openWRT (Wireless) Repeater

/etc/config/network

```
config 'switch' 'eth0'
        option 'enable' '1'
config 'switch_vlan' 'eth0_0'
        option 'device' 'eth0'
        option 'vlan' '0'
        option 'ports' '0 1 2 3 5'
config 'switch_vlan' 'eth0_1'
        option 'device' 'eth0'
        option 'vlan' '1'
        option 'ports' '4 5'
config 'interface' 'loopback'
        option 'ifname' 'lo'
        option 'proto' 'static'
        option 'ipaddr' '127.0.0.1'
        option 'netmask' '255.0.0.0'
config 'interface' 'lan'
        option 'type' 'bridge'
        option 'ifname' 'eth0.0'
        option 'proto' 'static'
        option 'netmask' '255.255.255.0'
        option 'ipaddr' '192.168.0.1'
config 'interface' 'wan'
        option 'ifname' 'eth0.1'
        option 'proto' 'dhcp'
config 'interface' 'wwan'
        option 'proto' 'dhcp'
```

/etc/config/wireless

```
config 'wifi-device' 'wl0'
        option 'type' 'broadcom'
        option 'txpower' '18'
        option 'hwmode' '11bg'
        option 'channel' '11'
config 'wifi-iface'
        option 'ssid' 'f00b4r'
        option 'device' 'wl0'
        option 'mode' 'sta'
        option 'network' 'wwan'
        option 'key' '(4xx3ss-2-the-d0me)'
        option 'encryption' 'psk2+tkip+ccmp'
config 'wifi-iface'
        option 'device' 'wl0'
        option 'mode' 'ap'
```

```
        option 'encryption' 'none'
        option 'ssid' 'OpenWrt-Repeater'
        option 'network' 'lan'
```

/etc/config/dhcp

```
cconfig 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 lan
        option interface        lan
        option start    100
        option limit    150
        option leasetime        12h
config dhcp wan
        option interface        wan
        option ignore   1
```

/etc/config/firewall

```
config 'defaults'
        option 'syn_flood' '1'
        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 'input' 'REJECT'
        option 'output' 'ACCEPT'
        option 'forward' 'REJECT'
        option 'masq' '1'
        option 'mtu_fix' '1'
        option 'network' 'wan wwan'
config 'forwarding'
        option 'src' 'lan'
        option 'dest' 'wan'
config 'rule'
        option 'name' 'Allow-DHCP-Renew'
        option 'src' 'wan'
        option 'proto' 'udp'
        option 'dest_port' '68'
        option 'target' 'ACCEPT'
        option 'family' 'ipv4'
config 'rule'
        option 'name' 'Allow-Ping'
        option 'src' 'wan'
        option 'proto' 'icmp'
        option 'icmp_type' 'echo-request'
        option 'family' 'ipv4'
        option 'target' 'ACCEPT'
config 'rule'
        option 'name' 'Allow-DHCPv6'
        option 'src' 'wan'
        option 'proto' 'udp'
        option 'src_ip' 'fe80::/10'
        option 'src_port' '547'
        option 'dest_ip' 'fe80::/10'
        option 'dest_port' '546'
        option 'family' 'ipv6'
        option 'target' 'ACCEPT'
config 'rule'
        option 'name' 'Allow-ICMPv6-Input'
        option 'src' 'wan'
        option 'proto' 'icmp'
        list 'icmp_type' 'echo-request'
        list 'icmp_type' 'destination-unreachable'
        list 'icmp_type' 'packet-too-big'
        list 'icmp_type' 'time-exceeded'
        list 'icmp_type' 'bad-header'
        list 'icmp_type' 'unknown-header-type'
        list 'icmp_type' 'router-solicitation'
        list 'icmp_type' 'neighbour-solicitation'
        option 'limit' '1000/sec'
```

```
        option 'family' 'ipv6'
        option 'target' 'ACCEPT'
config 'rule'
        option 'name' 'Allow-ICMPv6-Forward'
        option 'src' 'wan'
        option 'dest' '*'
        option 'proto' 'icmp'
        list 'icmp_type' 'echo-request'
        list 'icmp_type' 'destination-unreachable'
        list 'icmp_type' 'packet-too-big'
        list 'icmp_type' 'time-exceeded'
        list 'icmp_type' 'bad-header'
        list 'icmp_type' 'unknown-header-type'
        option 'limit' '1000/sec'
        option 'family' 'ipv6'
        option 'target' 'ACCEPT'
config 'include'
        option 'path' '/etc/firewall.user'
```

Troubleshooting

1. What if openWRT constantly disconnects from the host access point?

This might be related to the fact, that your access points uses the same ESSID on the 2.4GHz as 5GHz channel. The fix is either to disable one of them on your host AP, reconnect 'til it works or check for another openWRT version for your device.

It might also be that the openWRT wireless host is not on the same channel as the host AP.

1. The 'Associated Stations' shows a '?' below the IP Address field of an entry.

Looks like a bug in the openWRT GUI. Ignore it an verify it via ssh on the access point.

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