call fails, the error thrown by ADB is also returned.

3.2.2 install-application

This call installs and optionally launches the specified application on iOS and Android devices.

Request

<ensembleServerURL>/install-application

- ▪   Request type: POST
- ▪   <ensembleServerURL> is returned by the Access Server's lock-device REST API
- ▪   Example of API call:

    https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/install-application

Parameters

Name	Description	Required?
applicationId	Application id of the device. This id is returned from add-application or get-application-id Rest API call.	Yes
removeApplication	True will remove application once the device is releaseed.	Yes
launchApplication	True will launch application after install.	Yes

Response

- Response type: JSON

3.2.3 remove-application

This call uninstalls the specified application on iOS and Android devices.

Request

<ensembleServerURL>/remove-application

- Request type: POST
- <ensembleServerURL> is returned by the Access Server's lock-device REST API
- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/remove-application

Parameters

Name	Description	Required?
applicationId	Application id of the device. This id is returned from add-application or get-application-id Rest API call.	Yes

Response

- Response type: Plain text
- SUCCESS or FAILURE

3.2.4 launch-application-by-fileurl

This call uninstalls the specified application on Android devices.

Request

<ensembleServerURL>/launch-application-by-fileurl

- ▪ Request type: POST
- ▪ <ensembleServerURL> is returned by the Access Server's lock-device REST API
- ▪ Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/launch-application-by-fileurl

Parameters

Name	Description	Required?
url	URL of an APK file. The URL should be accessible to Ensemble Server. This can be the URL generated by Web Studio like https://adminportal.deviceanywhere.com/app/539449.apk	Yes

Response

- ▪ Response type: Plain text
- ▪ SUCCESS or FAILURE

3.2.5 restart-device

This call restarts iOS and Android devices.

NOTE: This API support Express platform only. Not for pure software (unintegrated) local tethered devices.

Request

<ensembleServerURL>/restart-device

- ▪ Request type: POST
- ▪ <ensembleServerURL> is returned by the Access Server's lock-device REST API
- ▪ Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/restart-device

Response

- ▪ Response type: JSON
- ▪ SUCCESS or FAILURE is returned.

3.2.6 launch-application

This call launches the specified application on iOS and Android devices.

Request

<ensembleServerURL>/launch-application

- ▪ Request type: POST
- ▪ <ensembleServerURL> is returned by the Access Server's lock-device REST API
- ▪ Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/launch-application

Parameters

Name	Description	Required?
appClassPath	Classpath of the application to be launched On Android, you can launch any application, including system applications. On iOS, only applications installed via Studio, the REST API, or the command line utility can be launched using this call.	Yes

Response

- ▪ Response type: Text only
- ▪ SUCCESS or FAILURE is returned.

3.2.7 send-key

This call allows you to send a key string or touch inputs to a device.

Request

<ensembleServerURL>/send-key

- ▪ Request type: POST
- ▪ <ensembleServerURL> is returned by the Access Server's lock-device REST API
- ▪ Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/send-key

Parameters

Name	Description	Required?
keyString	Keyboard or touchscreen sequence to be entered on the device You can specify data entry, a touchscreen sequence, the names of hardware keys to press, or any combination of these.	Yes

	When specifying a touchscreen sequence, use the exact format when capturing taps and swipes in Studio, e.g., [Touch(265,285)][Touch(1198,194)] or [Swipe(60,427)(300,434)(2)(576). When specifying hardware key presses, use the key name displayed when hovering over the device key(s) in Studio, e.g., [Home][Power].	
keyMode	Input mode for all text entry into a device, depending on the type of field the text is being entered into—supported values are the same as appear in Studio, including any custom key modes: Alpha: Alphanumeric field Numeric: Numeric field such as a phone number Web: URL field of a browser	No
	Messaging: Entry field of a text message Dialer:	
holdTime	The length of time a key is pressed for in milliseconds, e.g., 200	No
delayTime	The time between key presses in milliseconds, e.g., 200	No

Response

- Response type: JSON

- SUCCESS or FAILURE is returned.

3.2.8 wait-text

This call allows you to verify a script based on a string of text from a device screen.

Request

<ensembleServerURL>/wait-text

- Request type: POST

- <ensembleServerURL> is returned by the Access Server's lock-device REST API

- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/wait-text

Parameters

Name	Description	Required?
textToWatch	Specify a string of text from the device screen to wait for.	Yes
failThreshold	Enter the maximum number of characters in the string that can be mismatched. For example, if you specify that any two characters can be mismatched in the string "California," the term "Callfornla" will be considered a match.	No
foreground	Color in RGB expressed as a single integer—use the RGB value in the color chip in Studio as the basis for a single integer, e.g.,	No

	if the color in Studio is R=68,G=152,B=236, enter 68152236. ▪ If transforming by text color, use this parameter to specify text color. ▪ If transforming by converting to black and white, use this parameter to specify the dividing color. ▪ If transforming by adjusting contrast, use this parameter to specify the dividing color.	
foreOrback	Set the tolerance threshold if using a text transformation: ▪ If transforming by text color, choose a value between 0 and 128 to increase the slider and reliably extract the text you want. ▪ If transforming by text background, choose a value between 0 and 128 to increase the slider and reliably extract the text you want. ▪ If converting to black and white, set the threshold value between 128 and 128 for variations in the dividing color. A negative value makes the selected color lighter; a positive value makes it darker. ▪ If adjusting contrast, move the slider to adjust contrast and extract text. Enter the slider value.	No
useCanvasRegion	Use true or false to specify if extracting text from a specific region of the device screen. If true, we recommend using xCanvas, yCanvas, widthCanvas, and heightCanvas for faster results. Select the screen region in Studio and hover over it to find the corresponding values.	No
xCanvas	x coordinate of top-left corner of text region Enter 0 if useCanvasRegion is false.	No
yCanvas	x coordinate of top-left corner of text region Enter 0 if useCanvasRegion is false.	No
widthCanvas	Width of text region in pixels	No
heightCanvas	Height of text region in pixels	No
useSecondaryDisplay	Set to true if the secondary display should be used to find the text defined, false if not. Default value is false (for primary display).	No
textToWatchLanguage	Text language Values are English (default), German, French, Japanese, ChineseTraditional, ChineseSimplified, and KoreanHangul.	No
timeout	Wait time in milliseconds within which image region must be matched. Default value is 30000 (for 30 seconds).	No

Response

- Response type: JSON
- SUCCESS or FAILURE is returned. Also return object attributes if specified text is found.

3.2.9 wait-image

This call allows you to verify a script based on an image from a device screen.

Request

<ensembleServerURL>/wait-image

- Request type: POST
- <ensembleServerURL> is returned by the Access Server's lock-device REST API
- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/wait-image

Parameters

Name	Description		Required?
imageHeaderId	Database ID of the image captured *Use either imageHeaderId or imageBytes, but not both.		Yes*
imageBytes	Base64-encoded content of the image file, e.g., imageBytes = org.apache.xerces.impl.dv.util.Base64.encode (ImageUtil.imageToBytes(ImageIO.read(file))); where file is an object containing the filename of your image *Use either imageHeaderId or imageBytes, but not both.		Yes*
imageWidth	Width of the entire image in pixels		Yes
imageHeight	Height of the entire image in pixels		Yes
region	Defines the specific image region to wait for—see sub-parameters below		Yes
	X	x coordinate of top-left corner of image region	Yes
	Y	y coordinate of top-left corner of image region	Yes
	width	Width of image region in pixels	Yes
	height	Height of image region in pixels	Yes
timeout	Wait time in milliseconds within which image region must be matched Default value is 30000 (for 30 seconds).		No
isFixed	Values are true to look for the image region at the same location as in the reference image, false to match the image region at any position on the device screen. Default value is false (for any position).		No

isSecondaryDisplay	Set to true if the secondary display should be used to find the image region defined, false if not. Default value is false (for primary display).	No
pixelThreshold	Set the percentage of pixels to match, with 100 being a strict match (default is 95).	No
colorThreshold	Set the percentage of color matching between the reference images and the device screen, with 100 being a strict match (default is 70).	No
areaThreshold	Set a radius around each pixel's original position in which to look for the pixel, with 100 being a strict match (or the tightest radius). The default is 100.	No

Response

- Response type: JSON

- SUCCESS or FAILURE is returned. Also return the object attributes if specified image is found.

3.2.10 start-appium

This call starts the Appium server and returns the Appium connection URL required for insertion into your Appium script in order to connect with your App Experience's device.

NOTE: For more information on how to utilize Appium on App Experience device cloud, please refer to the Appium Integration Guide.

Prerequisites

The start-appium call is run on a selected device, which you need to acquire using the lock-device call before issuing the start-appium call. The sequence of calls would be:

- establish-api-session

- lock-device (providing the device MCD)

- start-appium

Request

https://<AccessServerHostname>:<Port Number>/resource/device/<sessionID>/start-appium/<mcd>

- Request type: GET

- <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.

- The <mcd> parameter is the MCD number of your test device. You can check the MCD number of a device in Studio by right-clicking the device in the device list and viewing Device Info.

- The <sessionID> parameter is returned by the establish-api-session call and required for subsequent Access Server API calls.

Parameters

None—All parameters are specified as part of the URL in this GET request.

Response

- Response type: Plain text
- SUCCESS or FAILURE

3.2.11 stop-appium

This call stops the Appium session.

NOTE See the stop-appium-with-log Ensemble Server call to stop an Appium session with log file.

Request

https://<AccessServerHostname>:<Port Number>/resource/device/<sessionID>/stop-appium/<mcd>

Request type: GET

- <AccessServerHostname> is the fully qualified hostname of your environment's Access Server.
- The <mcd> parameter is the MCD number of your test device. You can check the MCD number of a device in Studio by right-clicking the device in the device list and viewing Device Info.
- The <sessionID> parameter is returned by the establish-api-session call and required for subsequent Access Server API calls.

Parameters

None—All parameters are specified as part of the URL in this GET request.

Response

- Response type: Plain text
- SUCCESS or FAILURE is returned.

3.2.12 stop-appium-with-log

This call stops the Appium session and returns an Appium log file in ZIP format.

NOTE: See also the stop-appium Access Server call.

Request

<ensembleServerURL>/stop-appium-with-log

- Request type: GET
- <ensembleServerURL> is returned by the Access Server's lock-device REST API
- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/stop-appium-with-log

Parameters

None—All parameters are specified as part of the URL in this GET request.

Response

- Response type: octet-stream
- The output is a .zip file which you can name and save as you wish. If the calls fails for any reason, you will receive a .zip file with 0 bytes of data.

3.2.13 object-touch

This call find the specified object in current display xml and touch it.

Request

<ensembleServerURL>/object-touch

- Request type: POST
- <ensembleServerURL> is returned by the Access Server's lock-device REST API
- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/object-touch

Parameters

Name	Description	Required?
scrollDirection	Swiping the image screen on various directions as - 0 -"SwipeDisabled" - 1-"SwipeDown" - 2-"SwipeUp" - 3-"SwipeLeft" - 4 -"Swipe Right"	No
scrollSize	Scroll Size as - 2:Small(200px) - 3:Medium(400px) - 4:Big(600px) - 5:Large(800px) - 6:Auto(Androidonly)	No

marginPercent	To identify & touch the object under multiple layers of objects which is not visible on the screen, default value is -1 and user can specify marigin with ' % ' can the object is visible on the device screen which increses the probability to touch the object.	No
swipeStartLocation	We have to swipe on the screen to get to selected item , where to start from. This will be x-coordinate if swiping vertically and y-coordinate if swiping horizontally. This can be selected by using object tree	No
eTouch	Applicable for Android only* To swipe automatically on the device	No
touchOffsetPointX	X coordingate value to touch on specified position. Value shoule be 0 to upto the device screen	No
touchOffsetPointY	Y coordingate value to touch on specified position. Value shoule be 0 to upto the device screen	No
useXPath	User have to specified this options if want to use this as 'True'	Yes
useResource	User have to specified this options if want to use this as 'True'	Yes
useObjectID	User have to specified this options if want to use this as 'True'	Yes
useText	User have to specified this options if want to use this as 'True'	Yes
useDescription	It displays the description of the object (if desciption values is mentioned while developing the application)	No
index	Index value is to identify the specific object out of the common objects in the layout	Yes
xPath	Set the xpath value to touch on the specified object	Yes
resource	Set the Resource value to touch on the specified object	Yes
text	Set the Text and object ID values to touch on the specified object	Yes
scrollableParent	Parent object to manage auto-scrolling feature (Android only)	No
timeout	Wait time in milliseconds within which image	No

	region must be matched Default value is 30000 (for 30 seconds).	

Response

- Response type: JSON

- SUCCESS (if object is found and touched) or FAILURE

3.2.14 object-edit

This Call find the specified object in current display xml and touch it, and enter specified text.

Request

<ensembleServerURL>/object-edit

- Request type: POST

- <ensembleServerURL> is returned by the Access Server's lock-device REST API

- Example of API call:

    https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/object-edit

Parameters

Name	Description	Required?
scrollDirection	Swiping the image screen on various directions as - 0 -"SwipeDisabled" - 1-"SwipeDown" - 2-"SwipeUp" - 3-"SwipeLeft" - 4 -"Swipe Right"	No
scrollSize	Scroll Size as - 2:Small(200px) - 3:Medium(400px) - 4:Big(600px) - 5:Large(800px) - 6:Auto(Androidonly)	No
swipeStartLocation	We have to swipe on the screen to get to selected item , where to start from. This will be x-coordinate if swiping vertically and y-coordinate if swiping horizontally. This can be selected by using object tree	No

eTouch	Applicable for Android only* To swipe automatically on the device	No
touchOffsetPointX	X coordingate value to touch on specified position. Value shoule be 0 to upto the device screen	No
touchOffsetPointY	Y coordingate value to touch on specified position. Value shoule be 0 to upto the device screen	No
clearText	Clear the text filed if the filed have data.	No
focusText		No
textToEnter	User needs to provide a text to enter on the selected filed	
useXPath	User have to specified this options if want to use this as 'True'	Yes
useResource	User have to specified this options if want to use this as 'True'	Yes
useObjectID	User have to specified this options if want to use this as 'True'	Yes
useDescription	It displays the description of the object (if desciption values is mentioned while developing the application)	No
index	Index value is to identify the specific object out of the common objects in the layout	Yes
ObjectID	Set the Object ID value to touch on the specified object	Yes
xPath	Set the xpath value to touch on the specified object	Yes
resource	Set the Resource value to touch on the specified object	Yes
scrollableParent	Parent object to manage auto-scrolling feature (Android only)	No
timeout	Wait time in milliseconds within which image region must be matched Default value is 30000 (for 30 seconds).	No

Response

- Response type: JSON
- SUCCESS (if object is found, touched and text entered) or FAILURE

3.2.15 object-extract-text

This Call Extract the text of the specified object in the current display xml.

Request

<ensembleServerURL>/object-extract-text

- Request type: POST
- <ensembleServerURL> is returned by the Access Server's lock-device REST API
- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/object-extract-text

Parameters

Name	Description	Required?
useXPath	User have to specify this options if want to use this as 'True'	Yes
useResource	User have to specify this options if want to use this as 'True'	Yes
useText	User have to specify this options if want to use this as 'True'	Yes
useDescription	It displays the description of the object (if desciption values is mentioned while developing the application)	No
text	Set the Text and object ID values to touch on the specified object	Yes
xPath	Set the xpath value to touch on the specified object	Yes
resource	Set the Resource value to touch on the specified object	Yes
timeout	Wait time in milliseconds within which image region must be matched Default value is 30000 (for 30 seconds).	No

Response

- Response type: JSON
- SUCCESS (also returns the text) or FAILURE

3.2.16 object-wait

This Call wait for the specified object to appear in the current display xml.

Request

<ensembleServerURL>/object-wait

- ▪ Request type: POST
- ▪ <ensembleServerURL> is returned by the Access Server's lock-device REST API
- ▪ Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/object-wait

Parameters

Name	Description	Required?
scrollDirection	Swiping the image screen on various as ▪ 0 -"SwipeDisabled" ▪ 1-"SwipeDown" ▪ 2-"SwipeUp" ▪ 3-"SwipeLeft" ▪ 4 -"Swipe Right"	
scrollSize	Scroll Size as ▪ 2:Small(200px) ▪ 3:Medium(400px) ▪ 4:Big(600px) ▪ 5:Large(800px) ▪ 6:Auto(Androidonly)	
marginPercent	To identify & touch the object under multiple layers of objects which is not visible on the screen, default value is -1 and user can specify marigin with ' % ' can the object is visible on the device screen which increses the probability to touch the object.	No
swipeStartLocation	We have to swipe on the screen to get to selected item , where to start from. This will be x-coordinate if swiping vertically and y-coordinate if swiping horizontally. This can be selected by using object tree	No
eTouch	Applicable for Android only* To swipe automatically on the device	No
touchOffsetPointX	X coordingate value to touch on specified position. Value shoule be 0 to upto the device screen	No
touchOffsetPointY	Y coordingate value to touch on specified position. Value shoule be 0 to upto the device screen	No

useXPath	User have to specified this options if want to use this as 'True'	Yes
useResource	User have to specified this options if want to use this as 'True'	Yes
useObjectID	User have to specified this options if want to use this as 'True'	Yes
useText	User have to specified this options if want to use this as 'True'	Yes
useDescription	It displays the description of the object (if desciption values is mentioned while developing the application)	No
index	Index value is to identify the specific object out of the common objects in the layout	No
text	Set the Text and object ID values to touch on the specified object	Yes
xPath	Set the xpath value to touch on the specified object	Yes
resource	Set the Resource value to touch on the specified object	Yes
scrollableParent	Parent object to manage auto-scrolling feature (Android only)	No
timeout	Wait time in milliseconds within which image region must be matched Default value is 30000 (for 30 seconds).	No

Response

- ▪ Response type: JSON
- ▪ SUCCESS (also return the founded object with its attributes) or FAILURE

3.2.17 object-pickdata (iOS Only)

This Call Select the specified object in the current display picker wheel.

Request

<ensembleServerURL>/object-pickdata

- ▪ Request type: POST

- <ensembleServerURL> is returned by the Access Server's lock-device REST API

- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/object-pickdata

Parameters

Name	Description	Required?
pickerClassName	Specify the iOS pickerClassName name ("UIPicker")	No. Default is set to "UIPicker" if not specified.
pickerWheelValues	Specify the text string that will be selected in the picker wheel. String must be specified in the actual wheeler. The separator must be ";". Example: "hh; mm", "mth; day".	Yes
pickerIndex	1-based index of picker object to apply the set value	No. Default is set to "1" if not specified.

Response

- Response type: JSON

- SUCCESS (if object is selected) or FAILURE

3.2.18 object-get-current-layout

This call is to Get the current display xml.

Request

<ensembleServerURL>/object-get-current-layout

- Request type: POST

- <ensembleServerURL> is returned by the Access Server's lock-device REST API

- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/object-get-current-layout

Parameters : None.

Response

- Response type: JSON

- SUCCESS (includes current layout details) or FAILURE

- Sample Response:

<screen width='1440' height='2560' ><node className='android.widget.FrameLayout' x='0' y='0' height='2560' width='1440' xInParentCoord='0' yInParentCoord='0' description=''

package='com.mc.android.control' text='' enabled='true' focusable='false' clickable='false' checkable='false' checked='false' address='-2147453880' scrollable='false' >

<node className='android.view.ViewGroup' x='0' y='96' height='192' width='1440' xInParentCoord='0' yInParentCoord='0' description='' package='com.mc.android.control' text='' enabled='true' focusable='false' clickable='false' checkable='false' checked='false' address='-2147452919' scrollable='false' resource='android:id/action_bar' >

<node className='android.widget.LinearLayout' x='33' y='96' height='192' width='474' xInParentCoord='0' yInParentCoord='0' description='DAAgent, Navigate home' package='com.mc.android.control' text='' enabled='true' focusable='true' clickable='true' checkable='false' checked='false' address='-2147446192' scrollable='false' >

<node className='android.widget.TextView' x='193' y='143' height='97' width='282' xInParentCoord='0' yInParentCoord='0' description='' package='com.mc.android.control' text='DAAgent' enabled='true' focusable='false' clickable='false' checkable='false' checked='false' address='-2147444270' scrollable='false' resource='android:id/action_bar_title' >

</node>

</node>

<node className='android.widget.ImageButton' x='1216' y='96' height='192' width='224' xInParentCoord='0' yInParentCoord='0' description='More options' package='com.mc.android.control' text='' enabled='true' focusable='true' clickable='true' checkable='false' checked='false' address='-2147445231' scrollable='false' >

</node>

</node>

<node className='android.widget.TextView' x='35' y='298' height='83' width='1370' xInParentCoord='0' yInParentCoord='0' description='' package='com.mc.android.control' text='Agent status:' enabled='true' focusable='false' clickable='false' checkable='false' checked='false' address='-2147449075' scrollable='false' >

</node>

<node className='android.widget.TextView' x='35' y='389' height='83' width='1370' xInParentCoord='0' yInParentCoord='0' description='' package='com.mc.android.control' text='Connected to server' enabled='true' focusable='false' clickable='false' checkable='false' checked='false' address='-2147450036' scrollable='false' resource='com.mc.android.control:id/AgentStatus' >

</node>

<node className='android.widget.TextView' x='35' y='512' height='83' width='1370' xInParentCoord='0' yInParentCoord='0' description='' package='com.mc.android.control' text='Agent log:' enabled='true' focusable='false' clickable='false' checkable='false' checked='false' address='-2147450997' scrollable='false' >

</node>

```
<node className='android.widget.ScrollView' x='35' y='603' height='1942' width='1370'
xInParentCoord='0' yInParentCoord='0' description='' package='com.mc.android.control' text=''
enabled='true' focusable='true' clickable='false' checkable='false' checked='false' address='-2147451958'
scrollable='false' resource='com.mc.android.control:id/LogScrollView' >

<node className='android.widget.TextView' x='40' y='603' height='156' width='1360' xInParentCoord='0'
yInParentCoord='0' description='' package='com.mc.android.control' text=' [12:40] Agent is connected to
ensemble server' enabled='true' focusable='false' clickable='false' checkable='false' checked='false'
address='-2147448114' scrollable='false' resource='com.mc.android.control:id/AgentLog' >

                        </node>

                </node>

        </node>

</screen>
```

3.2.19 get-current-image

This call is to get the device's current screen image.

Request

<ensembleServerURL>/get-current-image

- ▪ Request type: POST
- ▪ <ensembleServerURL> is returned by the Access Server's [lock-device](#) REST API
- ▪ Example of API call:

    https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/get-current-image

Parameters : None.

Response

- ▪ Response type: PNG File
- ▪ SUCCESS (current image file return) or FAILURE

3.2.20 start-device-log

This call is to start device log capturing.

Request

<ensembleServerURL>/start-device-log

- ▪ Request type: GET

- <ensembleServerURL> is returned by the Access Server's [lock-device](#) REST API

- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/start-device-log

Parameters : None.

Response

- Response type: Plain text (ActionResponse)

- SUCCESS or FAILURE

3.2.21 stop-device-log

This Call is to stop get device log.

Request

<ensembleServerURL>/stop-device-log

- Request type: GET

- <ensembleServerURL> is returned by the Access Server's [lock-device](#) REST API

- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/stop-device-log

Parameters : None.

Response

- Response type: JSON

- SUCCESS or FAILURE

3.2.22 get-device-log

This call is to retrieve the captured device log

Request

<ensembleServerURL>/get-device-log

- Request type: GET

- <ensembleServerURL> is returned by the Access Server's [lock-device](#) REST API

- Example of API call:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/get-device-log

Parameters : None.

Response

- Response type: Byte stream

- SUCCESS (return the device log in ZIP file) or FAILURE

- Sample Output:

INFO - mc   - start-device-log:"SUCCESS"

INFO - mc   - stop-device-log:"SUCCESS"

INFO - mc   - get-device-log:[Ljava.io.InputStream;@4b9af9a9

--------- beginning of main

01-26 16:06:11.528 D/QSEECOMAPI: (297): App is not loaded in QSEE

01-26 16:06:11.548 D/QSEECOMAPI: (297): Loaded image: APP id = 5

01-26 16:06:11.548 D/DrmWidevineDash(297): Service_Initialize: ends! returns 0

01-26 16:06:11.548 D/DrmWidevineDash(297): OEMCrypto_Initialize sion_buffer g_wv_fhandle->ion_sbuffer 0x0xb0070000

01-26 16:06:11.548 E/DrmWidevineDash(297): sion_buffer g_wv_fhandle->ion_sbuffer 0x0xb0070000

01-26 16:06:11.548 D/DrmWidevineDash(297): OEMCrypto_Initialize: ends! returns 0

01-26 16:06:11.548 D/DrmWidevineDash(297): OEMCrypto_APIVersion: starts!

01-26 16:06:11.548 D/DrmWidevineDash(297): hlos api version = 9

01-26 16:06:11.548 D/DrmWidevineDash(297): tz api version = 8

01-26 16:06:11.548 D/DrmWidevineDash(297): OEMCrypto_APIVersion: ends! returns version 9

01-26 16:06:11.548 D/DrmWidevineDash(297): OEMCrypto_IsKeyboxValid: starts!

01-26 16:06:11.558 D/DrmWidevineDash(297): OEMCrypto_IsKeyboxValid: ends! returns 0

01-26 16:06:11.558 D/WVCdm   (297): OEMCrypto_Initialize Level 1 success. I will use level 1.

01-26 16:06:11.558 D/DrmWidevineDash(297): OEMCrypto_OpenSession: starts! SID=0xbee6b9e0

01-26 16:06:11.558 D/DrmWidevineDash(297): OEMCrypto_OpenSession SID = 1

01-26 16:06:11.558 D/DrmWidevineDash(297): OEMCrypto_OpenSession: ends! returns 0

01-26 16:06:11.558 D/DrmWidevineDash(297): OEMCrypto_GetRandom: starts! randomData=0xb11f48f8, dataLength=8

01-26 16:06:11.558 D/DrmWidevineDash(297): OEMCrypto_GetRandom: ends! returns 0

01-26 16:06:11.558 D/DrmWidevineDash(297): OEMCrypto_LoadDeviceRSAKey: starts!SID=1, wrapped_rsa_key=0xb224ba00, wrapped_rsa_key_length=1280

01-26 16:06:11.568 D/DrmWidevineDash(297): OEMCrypto_LoadDeviceRSAKey: ends! returns 0

01-26 16:06:11.568 I/WVCdm   (297): CdmEngine::QueryKeyControlInfo

01-26 16:06:11.568 W/WVCdm   (297): BufferReader::Read<T> : Failure during parse: Not enough bytes (4)

01-26 16:06:11.568 W/WVCdm   (297): CdmEngine::ExtractWidevinePssh: Unable to read PSSH atom size

01-26 16:06:11.568 I/WVCdm   (297): CdmEngine::GenerateKeyRequest

01-26 16:06:11.568 D/DrmWidevineDash(297): OEMCrypto_GetDeviceID: starts! deviceID=0xb0824760, idLength=0xae0fd710

01-26 16:06:11.578 D/DrmWidevineDash(297): OEMCrypto_GetDeviceID: ends! returns 0

01-26 16:06:11.578 D/DrmWidevineDash(297): OEMCrypto_SupportsUsageTable: starts!

01-26 16:06:11.578 D/DrmWidevineDash(297): OEMCrypto_SupportsUsageTable: is_supported = 1

01-26 16:06:11.578 D/DrmWidevineDash(297): OEMCrypto_SupportsUsageTable: wv_app_version = 25

01-26   6:06:11.578 D/DrmWidevineDash(297): OEMCrypto_SupportsUsageTable: ends! returns 0x0

3.2.23 capture-frame

This Call is capture the next image from the device. save the image in a capture-list, so that it can be upload.

Request

<ensembleServerURL>/capture-frame

- ▪ Request type: POST
- ▪ <ensembleServerURL> is returned by the Access Server's lock-device REST API
- ▪ Example of API call:

    https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/capture-frame

Parameters : None.

Response

- ▪ Response type: JSON
- ▪ SUCCESS or FAILURE

3.2.24 get-device-performance

 This call is to get Device Performance Metrics.

Request

<ensembleServerURL>/get-device-performance

- ▪ Request type: POST
- ▪ <ensembleServerURL> is returned by the Access Server's lock-device REST API

▪ Example of API call:

https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/get-device-performance

Parameters : None.

Response

▪ Response type: JSON

▪ Sample Result:

{

"status": "SUCCESS",

"reason": "",

"failureReason": "",

"devicePerformance": " Network Operator Name = AT&T; Network MCC = 310; Network MMC = 410; Signal Strength (dBm) = 0; NetworkType = Wifi; Device IP = 10.120.101.59; Free Memory (kB) = 192960; Total Memory (kB) = 1929536; ; Battery Level (%) = 100.000000; CPU Utilization (%) = 19.50"

}

3.2.25 set-location

This call is to set simulated location on Android devices.

Request

<ensembleServerURL>/set-location

▪ Request type: POST

▪ <ensembleServerURL> is returned by the Access Server's lock-device REST API

▪ Example of API call:

https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/set-location

Prerequisites

▪ Android version 5.0 and later.

▪ On the target device > Settings > Developer Options > Allow Mock Locations is turned ON.

Parameters

Name	Description	Required?
Longitude	Longitude value	Yes
Latitude	Latitude value	Yes
Altitude	Altitude value	No
Satellite	Satellite value	No

Response

- Response type: JSON
- SUCCESS or FAILURE

3.2.26 webdriver-command

These web commands enable you to interact directly with web elements when WebDriver option is enabled..

Request

<ensembleServerURL>/webdriver-command

- Request type: POST
- <ensembleServerURL> is returned by the Access Server's lock-device REST API
- Example of API with its parameters.

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgoI65EVLrI8D4wg/webdriver-command

Parameters

Name	Description	Required?
commandType	Specifies one the following command: <table><tr><td>`start-webdriver`</td><td>`start webdriver`</td></tr><tr><td>`close-webdriver`</td><td>`close webdriver`</td></tr><tr><td>`Click`</td><td>`click on specified element`</td></tr><tr><td>`submit-form`</td><td>`submit on specified form`</td></tr><tr><td>`submit-element`</td><td>`submit on specified element`</td></tr><tr><td>`set-value`</td><td>`set specific value of specified element`</td></tr><tr><td>`get-value`</td><td>`get current value of specified element`</td></tr><tr><td>`get-element-count`</td><td>`get the element count of specified element`</td></tr><tr><td>`get-children-count`</td><td>`get the children count of specified element`</td></tr></table>	Yes.

	wait-exist	*wait until the specified element exist*	
	wait-visible	*wait until the specified element is visible*	
	wait-hidden	*wait until the specified element is hidden*	
	wait-focus	*wait until the specified element is on focus*	
	wait-blur	*wait until the specified element (image) is blur*	
openUrl	Specifies the url for the "start-webdriver" command		Yes, only for start-webdriver command.
findBy	Specifies "findBy" method for the specified element: xpath name id text tag css		Yes, except start-drvier, close-driver.
findbyValue	Specifies the actual value to "findBy". Value depends on the web page. **Sample for findBy, finbyValue:** findBy=tag,findbyValue=select findBy=xpath,findbyValue=//option[contains(text(),'2017')] findBy=id,findbyValue=gwm-SignIn-button findBy=id,findbyValue=auth-show-password-checkbox findBy=text,findbyValue=Create an account		Yes, except start-drvier, close-driver.
attribute	Specifies "attribute" method for the specified element		No.
attributeValue	Specifies the actual value to "attribute"		Yes, if attribute parameter is used.

index	Specifies the index of the specified element (if more than one is found). Default is "-1". **Sample**: index=4	Yes, if more than one item is available.
newValue	Specifies the new value for the specified element. default is null.	Yes, only for "set-value".
formData	Specifies the form data for "submit-form" command. List of pair of string, as the following "**filedName**=VALUE". **Special VALUE**: "setCheckOn" to select check mark. "setCheckOff" to unselect check mark. **Examples**: rememberMe=setCheckOn (select check mark to field "rememberMe") rememberMe=setCheckOff (unselect check mark to field "rememberMe") password=password123 (set value "password123" to field "password") email=abc@mail.com (set value "abc@mail.com" to field "email") **Sample**: formData={password=password, rememberMe=setCheckOn, email=abc@mail.com}	Yes, only for sub-form command.
formAction	Specifies the form action for "submit-form" command. **Options**: • "formSubmit" (to submit the form)	No

	• "" (default is empty string to not submit the form) **Sample**: formAction=formSubmit	
timeout	Specifies the timeout value in milliseconds. Default is 30000 (30 seconds)	No

Example API calls

- ▪ Example of API:

  https://18.0.0.1:443/da/ensemble/device/-ItWMdrgol65EVLrI8D4wg/webdriver-command

- ▪ Example of its parameters (**bold-highlighted** text is the commandType for easier reference):

[commandType=**start-webdriver**,findBy=,findbyValue=,attribute=,attributeValue=,index=-1,newValue=,openUrl=accounts.google.com/SignUp,formData={},formAction=,timeout=30000]

[commandType=**set-value**, findBy=tag,findbyValue=input,attribute=name,attributeValue=FirstName,index=-1,newValue=David,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**submit-element**, findBy=tag,findbyValue=select,attribute=,attributeValue=,index=4,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**get-children-count**, findBy=tag,findbyValue=select,attribute=,attributeValue=,index=1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**get-value**, findBy=tag,findbyValue=select,attribute=,attributeValue=,index=4,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**click**,findBy=tag,findbyValue=select,attribute=name,attributeValue=BirthYear,index=4,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**start-webdriver**,findBy=,findbyValue=,attribute=,attributeValue=,index=-1,newValue=,openUrl=accounts.google.com/SignUp,formData={},formAction=,timeout=30000]

[commandType=**wait-blur**,findBy=xpath,findbyValue=//option[contains(text(),'2017')],attribute=,attributeValue=,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**wait-visible**, findBy=xpath,findbyValue=//input[@name='FirstName'],attribute=,attributeValue=,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**wait-hidden**,
findBy=xpath,findbyValue=//input[@name='timeStmp'],attribute=,attributeValue=,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**wait-exist**,
findBy=xpath,findbyValue=//input[@id='timeStmp'],attribute=,attributeValue=,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**click**,findBy=tag,findbyValue=input,attribute=name,attributeValue=FirstName,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**wait-focus**,
findBy=tag,findbyValue=input,attribute=name,attributeValue=FirstName,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**close-webdriver**,
findBy=,findbyValue=,attribute=,attributeValue=,index=0,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**start-webdriver**,findBy=,findbyValue=,attribute=,attributeValue=,index=-1,newValue=,openUrl=http://www.amazon.com,formData={},formAction=,timeout=30000]

[commandType=**click**,findBy=id,findbyValue=gwm-SignIn-button,attribute=,attributeValue=,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**click**,findBy=id,findbyValue=auth-show-password-checkbox,attribute=,attributeValue=,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**click**,findBy=id,findbyValue=ap_email,attribute=,attributeValue=,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**submit-form**,
findBy=tag,findbyValue=form,attribute=,attributeValue=,index=1,newValue=,openUrl=,formData={password=password, rememberMe=setCheckOn,
email=abc@mail.com},formAction=formSubmit,timeout=30000]

[commandType=**close-webdriver**,
findBy=,findbyValue=,attribute=,attributeValue=,index=0,newValue=,openUrl=,formData={}]

[commandType=**click**,findBy=text,findbyValue=Create an account.,attribute=,attributeValue=,index=-1,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**get-value**,
findBy=tag,findbyValue=select,attribute=,attributeValue=,index=4,newValue=,openUrl=,formData={},formAction=,timeout=30000]

[commandType=**submit-form**,
findBy=tag,findbyValue=form,attribute=,attributeValue=,index=1,newValue=,openUrl=,formData={passw

ord=password, DoesNotExist=setCheckOn, customerName=John Woods, email=abc@mail.com},formAction=formSubmit,timeout=30000]

Response

- Response type: JSON

- SUCCESS (also returns the text) or FAILURE

- Example response & result

{"status":"SUCCESS","reason":"","failureReason":"","value":null}

{"status":"SUCCESS","reason":"selectElement. More than one element matches the criterion passed. Please narrow selection by using other attributes","failureReason":"selectElement. More than one element matches the criterion passed. Please narrow selection by using other attributes","value":null}

{"status":"FAILURE","reason":"no such element: Unable to locate element: {\"method\":\"name\",\"selector\":\"DoesNotExist\"}\n (Session info: chrome=66.0.3359.126)...","failureReason":"no such element: Unable to locate element: {\"method\":\"name\",\"selector\":\"DoesNotExist\"}\n (Session info: chrome=66.0.3359.126)...","value":null}

{"status":"SUCCESS","reason":"","failureReason":"","value":"-1"}

Example Test Source Code – Attempt to create an Amazon account. Note: Amazon.com is a dynamic site which change frequently. The web objects mentioned in the following example may not be available at anytime.

```
static public void TestWebDriverSubmitAmazon( String deviceID )
{
    String sessionIDEnsem = "";
    sessionIDEnsem = LockDevice(deviceID);


    StringWriter acquireExpired = new StringWriter();
    JSONObject exportObj = new JSONObject();

    String ret2;
    try
    {
        exportObj.put("commandType", "start-webdriver" );
        exportObj.put("openUrl", "http://www.amazon.com" );

        ret2 = restRequest(sessionIDEnsem + "/webdriver-command", "POST",
```

```
"application/json", "application/json", exportObj.toString());
        Log.info("TestWebDriver " + exportObj + " = " + ret2);

        exportObj.put("openUrl", "" );

        exportObj.put("commandType", "click" );
        exportObj.put("findBy", "text"  );
        exportObj.put("findbyValue", "Create an account" );
        ret2 = restRequest(sessionIDEnsem + "/webdriver-command", "POST",
"application/json", "application/json", exportObj.toString());
        Log.info("TestWebDriver " + exportObj + " = " + ret2);

        exportObj.put("commandType", "click" );
        exportObj.put("findBy", "text"  );
        exportObj.put("findbyValue", "Create an account." );
        ret2 = restRequest(sessionIDEnsem + "/webdriver-command", "POST",
"application/json", "application/json", exportObj.toString());
        Log.info("TestWebDriver " + exportObj + " = " + ret2);

        exportObj.put("commandType", "submit-form");
        exportObj.put("findBy", "tag"  );
        exportObj.put("findbyValue", "form" );
        exportObj.put("index", "1" );
        Map<String, String> formData = new HashMap<String, String>();
        formData.put( "customerName", "John Woods");
        formData.put( "DoesNotExist", "setCheckOn");
        formData.put( "password", "password");
        formData.put( "email", "abc@mail.com");
        exportObj.put("formData", formData);
        exportObj.put("formAction", "formSubmit");


        ret2 = restRequest(sessionIDEnsem + "/webdriver-command", "POST",
"application/json", "application/json", exportObj.toString());
        Log.info("TestWebDriver " + exportObj + " = " + ret2);

        sleep( 30 );
        exportObj.put("commandType",
WebDriverRestRequest.commandTypeEnum.CLOSE_WEBDRIVER.getName() );
        exportObj.put("windowTitle", ""  );
        exportObj.put("findBy", ""   );
        exportObj.put("findbyValue", "" );
        exportObj.put("attribute", "" );
        exportObj.put("attributeValue", "" );
        exportObj.put("index", "" );
        ret2 = restRequest(sessionIDEnsem + "/webdriver-command", "POST",
"application/json", "application/json", exportObj.toString());
        Log.info("TestWebDriver " + exportObj + " = " + ret2);
    }
    catch (JSONException e)
    {
        Log.error(e);
    }

    unLockDevice();
}
```

Example Test Output

```
restRequest:http://somePC/da/ensemble/device/lnzTO6FV3ll2eeJ58Bk_gw/webdriver-
command

TestWebDriver {"openUrl":"http://www.amazon.com","commandType":"start-webdriver"}
=
{"status":"SUCCESS","reason":"","failureReason":"","value":null}restRequest:http:
//somePC da/ensemble/device/lnzTO6FV3ll2eeJ58Bk_gw/webdriver-command

TestWebDriver {"openUrl":"","commandType":"click","findbyValue":"Create an
account","findBy":"text"} =
{"status":"SUCCESS","reason":"","failureReason":"","value":null}

restRequest:http://somePC/da/ensemble/device/lnzTO6FV3ll2eeJ58Bk_gw/webdriver-
command

TestWebDriver {"openUrl":"","commandType":"click","findbyValue":"Create an
account.","findBy":"text"} =
{"status":"SUCCESS","reason":"","failureReason":"","value":null}

restRequest:http://somePC/da/ensemble/device/lnzTO6FV3ll2eeJ58Bk_gw/webdriver-
command

TestWebDriver {"openUrl":"","commandType":"submit-
form","findbyValue":"form","findBy":"tag","index":"1","formData":{"password":"pas
sword","DoesNotExist":"setCheckOn","customerName":"John
Woods","email":"abc@mail.com"},"formAction":"formSubmit"} =
{"status":"FAILURE","reason":"no such element: Unable to locate element:
{\"method\":\"name\",\"selector\":\"DoesNotExist\"}\n  (Session info:
chrome=66.0.3359.126)...","failureReason":"no such element: Unable to locate
element: {\"method\":\"name\",\"selector\":\"DoesNotExist\"}\n  (Session info:
chrome=66.0.3359.126)...","value":null}
```

3.3 Live-Test REST API

Live Test Server calls are of the format:

https://<Live-Test Hostname>:<Port Number>/da/livetest/device/<api session ID>/<API-call>

- Please refer to your deployment for <Live-Test Hostname>.
- Port number's default is 80 (http) or 8443 (https).
- The <api session ID> parameter is returned by the establish-api-session call and required for all REST API calls.
- /<API-call> is the API method invoked: e.g., /lock-device.
- Example of API call:

  https://18.0.0.1:443/da/livetest/device/-ItWMdrgol65EVLrI8D4wg/execute-action

NOTE: Prerequisites for executing a Live Test Server's REST API is a valid API session. Use the Access Server's establish-api-session to start REST API session.

3.3.1 execute-action

This call executes the specified App Experience Action script.

Request

https://<Live-Test Hostname>:<Port Number>/da/livetest/device/<api session ID>/execute-action

- Request type: POST
- Example of API call:

   https://18.0.0.1:443/da/livetest/device/-ItWMdrgol65EVLrI8D4wg/execute-action

Parameters

Name	Description	Required?
projectName	Specify your Project Name to be executed	Yes
executeItem	Action name is you executed item	Yes
deviceMCD	The MCD number of your test device	Yes
shouldLockDevice	specify if it should lock/unlock device true is the value for device lock	Yes

Response

- Response type: JSON
- SUCCESS or FAILURE

3.3.2 execute-testcase

This call executes the specified testcase.

Request

https://<Live-Test Hostname>:<Port Number>/da/livetest/device/<api session ID>/execute-testcase

- Request type: POST
- Example of API call:

   https://18.0.0.1:443/da/livetest/device/-ItWMdrgol65EVLrI8D4wg/execute-testcase

Parameters

Name	Description	Required?
projectName	Specify your Project Name to be executed	Yes
executeItem	Test case name is you executed item	Yes
deviceMCD	The MCD number of your test device	Yes
shouldLockDevice	specify if it should lock/unlock device true is the value for device lock	Yes
secondaryDevice MCDList	Specify the MCD number of your test device, if more than one device is used in script imlemented	No

Response

- Response type: JSON
- SUCCESS or FAILURE

3.3.3 execute-testcycle

This call executes the specified testcycle.

Request

https://<Live-Test Hostname>:<Port Number>/da/livetest/device/<api session ID>/execute-testcycle

- Request type: POST
- Example of API call:

  https://18.0.0.1:443/da/livetest/device/-ItWMdrgol65EVLrI8D4wg/execute-testcycle

Parameters

Name	Description	Required?
projectName	Specify your Project Name to be executed	Yes
executeItem	testcycle name is you executed item	Yes
deviceMCD	The MCD number of your test device	Yes
shouldLockDevice	specify if it should lock/unlock device true is the value for device lock	Yes
secondaryDeviceMCDList	Specify the MCD number of your test device, if more than one device is used in script imlemented	No

Response

- Response type: JSON
- SUCCESS or FAILURE

4 Known Issues and Limitations

For items listed below, please refer to corresponding JIRA ticket for latest solution/update, if available.

Checkpoint option not working in toggle transaction

Checkpoint option for toggle transaction command is not working. When 'Check point' option is set to true no proofs are generated.