

Voice API Case Study:  
Functional Testing for  
Mozilla's New Firefox OS  
Mobile Operating System.

# mozilla



*“Plivo met all of our requirements. The API was easy to use and it has proved reliable during testing. As we continue to build out our automated testing suite for Firefox OS, we can see other opportunities to use Plivo in the future.”*

Bob Silverberg, QA Engineer at Mozilla

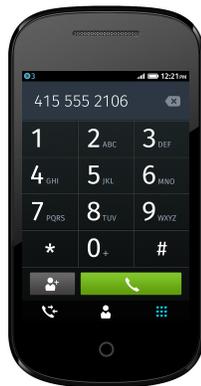
## Using Plivo’s Voice API to Automate QA Testing and Monitoring for Mobile Calls on Firefox OS.

Mozilla’s Web QA department was seeking an automated method to work with their current QA testing setup to initiate, monitor, and log call details for their Firefox OS. Using Marionette, Mozilla’s automation driver to simulate user input, and Plivo’s voice APIs to initiate calls, Mozilla was able to breeze through development of their automated testing suite for Firefox OS.

1 Mozilla initiates test calls using a Python client built on Plivo’s voice API. The QA team can also control the call (e.g., call duration) just by adding a few lines of code to their app.

2 Using Plivo’s API, the Mozilla team monitors call status during live test calls and retrieves call logs after calls are complete. Plivo also logs parameters such as caller and receiver IDs, and session start date and times.

3 After the call, detailed call records can be retrieved via Plivo’s APIs including call duration, end time, call recording URL, as well as caller and receiver ID.



### Challenge

- Mozilla’s Web QA team needed a voice API service that allowed automated testing for real devices running Firefox OS.

### Solution

- Run tests on real devices using Mozilla’s Marionette automation driver to simulate user input and initiate calls using Plivo’s Python client and monitor and log call details using Plivo’s API.

### Why Plivo?

- **Easy Integration.** With just a few lines of code, the QA team was able to start testing their new OS.
- **Reliability.** QA testing requires very controlled environments to ensure consistency in sample data.
- **Live Call Monitoring.** Plivo’s API allows users to monitor live calls from initiation to hang up and everything in between.
- **Call Logs.** Every call made with Plivo is logged in detail automatically and accessible via APIs.

### Results

- The Mozilla Web QA team was able to use Plivo to automate call testing and continue to build out their automated testing suite for Firefox OS.

## Solution Criteria

Our requirement was quite simple; we needed a way to place a call to a mobile phone, and to monitor the status of that call. It was important to have an API to place the call, watch for the call being answered and hung up, and also to cancel a call if something went wrong during the test.

## Choosing Plivo

Plivo met all of our requirements: ability to control the call, monitor that call live, and retrieve call details after the call is complete. The API was easy to use and our testing indicated that it was reliable.

## Easy Integration & Reliable Testing

Mozilla's Web QA department is tasked with creating and running functional tests for Firefox OS, Mozilla's new mobile phone operating system. These tests run on a real device and use Marionette to simulate user input. We are able to do most of what we want on the device with Marionette, but we wanted to be able to test receiving an actual call on the phone. We explored the possibility of placing a call from one phone to another, but this wasn't feasible with our current automation setup. We now use a Python client built on Plivo to initiate a call to the phone, and then wait for it during the Python test. When the phone rings we use Marionette to answer the phone and then to hang it up. We are able to monitor all of this from the Plivo side as well by using the Plivo API to watch for the call

being answered and hung up.

## What are the next steps for Firefox OS?

We've been running our tests several times per day in automation and it is working very well. We are continuing to build out our automated testing suite for Firefox OS as new features are added. There may be a few other opportunities to use Plivo in the future.

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## About Mozilla and Firefox OS

Mozilla is best known for the development of open source applications including the Firefox and SeaMonkey web browsers, Thunderbird email client, Bugzilla bug tracking system and the Firefox OS mobile operating system.

Firefox OS is an open source mobile operating system based on the Linux kernel that can be used on smartphones, tablets, and smart TVs. The Firefox OS is built using open standards

To learn more visit:

<https://www.mozilla.org/en-US/firefox/os/>.

## Talk to Us

**If you're interested in adding voice calling to your mobile app, let us show you how!**

Contact our sales team to get started:  
[sales@plivo.com](mailto:sales@plivo.com)

## What is Plivo?

Our goal is to simplify telecom. Today, we provide a simple cloud-based HTTP API that allows any developer to easily add Voice and SMS capabilities to their web and mobile apps using any web language without upfront costs. If you're building an app with voice and SMS capabilities, you'll need Plivo.

We take the guesswork out of building Voice and SMS apps. Everything from carrier contracts to 24/7 technical support, to delivering the best call quality and message deliverability; all at the lowest pay as you go price.

Visit us at [www.plivo.com](http://www.plivo.com)

