



Mobile and web app testing
from anywhere, anytime

Mobile Device Coverage Report

Your assured list of Must-Test Mobile Devices for **2021**



Contents



01 Introduction

02 The World of Apps

03 Top Challenges of Mobile App Testing

04 pCloudy Device Coverage

- Top 30 Devices Popularly Tested in India
- Top 30 Devices Popularly Tested in the USA

05 Choosing the Right Platform

06 Solution : Digital Testing & Device Planner

Introduction

Technologies are Solidifying

The speed at which technologies and companies are growing today are quite unfathomable. We have come a long way from the digital age of the 1970s to the information age of the 21st century in such a short span of time. The rate at which technologies around the world are evolving, things that we thought impossible are starting to take shape in reality. Several businesses have started to run with the idea of going digital and opening up pipelines through digital channels as well. Businesses are using various technologies to scale up.

A few Technologies that are making headway



Artificial Intelligence



Omni-channel communication



Increased interaction between devices through IoT (Internet of Things)

What does this mean for the mobile app industry?

Being in the testing space, what this means to us is that we need to **scale up** our testing efforts. Since many businesses have developed **apps** of their own to ease the access to their customers, the duty to **test apps thoroughly** takes utmost priority. Businesses are also ensuring that they constantly **update their apps** by providing **additional features** to ease the efforts of the users. This means that adopting methodologies like Agile and DevOps is vital to **ensure prompt releases**. Since businesses use different digital touchpoints to reach their audience, **optimizing the apps** to work on both mobile and desktop systems is a crucial task for app developers.

The World of Apps

There are nearly 6 million apps

that are being distributed across the globe through [different app distribution markets](#). This number is climbing as many more apps are being developed daily. Gone are the days when we had apps only to play games on mobile devices. The [new age of app development](#) has revealed that we are closing in on having apps for every need. With the help of technologies such as [Artificial Intelligence](#), [the Internet of Things](#), [Augmented and Virtual Reality](#), we are able to achieve more than what we could ever imagine. Who could ever imagine that we could have an app to test for a virus through our phones in the safety of our homes?

The App world is no more restricted to mobile devices and smartphones. With the rise of digitalization, Businesses and Enterprises are focussing on having an omni-channel presence to maximize the reach and make it easy for their consumers to use their services. Creating an [omni-channel](#) presence isn't as easy as it looks. Infact, it is more tedious for development as it involves a lot of database management and optimization. And that's where

Multi experience Development platforms

[Read more](#)

come to play. Creating apps for digital interfaces has taken the limelight when we talk about the future of the App World. Transitioning from Mobile and smartphones to Web Application has taken a center stage off late. However, the coverage of more smart devices such as Smart Speakers, Smart Watches, Augmented/virtual reality are becoming key components of the digital world.



02 THE WORLD OF APPS



The visibility of a brand or solution by companies now means that they not only have a dedicated app for smartphones but also [make it easy for consumers](#) to get things done with very minimal work. Imagine you remember something important while taking a shower and want to note it, what do you do? Ideally, you'd want a solution where you [speak to your smartphone](#) or a smart speaker to make a note of it. This simple function would mean that your devices stay connected over a network and compatible with each other. Performing simple things like [ordering groceries](#) while cooking, or [scheduling reminders](#) for meetings through your smart speaker are becoming the usual norm of [smart homes](#).

While the interaction with smart devices is becoming more promising and easy, however, they are leaving a bitter taste when not done right. Picking up the example of making a note from the shower, imagine the smart devices don't understand what you say and ask you to repeat the same thing multiple times. Frustrating isn't it? You might as well go old school and stick to pen and paper instead of relying on these smart devices are some thoughts that immediately brew in the mind.

Such simple examples point us to the reality that solutions we provide can make or break us. And that's where testing comes into the picture. Ensuring that your apps perform well in most if not all situations can be guaranteed when devices are tested thoroughly. However, considering the challenges faced because of Device Fragmentation setting up and maintaining a lab of your own is an expensive and tedious process.

Top Challenges of Mobile App Testing



Device Fragmentation

Living in a world where electronic devices are being upgraded every now and then brings its own set of advantages and pitfalls. Also, we are in a place where digital transformation is accelerating the software releases and OS updates at a much faster rate than expected. Being able to cope and run with the current pace is sure a herculean task for many. Looking at the statistics by StatCounter, we can understand the crux of the problem that arises due to Device Fragmentation.

The Device Market Share - 2020 stats show us that close to

55%

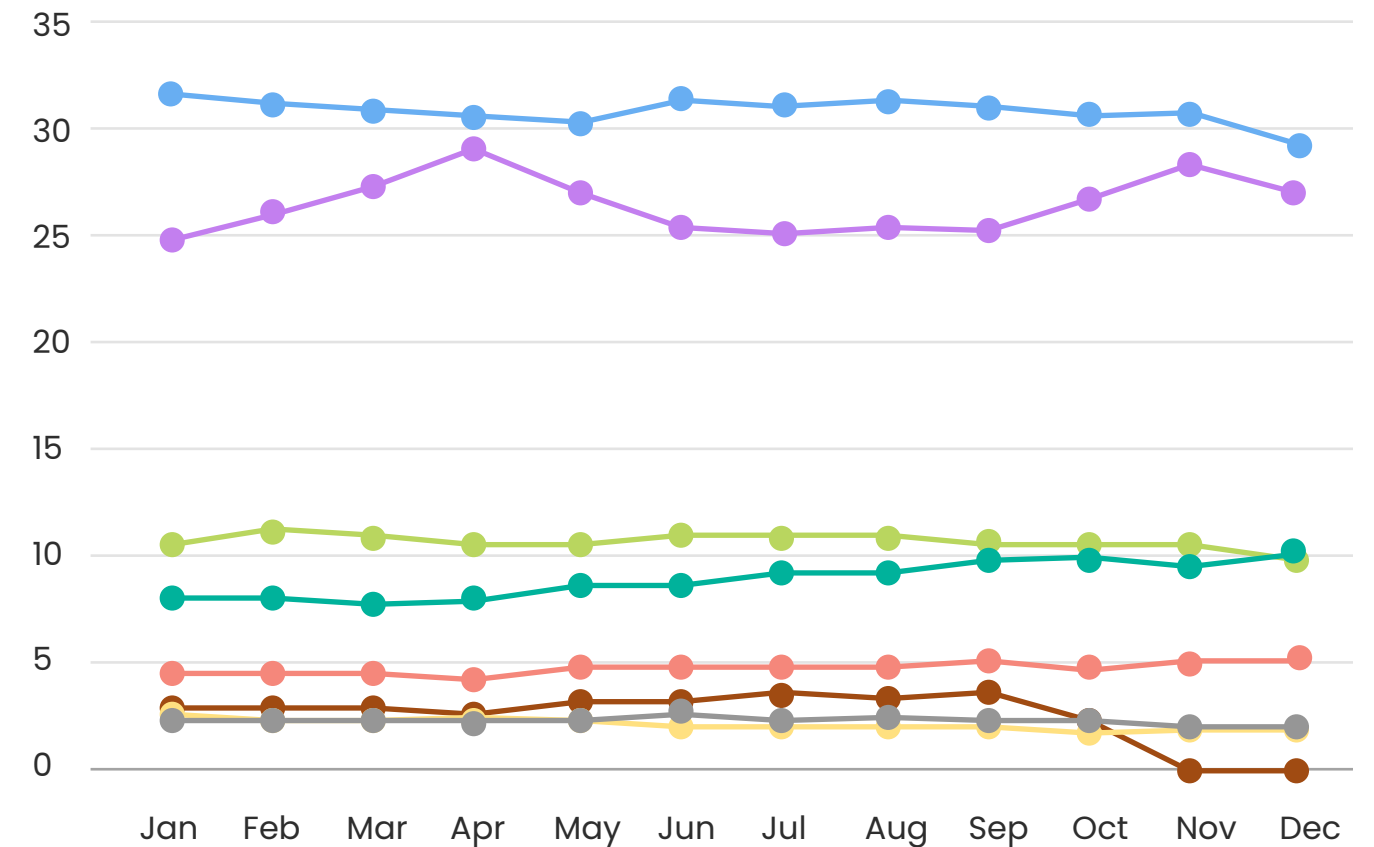
of the consumers use [Samsung and Apple](#) mobile devices globally,

45%

of consumers use devices by other manufacturers such as [Huawei](#), [Xiaomi](#), [Oppo](#), etc.

Now, these stats vary depending on the region you choose. Looking at the graph, you would think that we need to majorly invest our time and money in testing Samsung and Apple Devices. However, there are still a majority of consumers from different countries and regions that might be using some other device altogether. How do you ensure that your apps cater to all of the consumers without having to compromise

Fig 3.1: Device Market Share - 2020



Sources - [statcounter](#)[GlobalStats](#)
[www.pcloudy.com](#)

on your testing efforts? This would mean that you would need to have seamless Device Coverage. We also need to keep in mind that we're still just talking about Mobile devices and tablets. Considering the evolving digital world that is moving towards other digital touchpoints such as wearable devices, smart speakers, Desktop Web Apps, etc. Catering to consumers holistically is a whole new ballgame, as this would mean that as an App Development firm you will need to have complete device coverage to ensure that your apps function perfectly on most if not all devices.

Why do I need to test my app on different devices?

[Read more](#)

OS Fragmentation

Within the different [Operating Systems](#) that are available, multiple versions come out quite often, the Android and iOS Version graphs show us that the adoption rate of iOS is much higher than that of the Android versions. However, there is always a small percentage of users that still use the older versions of both iOS and Android OS. Ensuring that we test across different devices and their OS versions is crucial for the success of any Mobile App. From the Chart here

72%

of consumers use the Android OS across different mobile devices.

26%

of consumers are Apple lovers using iOS

This is possibly because of the cost of owning Apple Products which is much higher than mobile devices manufactured by others.

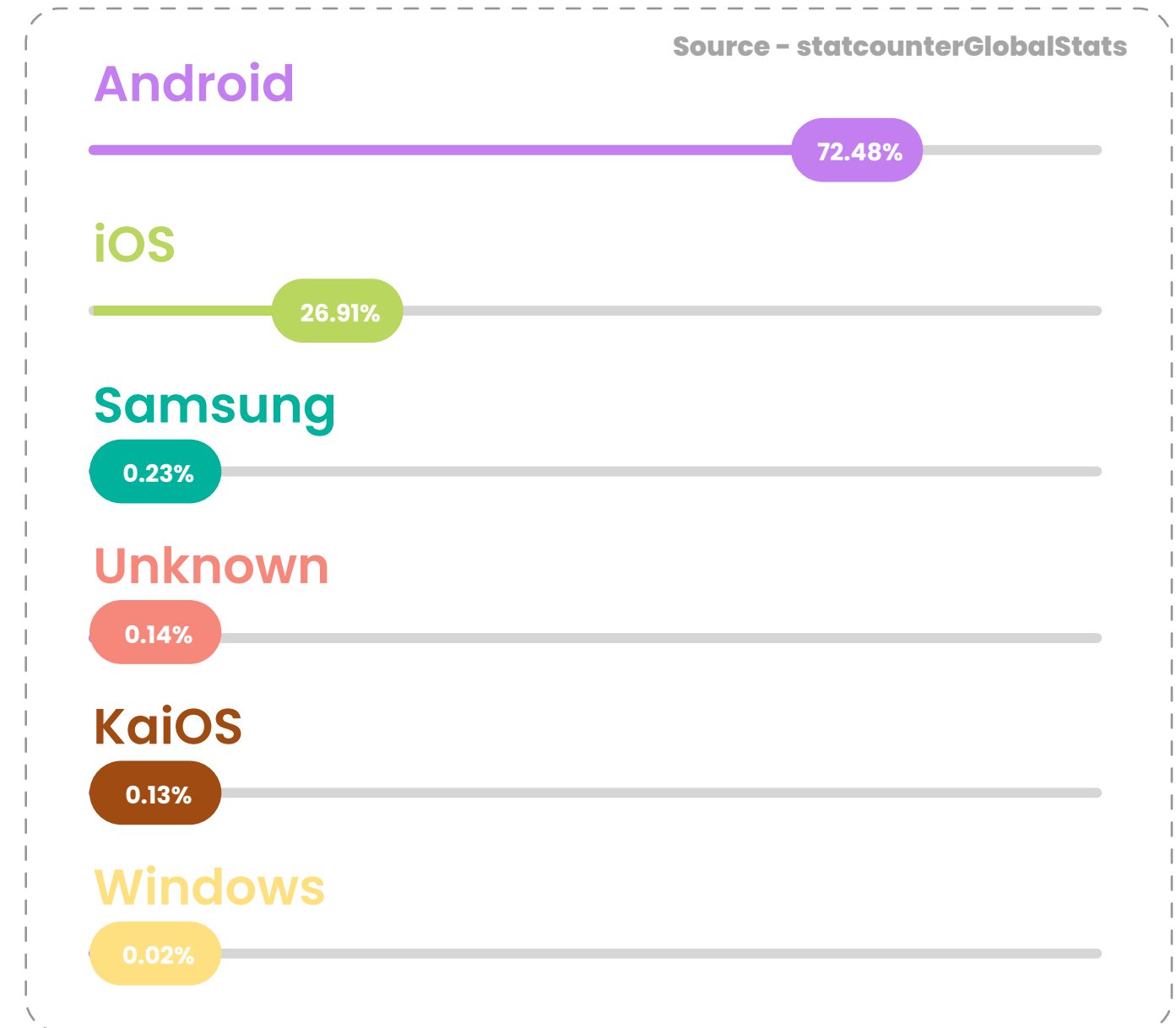


Fig 3.2 : Mobile Operating System Market Share Worldwide
December 2020

www.pcloudy.com

Android Version Fragmentation (Dec 2020)



Though Android 10 was released in Sept of 2019, only 43% have upgraded to the latest version. However, about 75% of Consumers use Android versions from 8.1 and Above.

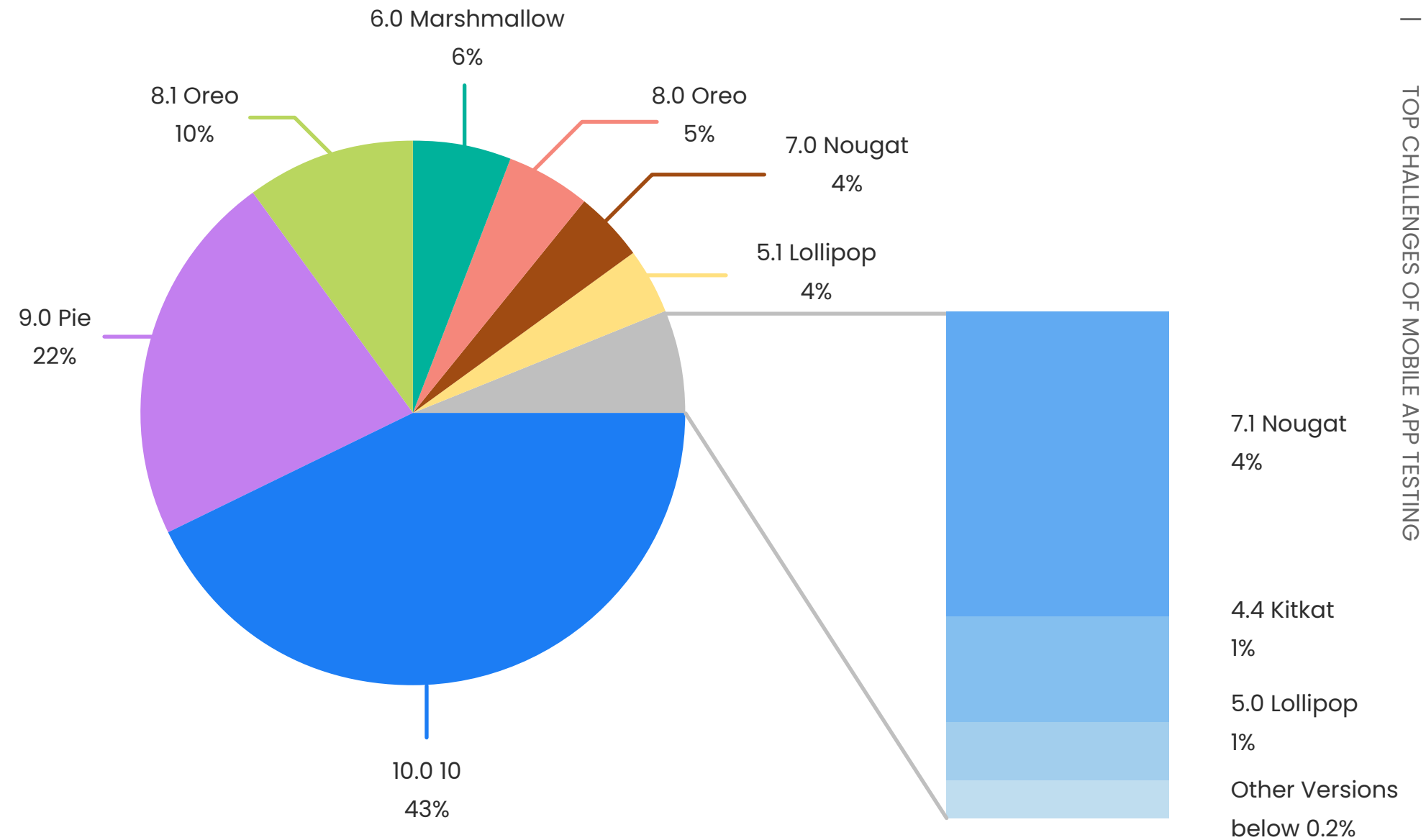
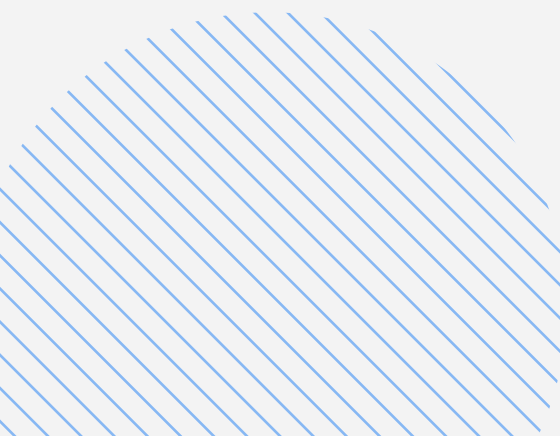
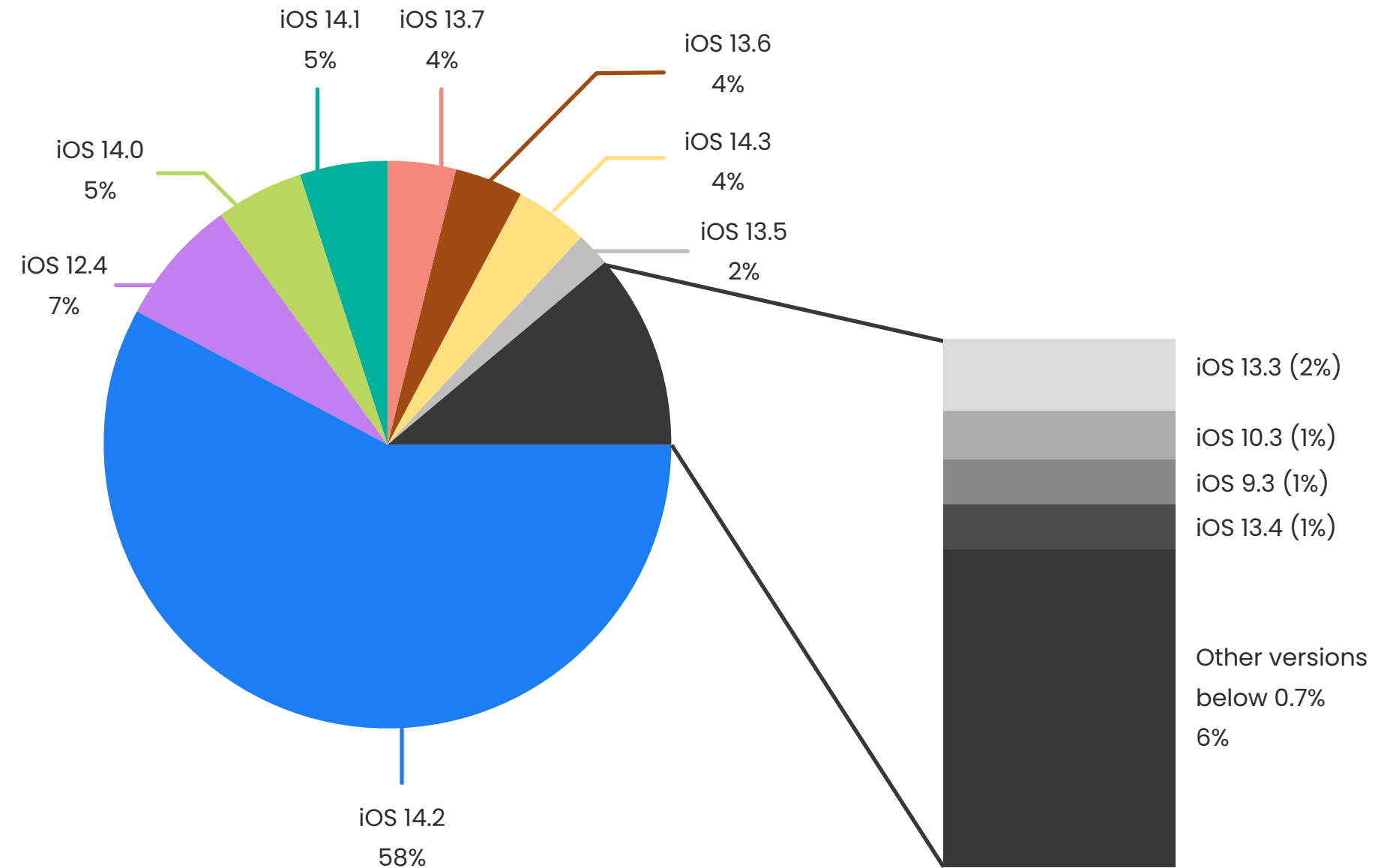


Fig 3.3 : Android Version Fragmentation (Dec 2020)

iOS Version Fragmentation (Dec 2020)

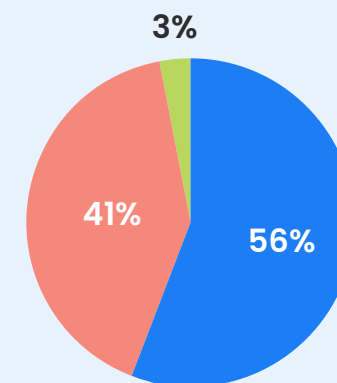
Compared to the Android OS usage, the adoption rate of the latest iOS version is much higher with over 58% of consumers already using iOS 14.2 which was released in Sept 2020.



Mobile/Tablets vs Desktop

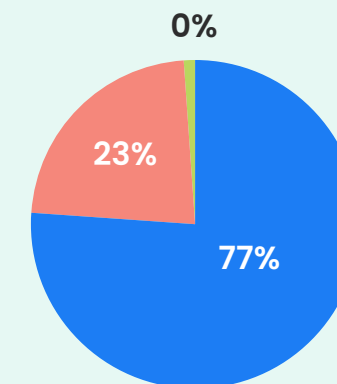
No doubt that Mobile Apps are being developed for a wide range of sectors ranging from [entertainment & games](#) to [e-commerce & healthcare](#). Nonetheless, there has been a significant [increase in the number of web applications](#) that are being developed as well. This again affirms that businesses are focusing on being present in [multiple digital touchpoints](#) to increase their visibility. Again, there are other factors such as [adoption rate](#) based on region and [OS versions](#). For example, if you want your app to reach widely to an [Indian market](#) you would have to keep a majority of the focus on the [mobile app testing](#) as opposed to spending an equal amount of energy on [testing for both mobile and web applications](#) when considering the global audience

Device usage worldwide - Dec 2020



■ Mobile ■ Desktop ■ Tablet

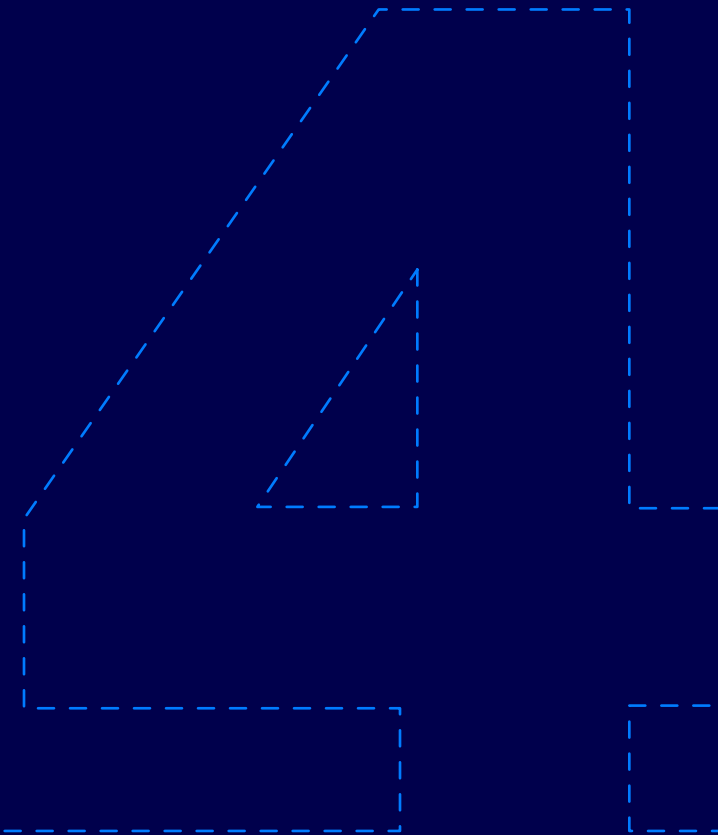
Device usage India - Dec 2020



Source - [statcounter](#)[GlobalStats](#)

[www.pcloudy.com](#)


pCloudy Device Coverage





What is the report about?

Keeping in the mind the constant **influx of devices** that are being released in the market every now and then. There is a desperate need for different devices to have a **broad device coverage** included in your testing strategy. In the Device Coverage Report, we have highlighted the most popular devices that our user base of **100,000+ users** avail from the **500+ devices** that are present on our platform. The pCloudy platform comprises both **mobile/tablet devices and desktop systems** that provide you with **2000+ browser and device combinations**. However, in this report, we will mostly cover the **popular mobile devices** being used on the platform.



How did we collate the report?

We have gathered data from the **usage pattern** of devices by our users on the platform. The data provided is a compilation of **usage statistics** that are recorded throughout the year. Though we have clients that use our platform from **different regions** on the globe, a majority of our user base comes from the US and India regions specifically. The report consists of the 30 most preferred devices for testing in the **US and India** based on some **specific parameters**.





Top 30 popular Devices in the India Region

SI no.	Manufacturer	Model	OS	Version
01	Apple	iPhone X	iOS	13.3.1
02	Samsung	Galaxy On8	Android	7.0.0
03	Apple	iPhone X	iOS	14.0.0
04	Apple	iPhone 11	iOS	14.0.0
05	Samsung	Galaxy s9	Android	10.0.0
06	Samsung	Galaxy s10	Android	10.0.0
07	Oneplus	8	Android	11.0.0
08	Apple	iPhone SE 2020	iOS	13.4.1
09	Samsung	Galaxy J5 (2016)	Android	7.1.1
10	Apple	iPhone XS	iOS	13.4.1
11	Apple	iPhone 6	iOS	12.4.6
12	Samsung	Galaxy Note 8	Android	9.0.0
13	Oneplus	7 Pro	Android	10.0.0
14	Samsung	Galaxy Note 10	Android	10.0.0
15	google	Pixel 2	Android	10.0.0

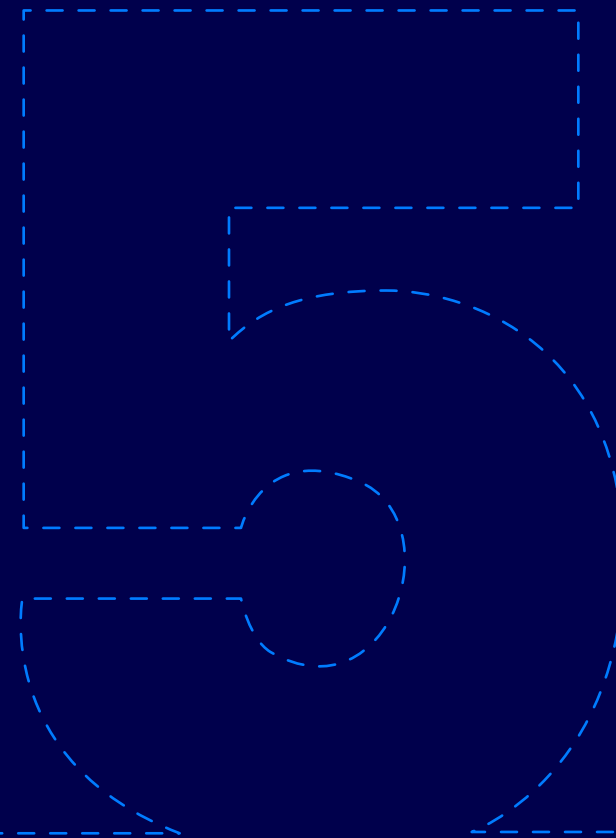
SI no.	Manufacturer	Model	OS	Version
16	Oppo	Neo 5	Android	5.1.0
17	Apple	iPhone 8	iOS	12.2.0
18	Google	Pixel XL	Android	9.0.0
19	Samsung	Galaxy J7 Pro	Android	8.1.0
20	Asus	Zenfone Go	Android	4.4.4
21	Lenovo	Vibe X3	Android	6.0.1
22	Samsung	Galaxy Note 9	Android	10.0.0
23	Samsung	Galaxy A9	Android	10.0.0
24	Xiaomi	Redmi Note 7 Pro	Android	9.0.0
25	Apple	iPhone 6s Plus	iOS	13.3.1
26	Apple	iPhone 6s	iOS	11.4.1
27	Samsung	Galaxy S20	Android	10.0.0
28	Samsung	Galaxy S8	Android	8.0.0
29	Apple	iPhone 7	iOS	14.0.0
30	Apple	iPhone 7	iOS	13.7.0



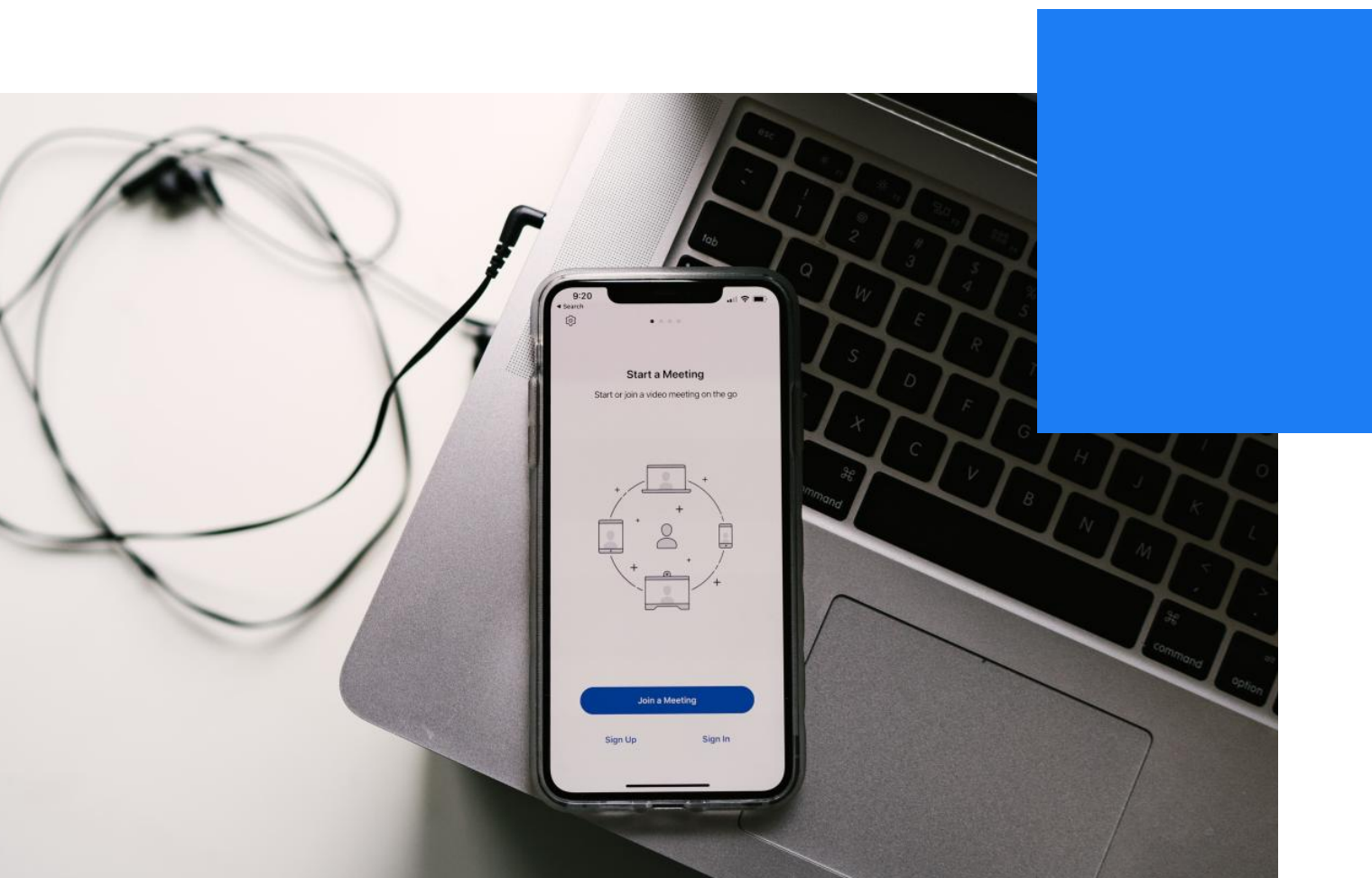
Top 30 popular Devices in the USA Region

SI no.	Manufacturer	Model	OS	Version	SI no.	Manufacturer	Model	OS	Version
01	Apple	iPhone 11 Pro	iOS	13.0.0	16	Samsung	Galaxy S10	Android	10.0.0
02	Apple	iPhone 11 Pro Max	iOS	13.1.0	17	Apple	iPad 7	iOS	13.4.1
03	Apple	iPhone X	iOS	13.5.1	18	Samsung	Galaxy S8 Plus	Android	8.0.0
04	Apple	iPhone XS	iOS	12.0.0	19	Apple	iPad Mini 4	iOS	14.0.1
05	Apple	iPhone 11	iOS	13.3.1	20	Huawei	Mate 10	Android	10.0.0
06	Apple	iPhone XR	iOS	12.0.1	21	Google	Pixel 3 XL	Android	11.0.0
07	Apple	iPhone SE	iOS	11.2.5	22	Samsung	Galaxy S8 Plus	Android	8.0.0
08	Apple	iPhone 8	iOS	14.2.0	23	Apple	iPhone 7 Plus	iOS	13.3.1
09	Google	Pixel 3	Android	10.0.0	24	Motorola	G4 Play	Android	7.1.1
10	Samsung	Galaxy S9 Plus	Android	10.0.0	25	Google	Pixel 4	Android	10.0.0
11	Apple	iPhone XS Max	iOS	12.0.0	26	Google	Pixel C	Android	8.1.0
12	Google	Pixel 2 XL	Android	9.0.0	27	Apple	iPhone 6s Plus	iOS	13.5.1
13	Apple	iPhone XR	iOS	13.3.1	28	LG	V30 Plus	Android	8.0.0
14	Apple	iPhone 8 Plus	iOS	13.4.1	29	Blu	StudioG	Android	6.0.0
15	Apple	iPhone 12	iOS	14.1.0	30	Samsung	S6 Edge	Android	6.0.1

Choosing the Right Testing Platform



Having read about the different challenges that are present when it comes to app testing. How do we navigate to building a solution around this? This may be the question that you asking. To start with, we think several factors need to be considered while [exploring Testing Platforms](#). Again, there is always an option of building your own [App Testing Facility](#) or source it in the form of [SAAS product offerings](#) that are available. Of the many offerings that are available in the market. Some key pointer that you need to keep in mind while [evaluating the testing platform](#) are given below –



Device Fragmentation

Does the Testing platform have the devices that you are looking for to fulfill your market reach.



Availability of devices

How easily can you access the devices that are present on the platform?



DevOps

Does the platform integrate with your build systems/Dev IDEs or continuous integration systems?



Automation

Does the platform let you automate your tests? Does the platform support the automation tools or frameworks that you use?



Types of Testing

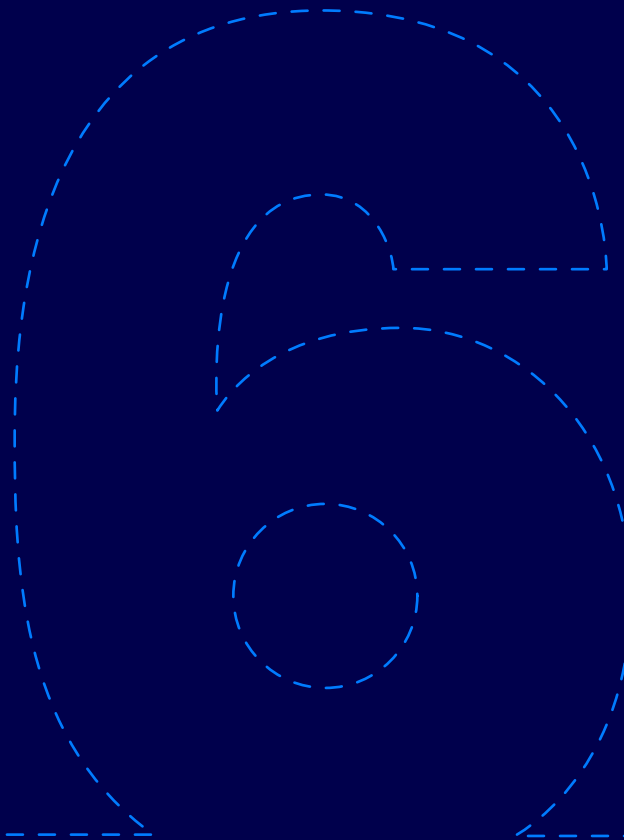
What are the different types of testing you require? Will the platform be able to perform the functional testing aspects that you are looking for?



Security





Can your app be uploaded on an external cloud or does it need to be testing within an internal server? Does the platform support testing on a Private server?

Solution



Digital Testing

Scaling up apps to perform well on [multiple platforms](#) is sure to put them on the road to success. This would mean that a thorough investigation of the device for

-  functionality
-  Battery Charts
-  Memory Usage Chart
-  CPU Usage

are crucial to optimize the apps that we develop. Also ensuring that the testing happens on multiple devices running [different OS](#) and monitoring its performance on both Mobile devices and Desktop computers will ensure that you cater to the audience that you target. While testing devices such as [wearables and smart devices](#), will take time, the need of the hour is to enable testing the apps on both [Mobile Device and Desktop systems](#) that run a different OS and browser versions. [Automation](#) is also a vital aspect when testing as this would ease the efforts and time spent.



Device Planner

Sometimes not being able to access the devices you need for testing might be a problem. However, pCloudy’s device planner offers a solution to the growing device

fragmentation problem. The device planner feature of pCloudy, helps you schedule your testing with the set of devices that you desire to get the optimum device coverage. With multiple devices to choose from different regions, you can plan your testing around the region of your target audience. The tool also has a brain of its own which helps you populate a list of device recommendations based on the market segment and region you are targeting.

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Device PlannerNEW

UDID

Capabilities

Your Recommended Device Scope

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No.	Device	OS	Version	Market Penetration
1	Apple iPhone 8	iOS	iOS 14	2.39 %
2	Xiaomi Redmi Note 7 Pro	Android	Android 10	1.46 %
3	Apple iPhone X	iOS	iOS 14	0.98 %
4	Xiaomi Redmi Note 5 Pro	Android	Android 10	0.98 %
5	OnePlus 7 Pro	Android	Android 10	0.97 %
6	Vivo V15 Pro	Android	Android 10	0.92 %

SELECT SCENARIO

COUNTRY

India ✕

YOUR TARGET MARKET COVERAGE?

25%

INCLUDE

☐ Tablet

☒ Smartphone

Calculate

Fig 6.1 : Device Planner

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by enabling Continuous Testing



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DevOps