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Introduction

mod_com_g729 allows you to have the G.729/A audio codec in FreeSWITCH. It supports G.729 and G.729 Annex A (a=fmtp:18 annexb=no).

G.729 is a toll-quality, low-bandwidth audio codec supported by many VoIP providers. The voice quality of a G.729-encoded call is about the same as that of G.711, the codec used for standard PSTN calls. However, the amount of bandwidth needed to carry a G.729 call is much lower than that for a G.711 call. Enterprises using G.729 will make more efficient use of available network bandwidth.

G.729 uses roughly 1/8th of the bandwidth of a G.711 (8 kbit/s vs 64 kbit/s).

Setup

The module is packaged separately from the rest of FreeSWITCH.

It can be downloaded from http://files.freeswitch.org/g729

Full installation instructions are available at the above link in the INSTALL.txt file.

Note: You should make sure that mod_g729 is not loaded at the same time as mod_com_g729.

Linux

Download the fsg729-xxx-installer file, make it executable and run it. This will install the module and supporting software to /usr/local/freeswitch or /opt/freeswitch (autodetected). If you are not using one of these directories for FreeSWITCH installation (e.g. using standard Debian directory layout), then you will need to pass two command line parameters:

```
./fsg729-xxx-installer [bin_dir modules_dir]
```

For example:

```
./fsg729-194-installer /usr/bin /usr/lib/freeswitch/mod
```

Your /bin directory will then contain an executable named validator, run this to enter your sales codes (see Licensing) and download your licences.zip file. This file contains your licences which should be extracted to /etc/freeswitch.

No Hardware Detected

This error will usually happen for one of two reasons.

- You're trying to run inside a VM
  - Using mod_com_g729 from within a VM is not supported, please use bare metal only
- Your network interfaces aren't named ethX (e.g. eth0, eth1, etc).
  - Currently, we only support interfaces named with the ethX scheme. Please change the interface name accordingly.

Licensing

Licences can be purchased from the FreeSWITCH website - see the G.729 tab at the top of the page.

Pricing is $10 per channel.

A single licence provides you with one encoder and one decoder, which is enough for bridging one call.

Licences are only required for channels performing transcoding (for bridging calls a leg uses G.729 and a different leg uses a different codec, and for applications which need to process media). Bridged channels

where G.729 is on all legs still use pass-through mode, so that they do not consume a licence.

Licence details

Licences are linked to a particular server. This is achieved by linking the licence to the MAC address(es) of the server.

Warning: This means that if these MAC addresses change, the licence will no longer be valid for the server and will need to be reissued (or the MAC addresses returned to the previous values).

API Commands

g729_status

Removed in FreeSWITCH G729 release 147. Use g729_info instead.

g729_info

This command verifies your license is active and shows you the number of licences available/in use.

```
freeswitch@internal> g729_info
Permitted G.729 channels: 1
Encoders in use: 0
Decoders in use: 0
```

g729_count

Returns the number of permitted channels that are licensed on this system

g729_available

Returns 'true' if the codec is loaded and the license server is available, otherwise returns false.

g729_used

Returns the encoder:decoder counts. Can be paired with the regex API to do powerful manipulations.

Notes

The freeswitch_licence_server is automatically started by mod_com_g729 but if you started freeswitch with a user other than root, e.g. nobody, you have to start freeswitch_licence_server before loading mod_com_g729.

Freeswitch will try to automatically start this server however if the user you are running freeswitch as cannot execute /usr/sbin/freeswitch_licence_server it will fail. Give them permission and freeswitch should be able to auto start it.

```
root#cd /usr/sbin
root#./freeswitch_licence_server
```

If you are running freeswitch with a different user and you add more G729 licenses, stop and start the freeswitch_license_server.

Saving Config Files

After activating, you should keep your zip files around for backups. There's a maximum of 3 activates per license. If you don't read this until it's too late, then you can send an email to g729-support@freeswitch.org to have it reset once so that you can back up the files to use in the future.

Phone wants G729A

You're probably seeing something like:

```
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [G729a:18:8000:30:8000]/
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [G729a:18:8000:30:8000]/
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [G729a:18:8000:30:8000]/
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [G729a:18:8000:30:8000]/
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [G729a:18:8000:30:8000]/
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [PCMU:0:8000:30:64000]/[
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [PCMU:0:8000:30:64000]/[
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [PCMU:0:8000:30:64000]/[
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [PCMU:0:8000:30:64000]/[
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4619 Audio Codec Compare [PCMU:0:8000:30:64000]/[
2011-03-17 11:51:06.327987 [DEBUG] sofia_glue.c:4672 Substituting codec PCMU@30i@8000h
```

http://wiki.freeswitch.org/wiki/Sofia.conf.xml#NDLB-allow-bad-iananame

On Linksys (or Cisco SPA5XX) phones & ATAs you have to rename the G729 codec name on SIP tab from G729a to G729.

See Also

- Codecs
- Modules
- G729 Downloads
- FreeSWITCH website - see G.729 tab to purchase licences
- G729 Wiki