The objective of this platform is to connect your home network to the Internet using an IPv6 tunnel provided by sixxs. A TP-Link MR3020 router is used as the tunnel endpoint:

- The Ethernet interface is connected to you home set-top box.
- The WLAN interface is used to interconnect all home equipments using IPv6.

The following assumptions determine the scenario of this deployement

1. The

Start by configuring the Ethernet and the WLAN interfaces on the MR3020 in two different IP networks.

/etc/config/network

```
config interface 'loopback'
    option ifname 'lo'
    option proto 'static'
    option ipaddr '127.0.0.1'
    option netmask '255.0.0.0'

config interface 'wan'
    option ifname 'eth0'
    option proto 'static'
    option ipaddr '192.168.1.66'
    option netmask '255.255.255.0'
    option gateway '192.168.1.1'
    option dns '8.8.8.8'

config interface 'wifi'
        option proto 'static'
        option ipaddr '192.168.66.1'
        option netmask '255.255.255.0'
        option ip6addr '2a01:240:fe00:80ab::1/64'
```

/etc/config/dhcp

```
config dnsmasq
    option domainneeded    1
    option boguspriv    1
    option filterwin2k    0  # enable for dial on demand
    option localise_queries    1
    option rebind_protection 1  # disable if upstream must serve
RFC1918 addresses
    option rebind_localhost 1  # enable for RBL checking and similar
services
    #list rebind_domain example.lan  # whitelist RFC1918 responses for
domains
    option local    '/lan/'
    option domain    'lan'
    option expandhosts    1
```

```
    option nonegcache    0
    option authoritative    1
    option readethers    1
    option leasefile    '/tmp/dhcp.leases'
    option resolvfile    '/tmp/resolv.conf.auto'
    #list server        '/mycompany.local/1.2.3.4'
    #option nonwildcard    1
    #list interface        br-lan
    #list notinterface    lo
    #list bogusnxdomain     '64.94.110.11'

config dhcp wifi
    option interface    wifi
    option start     100
    option limit    150
    option leasetime    12h

config dhcp wan
    option interface    wan
    option ignore    1
```

/etc/config/wireless

```
config wifi-device  radio0
    option type     mac80211
    option channel  11
    option macaddr    f8:d1:11:bd:62:ce
    option hwmode    11ng
    option htmode    HT20
    list ht_capab    SHORT-GI-20
    list ht_capab    SHORT-GI-40
    list ht_capab    RX-STBC1
    list ht_capab    DSSS_CCK-40

config wifi-iface
    option device   radio0
    option network  wifi
    option mode     ap
    option ssid 'PocketBox'
        option encryption 'psk2'
        option key '1CAFE2DECA'
```

/etc/config/firewall

```
config zone
    option name             wifi
    option input            ACCEPT
    option output           ACCEPT
    option forward          REJECT
```

```
config zone
    option name         lan
    option network         'lan'
    option input         ACCEPT
    option output         ACCEPT
    option forward         REJECT

config zone
    option name         wan
    option network         'wan'
    option input         REJECT
    option output         ACCEPT
    option forward         REJECT
    option masq         1
    option mtu_fix         1

config forwarding
    option src         lan
    option dest         wan

config forwarding
        option src              wifi
        option dest             wan
```

```
opkg update && opkg install aiccu radvd
```

```
ip -6 addr add 2a01:240:fe00:80ab::1/64 dev wlan0
```

/etc/sysctl.conf

```
net.ipv6.conf.all.forwarding=1
```

/etc/config/radvd

```
config interface
    option interface    'wifi'
    option AdvSendAdvert    1
    option AdvManagedFlag    0
    option AdvOtherConfigFlag 0
    list client         ''
    option ignore         0

config prefix
    option interface    'wifi'
    # If not specified, a non-link-local prefix of the interface is
used
    list prefix         '2a01:240:fe00:80ab::/64'
```

```
    option AdvOnLink    1
    option AdvAutonomous    1
    option AdvRouterAddr    0
    option ignore        0

config route
    option interface    'wifi'
    list prefix        ''
    option ignore        1

config rdnss
    option interface    'wifi'
    # If not specified, the link-local address of the interface is used
    list addr        ''
    option ignore        1

config dnssl
    option interface    'wifi'
    list suffix        ''
    option ignore        1
```

Create and edit

/etc/aiccu.conf

```
# AICCU Configuration

# Login information (defaults: none)
username XXXX-SIXXS
password XXXX

# Protocol and server to use for setting up the tunnel (defaults: none)
#protocol <tic|tsp|l2tp>
#server <server to use>

# Interface names to use (default: aiccu)
# ipv6_interface is the name of the interface that will be used as a
tunnel interface.
# On *BSD the ipv6_interface should be set to gifX (eg gif0) for
proto-41 tunnels
# or tunX (eg tun0) for AYIYA tunnels.
ipv6_interface tun0

# The tunnel_id to use (default: none)
# (only required when there are multiple tunnels in the list)
tunnel_id T23724

# Be verbose? (default: false)
verbose true
```

```
# Daemonize? (default: true)
# Set to false if you want to see any output
# When true output goes to syslog
#
# WARNING: never run AICCU from DaemonTools or a similar automated
# 'restart' tool/script. When AICCU does not start, it has a reason
# not to start which it gives on either the stdout or in the (sys)log
# file. The TIC server *will* automatically disable accounts which
# are detected to run in this mode.
#
daemonize true

# Automatic Login and Tunnel activation?
automatic true

# Require TLS?
# When set to true, if TLS is not supported on the server
# the TIC transaction will fail.
# When set to false, it will try a starttls, when that is
# not supported it will continue.
# In any case if AICCU is build with TLS support it will
# try to do a 'starttls' to the TIC server to see if that
# is supported.
requiretls false

# PID File
#pidfile /var/run/aiccu.pid

# Add a default route (default: true)
#defaultroute true

# Script to run after setting up the interfaces (default: none)
#setupscript /usr/local/etc/aiccu-subnets.sh

# Make heartbeats (default true)
# In general you don't want to turn this off
# Of course only applies to AYIYA and heartbeat tunnels not to static
ones
#makebeats true

# Don't configure anything (default: false)
#noconfigure true

# Behind NAT (default: false)
# Notify the user that a NAT-kind network is detected
behindnat true

# Local IPv4 Override (default: none)
# Overrides the IPv4 parameter received from TIC
# This allows one to configure a NAT into "DMZ" mode and then
# forwarding the proto-41 packets to an internal host.
```

```
#
# This is only needed for static proto-41 tunnels!
# AYIYA and heartbeat tunnels don't require this.
#local_ipv4_override
```

```
aiccu start
/etc/init.d/radvd start
/etc/init.d/radvd enable
```