Outbound SMS Dialer

Duration: 15 minutes

Objectives

In this lab, you'll create a basic dialer that will send multiple SMS to a list of numbers read from a CSV file.

How to setup your own computer

This lab can be completed from any platform with an HTML5-compatible browser.

Pre-requisites

This lab assumes you have some basic knowledge of JavaScript, and you have experience creating Tropo applications. Alternatively, you could have gone through the Tropo introductory lab: “Create a Voice Machine”.

You’ll need a Tropo account that has been enabled for Outbound SMS.

If you’re attending a Cisco event, reach to your instructor to get activated. If you’re running this lab offline, reach to Tropo support by email and ask for the procedure to activate your Tropo account.

Step 1 – Upload the CSV file

In this section, we'll upload a CSV file to your private Tropo file manager.

On your local machine, create a new file named "numbers.csv" in the following format. Adapt the contents with other lab participants.

```
name,number
Phil,+15555551212
Enrico,+394253345321
Steve,+33678007834
```

From the Tropo dashboard, log into your account.

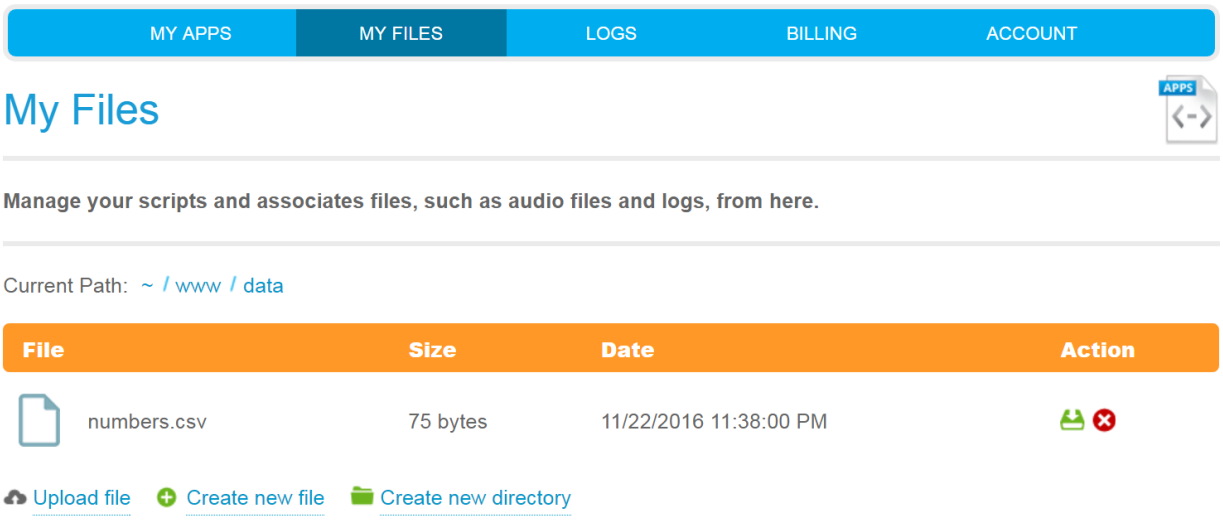
Navigate to the **MY FILES** tab. This is the Tropo file manager, which you can use to host your resource files for free and access them directly from Tropo when you need to edit them.

Note that you can upload files using the Tropo file manager or you can use an FTP client. If you use an FTP client, set the host name to ftp.tropo.com, and use your Tropo dashboard credentials to login.

Click on the folder named **www,** and click on the folder icon labeled **Create New Directory.** Name this new directory 'Data'.

Open your new directory folder and click **Upload file**.

Select the "numbers.csv" file you just created.



Step 2 – Parse the CSV file

In this section, you will create a new Tropo application whose Javascript code will parse the CSV file we just uploaded.

From the Tropo dashboard, navigate to the **MY APPS** tab and select **Create application**.

Name your new App 'CSV Dialer'. Select **Scripting API** under **Type of Application**.

Open the script editor by clicking the pencil icon titled **New script**. Paste the code below, name the file dialer.js, and click **Save**.

```
function loadFile(url){
   var line;
   var returnFile = "";
   connection = new java.net.URL(url).openConnection();
   connection.setDoOutput(false);
   connection.setDoInput(true);
   connection.setInstanceFollowRedirects(false);
   connection.setRequestMethod("GET");
   connection.setRequestProperty("Content-Type", "text/plain");
   connection.setRequestProperty("charset", "utf-8");
   connection.connect();

   var dis = new java.io.DataInputStream(connection.getInputStream());
   while (dis.available() != 0) {
      line = dis.readLine();
      returnFile += line + "#end";
   }
   return returnFile;
}

function csvJSON(csv){
   var lines=csv.split("#end");
   var returnJSON = [];
   var headers=lines[0].split(",");
   for(var i=1;i<lines.length;i++){
      var obj = {};
```

```
        var currentline=lines[i].split(",");
        for(var j=0;j<headers.length;j++){
            obj[headers[j]] = currentline[j];
        }
        returnJSON.push(obj);
    }
    return returnJSON;
}
```

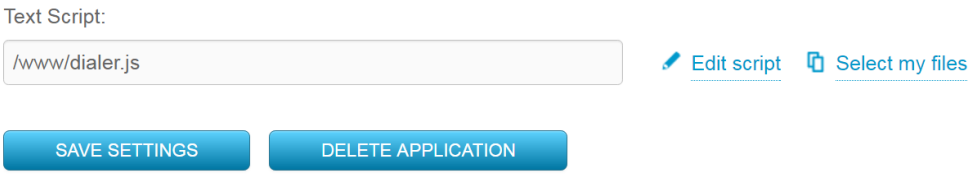
In order to load the data from our CSV file and convert it to JavaScript Object Notation (JSON), we are leveraging 2 functions:

- *loadFile(), loads the file at the url passed into it. This file uses Java to load the file and can be used with Tropo-hosted apps, as long as the file you're loading is hosted in your Tropo account.*
- *csvJSON() is based on the csv-to-json.js script from TechSlides.com, which can be found here: https://gist.github.com/iwek/7154578#file-csv-to-json-js. This script does not work for data that contains commas inside of strings and may break in other cases as well. For production uses, you may need a more robust CSV to JSON conversion script, such as Papa Parse (http://papaparse.com/).*

Click **Create App** and proceed to next section where we will add code to send SMS.

Step 3 - Making the calls

Reach to the "Text Script" section of your application, and click **Edit script**.



Append the block of code below to load your CSV file into a JSON array. Make sure to Replace the numbers before the "/www/" in the file path with your unique Tropo account ID, located in the upper right of the Tropo dashboard; right after your user name.

```
var csvFile = loadFile("http://hosting.tropo.com/5555555/www/data/dialerNumbers.csv");
var numbersToDial = csvJSON(csvFile);
```

To complete our code, we'll now perform the actual call to the numbers listed in our CSV file.

Write a for loop that will iterate through each of the people in the JSON object. Inside that for loop, we'll create a variable to represent the properties of the current person, initiate a new call on a SMS channel, personalize a message to be sent to the callee, and hang up to proceed to the next callee.

```
for (var i = 0; i<numbersToDial.length-1; i++){
   var callee = numbersToDial[i];
   call(callee.number, { network: "SMS" });
   say("Hi, " + callee.name);
   hangup();
}
```

*Note that for a very small number of calls, using the **call** method inside a for loop is an acceptable way to call multiple people. In a production application, you should use the Tropo REST API to initiate each of the calls individually.*

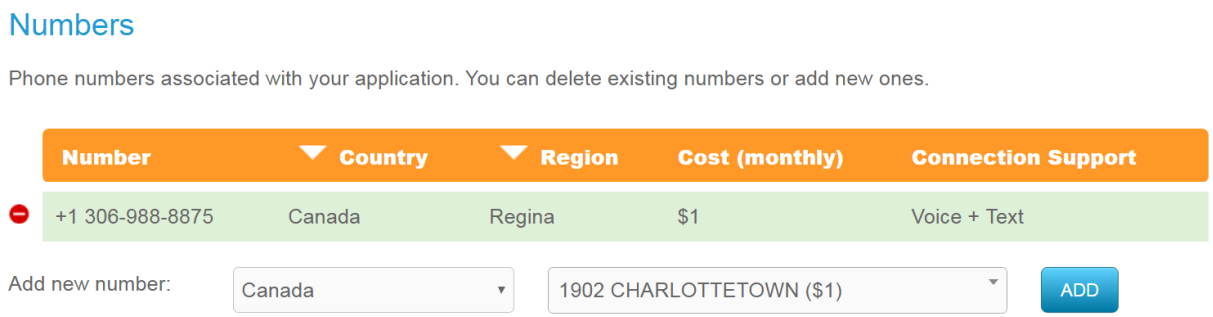
Click **Save** and proceed to the next section where we'll invoke our script.

Step 4 – Creating an Outbound session

Reach to the “Numbers” section of your application.

Select a phone number that is SMS-enabled and click **Add script**.

If you are living anywhere else than US or Canada, pick a number in Canada, as Canada is Tropo’s gateway to create international calls. In other words, It is the place from which you should get the best reach.



The last step is to launch our script. The difficulty here is that we need a hook, a way to tell Tropo to create a new session in which our application will load and execute the Javascript code we provided. For that purpose, Tropo defines 2 API keys, which invoke the Voice and SMS scripts respectively.

Click the **launch** link for the messaging API key.

If you're working with a Tropo account authorized for Outbound SMS, and the CSV file has been correctly uploaded, your script should start texting each of the phone numbers in order.

If you encounter any trouble, copy paste the complete script provided in next section. Simply make sure to replace the Tropo account number with yours.

The complete script

Your finished script should look like this:

```
var csvFile = loadFile("http://hosting.tropo.com/5051540/www/data/numbers.csv"
);
var numbersToDial = csvJSON(csvFile);


for (var i = 0; i<numbersToDial.length-1; i++){
    var callee = numbersToDial[i];


    call(callee.number, { network: "SMS" });
    say("Hi, " + callee.name);
    hangup();
}


//file loading function.
function loadFile(url){
    var line;
    var returnFile = "";
    connection = new java.net.URL(url).openConnection();
    connection.setDoOutput(false);
    connection.setDoInput(true);
    connection.setInstanceFollowRedirects(false);
    connection.setRequestMethod("GET");
    connection.setRequestProperty("Content-Type", "text/plain");
    connection.setRequestProperty("charset", "utf-8");
    connection.connect();


    var dis = new java.io.DataInputStream(connection.getInputStream());
    while (dis.available() != 0) {
        line = dis.readLine();
        returnFile += line + "#end";
    }
    return returnFile;
}
```

```
function csvJSON(csv){
    var lines=csv.split("#end");
    var returnJSON = [];
    var headers=lines[0].split(",");
    for(var i=1;i<lines.length;i++){
        var obj = {};
        var currentline=lines[i].split(",");
        for(var j=0;j<headers.length;j++){
            obj[headers[j]] = currentline[j];
        }
        returnJSON.push(obj);
    }
    return returnJSON;
}
```