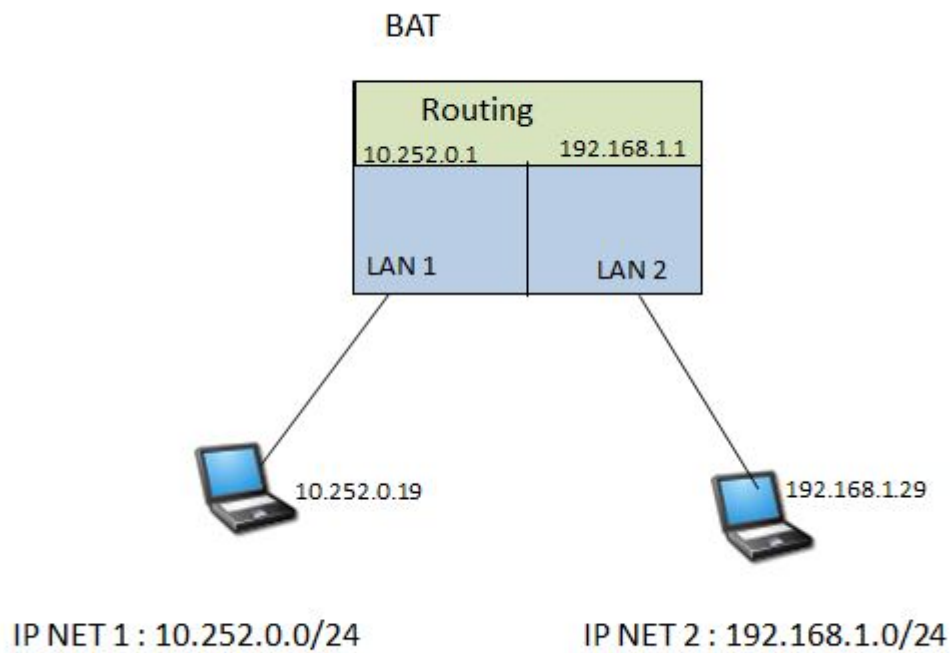


## How to redirect Broadcast when the BAT is used as router

- 2018-02-21 - BAT, WLC (HiLCOS)

### 1 Scenario

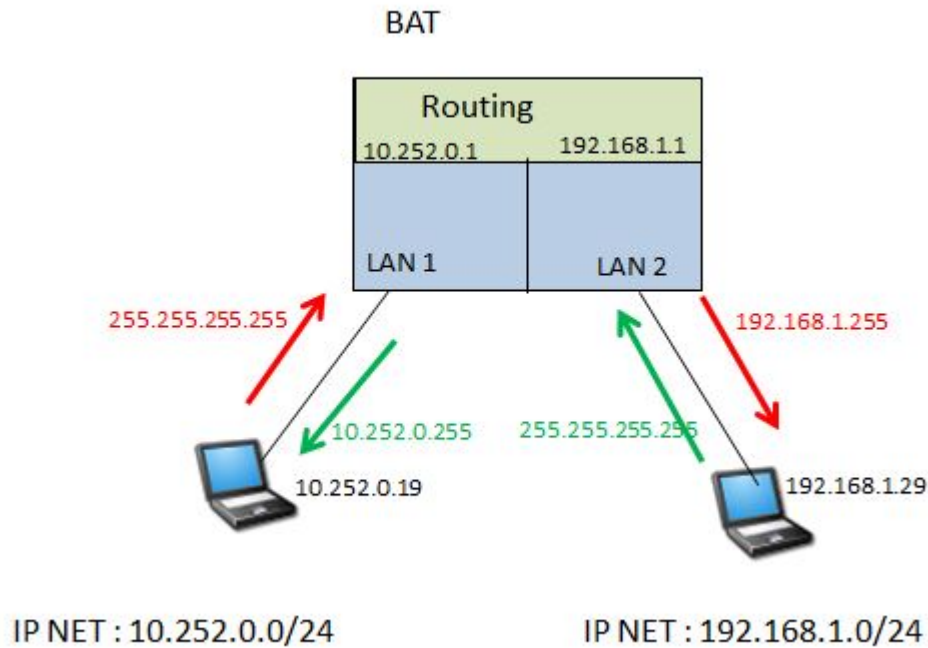
Routing on a BAT is configured between 2 interfaces as follow :



Configuration on the BAT (from the default config) :

```
set Setup/TCP-IP/Network-list/INTRANET 192.168.1.1 255.255.255.0 * BRG-1
set Setup/TCP-IP/Network-list/NET2 10.252.0.1 255.255.255.0 * BRG-2 * Intranet
set Setup/LAN-Bridge/Port-Data/LAN-1 * BRG-2
```

What we want to do :



Redirect specific IP broadcast (depending on the UDP port) from IP NET 1 to IP NET 2 and vice versa :

## 2 The IP redirect function

There is in the BAT a Firewall L2.

It makes possible a redirection of IP datas.

Nevertheless it works as a Firewall at the interface level. Enabling 1 rule on the interface will automatically turn it on , all the traffic which isn't defined in the rules will be dropped (at the interface level).

That's why in our case we'll define 2 preliminary rules, one to allow the IP traffic, another one to allows the ARPs (these 2 rules are enough to make IP communications working properly).

Then 2 additionnal rules : 1 to redirect the specific broadcast from IP NET 1 to IP NET 2 (based on the UDP port) and vice versa.

## 3 Broadcasts to redirect

Define the traffic which has to be redirected depending on the UDP port. (it can also be based on a TCP port but IP broadcast usually don't use TCP as transport layer protocol)

In our case we'll redirect traffic using UDP port 666

| No. | Time     | Date                       | Source      | Destination     | Protocol |
|-----|----------|----------------------------|-------------|-----------------|----------|
| 1   | 0.000000 | 2013-03-27 10:39:29.819978 | 10.252.0.19 | 255.255.255.255 | UDP      |

```

Frame 1: 60 bytes on wire (480 bits), 60 bytes captured (480 bits)
Ethernet II, Src: SpeedDra_00:05:48 (00:13:3b:00:05:48), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
  Destination: Broadcast (ff:ff:ff:ff:ff:ff)
  Source: SpeedDra_00:05:48 (00:13:3b:00:05:48)
  Type: IP (0x0800)
Internet Protocol, Src: 10.252.0.19 (10.252.0.19), Dst: 255.255.255.255 (255.255.255.255)
  Version: 4
  Header length: 20 bytes
  Differentiated Services Field: 0x00 (DSCP 0x00: Default; ECN: 0x00)
  Total Length: 46
  Identification: 0x0000 (0)
  Flags: 0x00
  Fragment offset: 0
  Time to live: 255
  Protocol: UDP (17)
  Header checksum: 0xb0b0 [correct]
  Source: 10.252.0.19 (10.252.0.19)
  Destination: 255.255.255.255 (255.255.255.255)
User Datagram Protocol, Src Port: mdqs (666), Dst Port: disclose (667)
  Source port: mdqs (666)
  Destination port: disclose (667)
  Length: 26
  Checksum: 0xef76 [correct]
Data (18 bytes)

```

## 4 Configuration

### 4.1 Via LAN Config

Configuration

èWireless LAN

- Security
  - Protocols
    - Add

Add the 4 rules :

| Name         | Protocol | Subtype | First port | Last port | Remote MAC address | DHCP assigned IP | Network IP | Netmask | Interface list | Action   | Redirect IP address |
|--------------|----------|---------|------------|-----------|--------------------|------------------|------------|---------|----------------|----------|---------------------|
| IP           | 0800     | 0       | 0          | 0         | 000000000000       | Irrelevant       | 0.0.0.0    | 0.0.0.0 | LAN-1,LAN-2    | Pass     | 0.0.0.0             |
| ARP          | 0806     | 0       | 0          | 0         | 000000000000       | Irrelevant       | 0.0.0.0    | 0.0.0.0 | LAN-1,LAN-2    | Pass     | 0.0.0.0             |
| NET1_TO_NET2 | 0800     | 17      | 666        | 666       | 000000000000       | Irrelevant       | 0.0.0.0    | 0.0.0.0 | LAN-1          | Redirect | 192.168.1.255       |
| NET2_TO_NET1 | 0800     | 17      | 666        | 666       | 000000000000       | Irrelevant       | 0.0.0.0    | 0.0.0.0 | LAN-2          | Redirect | 10.252.0.255        |

### 4.2 Via CLI

Set Setup/LAN-Bridge/Protocol-Table/IP \*\* 0800 \* \* \* \* \* LAN-1,LAN-2 Pass

Set Setup/LAN-Bridge/Protocol-Table/ARP \*\* 0806 \* \* \* \* \* LAN-1,LAN-2 Pass

Set Setup/LAN-Bridge/Protocol-Table/NET1\_TO\_NET2 \*\* 0800 \* \* 17 666 666 LAN-1 Redirect 192.168.1.255

Set Setup/LAN-Bridge/Protocol-Table/NET2\_TO\_NET1 \*\* 0800 \* \* 17 666 666 LAN-2 Redirect 10.252.0.255