FusionPBX – Migrating FreeSWITCH from Source to Packages

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This is a brief documentation how I successfully migrated my underlying FreeSWITCH server from a source compiled installation to a packaged installation. Before you follow this, please understand that I am a novice in the Linux world so if you see an opportunity to improve upon this process, please feel free to modify accordingly. All I ask is that you communicate such improvements back to me or to the **#fusionpbx** or **#freeswitch** IRC channels so as to help the community benefit from it.

Pre-Qualifications:

Before you begin, make sure the following is true about your environment:

- **OS:** Debian Linux v8 (Jessie) x64
- **FusionPBX** is installed and functioning well (i.e., you can login and make changes to your settings and they take effect).
- You have a source compiled installation of FreeSWITCH (i.e., the folder **/usr/local/freeswitch** is present on your system and Advanced > Default Settings > Switch in the FusionPBX Gui shows the switch paths in the folder identified above).
- The folder **/etc/freeswitch** is NOT present in your system (if it is, you'll need to delete or rename it, as the installation will not overwrite that folder).

Summary Results:

If all goes well, your installation of FusionPBX will be unaffected (i.e., any customizations you've done will survice), but you will now enjoy the benefits of having the latest stable version of FreeSWITCH which is easily maintained by APT (using apt-get upgrade and/or apt-get dist-upgrade).

An added benefit is that installing modules will be much easier – as simple as "apt-get install freeswitch-mod-shout" for example. It'll get installed, configured, and enabled for you.

Okay, some housekeeping:

If you are as cautious as I am, and this server is a VPS – **TAKE A SNAPSHOT NOW!!!**
If not a VPS, then you may want to opt for rename (wherever a delete is specified). In case anything goes wrong, simply go back and rename the folders back to what they were. I would recommend a suffix like "_old".

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So let's begin. Here's what I did:

1. Stop FreeSWITCH with the following command:

   systemctl stop freeswitch (if you use tab completion then ".service" will be appended to the command, it's fine)

2. Rename the following directories:

   /etc/freeswitch   >>>   /etc/freeswitch_old
   /usr/local/freeswitch   >>>   /usr/local/freeswitch_old

3. Install FreeSWITCH:
   a. Assuming you still have your FusionPBX installation files, navigate to it (specifically to the subdirectory that contains the switch install scripts)
      cd /usr/src/fusionpbx-install.sh/debian/resources/switch/

      i. *If you don't have the installation folder, get it:*
         cd /usr/src/
         git clone https://github.com/fusionpbx/fusionpbx-install.sh.git

   b. List the contents of that folder using: ls -lah
   c. You will see three package installation scripts, they are self-explanatory – choose one and run as follows (**this may take a while to complete – took about 5mins on a Digita Ocean 1GB droplet**):

      ./package-all.sh OR ./package-release.sh OR ./package-master-all.sh

4. Login to FusionPBX and adjust the switch paths as follows:

Subcategory	Type	Value	Enabled
base	dir	/usr	true
bin	dir		true
call_center	dir	/etc/freeswitch/autoload_configs	false
conf	dir	/etc/freeswitch	true
db	dir	/var/lib/freeswitch/db	true
dialplan	dir	/etc/freeswitch/dialplan	false
extensions	dir	/etc/freeswitch/directory	false
grammar	dir	/usr/share/freeswitch/grammar	true
log	dir	/var/log/freeswitch	true
mod	dir	/usr/lib/freeswitch/mod	true
phrases	dir	/etc/freeswitch/lang	false
recordings	dir	/var/lib/freeswitch/recordings	true
scripts	dir	/usr/share/freeswitch/scripts	true
sip_profiles	dir	/etc/freeswitch/sip_profiles	false
sounds	dir	/usr/share/freeswitch/sounds	true
storage	dir	/var/lib/freeswitch/storage	true
voicemail	dir	/var/lib/freeswitch/storage/voicemail	true

5. Now let's restore our old switch configuration as follows:

   a. Delete the contents of the /etc/freeswitch directory
      rm -rf /etc/freeswitch/*

   b. Copy the configuration files over to /etc/freeswitch directory
      cp -ar /usr/local/freeswitch_old/conf/* /etc/freeswitch

   c. Modify the LUA conf file with the appropriate script_dir variable:
      nano /etc/freeswitch/autoload_configs/lua.conf.xml

      Change line #16 to: <param name="script-directory" value="$${script_dir}/?.lua"/>

6. Now let's fix permissions and restart the services. In the same folder, run this script:

   ./package-permissions.sh
   systemctl daemon-reload
   systemctl try-restart freeswitch
   systemctl daemon-reload
   systemctl restart php5-fpm
   systemctl restart nginx

7. Log back into FusionPBX and check to make sure ALL modules have started and are running:

   ADVANCED >> Modules

8. This is optional, but I chose to reboot the server at this point. When the server comes back up, login into FusionPBX and check the Sip Status page to make sure your profiles have restarted. That's it, enjoy!

FINAL STEPS – VERY IMPORTANT!!!

9. Update your Fail2ban jail files to read the new FreeSWITCH log file, which is now located at:
   /var/log/freeswitch/freeswitch.log

10. Restart the Fail2Ban service as follows:
    systemctl restart fail2ban

11. And to wrap-up, you might consider bringing your system up-to-date via ADVANCED > UPGRADE. I did run into some issues with the new changes that had been made with MOH, however, all internal and external calls were successful.

    If this is the case for you, follow the instructions provided by a member of the #fusionpbx IRC channel:
    http://pastebin.com/fHw0wDjb

    If you get this error when placing calls to *9664 to test MOH, then simply restart FreeSWITCH:
    [ERR] mod_local_stream.c:814 Unknown source default