

# FreeSWITCH

## Phrase Macro

# FreeSWITCH *Agenda*

Phrase Macro Syntax

Phrase Macro by Example

Lab 1 – a basic Phrase Macro

Lab 2 – Match and Nomatch in Phrase Macro

# FreeSWITCH *Phrase Macro Usage*

Phrase macros definitions are found in files included by FreeSWITCH conf directory /lang/en/en.xml

```
root@FreeSWITCH01:/etc/freeswitch/lang/en# ls
demo  dir  en.xml  ivr  vm
```

```
<include>
  <language name="en" say-module="en" sound-prefix="${sound_prefix}" tts-engine="cepstral" tts-voice="callie">
    <phrases>
      <macros>
        <X-PRE-PROCESS cmd="include" data="demo/*.xml"/>
        <X-PRE-PROCESS cmd="include" data="omid/*.xml"/>
        <X-PRE-PROCESS cmd="include" data="vm/sounds.xml"/>
        <X-PRE-PROCESS cmd="include" data="dir/sounds.xml"/>
        <X-PRE-PROCESS cmd="include" data="ivr/*.xml"/>
      </macros>
      <X-PRE-PROCESS cmd="include" data="vm/voicemail_ivr.xml"/>
    </phrases>
  </language>
</include>
```

# FreeSWITCH *Phrase Macro Example*

```
<macro name="demo_ivr_main_menu" pause="100">
  <input pattern="(.)">
    <match>
      <!-- string together several existing sound files to create one long greeting -->
      <action function="play-file" data="ivr/ivr-welcome_to_freeswitch.wav"/>
      <action function="play-file" data="ivr/ivr-this_ivr_will_let_you_test_features.wav"/>
      <action function="play-file" data="ivr/ivr-you_may_exit_by_hanging_up.wav"/>
      <!-- note that you can do more than just play files, e.g. have pauses and do TTS -->

      <!-- Menu option 1: Call FreeSWITCH conference-->
      <action function="play-file" data="ivr/ivr-enter_ext_pound.wav"/>
      <action function="play-file" data="silence_stream://1500"/>
      <action function="play-file" data="ivr/ivr-to_call_the_freeswitch_conference.wav"/>
      <action function="play-file" data="ivr/ivr-please.wav"/>
      <action function="play-file" data="voicemail/vm-press.wav"/>
      <action function="play-file" data="digits/1.wav"/>
```

lang/en/demo/demo-ivr.xml

# FreeSWITCH *Phrase Macro Example* (macro name and pause)

```
<macro name="demo_ivr_main_menu" pause="100">
  <input pattern="(.*)">
    <match>
      <!-- string together several existing sound files to create one long greeting -->
      <action function="play-file" data="ivr/ivr-welcome_to_freeswitch.wav"/>
      <action function="play-file" data="ivr/ivr-this_ivr_will_let_you_test_features.wav"/>
      <action function="play-file" data="ivr/ivr-you_may_exit_by_hanging_up.wav"/>
      <!-- note that you can do more than just play files, e.g. have pauses and do TTS -->

      <!-- Menu option 1: Call FreeSWITCH conference-->
      <action function="play-file" data="ivr/ivr-enter_ext_pound.wav"/>
      <action function="play-file" data="silence_stream://1500"/>
      <action function="play-file" data="ivr/ivr-to_call_the_freeswitch_conference.wav"/>
      <action function="play-file" data="ivr/ivr-please.wav"/>
      <action function="play-file" data="voicemail/vm-press.wav"/>
      <action function="play-file" data="digits/1.wav"/>
```

Macro "name" is what we will use in phrase call from dialplan or script.

"pause" will be the number of milliseconds to sleep after playing each individual sound file (optional)

# FreeSWITCH Phrase Macro Example (input pattern)

```
<macro name="demo_ivr_main_menu" pause="100">
  <input pattern="(.)">
    <match>
      <!-- string together several existing sound files to create one long greeting -->
      <action function="play-file" data="ivr/ivr-welcome_to_freeswitch.wav"/>
      <action function="play-file" data="ivr/ivr-this_ivr_will_let_you_test_features.wav"/>
      <action function="play-file" data="ivr/ivr-you_may_exit_by_hanging_up.wav"/>
      <!-- note that you can do more than just play files, e.g. have pauses and do TTS -->

      <!-- Menu option 1: Call FreeSWITCH conference-->
      <action function="play-file" data="ivr/ivr-enter_ext_pound.wav"/>
      <action function="play-file" data="silence_stream://1500"/>
      <action function="play-file" data="ivr/ivr-to_call_the_freeswitch_conference.wav"/>
      <action function="play-file" data="ivr/ivr-please.wav"/>
      <action function="play-file" data="voicemail/vm-press.wav"/>
      <action function="play-file" data="digits/1.wav"/>
    </match>
  </input>
</macro>
```

The regular expression in "input pattern" is checked against the input passed as an argument to "phrase"

```
<action application="phrase" data="phrase_lab1,1000"/>
```

If that expression matches, the phrase macro will execute the actions contained in the "match" section, else if the input pattern is not matched, the phrase macro will execute the actions contained in the "nomatch" section

# FreeSWITCH Phrase Macro – Lab 1

Create a Phrase Macro to read the number of messages that we pass as input.

```
<include>
  <macro name="phrase_lab1" pause="750">
    <input pattern="(.)">
      <match>
        <action function="execute" data="sleep(1000)"/>
        <action function="play-file" data="voicemail/vm-you_have.wav"/>
        <action function="say" data="$1" method="pronounced" type="items"/>
        <action function="play-file" data="voicemail/vm-messages.wav"/>
      </match>
    </input>
  </macro>
</include>
```

## FreeSWITCH Phrase Macro – Lab 1

```
<extension name="Phrase Lab 1">  
  <condition field="destination_number" expression="^55555$">  
    <action application="answer"/>  
    <action application="phrase" data="phrase_lab1,1000"/>  
    <action application="hangup"/>  
  </condition>  
</extension>
```



## FreeSWITCH Phrase Macro – Lab 2

Create a Phrase Macro to read the number of messages and if the number of messages is more than 9999, Phrase Macro plays “that mailbox is full, please try the call again later”.

```
<include>
  <macro name="phrase_lab2" pause="750">
    <input pattern="^\d{4}$">
      <match>
        <action function="execute" data="sleep(1000)"/>
        <action function="play-file" data="voicemail/vm-you_have.wav"/>
        <action function="say" data="$1" method="pronounced" type="items"/>
        <action function="play-file" data="voicemail/vm-messages.wav"/>
      </match>
      <nomatch>
        <action function="execute" data="sleep(1000)"/>
        <action function="play-file" data="voicemail/vm-mailbox_full.wav"/>
      </nomatch>
    </input>
  </macro>
</include>
```

## FreeSWITCH *Phrase Macro – Lab 2*

```
<extension name="Phrase Lab 2">  
  <condition field="destination_number" expression="^66666$">  
    <action application="answer"/>  
    <action application="phrase" data="phrase_lab2,999999"/>  
    <action application="hangup"/>  
  </condition>  
</extension>
```