Introduction

This module provides an HTTP based Telephony API using a Duo Voice application interface as well as a cached http file format interface.

It can use to create Custom IVR, send instructions to Duo voice application such as play file, dial number, voicemail etc.

it will communicate with http post methods and json strings.

Duo Voice application always send following parameters from post method.

|  |  |
| --- | --- |
| session | Session Id |
| ani | Automatic Number Identification |
| dnis | Destination number Identification Service |
| callerdirection |  |
| calleridname |  |
| result | DTMF  ***Figure 1.0*** |

http application has to reply json string to the Duo Voice application with some parameters as follows,

{

"action": "playandgetdigits",

"file": "Duo\_IVR\_Menu.wav",

"nexturl": "http://192.168.1.195/IVR/Process.php",

"result": "result",

"errorfile": "",

"digittimeout": "20",

"inputtimeout": "100",

"loops": "2",

"terminator": "#",

"strip": "#",

"maxdigits"3",

"digits": "1"

}

***Figure 1.1***

there were key parameters has in this string like “action”,”nexturl”

“action” -> this is a command what Duo voice application have to do now.

”nexturl” -> this is the instruction what duo voice application go to the next.

You can create a htttp scrip, what we have to do next and send it Duo Voice application from json string (Figure 1.1) as “nexturl”.

The Duo voice application do the process of json string (figure1.0) and sends parameters (Figure1.0) for the page which mentioned “nexturl” of json string (figure 1.1).

Work Json Strings

Voicemail

{

"action" : "",

"nexturl" : "",

"check" : "",

"authonly" : "",

"profile" : "",

"domain" : "",

"id" : ""

}

Action : action of this string ,it should “voicemail”

Nexturl : url to submit for the next action

Check : true to check, omit to record a message for this mailbox

Authonly : authenticate only and continue

Profile : profile name to use, omit for “default”

Domain : domain to use, omit for global domain variable

Id : mailbox id to use, omit to prompt for id

playandgetdigits

{

"action": "",

"file": "",';

"nexturl": "",

"result": "",

"errorfile": "",

"digittimeout": "",

"inputtimeout": "",

"loops": "",

"terminator": "",

"strip": "",

"maxdigits": "",

"digits": ""

}

Action : action of this string ,it should “playandgetdigits”

File : the play file name

Nexturl : url to submit for the next action

Result :

Errorfile : Errorfile to play on invalied input

Digittimeout : pause to wait for digits after file plays

Inputtimeout : pause to wait for more digits in multi digits input

Loops : Maximum numbers of times to play the file when input

bindings are present

Terminator :

Strip :

Maxdigits :

Digits :

Dial number

{

"action": "",

"nexturl": "'",

"context": "",

"dialplan": "",

"callername": "",

"callernumber": "",

"number": ""

}

Action : action of this string ,it should “directdial”

Nexturl : url to submit for the next action

context : Dialplan context

Dialplan : Dialplane name

Callername : caller id name

Callernumber:caller id number

Number : destination number (extension)

Play file

{

"action": "",

"file": "",

"nexturl": "",

"result": "",

"errorfile": "",

"digittimeout": "",

"inputtimeout": "",

"loops": "",

"terminator": "",

"strip": "",

"digits": ""

}

Action : action of this string ,it should “playandgetdigits”

File : the play file name

Nexturl : url to submit for the next action

Result :

Errorfile : Errorfile to play on invalied input

Digittimeout : pause to wait for digits after file plays

Inputtimeout :pause to wait for more digits in multi digits input

Loops : Maximum numbers of times to play the file when input

bindings are present

Terminator :

Strip :

Digits :

ConferenceCall

{

"action": "",

"nexturl": "",

"profile": "",

"data": ""

}

Action : action of this string ,it should “conference”

Nexturl : url to submit for the next action

Profile : conference profile name to use

Data :

Break call

{

"action": "",

"nexturl": "",

"cause": ""

}

Action : action of this string ,it should “break”

Nexturl : url to submit for the next action

cause :

Hangup Call

Action : action of this string ,it should “hangup”

{

"action": "",

"nexturl": "",

"cause": ""

}

Nexturl : url to submit for the next action

cause :

PauseCall

{

"action": "",

"nexturl": "",

"result": "",

"errorfile": "",

"digittimeout": "",

"inputtimeout": "",

"milliseconds": "",

"terminator": "",

"strip": "",

"digits": ""

}

Action : action of this string ,it should “pause”

Nexturl : url to submit for the next action

Result :

Errorfile : Errorfile to play on invalied input

Digittimeout : pause to wait for digits after file plays

Inputtimeout : pause to wait for more digits in multi digits input

Milliseconds :

Terminator :

Strip :

Digits :

RecordCall

{

"action": "",

"nexturl": "",

"limit": "",

"posturl": "",

"name": ""

}

Action : action of this string ,it should “hangup”

Nexturl : url to submit for the next action

limit : timeout in seconds

Posturl : url to submit upload file

name : name to use for input values

Record Voice Message

{

"action": "",

"file": "",

"nexturl": "",

"result": "",

"errorfile": "",

"digittimeout": "",

"inputtimeout": "",

"limit": "",

"terminator": "",

"strip": "",

"posturl": "",

"digits": ""

}

Action : action of this string ,it should “playandgetdigits”

File : name into which to save result

Nexturl : url to submit for the next action

Result :

Errorfile : Errorfile to play on invalied input

Digittimeout : pause to wait for digits after file plays

Inputtimeout : pause to wait for more digits in multi digits input

Limit : timeout in seconds

Terminator :

Posturl : url to submit upload file

Strip :

Digits :

Say

{

"action": "",

"file": "",

"nexturl": "",

"result": "",

"errorfile": "",

"digittimeout": "",

"inputtimeout": "",

"loops": "",

"language": "",

"type": "",

"method": "",

"gender": "",

"terminator": "",

"strip": "",

"digits": ""

}

Action : action of this string ,it should “say”

File : the file

Nexturl : url to submit for the next action

Result :

Errorfile : Errorfile to play on invalied input

Digittimeout : pause to wait for digits after file plays

Inputtimeout : pause to wait for more digits in multi digits input

Loops : Maximum numbers of times to play the file when input

bindings are present

Language : language to speak

Type : type (fs param)

Method : method (fs param)

Gender : gender (fs param)

Terminator :

Strip :

Digits :

Speak

Action : action of this string ,it should “spaek”

{

"action": "",

"file": "",

"nexturl": "",

"result": "",

"errorfile": "",

"digittimeout": "",

"inputtimeout": "",

"loops": "",

"engine": "",

"voice": "",

"terminator": "",

"strip": "",

"digits": ""

}

File : the file

Nexturl : url to submit for the next action

Result :

Errorfile : Errorfile to play on invalied input

Digittimeout : pause to wait for digits after file plays

Inputtimeout : pause to wait for more digits in multi digits input

Loops : Maximum numbers of times to play the file when input

bindings are present

Engine : Text to speech engine to use

Voice : tts voice to use

Terminator :

Strip :

Digits :

Go to start page

Reserve call

Return Json String (play file)

Play File

Go to next page ( get by next url)

Return Json String (play file and get digit)

Play File and

Get Digit

Go to next page (get by next url)

Return Json String (Dial Number)

Dial Number

User Application

(http)

Duo Voice Platform

PHPVoiceLibrary

Usage

PHPVoiceLibrary has php classes to send instructions for the duo voice application to handle the incoming call as user needs, such as play file, dial number, voicemail etc.

Duo Voice Application

User Application

PHPVoiceLibrary

**1**-> Duo Voice Application call the start page of User Created application

It send following properties to start page using http post method

result

session ani

dnis

callerdirection

calleridname

**2** -> Start page returns a json string to the Duo Voice application as follows.

“{

"action":"playandgetdigits",

"file":"Duo\_IVR\_Menu.wav",

"nexturl":"http://192.168.1.195/IVR/Process.php",

"result":"result",

"errorfile":"",

"digittimeout":"20",

"inputtimeout":"100",

"loops":"2",

"terminator":"#",

"strip":"#",

"maxdigits:"3",

"digits":"1"

}”

**3** -> Duo Voice Application call the next page of User Created application (get from nexturl )

ex:"nexturl":"http://192.168.1.195/IVR/Process.php",

And send following properties to that page using http post method

result

session ani

dnis

callerdirection

calleridname

**4** -> Set parameters and get result from Dialnumber script of phpvoice library.

$dialNum = new DialExtension ();

$dialNum->SetNextUrl("http://192.168.1.195/IVR/end.php");

$dialNum->SetContext("TestInternalPbx");

$dialNum->SetDialplan("XML");

$dialNum->SetCallerName("1000");

$dialNum->SetCallerNumber("1000");

$dialNum->SetNumber("2001");

$result = $dialNum->GetResult();

**5** -> 2nd page returns a json string to the User Application as follows.

“{

"action": "dialextension",

"context": "TestInternalPbx",

"nexturl": "http://192.168.1.195/IVR/end.php",

"dialplan": "XML",

"callername": "1000",

"callernumber" : "1000",

"number" : "2001"

}”

**6** -> User Application returns a json string to the Duo Voice application as follows.

“{

"action": "dialextension",

"context": "TestInternalPbx",

"nexturl": "http://192.168.1.195/IVR/end.php",

"dialplan": "XML",

"callername": "1000",

"callernumber" : "1000",

"number" : "2001"

}”

Page class and Functions

|  |  |  |
| --- | --- | --- |
| class.BreakCall.php | BreakCall | SetNextUrl($targetUrl)  SetBreakCause($targetBreakCause)  GetResult() |
|  | | |
| class.ConferenceCall.php | ConferenceCall | SetNextUrl($targetUrl)  SetProfile($targetProfile)  SetData($targetData)  GetResult() |
|  | | |
| class.DialNumber.php | DialNumber | SetNextUrl($targetUrl)  SetContext($targetContext)  SetDialplan($targetDialplan)  SetCallerName($targetCallername)  SetCallerNumber($targetCallerNumber)  SetNumber($targetNumber)  GetResult() |
|  | | |
| class.HangupCall.php | HangupCall | SetNextUrl($targetUrl)  SetHangupCause($targetHangupCause)  GetResult() |
|  | | |
| class.PauseCall.php | PauseCall | SetNextUrl($targetUrl)  SetResult($targetResult)  SeteErorfile($targetErrorFile)  SetDigitTimeOut($targetDigitTimeOut)  SetInputTimeOut($targetInputTimeOut)  SetMilliSeconds($targetMilliSeconds)  SetTerminator($targetTerminator)  SetStrip($targetStrip)  SetDigits($targetDigits)  GetResult() |
|  | | |
| class.PlayFile.php | PlayFile | SetFile($targetFile)  SetNextUrl($targetUrl)  SetResult($targetResult)  SetErrorFile($targetErrorFile)  SetDigitTimeout($targetDigitTimeOut)  SetInputTimeout($targetInputTimeOut)  SetLoops($targetLoops)  SetTerminator($targetTerminator)  SetStrip($targetStrip)  SetDigits($targetDigits)  GetResult() |
|  | | |
| class.PlayFileAndGetDigits.php | PlayFileAndGetDigits | SetFile($targetFile)  SetNextUrl($targetUrl)  SetResult($targetResult)  SetErrorFile($targetErrorFile)  SetDigitTimeout($targetDigitTimeOut)  SetInputTimeout($targetInputTimeOut)  SetLoops($targetLoops)  SetTerminator($targetTerminator)  SetStrip($targetStrip)  SetMaxDigits($targetMaxDigits)  SetDigits($targetDigits)  GetResult() |
|  | | |
| class.RecordCall.php | RecordCall | SetNextUrl($targetUrl)  SetLimit($targetLimit)  SetPostUrl($targetPostUrl)  SetName($targetName)  GetResult() |
|  | | |
| class.RecordVoiceMessage.php | RecordVoiceMessage | SetFile($targetFile)  SetNextUrl($targetUrl)  SetResult($targetResult)  SetErrorFile($targetErrorFile)  SetDigitTimeout($targetDigitTimeOut)  SetInputTimeout($targetInputTimeOut)  SetLimit($targetLimit)  SetTerminator($targetTerminator)  SetStrip($targetStrip)  SetPostUrl($targetPostUrl)  SetDigits($targetDigits)  GetResult() |
|  | | |
| class.Say.php | Say | SetFile($targetFile)  SetNextUrl($targetUrl)  SetResult($targetResult)  SetErrorFile($targetErrorFile)  SetDigitTimeOut($targetDigitTimeOut)  SetInputTimeOut($targetInputTimeOut)  SetLoops($targetLoops)  SetLanguage($targetLanguage)  SetType($targetType)  SetMethod($targetMethod)  SetGender($targetGender)  SetTerminator($targetTerminator)  SetStrip($targetStrip)  SetDigits($targetDigits)  GetResult() |

|  |  |  |
| --- | --- | --- |
|  | | |
| class.Speak.php | Speak | SetFile($targetFile)  SetNextUrl($targetUrl)  SetResult($targetResult)  SetErrorFile($targetErrorFile)  SetDigitTimeout($targetDigitTimeOut)  SetInputTimeout($targetInputTimeOut)  SetLoops($targetLoops)  SetEngine($targetEngine)  SetVoice($targetVoice)  SetTerminator($targetTerminator)  SetStrip($targetStrip)  SetDigits($targetDigits)  GetResult() |
|  | | |
| class.VoiceMail.php | VoiceMail | SetNextUrl($targetUrl)  SetCheckAccount($targetCheckAccount)  SetAuthOnly($targetAuthOnly)  SetProfile($targetProfile)  SetDomain($targetDomain)  SetVoiceMailId($targetVoiceMailId)  GetResult() |
|  | | |
| class.UploadFile.php | UploadFile | SET($fileArray,$request)  MoveFile($location)  GetSessionID()  GetFileName()  GetTemparyFileName() |
|  | | |
| class.DialExtension.php | DialExtension | SetNextUrl($targetUrl)  SetContext($targetContext)  SetDialplan($targetDialplan)  SetCallerName($targetCallername)  SetCallerNumber($targetCallerNumber)  SetNumber($targetNumber)  GetResult() |

Sample code for Dial Extension number call

require\_once("PHPVoiceLibrary/class.DialExtension.php");

$calldata = json\_decode($HTTP\_RAW\_POST\_DATA,true); /\* CONVERT JSON STRING TO ARRAY \*/

/\*(CAME FROM DUO VOICE APPLICATION)\*/

/\* READ VALUES \*/

$result= $calldata["result"];

$session = $calldata["session"];

$ani=$calldata["ani"];

$dnis=$calldata["dnis"];

$callerdirection=$calldata["direction"];

$calleridname=$calldata["name"];

$objProcesIvr = new ProcessIVR(); /\* CREATE OBJECT FROM PROCESSIVR CLASS \*/

/\* SEND VALUES TO DIRECTDIALEXTENSION METHOD OF PROCESSIVR CLASS \*/

$string = $this-> DirectDialExtension ("http://192.168.1.195/IVR/end.php","TestInternalPbx",

"XML","####","####","2000");

Print($string);

Class ProcessIVR

{

function DirectDialExtension($nexturl,$context,$dialplan,$callername,$callernumber,$number)

{

try

{

$dialNum = new DialExtension(); /\* CREATE OBJECT FROM DIALEXTENSION CLASS \*/

/\* SET PROPERTIES OF DIALEXTENSION CLASS \*/

$dialNum->SetNextUrl($nexturl);

$dialNum->SetContext($context);

$dialNum->SetDialplan($dialplan);

$dialNum->SetCallerName($callername);

$dialNum->SetCallerNumber($callernumber);

$dialNum->SetNumber($number);

/\* GET RESULT FROM DIALEXTENSION CLASS \*/

$result = $dialNum->GetResult();

return $result;

}

catch(exception $ex)

{

return $ex;

}

}

}