

## SauceLabs

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### TABLE OF CONTENT

<b>1</b>	<b>PURPOSE</b>
<b>2</b>	<b>SCOPE</b>
2.1	Description/ of activity/task
2.2	Target Audience
<b>3</b>	<b>INSTRUCTIONS</b>
3.1	Steps for activity/task
3.1.1	Pre-requisites
3.1.1.1	For User Onboarding
3.1.1.2	For Project Onboarding
3.1.1.3	End users will provide the following information of their application Or user onboarding which is part of snow template
3.1.2	How to perform a sample Test from Saucelabs
3.1.2.1	Sauce Labs Insights
3.1.3	Available Private Devices for Testing
3.1.3.1	Types of Testing that can be performed
<b>4</b>	<b>SAUCELABS INTEGRATION WITH TRICENTIS TOSCA</b>
4.1	Prerequisites:
4.2	Steps for Scanning an application on Saucelabs from Tosca:
4.3	Test case for Suacelabs mobile devices or desktop browsers
4.4	Execution list from Tosca to execute on the Suacelabs desktop browsers or mobile devices.
4.5	Steps to view the tosca executed test in the Suacelabs
<b>5</b>	<b>ADDITIONAL INFORMATION</b>
<b>6</b>	<b>ABBREVIATIONS AND DEFINITIONS</b>
6.1	Abbreviations
<b>7</b>	<b>REFERENCES</b>
7.1	Governing Documents
<b>8</b>	<b>REVISION HISTORY</b>
8.1	Changes made.

## 1 PURPOSE

This work instruction supports the use of SauceLabs which is a testing platform for web and mobile applications enabling the Users to run their tests across Desktops, Emulators, Simulators, and real Devices to support software delivery process and product developments following the defined processes.

This document covers the below instructions:

- Pre-requisites of User and Project onboarding
- Available Tunnel Pools for End users
- How to perform a sample Test from Saucelabs

## 2 SCOPE

### 2.1 Description/ of activity/task

#### In Scope

DDIT managed applications, systems, and software development

#### Out of scope

Those applications/systems practicing Agile that are not managed by DDIT

### 2.2 Target Audience

This Work Instruction applies to the following functions/roles as a minimum.

Function	Roles
DDIT	Product Owner (PO)
DDIT	Product Manager (PM)
DDIT	Scrum Master (SM)
DDIT	Test Manager, Test Coordinator, Tester, Test Analyst, Test Reviewers

### 3 INSTRUCTIONS

#### 3.1 Steps for activity/task

Responsible (Project Team)	Activity/Task
Test Manager, Test Coordinator, Tester, Test Analyst, Test Reviewer	<ol style="list-style-type: none"> <li>1. Responsible for all test phases – unit, system, integration and functional testing and acceptance</li> <li>2. Ensure that all required testing deliverables are created including testing approach, testing scenarios, conditions and expected results, test scripts and testing control sheets</li> <li>3. Execute formal review cycles including informal review, formal review, testing sign-off and quality assurance review</li> </ol>

##### 3.1.1 Pre-requisites

###### 3.1.1.1 For User Onboarding

a. End users will need to reach out to Ops team through SNOW onboarding with this Form - [here](#) to onboard users to Saucelabs.

###### 3.1.1.2 For Project Onboarding

End users will need to reach out to Ops team through SNOW onboarding with this Form - [here](#)

###### 3.1.1.3 End users will provide the following information of their application Or user onboarding which is part of snow template

Project Onboarding - Custom fields	
Sequence	Field Name
1	Application /Team Name
If application is hosted on intranet, will provide the below details	
(Sequence)	Information
2	Application ips
3	Application url
4	Application HealthCheck Port Number
5	Application Listening Port Number

## SauceLabs

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### User Onboarding - Custom fields

Sequence	Field Name
1	Application /Team Name
2	Role

### Mandatory: -

1	Should attach required Up4Growth training completion certificate (Common for all Roles)
2	Please attach your manager's approval email, for your access and role assignment to this project, as this will be subject to license cross charging

## SauceLabs

### 3.1.2 How to perform a sample Test from SauceLabs

**Step 1:** Login to SauceLabs application

[SSO login: <https://myapps.microsoft.com/signin/7c74289d-a7c6-4116https://myapps.microsoft.com/signin/7c74289d-a7c6-4116-bb46-e131cb534913?tenantId=f35a6974-607f-47d4-82d7-ff31d7dc53a5bb46e131cb534913?tenantId=f35a6974-607f-47d4-82d7-ff31d7dc53a5>]

Available Tunnel Pools for End Users testing:

- i.) SauceLabs\_App001\_Tunnel
- ii.) SauceLabs\_App002\_Tunnel

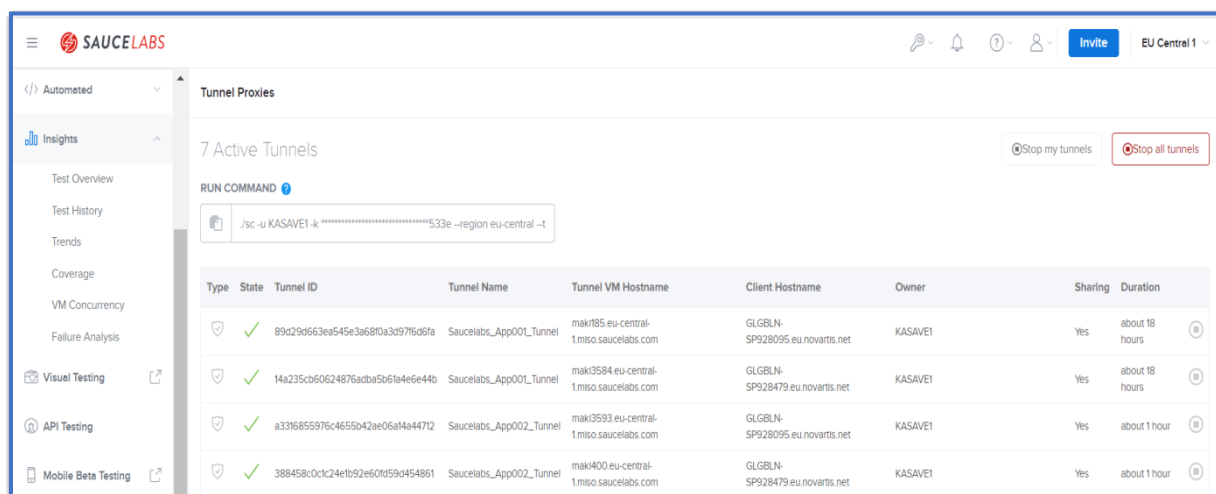


Figure 1

**Step 2:** In the left menu, click on "Live" dropdown and select "Cross Browser".

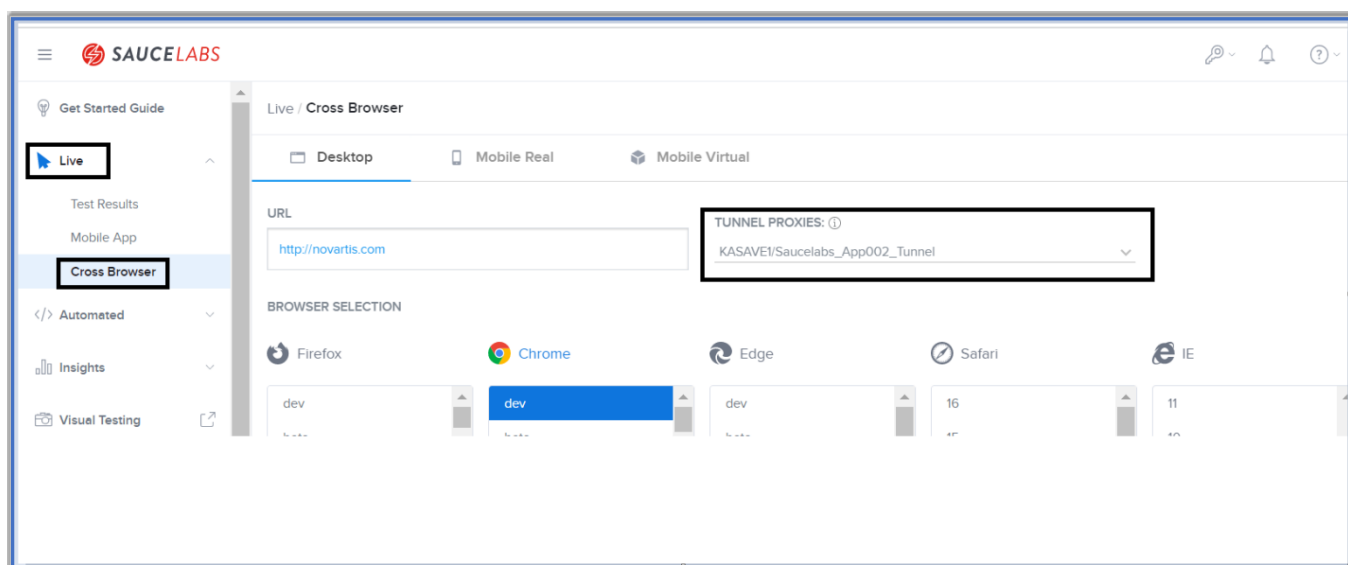


Figure 2

## SauceLabs

**Step 3:** In the Cross Browser page, (This is Example only & not restricted to SauceLABs functionalities)

- Provide the URL of the webpage which needs to be tested in "URL" field. [ Ex: <https://app100prd.aws.novartis.net> ]
- Select the available tunnel- pool for end Users from the "TUNNEL PROXIES" dropdown
- In "BROWSER SELECTION" section, select the version of the browser from the browser column in which you would like to run you test and select the browser resolution.
- Select the OS Version from the dropdown and click on "Start Test".

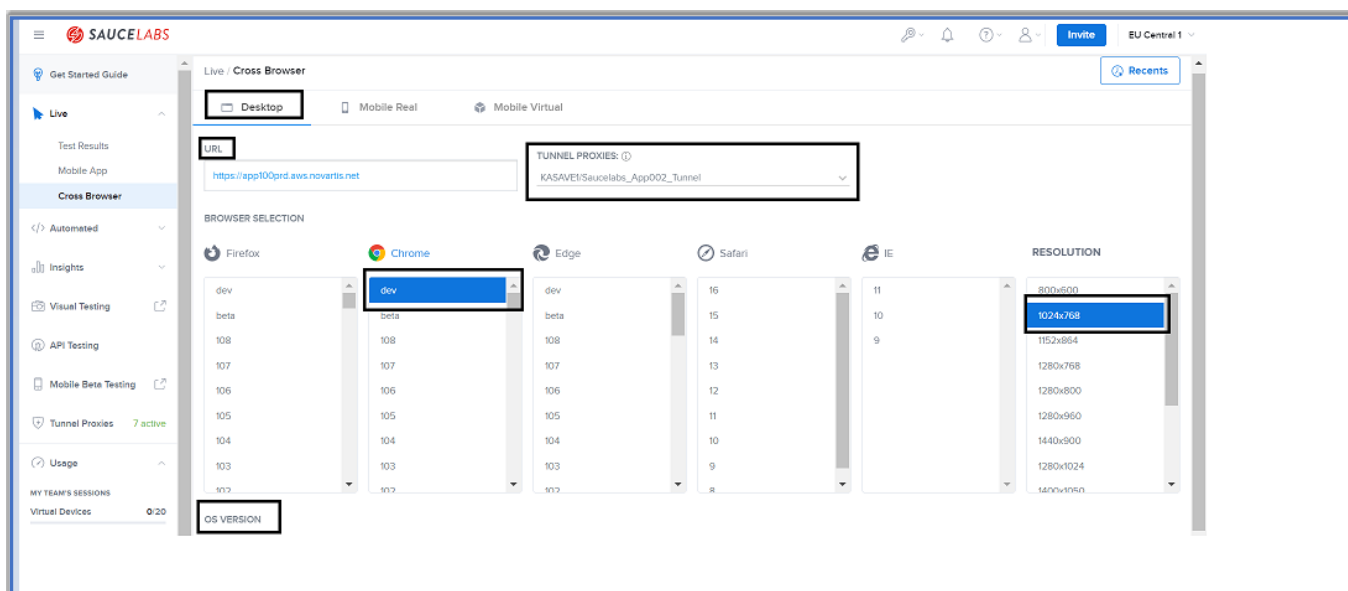


Figure 3

- A new window with test browser will be launched.

## SauceLabs

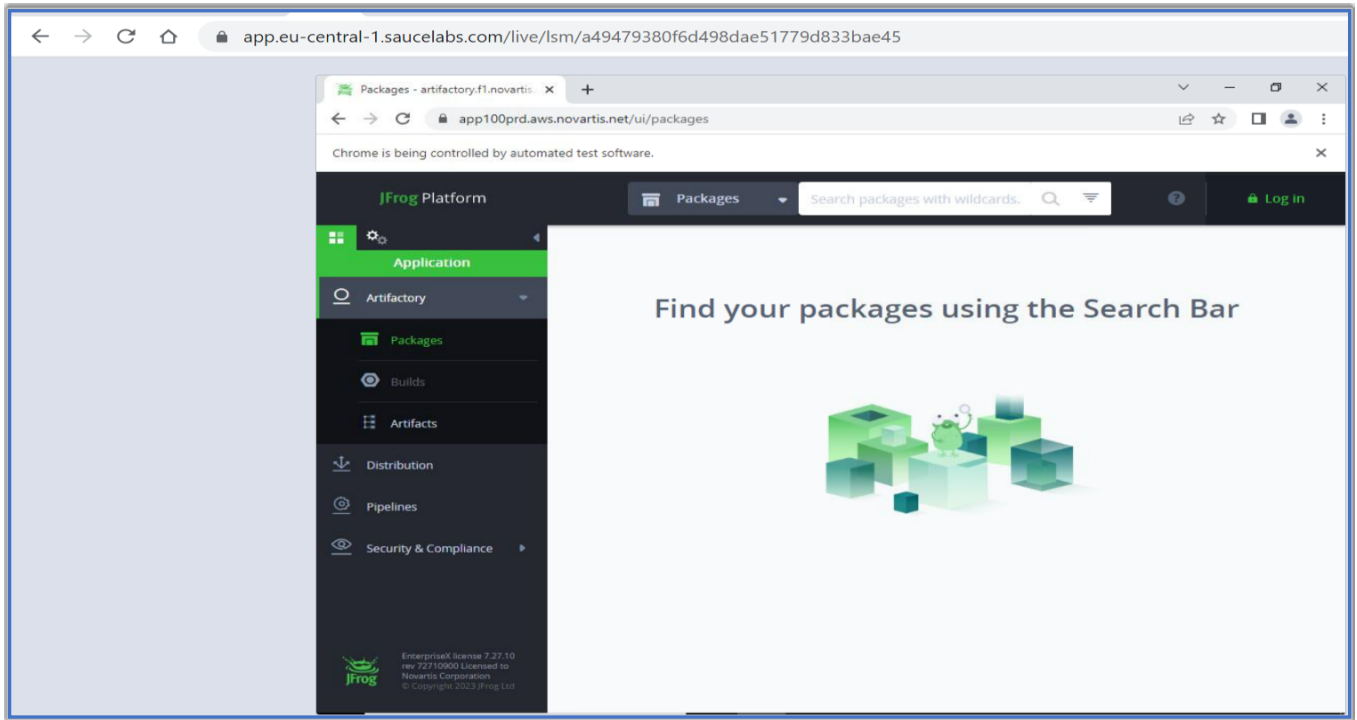


Figure 4

f. Please click on end to complete the test.

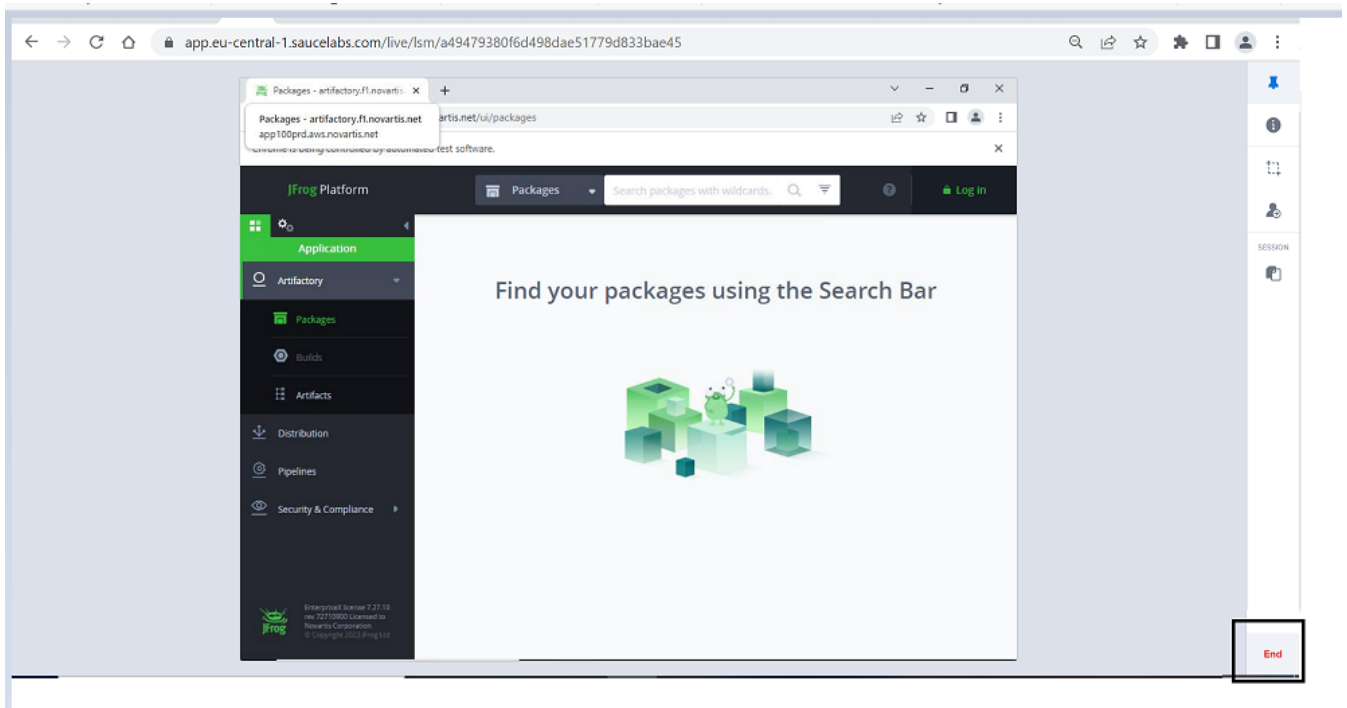


Figure 5

## 3.1.2.1 Sauce Labs Insights

Insights is the reporting and analytics hub of your Sauce test suite. In it, you will find an interactive data center that can help you interpret your test results over time, identify failure patterns across different platforms, understand how parallel tests can improve your build efficiency, and home in on areas of your app that might benefit from deeper testing.

Access the Insights menu from the left-side navigation menu of our web app. The test overview Shows a variety of views of the data related to all the tests executed

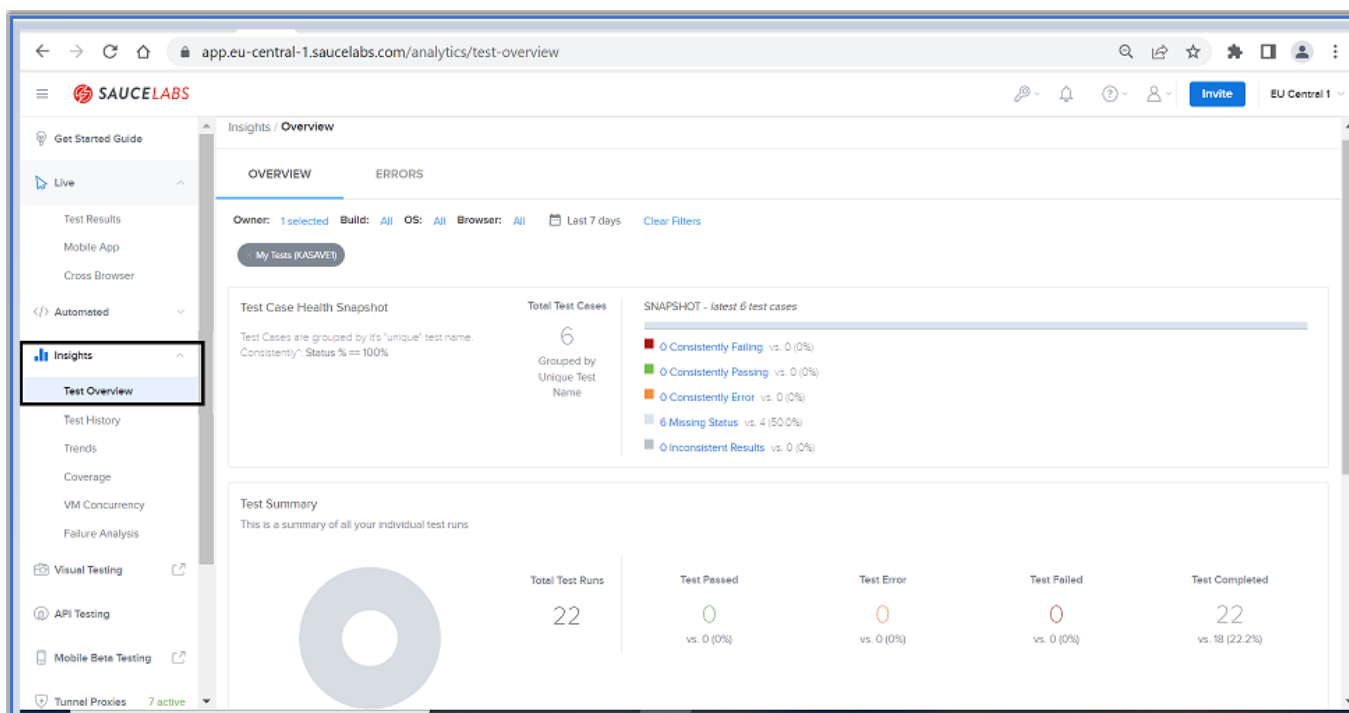


Figure 6



## SauceLabs

### 3.1.4 Available Private Devices for Testing

Device Brand	Model	Device Type	OS	Viewport (px)
Apple	iPhone <b>14 Pro Max</b>	Smartphone	iOS <b>16</b>	430x932
Apple	iPhone <b>13</b> (or equivalent)	Smartphone	iOS <b>15</b> (n-1)	390x844
Apple	iPhone <b>12 mini</b> (or equivalent)	Smartphone	iOS <b>15</b> (n-1)	375x812
Apple	iPad <b>Air 2022</b>	Tablet	iPadOS <b>16</b>	768x1024
Apple	iPad <b>Pro 2021</b> (or equivalent)	Tablet	iPadOS <b>15</b> (n-1)	834x1194
Android	Samsung <b>S22</b>	Smartphone	Android <b>13</b>	360x780
Android	Samsung <b>Galaxy Note 20</b>	Smartphone	Android <b>12</b> (n-1)	412x915

\* This list is dynamic and might change depending on license procurement & cross charging.

#### 3.1.4.1 Types of Testing that can be performed

1. Cross Browser testing
2. UI or Visual Regression testing
3. Multi OS Testing
4. Multi Device Testing
5. API

### 4 SAUCELABS INTEGRATION WITH TRICENTIS TOSCA

Tricentis Tosca is an industry-leading test creation tool, allowing for rich test case automation against web, mobile, and client-server applications.

#### 4.1 Prerequisites:

To integrate the Tosca with SauceLabs users must install Tricentis Tosca Commander Ent\_16.0.2\_L\_EN\_01 from the software center.

#### 4.2 Steps for Scanning an application on SauceLabs from Tosca:

Tosca scans your application to gather data about the various pages and elements. From the model Tosca creates, you will piece together sequences of actions, allowing you to script the steps your test will execute.

- 1) In the Tosca Commander, on the Modules tab, click Scan and then click Mobile.

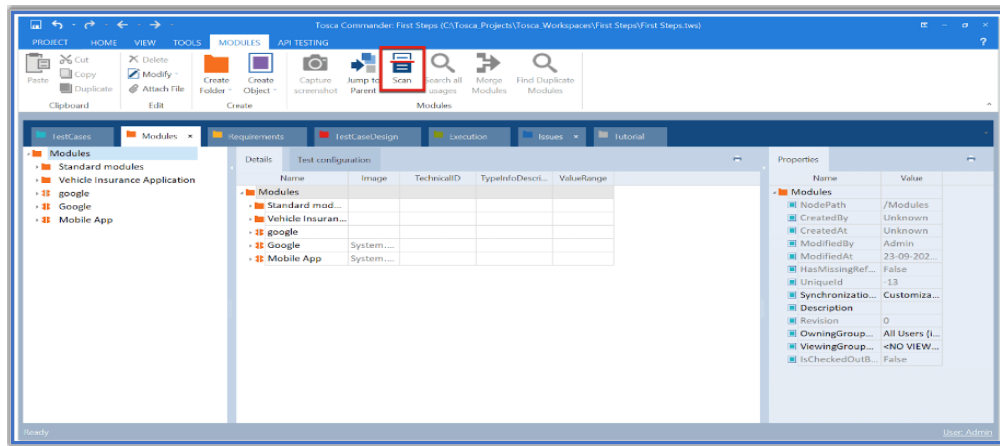


Figure 7

- 2) Click on Add Device box and click ad Add new connection.

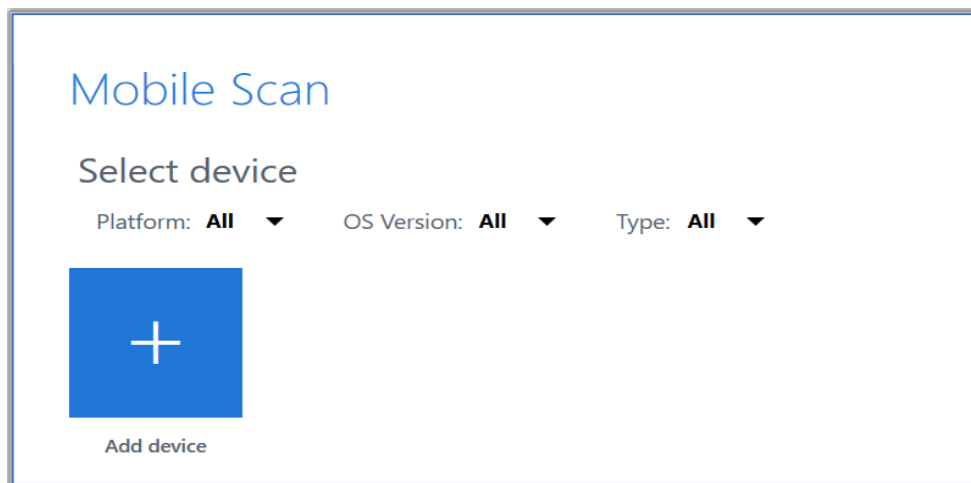


Figure 8

## SauceLabs

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- 3) In the Add connection box enter the connection name, select type as Cloud(Appium), provide the Appium Server Address and click on Add

**Note: Appium Server Address: Ex: <https://ondemand.eu-central-1.saucelabs.com/wd/hub>**

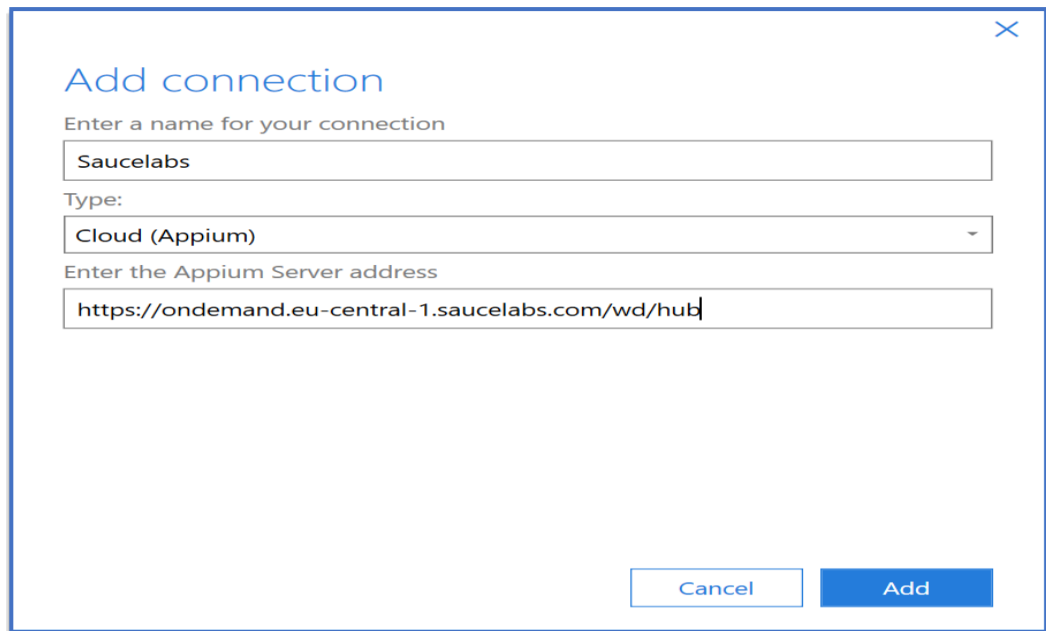
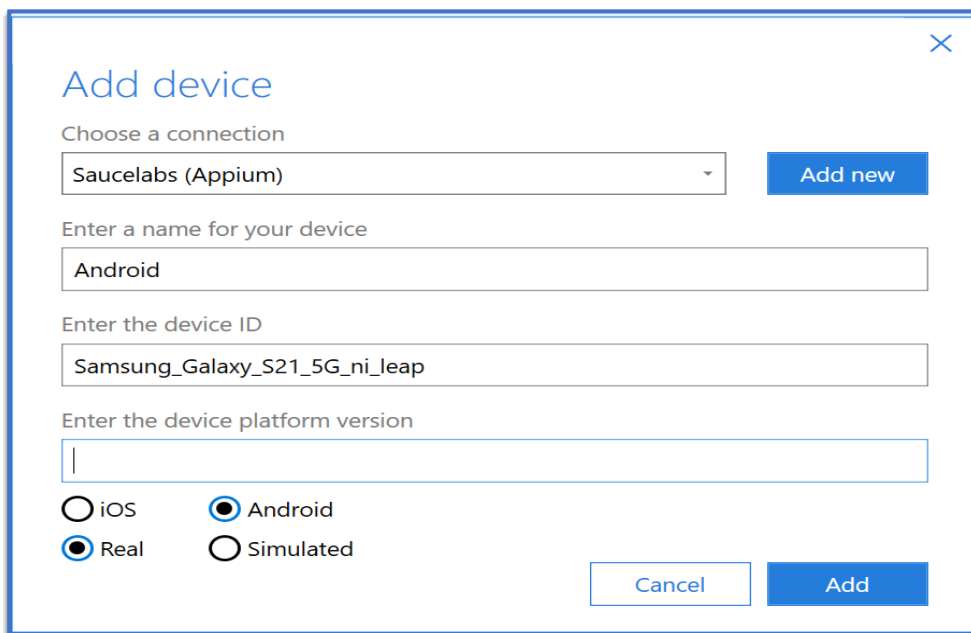


Figure 9

- 4) In the Add device box, enter the information for the Sauce Labs device you will be using.

## SauceLabs



**Add device**

Choose a connection

Saucelabs (Appium) Add new

Enter a name for your device

Android

Enter the device ID

Samsung\_Galaxy\_S21\_5G\_ni\_leap

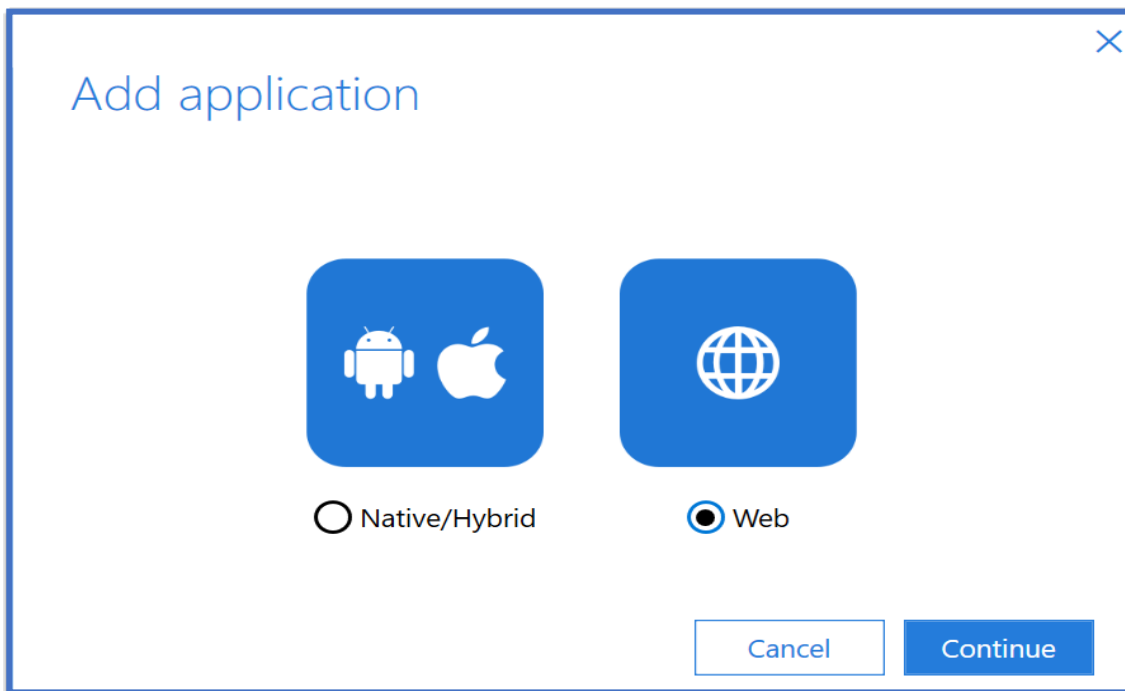
Enter the device platform version

☐ iOS
 ☒ Android
 ☒ Real
 ☐ Simulated

Cancel Add

Figure 10

- 5) Click on Add Application box, Select the Native/Hybrid or Web and click on continue
- 6) Enter your application name, application URL and click on Add

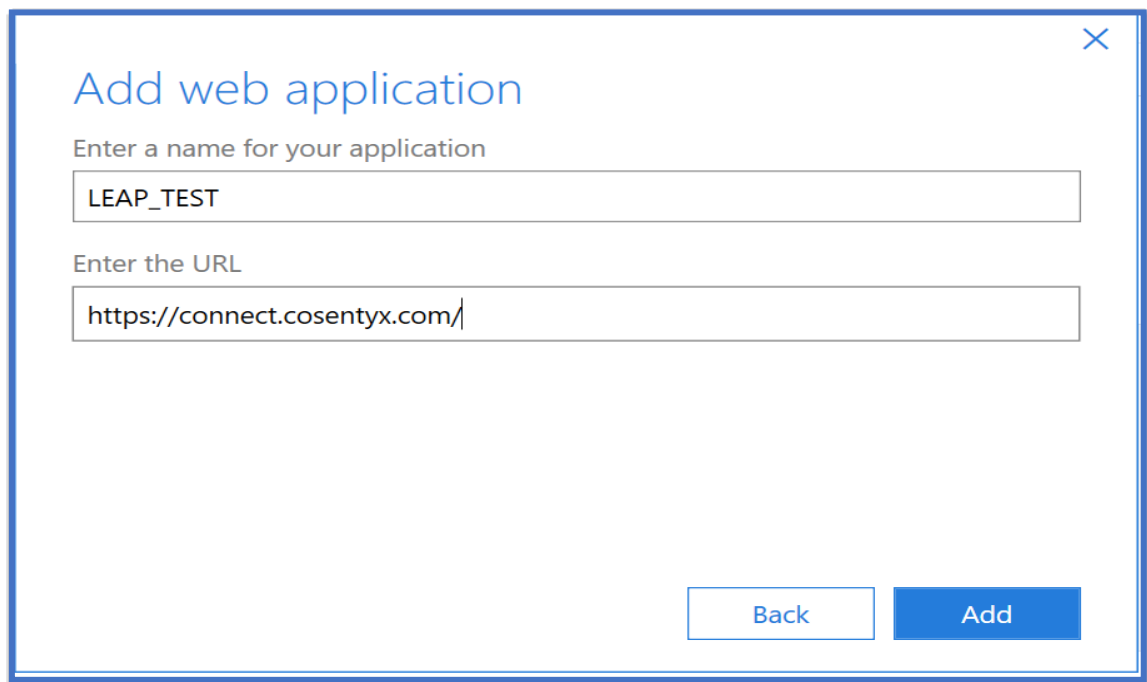


**Add application**

☐ Native/Hybrid
 ☒ Web

Cancel Continue

Figure 11



**Add web application**

Enter a name for your application

LEAP\_TEST

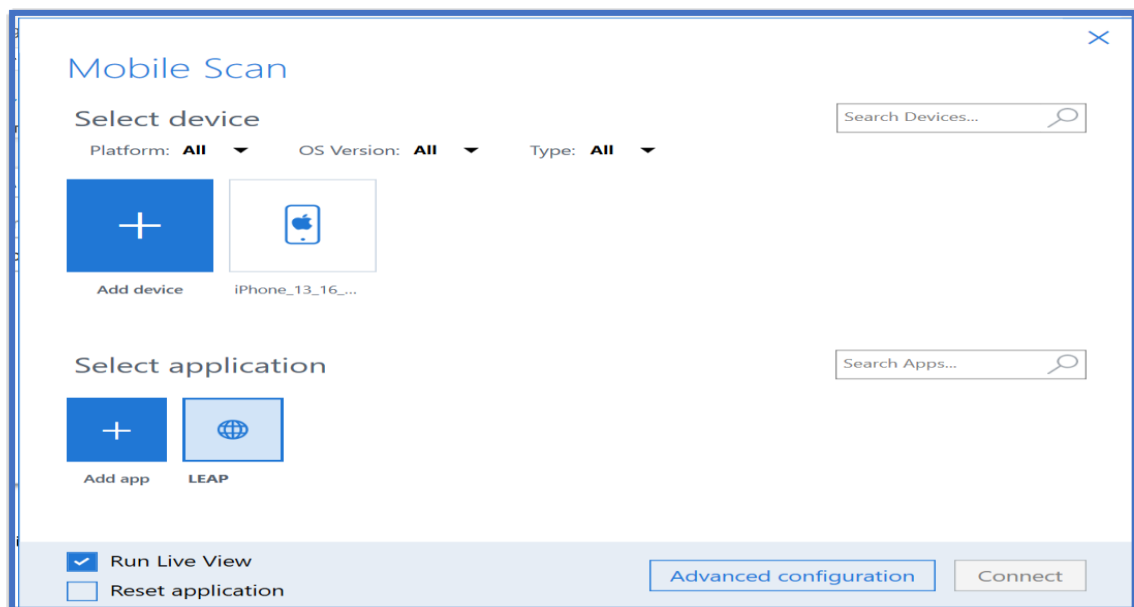
Enter the URL

https://connect.cosentyx.com/

Back Add

Figure 12

- 7) After adding the Device and Application then click on Advanced Configuration



**Mobile Scan**

Select device

Platform: All OS Version: All Type: All

Search Devices...

Add device iPhone\_13\_16...

Select application

Search Apps...

Add app LEAP

☒ Run Live View ☐ Reset application

Advanced configuration Connect

Figure 13

- 8) Click on Add Capability Set, name the Capability set, add the below listed capabilities, click on add.

## SauceLabs

noReset	True
tunnelIdentifier	Saucelabs_App001_Tunnel
tunnelOwner	sso-NVS-sauce-labs-TEC_SAUCELABS
Username	Sauce Username
Accesskey	Sauce Accesskey

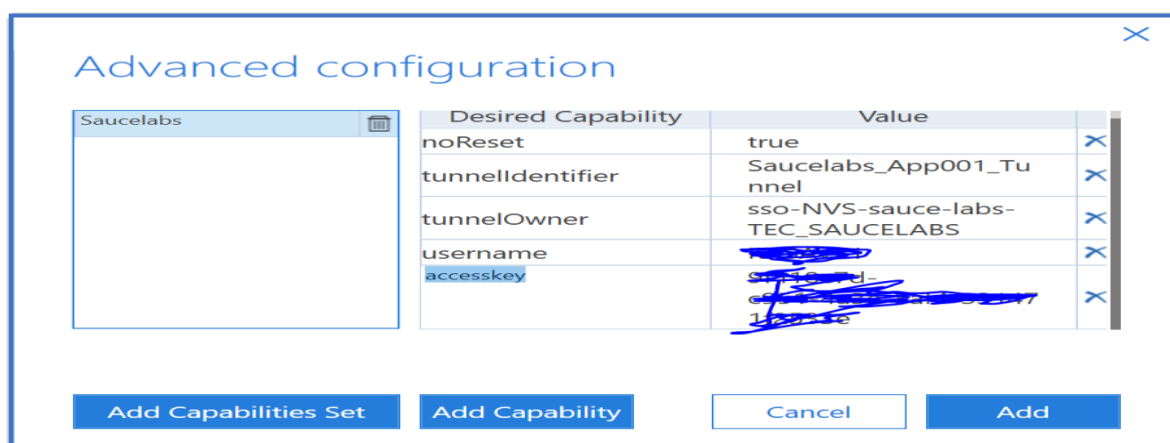


Figure 14

9) After adding the capability set click on connect. It will establish the connection and click on Scan.

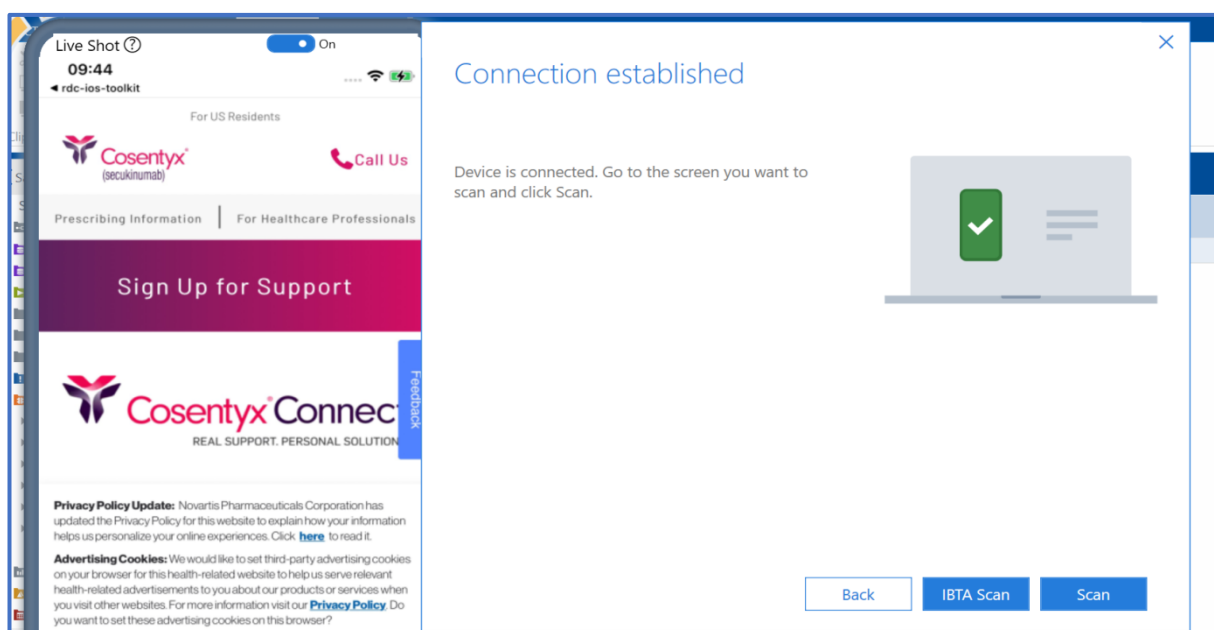


Figure 15

10) The Mobile Scan opens the application or website on the mobile device


#### 4.3 Test case for Suacelabs mobile devices or desktop browsers

1. If the test case is created to execute on Suacelabs mobile devices or desktop browsers below step need to add as first step to the test case in Tosca Commander
2. Drag and drop the Set Desired Capabilities Module onto your TestCase. It must be the first TestStep of your TestCase.
3. Enter the name of a Desired Capability “tunnelIdentifier and tunnelOwner” into the Name column.

- I) **tunnelIdentifier:** The value must be **"Saucelabs\_App001\_Tunnel or Saucelabs\_App002\_Tunnel"**
- II) **tunnelOwner:** The value must be **"sso-NVS-sauce-labs-TEC\_SAUCELABS"**

Details

Control Flow Diagram







Name	Value	ActionM...	DataT...	WorkS...
 Set Desired Capabilities				
 tunnelIdentifier	Saucelabs_App001_Tunnel	Select	String	
 tunnelOwner	sso-NVS-sauce-labs-TEC_SAUCELABS	Select	String	
 Capability			String	

Figure 16

#### 4.4 Execution list from Tosca to execute on the Suacelabs desktop browsers or mobile devices.

1. To run the Tosca test execution list on an Android device in Suacelabs, specify the test configuration parameters as described in the table below for test execution list.

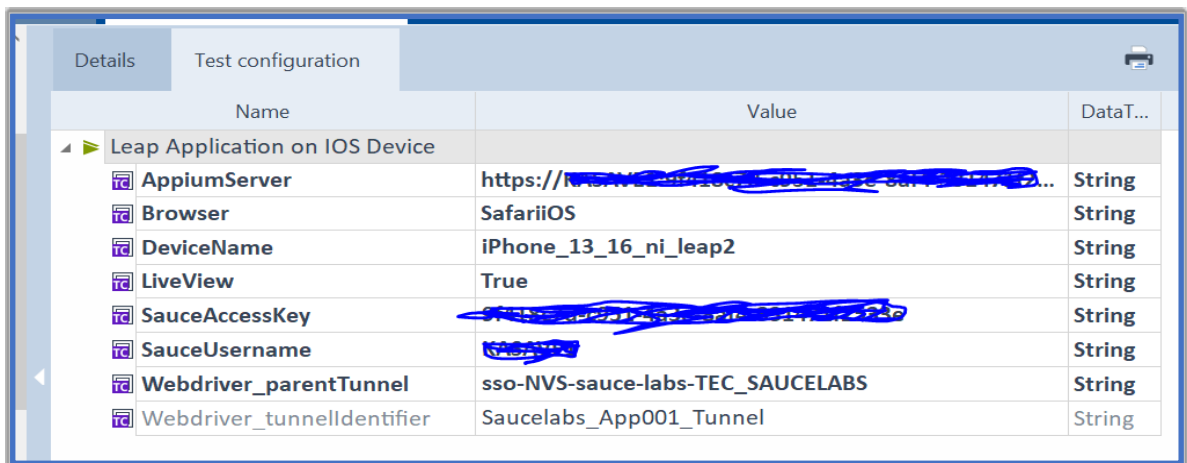
Name	Value	DataT...
Leap Application_Anriod Device		
AppiumServer	https://k8s-nvs-sauce-labs-tec-2022-07-14-1442...	String
Browser	ChromeAndroid	String
DeviceName	Samsung_Galaxy_S22_5G_ni	String
LiveView	True	String
SauceAccessKey	[REDACTED]	String
SauceUsername	[REDACTED]	String
tunnelIdentifier	Saucelabs_App001_Tunnel	String
tunnelOwner	sso-NVS-sauce-labs-TEC_SAUCELABS	String
UseXBrowserForMobile	True	String

Figure 17

## SauceLabs

Test configuration parameters	Description
AppiumServer	Enter the address of the Sauce Labs Appium server. https://< SauceUsername>: <SauceAccessKey>@ondemand.eu-central-1.saucelabs.com:443/wd/hub
DeviceName	Enter the full name of the device that is available on Sauce Labs.
Browser	Enter the browser name of the Android device.
SauceAccessKey	To automate tests on Sauce Labs, enter the access key for your Sauce Labs account. You can find your access key in your Sauce Labs account information in the AccessKey section
SauceUsername	To automate tests on Sauce Labs, enter the username of your Sauce Labs account.
tunnelIdentifier	To automate tests on Sauce Labs, enter the tunnel identifier
tunnelOwner	To automate tests on Sauce Labs, enter the tunnel owner
LiveView	True
UseXBrowserForMobile	True

2. To run the Tosca test execution list on an IOS device in Suacelabs, specify the test configuration parameters as described in the table below for test execution list.



Test configuration		
Name	Value	DataT...
Leap Application on IOS Device		
AppiumServer	https://[REDACTED]	String
Browser	SafariiOS	String
DeviceName	iPhone_13_16_ni_leap2	String
LiveView	True	String
SauceAccessKey	[REDACTED]	String
SauceUsername	[REDACTED]	String
Webdriver_parentTunnel	sso-NVS-sauce-labs-TEC_SAUCELABS	String
Webdriver_tunnelIdentifier	Saucelabs_App001_Tunnel	String

Figure 18



## SauceLabs

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Test configuration parameters	Description
AppiumServer	Enter the address of the Sauce Labs Appium server. https://< SauceUsername>: <SauceAccessKey>@ondemand.eu-central-1.saucelabs.com:443/wd/hub
DeviceName	Enter the full name of the device that is available on Sauce Labs.
Browser	Enter the browser name of the IOS device.
SauceAccessKey	To automate tests on Sauce Labs, enter the access key for your Sauce Labs account.  You can find your access key in your Sauce Labs account information in the AccessKey section.
SauceUsername	To automate tests on Sauce Labs, enter the username of your Sauce Labs account.
tunnelIdentifier	To automate tests on Sauce Labs, enter the tunnel identifier
tunnelOwner	To automate tests on Sauce Labs, enter the tunnel owner
LiveView	True
UseXBrowserForMobile	True

3. To run the execution list on a MAC browser in Suacelabs, specify the Execution list configuration parameters as described in the table below for test execution list.

## SauceLabs













Details			Test configuration
Name		Value	
Cross Browser Testing MacOS_Safari			
	Browser	Safari	String
	BrowserVersion	16	String
	Fibermode	True	String
	HubAddress	https://ondemand.eu-central-1.saucelabs.com:443/wd/hub	String
	InvokeTimeout	2000	String
	OSVersion	macOS Monterey - 12	String
	SynchronizationTimeout	30000	String
	WebDriver_sauce__tunnelName	Saucelabs_App001_Tunnel	String
	Webdriver_sauce__tunnelOwner	sso-NVS-sauce-labs-TEC_SAUCELABS	String
	WebDriverHubProxyAddress	http://eu-chbs-proxy.eu.novartis.net:2011	String
	WebDriverProxyPassword	*****	Password
	WebDriverProxyUsername		String

Figure 19

Test configuration parameters	Description
HubAddress	Enter the Hub address of the Sauce Labs. https://< SauceUsername>: <SauceAccessKey>@ondemand.eu-central-1.saucelabs.com:443/wd/hub
Browser	Enter the name of the browser that is available on Sauce Labs. Example: Safari
BrowsessrVersion	Enter the browser version available in the Suacelabs.
InvokeTimeout	Enter the timeout value. The recommended timeout value is "2000"
OSVersion	Enter the OS version to execute the execution list . Example: macOS Monterey – 12
WebDriver_sauce__tunnelName	To automate tests on Sauce Labs, enter the tunnel name The value must be "Saucelabs_App001_Tunnel or Saucelabs_App002_Tunnel:
Webdriver_sauce__tunnelOwner	To automate tests on Sauce Labs, enter the tunnel owner. The value must be "sso-NVS-sauce-labs-TEC_SAUCELABS"

## SauceLabs

WebDriverHubProxyAddress	Enter the driver proxy. http://eu-chbs-proxy.eu.novartis.net:2011
WebDriverProxyPassword	Enter 521 password
WebDriverProxyUsername	Enter your 521
SynchronizationTimeout	Enter the Synchronization timeout value. The default recommended value is: 30000

4. To run the execution list on a Windows Cross browser (Edge, Chrome, Firefox) in Sauce Labs, specify the Execution list configuration parameters as described in the table below for test execution list.

Details Test configuration			
Name		Value	Da
Cross Browser Testing Windows_E...			
Browser	Edge	String	
BrowserVersion	109	String	
Fibermode	True	String	
HubAddress	https://saucelabs.com/api/v1/hubs/4cc-a049-4ed4-9...	String	
InvokeTimeout	2000	String	
OSVersion	Windows 10	String	
SynchronizationTimeout	30000	String	
WebDriver_sauce__tunnelNa...	Saucelabs_App001_Tunnel	String	
Webdriver_sauce__tunnelOw...	sso-NVS-sauce-labs-TEC_SAUCELABS	String	
WebDriverHubProxyAddress	http://eu-chbs-proxy.eu.novartis.net:2011	String	
WebDriverProxyPassword	*****	Password	
WebDriverProxyUsername	*****	String	

Figure 20

## SauceLabs

Test configuration parameters	Description
HubAddress	Enter the Hub address of the Sauce Labs. https://< SauceUsername>: <SauceAccessKey>@ondemand.eu-central-1.saucelabs.com:443/wd/hub
Browser	Enter the name of the browser that is available on Sauce Labs. Example: Chrome, Edge, or Firefox
BrowsersrVersion	Enter the browser version available in the Saucelabs. Example: 109,111,108
InvokeTimeout	Enter the timeout value. The recommended timeout value is "2000"
OSVersion	Enter the OS version to execute the execution list . Example: Windows 10
WebDriver_sauce___tunnelName	To automate tests on Sauce Labs, enter the tunnel name The value must be "Saucelabs_App001_Tunnel or Saucelabs_App002_Tunnel:
Webdriver_sauce___tunnelOwner	To automate tests on Sauce Labs, enter the tunnel owner. The value must be "sso-NVS-sauce-labs-TEC_SAUCELABS"
WebDriverHubProxyAddress	Enter the driver proxy. http://eu-chbs-proxy.eu.novartis.net:2011
WebDriverProxyPassword	Enter 521 password
WebDriverProxyUsername	Enter your 521
SynchronizationTimeout	Enter the Synchronization timeout value. The default recommended value is: 30000

### 4.5 Steps to view the toasca executed test in the Suacelabs

1. Log into the Sauce labs using SSO. (Ex: <https://launcher.myapps.microsoft.com/api/signin/7c74289d-a7c6-4116-bb46-e131cb534913?tenantId=f35a6974-607f-47d4-82d7-ff31d7dc53a5>)
2. In the left menu, click on "Live" dropdown, select "Automated" and click on Test Results.
3. In the filter by section, select the Real devices or Virtual devices.

**SauceLabs**

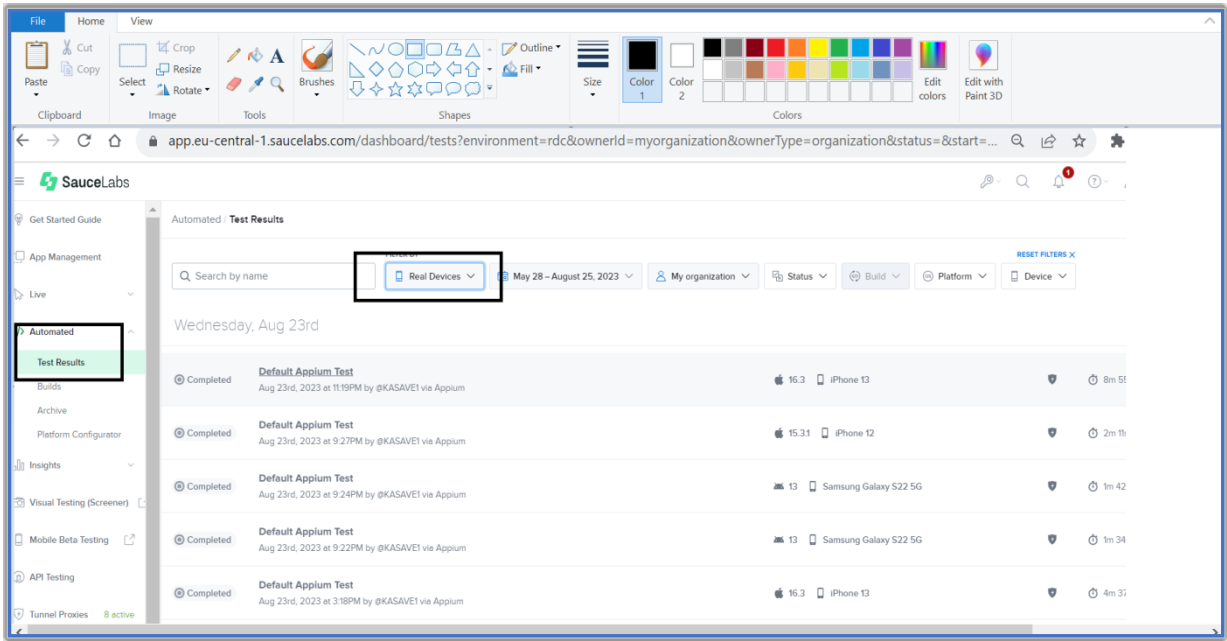


Figure 21

**5 ADDITIONAL INFORMATION**

For more information, please refer to the Official Documentation - [Documentation | Sauce Labs Documentation](#)

**6 ABBREVIATIONS AND DEFINITIONS**

**6.1 Abbreviations**

Abbreviation	Definition
N/A	N/A

**7 REFERENCES**

**7.1 Governing Documents**

- SOP-8027423 IT Waterfall System Development
- SOP-8126377 IT System Lifecycle

## **8 REVISION HISTORY**

### **8.1 Changes made**

Changes in the current version and high-level summary of changes for all listed previous versions are maintained below.

<b>Version Effective Date</b>	<b>Reason for Change</b>	<b>Summary of Changes</b>
1.0	Initial Version	Training Material for End-Users of Saucelabs
2.0	Second Version	Enhanced the end user onboarding & functional experience
3.0	Third Version	Updated the document with Tosca and Saucelabs Integration Steps

# Signature Page

Document properties	
Application	CoreDox
Name	DevOps Platform_WKINS_004
Title	SauceLABS End User WI
Version	4.0
Effective Date	13-Sep-2023 12:39:54
Type	Reference Documents
Subtype	Work Instruction

Document Set properties	
Shortname	DevOps Platform
Name	DevOps Platform: 46374
Type	System
Status	Active

*Responsible author*

User Name	Signature Date (UTC)	Intention
Adhe Swapnil	13-Sep-2023 12:12:00	I am the author of the document

*List of co-authors:*

User Name
Adhe Swapnil

*Approvers*

User Name	Signature Date (UTC)	Intention
Jaiswal Vijay Raj	13-Sep-2023 12:39:47	I approve the document

*Document electronically signed*