INDEX
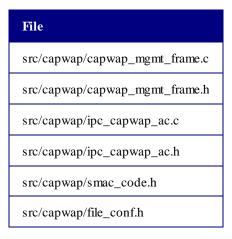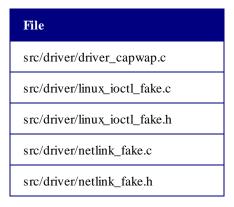
WRAPPER FOR HOSTAPD

This document explains the necessary steps for the installation of 2 wrappers for the hostapd daemon.

Installation of the wrapper for Access Controller (CAPWAP):

1. Create the folder "**src/CAPWAP**/" under the root path of hostapd source and add the following files:

File
src/capwap/capwap_mgmt_frame.c
src/capwap/capwap_mgmt_frame.h
src/capwap/ipc_capwap_ac.c
src/capwap/ipc_capwap_ac.h
src/capwap/smac_code.h
src/capwap/file_conf.h

2. In the path "**src/drivers/**" add the following files:

File
src/driver/driver_capwap.c
src/driver/linux_ioctl_fake.c
src/driver/linux_ioctl_fake.h
src/driver/netlink_fake.c
src/driver/netlink_fake.h

3. Append the following scripts into the configuration file as shown in the two columns of the table:

src/driver/drivers.mak	src/driver/drivers.mk

```
ifdef CONFIG_DRIVER_CAPWAP                    ifdef CONFIG_DRIVER_CAPWAP
DRV_CFLAGS += -DCONFIG_DRIVER_CAPWAP          DRV_CFLAGS += -DCONFIG_DRIVER_CAPWAP
DRV_OBJS += ../src/drivers/driver_capwap.o   DRV_OBJS += src/drivers/driver_capwap.c
DRV_OBJS += ../src/utils/radiotap.o          DRV_OBJS += src/utils/radiotap.c
NEED_SME=y                                    NEED_SME=y
NEED_AP_MLME=y                                NEED_AP_MLME=y
NEED_FAKE_NETLINK=y                           NEED_FAKE_NETLINK=y
NEED_LINUX_FAKE_IOCTL=y                       NEED_LINUX_FAKE_IOCTL=y
NEED_MGMT_FRAME=y                             NEED_MGMT_FRAME=y
NEED_CAPWAP_IPC=y                             NEED_CAPWAP_IPC=y
NEED_RFKILL=y                                 NEED_RFKILL=y
ifdef CONFIG_LIBNL32                          ifdef CONFIG_LIBNL32
  DRV_LIBS += -lnl-3                            DRV_LIBS += -lnl-3
  DRV_LIBS += -lnl-genl-3                       DRV_LIBS += -lnl-genl-3
  DRV_CFLAGS += -DCONFIG_LIBNL20                DRV_CFLAGS += -DCONFIG_LIBNL20
else                                         else
  ifdef CONFIG_LIBNL_TINY                       ifdef CONFIG_LIBNL_TINY
    DRV_LIBS += -lnl-tiny                         DRV_LIBS += -lnl-tiny
  else                                         else
    DRV_LIBS += -lnl                             DRV_LIBS += -lnl
  endif                                        endif
  ifdef CONFIG_LIBNL20                          ifdef CONFIG_LIBNL20
    DRV_LIBS += -lnl-genl                         DRV_LIBS += -lnl-genl
    DRV_CFLAGS += -DCONFIG_LIBNL20                DRV_CFLAGS += -DCONFIG_LIBNL20
  endif                                        endif
endif                                        endif
ifdef NEED_FAKE_NETLINK                      ifdef NEED_FAKE_NETLINK
DRV_OBJS += ../src/drivers/netlink_fake.o    DRV_OBJS += src/drivers/netlink_fake.c
endif                                        endif
ifdef NEED_LINUX_FAKE_IOCTL                  ifdef NEED_LINUX_FAKE_IOCTL
DRV_OBJS += ../src/drivers/linux_ioctl_fake.o DRV_OBJS += src/drivers/linux_ioctl_fake.c
endif                                        endif
ifdef NEED_MGMT_FRAME                        ifdef NEED_MGMT_FRAME
DRV_OBJS += ../src/capwap/capwap_mgmt_frame.o DRV_OBJS += ../src/capwap/capwap_mgmt_frame.c
endif                                        endif
ifdef NEED_CAPWAP_IPC                        ifdef NEED_CAPWAP_IPC
DRV_OBJS += ../src/capwap/ipc_capwap_ac.o    DRV_OBJS += ../src/capwap/ipc_capwap_ac.c
endif                                        endif
```

4. In the configuration file "**hostapd/.config**" add the following line

"**CONFIG_DRIVER_CAPWAP = y**", to enable the compilation of the wrapper CAPWAP.

5. In the configuration file of hostapd (example min_ac.conf), indicate the new wrapper by adding "**driver = capwap**". This file is read by hostapd when starting.

6. Create a file named "**hostapd_ac.conf**" and enter the following lines:

> **File: hostapd_ac.conf**
>
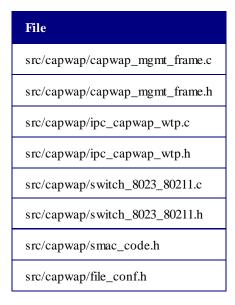> ip_daemon_ac=127.0.0.1
> sock_path_ac=/tmp/ac_ipc_hostapd
> port_daemon_ac=5543

This file is read by the daemon hostapd, and contains the necessary information for the connection with the AC daemon. The file must be located in the directory (pwd) where you run the hostapd daemon.

7. Start the daemon hostapd (with the AC wrapper) and then the AC daemon

Installation of the wrapper for WTP (CAPWAP_WTP):

1. Create the folder "**src/capwap**/" under the root path of hostapd source and add the following files:

File
src/capwap/capwap_mgmt_frame.c
src/capwap/capwap_mgmt_frame.h
src/capwap/ipc_capwap_wtp.c
src/capwap/ipc_capwap_wtp.h
src/capwap/switch_8023_80211.c
src/capwap/switch_8023_80211.h
src/capwap/smac_code.h
src/capwap/file_conf.h

2. In the path "**src/drivers**/" add the following files:

File
src/driver/driver_capwap_wtp.c

3. Append the following scripts into the configuration file as shown in the two columns of the table:

src/driver/drivers.mak	src/driver/drivers.mk
ifdef CONFIG_DRIVER_CAPWAP_WTP	ifdef CONFIG_DRIVER_CAPWAP_WTP
DRV_CFLAGS += -DCONFIG_DRIVER_CAPWAP_WTP	DRV_CFLAGS += -DCONFIG_DRIVER_CAPWAP_WTP
DRV_OBJS += ../src/drivers/driver_capwap_wtp.o	DRV_OBJS += src/drivers/driver_capwap_wtp.c
DRV_OBJS += ../src/utils/radiotap.o	DRV_OBJS += src/utils/radiotap.c
NEED_SME=y	NEED_SME=y
NEED_AP_MLME=y	NEED_AP_MLME=y
NEED_CAPWAP_MGMT_FRAME=y	NEED_CAPWAP_MGMT_FRAME=y
NEED_SWITCH_8023=y	NEED_NETLINK=y
NEED_IPC_CAPWAP=y	NEED_SWITCH_8023=y
NEED_NETLINK=y	NEED_IPC_CAPWAP=y
NEED_LINUX_IOCTL=y	NEED_LINUX_IOCTL=y

```
NEED_RFKILL=y                                       NEED_RFKILL=y
ifdef CONFIG_LIBNL32                                ifdef CONFIG_LIBNL32
  DRV_LIBS += -lnl-3                                  DRV_LIBS += -lnl-3
  DRV_LIBS += -lnl-genl-3                             DRV_LIBS += -lnl-genl-3
  DRV_CFLAGS += -DCONFIG_LIBNL20                      DRV_CFLAGS += -DCONFIG_LIBNL20
else                                                else
  ifdef CONFIG_LIBNL_TINY                              ifdef CONFIG_LIBNL_TINY
    DRV_LIBS += -lnl-tiny                                DRV_LIBS += -lnl-tiny
  else                                                else
    DRV_LIBS += -lnl                                     DRV_LIBS += -lnl
  endif                                               endif
  ifdef CONFIG_LIBNL20                                ifdef CONFIG_LIBNL20
    DRV_LIBS += -lnl-genl                                DRV_LIBS += -lnl-genl
    DRV_CFLAGS += -DCONFIG_LIBNL20                       DRV_CFLAGS += -DCONFIG_LIBNL20
  endif                                               endif
endif                                               endif
ifdef NEED_CAPWAP_MGMT_FRAME                        ifdef NEED_CAPWAP_MGMT_FRAME
DRV_OBJS += ../src/capwap/capwap_mgmt_frame.o       DRV_OBJS += src/capwap/capwap_mgmt_frame.c
endif                                               endif
ifdef NEED_SWITCH_8023                              ifdef NEED_SWITCH_8023
DRV_OBJS += ../src/capwap/switch_8023_80211.o       DRV_OBJS += src/capwap/switch_8023_80211.c
endif                                               endif
ifdef NEED_IPC_CAPWAP                               ifdef NEED_IPC_CAPWAP
DRV_OBJS += ../src/capwap/ipc_capwap_wtp.o          DRV_OBJS += src/capwap/ipc_capwap_wtp.c
endif                                               endif
```

4. In the configuration file "**hostapd/.config**" add the following line "**CONFIG_DRIVER_CAPWAP_WTP = y**", to enable the compilation of the wrapper CAPWAP_WTP.

5. In the configuration file of hostapd (example min_wtp.conf), indicate the new wrapper by adding the line "**driver = capwap_wtp**". This file is read by hostapd when starting..

6. Create a file named "**hostapd_wtp.conf**" and enter the following lines:

<div style="border:1px solid navy;">

File: hostapd_ac.conf

ip_daemon_wtp=127.0.0.1

port_daemon_wtp=6333

sock_pach_wtp=/tmp/wtp_ipc_hostapd

</div>

This file is read by the daemon hostapd, and contains the necessary information for the connection with the WTP daemon. The file must be located in the directory (pwd) where you run the hostapd daemon.

7. Start the daemon hostapd (with the WTP wrapper) and then the WTP daemon