

MESA

PROJECT 2

MODULE 4

BUILD YOUR OWN PBX:

```
2.10.0.0.152
Setting up flex (2.6.4-6.2) ...
Setting up libsrtp2-dev (2.2.0-1) ...
Setting up libc-client2007e-dev (8:2007f~dfsg-6) ...
Setting up libcfg-dev:armhf (3.0.1-2+deb10u1) ...
Setting up libspandsp-dev:armhf (0.0.6+dfsg-2) ...
Setting up freetds-dev (1.00.104-1+deb10u1) ...
Setting up libselinux1-dev:armhf (2.8-1+b1) ...
Setting up subversion (1.10.4-1+deb10u3) ...
Setting up libfl-dev:armhf (2.6.4-6.2) ...
Setting up libical-dev:armhf (3.0.4-3) ...
Setting up libltdl-dev:armhf (2.4.6-9) ...
Setting up libcpkg-dev:armhf (3.0.1-2+deb10u1) ...
Setting up libglib2.0-dev:armhf (2.58.3-2+deb10u6) ...
Setting up libneon27-dev (0.30.2-3) ...
Setting up odbcinst (2.3.6-0.1) ...
Setting up dh-autoreconf (19) ...
Setting up dh-strip-nondeterminism (1.1.2-1) ...
Setting up odbcinst1debian2:armhf (2.3.6-0.1) ...
Setting up unixodbc-dev:armhf (2.3.6-0.1) ...
Setting up debhelper (13.2~bpo10+1) ...
Setting up vpb-driver-source (4.2.61-1) ...
Processing triggers for libglib2.0-0:armhf (2.58.3-2+deb10u6) ...
Processing triggers for libc-bin (2.28-10+rpt2+rpi1+deb10u2) ...
Processing triggers for man-db (2.8.5-2+deb10u1) ...
Processing triggers for install-info (6.5.0.dfsg.1-4+b1) ...
Setting up libgmime-2.6-dev (2.6.23+dfsg1-4) ...
Setting up libgmime-3.0-dev (3.2.1-1) ...

#####
## install completed successfully
#####
pi@raspberrypi:/usr/src/asterisk-18.24.1 $
```

```

2.10.0.0.152
make -C sounds install
make[1]: Entering directory '/usr/src/asterisk-18.24.1/sounds'
make[1]: Leaving directory '/usr/src/asterisk-18.24.1/sounds'
find rest-api -name "*.json" | while read x; do \
    /usr/bin/install -c -m 644 $x "/var/lib/asterisk/rest-api" ; \
done
+---- Asterisk Installation Complete -----+
+
+   YOU MUST READ THE SECURITY DOCUMENT   +
+
+ Asterisk has successfully been installed. +
+ If you would like to install the sample +
+ configuration files (overwriting any    +
+ existing config files), run:            +
+
+ For generic reference documentation:    +
+   make samples                          +
+
+ For a sample basic PBX:                 +
+   make basic-pbx                       +
+
+----- or -----+
+
+ You can go ahead and install the asterisk +
+ program documentation now or later run:   +
+
+           make progdocs                  +
+
+ **Note** This requires that you have    +
+ doxygen installed on your local system  +
+-----+
pi@raspberrypi:/usr/src/asterisk-18.24.1 $

```

```

2.10.0.0.152
[CC] res_audiosocket.c -> res_audiosocket.o
[LD] res_audiosocket.o -> res_audiosocket.so
[CC] res_stasis_snoop.c -> res_stasis_snoop.o
[LD] res_stasis_snoop.o -> res_stasis_snoop.so
[CC] res_calendar_exchange.c -> res_calendar_exchange.o
[LD] res_calendar_exchange.o -> res_calendar_exchange.so
[CC] res_geolocation.c -> res_geolocation.o
[CC] res_geolocation/geoloc_eprofile.c -> res_geolocation/geoloc_eprofile.o
[CC] res_geolocation/geoloc_civicaddr.c -> res_geolocation/geoloc_civicaddr.o
[CC] res_geolocation/geoloc_dialplan.c -> res_geolocation/geoloc_dialplan.o
[CC] res_geolocation/geoloc_gml.c -> res_geolocation/geoloc_gml.o
[CC] res_geolocation/geoloc_common.c -> res_geolocation/geoloc_common.o
[CC] res_geolocation/geoloc_datastore.c -> res_geolocation/geoloc_datastore.o
[CC] res_geolocation/geoloc_config.c -> res_geolocation/geoloc_config.o
[LD] res_geolocation/pidf_lo_test.xml -> res_geolocation/pidf_lo_test.o
[LD] res_geolocation/pidf_to_eprofile.xslt -> res_geolocation/pidf_to_eprofile.o
[LD] res_geolocation/eprofile_to_pidf.xslt -> res_geolocation/eprofile_to_pidf.o
[LD] res_geolocation.o res_geolocation/geoloc_eprofile.o res_geolocation/geoloc_civicaddr.o res_geolocation/geoloc_dialplan.o res_geolocation/geoloc_gml.o res_geolocation/geoloc_common.o res_geolocation/geoloc_datastore.o res_geolocation/geoloc_config.o res_geolocation/pidf_lo_test.o res_geolocation/pidf_to_eprofile.o res_geolocation/eprofile_to_pidf.o -> res_geolocation.so
[CC] res_pjsip_t38.c -> res_pjsip_t38.o
[LD] res_pjsip_t38.o -> res_pjsip_t38.so
[CC] res_pjsip_mwi.c -> res_pjsip_mwi.o
[LD] res_pjsip_mwi.o -> res_pjsip_mwi.so
Building Documentation For: channels pbx apps codecs formats cdr cel bridges funcs tests main res addons
+----- Asterisk Build Complete -----+
+ Asterisk has successfully been built, and +
+ can be installed by running:            +
+
+           make install                  +
+-----+
pi@raspberrypi:/usr/src/asterisk-18.24.1 $

```

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```

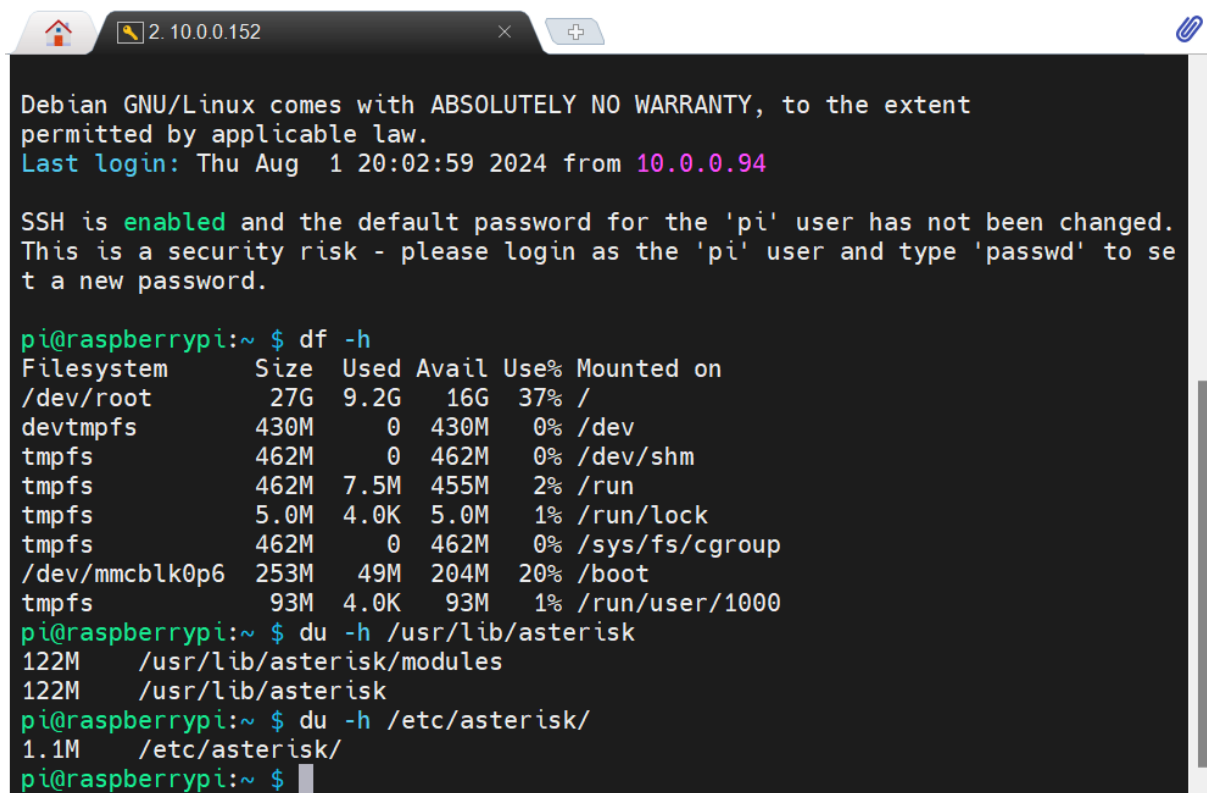
2. 10.0.152
Installing file configs/samples/statsd.conf.sample
Installing file configs/samples/stir_shaken.conf.sample
Installing file configs/samples/test_sorcery.conf.sample
Installing file configs/samples/udptl.conf.sample
Installing file configs/samples/unistim.conf.sample
Installing file configs/samples/users.conf.sample
Installing file configs/samples/voicemail.conf.sample
Installing file configs/samples/vpb.conf.sample
Installing file configs/samples/xmpp.conf.sample
Updating asterisk.conf
/usr/bin/install -c -d "/var/spool/asterisk/voicemail/default/1234/INBOX"
build_tools/make_sample_voicemail "/var/lib/asterisk" "/var/spool/asterisk"
Installing file phoneprov/00000000000000.cfg
Installing file phoneprov/00000000000000-directory.xml
Installing file phoneprov/00000000000000-phone.cfg
Installing file phoneprov/polycom_line.xml
Installing file phoneprov/polycom.xml
Installing file phoneprov/snom-mac.xml
pi@raspberrypi:/usr/src/asterisk-18.24.1 $ sudo make config
pi@raspberrypi:/usr/src/asterisk-18.24.1 $ sudo systemctl start asterisk
pi@raspberrypi:/usr/src/asterisk-18.24.1 $ sudo systemctl enable asterisk
asterisk.service is not a native service, redirecting to systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable asterisk
pi@raspberrypi:/usr/src/asterisk-18.24.1 $ sudo asterisk -rvvv
Asterisk 18.24.1, Copyright (C) 1999 - 2022, Sangoma Technologies Corporation and others.
Created by Mark Spencer <markster@digium.com>
Asterisk comes with ABSOLUTELY NO WARRANTY; type 'core show warranty' for details.
This is free software, with components licensed under the GNU General Public
License version 2 and other licenses; you are welcome to redistribute it under
certain conditions. Type 'core show license' for details.
=====
Connected to Asterisk 18.24.1 currently running on raspberrypi (pid = 6501)
raspberrypi*CLI>

```

```
configure: creating ./config.status
config.status: creating makeopts
config.status: creating autoconfig.h
configure: Menuselect build configuration successfully completed
```

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Image size:



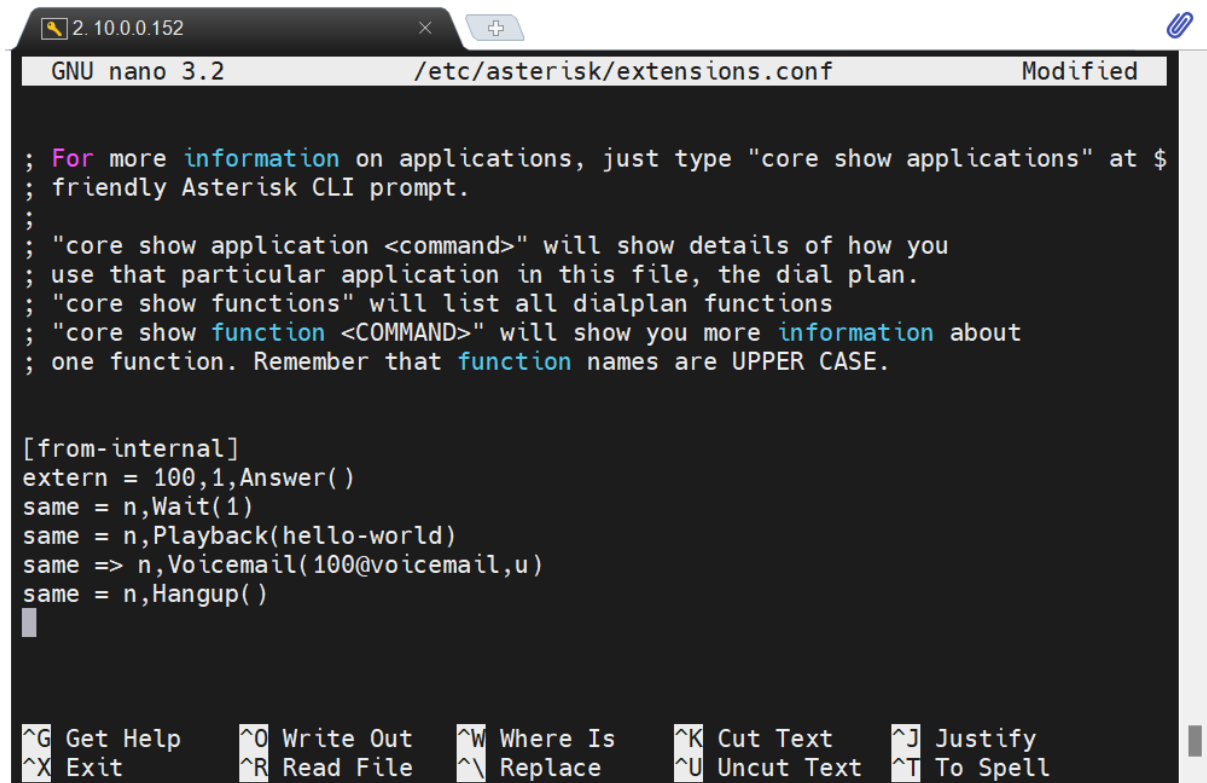
```
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu Aug 1 20:02:59 2024 from 10.0.0.94

SSH is enabled and the default password for the 'pi' user has not been changed.
This is a security risk - please login as the 'pi' user and type 'passwd' to se
t a new password.

pi@raspberrypi:~ $ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        27G   9.2G   16G   37% /
devtmpfs         430M    0   430M    0% /dev
tmpfs            462M    0   462M    0% /dev/shm
tmpfs            462M  7.5M   455M    2% /run
tmpfs            5.0M  4.0K    5.0M    1% /run/lock
tmpfs            462M    0   462M    0% /sys/fs/cgroup
/dev/mmcblk0p6   253M   49M   204M   20% /boot
tmpfs            93M   4.0K    93M    1% /run/user/1000
pi@raspberrypi:~ $ du -h /usr/lib/asterisk
122M    /usr/lib/asterisk/modules
122M    /usr/lib/asterisk
pi@raspberrypi:~ $ du -h /etc/asterisk/
1.1M    /etc/asterisk/
pi@raspberrypi:~ $
```

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Extensions.conf for dialling 100:



```
GNU nano 3.2 /etc/asterisk/extensions.conf Modified

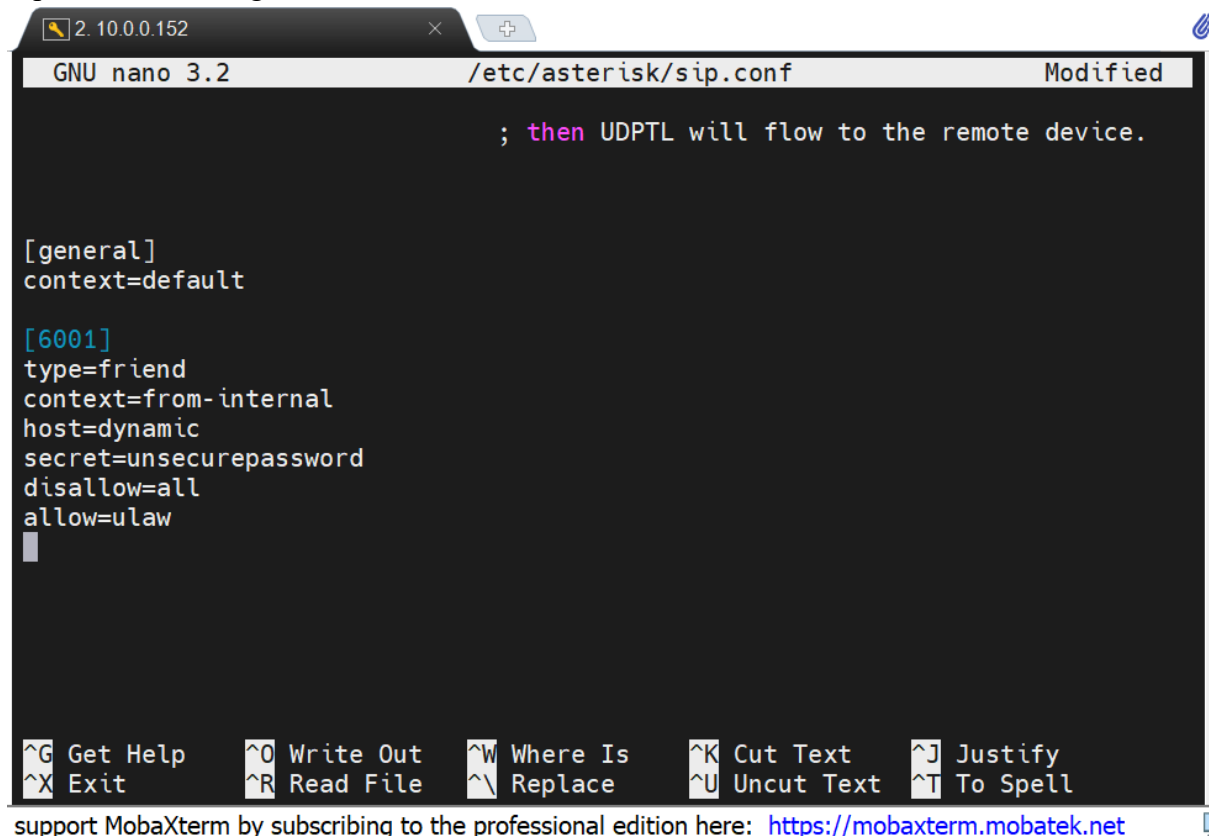
; For more information on applications, just type "core show applications" at $
; friendly Asterisk CLI prompt.
;
; "core show application <command>" will show details of how you
; use that particular application in this file, the dial plan.
; "core show functions" will list all dialplan functions
; "core show function <COMMAND>" will show you more information about
; one function. Remember that function names are UPPER CASE.

[from-internal]
extern = 100,1,Answer()
same = n,Wait(1)
same = n,Playback(hello-world)
same => n,VoiceMail(100@voicemail,u)
same = n,Hangup()

^G Get Help    ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify
^X Exit        ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell
```

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Sip.conf for dialling 100:



```
2.10.0.0.152 x +
GNU nano 3.2 /etc/asterisk/sip.conf Modified
; then UDPTL will flow to the remote device.

[general]
context=default

[6001]
type=friend
context=from-internal
host=dynamic
secret=unsecurepassword
disallow=all
allow=ulaw

^G Get Help    ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify
^X Exit        ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell

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```