

BR1 / HD2 / HD4 – Active / Active configuration

BR1 Active / Active

Configuring the 1st BR1 (BR1-1)

Change the Network Settings, so the router's IP address is 192.168.10.1 (255.255.255.0/24)

Enable VLANS – see image below:-

The screenshot shows the PEPWAVE Network settings interface. In the top navigation bar, 'Network' is selected. On the left sidebar under 'LAN', 'Network Settings' is highlighted. The main area displays 'IP Settings' with the IP Address set to 192.168.10.1 and Subnet Mask to 255.255.255.0 (/24). Below it is the 'DHCP Server' section, which has 'Enable' checked. A tooltip message says: 'If you need to define multiple VLANs, press here.'

Create the VLAN:-

The screenshot shows the PEPWAVE Network settings interface. In the top navigation bar, 'Network' is selected. On the left sidebar under 'LAN', 'Network Settings' is highlighted. The main area displays 'IP Settings' with the IP Address set to 192.168.11.1 and Subnet Mask to 255.255.255.0 (/24). Below it is the 'Network Settings' section, where 'Name' is set to 'VLAN_1', 'VLAN ID' is set to '1', and 'Inter-VLAN routing' is checked. The 'DHCP Server' section is also visible, with 'Enable' checked.

Add Port Settings, as below:-

The screenshot shows the PEPWAVE Network settings interface. In the top navigation bar, 'Network' is selected. On the left sidebar under 'LAN', 'Port Settings' is highlighted. The main area displays the 'Port Settings' table. It contains two rows for 'LAN Port 1' and 'LAN Port 2'. For both ports, 'Enable' is checked, 'PoE Enable' is checked, 'Speed' is set to 'Auto', 'Advertise Speed' is checked, 'Port Type' is set to 'Access', and 'VLAN' is set to 'VLAN_1'. A note at the bottom states: 'To configure Ethernet WAN Ports to act as the LAN interface, please click [here](#)'.

Setup the WAN port (BR1) as shown below – note the IP address is the static IP address from VLAN_1 of the 2nd device:-

The screenshot shows the PEPWAVE Network interface with the 'Network' tab selected. A modal window titled 'Connection Details' is open, specifically for 'WAN Connection Settings'. The configuration includes:

WAN Connection Name	WAN	Default
Connection Method	Static IP	<input type="button" value="Help"/>
Routing Mode	NAT	<input type="button" value="Help"/>
IP Address	192.168.21.2	
Subnet Mask	255.255.255.0 (/24)	<input type="button" value="Help"/>
Default Gateway	192.168.21.1	

Configure the Outbound Policy:-

The screenshot shows the PEPWAVE Network interface with the 'Advanced' tab selected. A modal window titled 'Edit Custom Rule' is open, showing the configuration for a custom rule named 'VLAN1-Cell'. The settings include:

Service Name	VLAN1-Cell
Enable	<input checked="" type="checkbox"/>
Source	IP Network 192.168.11.0 Mask: 255.255.255.0 (/24)
Destination	Any
Protocol	Any :: Protocol Selection Tool ::
Algorithm	Enforced
Enforced Connection	WAN: Cellular

Configuring the 2nd BR1 (BR1-2):-

Change the Network Settings, so the router's IP address is 192.168.20.1 (255.255.255.0/24)

The screenshot shows the PEPWAVE management interface. The top navigation bar has tabs: Dashboard, Network (which is selected), Advanced, System, and Status. On the right, there is a button labeled "Apply Changes". The left sidebar has sections for LAN (Network Settings, Port Settings, Captive Portal) and WAN, with a "Logout" button. The main content area has a message: "InControl management enabled. Settings can now be configured on InControl." Below this are two sections: "IP Settings" and "DHCP Server". In "IP Settings", the IP Address is set to 192.168.20.1 and the Subnet Mask is 255.255.255.0 (/24). In "DHCP Server", the DHCP Server is enabled, and the IP Range is set from 192.168.20.10 to 192.168.20.250 with a Subnet Mask of 255.255.255.0 (/24).

Create the VLAN:-

The screenshot shows the PEPWAVE management interface. The top navigation bar has tabs: Dashboard, Network (selected), Advanced, System, and Status. On the right, there is a button labeled "Apply Changes". The left sidebar has sections for LAN (Network Settings, Port Settings, Captive Portal) and WAN, with a "Logout" button. The main content area has a section titled "LAN". It contains "IP Settings" (IP Address 192.168.21.1, Subnet Mask 255.255.255.0 (/24)) and "Network Settings" (Name: VLAN_1, VLAN ID: 1, Inter-VLAN routing checked). Below these are "DHCP Server" settings (Enabled) and an "IP Range" of 192.168.21.10 to 192.168.21.200 with a Subnet Mask of 255.255.255.0 (/24).

Add Port Settings, as below:-

The screenshot shows the PEPWAVE management interface. The top navigation bar has tabs: Dashboard, Network (selected), Advanced, System, and Status. On the right, there is a button labeled "Apply Changes". The left sidebar has sections for LAN (Network Settings, Port Settings selected, Captive Portal) and WAN, with a "Logout" button. The main content area has a section titled "Port Settings". It shows two rows for "Port Name": "LAN Port 1" and "LAN Port 2". For "LAN Port 1", "Enable" is checked, "PoE Enable" is checked, "Speed" is "Auto", "Advertise Speed" is checked, "Port Type" is "Access", and "VLAN" is "VLAN_1". For "LAN Port 2", "Enable" is checked, "PoE Enable" is checked, "Speed" is "Auto", "Advertise Speed" is checked, "Port Type" is "Access", and "VLAN" is "Untagged LAN". A note at the bottom says: "To configure Ethernet WAN Ports to act as the LAN interface, please click [here](#)".

Setup the WAN port (BR1) as shown below – note the IP address is the static IP address from VLAN_1 of the 1st device:-

WAN Port	
WAN Connection Name	WAN <input type="button" value="Default"/>
Connection Method	Static IP <input type="button" value="?"/>
Routing Mode	NAT <input type="radio"/>
IP Address	192.168.11.2
Subnet Mask	255.255.255.0 (/24)
Default Gateway	192.168.11.1

Setup the Outbound Policy to force traffic over Cellular:-

Edit Custom Rule	
Service Name	VLAN1-Cell
Enable	<input checked="" type="checkbox"/>
Source	IP Network <input type="button" value="?"/> 192.168.21.0 Mask: 255.255.255.0 (/24) <input type="button" value="?"/>
Destination	Any <input type="button" value="?"/>
Protocol	Any <input type="button" value="?"/> :: Protocol Selection Tool :: <input type="button" value="?"/>
Algorithm	Enforced <input type="button" value="?"/>
Enforced Connection	WAN: Cellular <input type="button" value="?"/>

Physical Cables:-

Cable 1 = BR1-1 WAN -> BR1-2 LAN 1

Cable 2 = BR1-2 WAN -> BR1-1 LAN 1

2 x BR1 Active / Active - configuration



Step by Step – HD2 Active / Active

1. Login to the 1st HD2 (HD2-1)
2. Set the Network IP to:-
 - a. 192.168.10.1
 - b. VLAN1 – 192.168.11.1
 - c. VLAN2 – 192.168.12.1
3. Change the Port Settings
 - a. LAN1 = Access VLAN1
 - b. LAN2 – Access VLAN2
 - c. LAN3 – Access Untagged
 - d. LAN 4 – Access Untagged
4. Advanced Outbound Policy
 - a. Force 192.168.11.1 network to use Cell 1
 - b. Force 192.168.12.1 network to use Cell 2
5. Set WAN Connections
 - a. WAN1 = 192.168.21.2 (Gateway = 192.168.21.1 / DNS = Google)
6. WAN2 = 192.168.22.2 (Gateway = 192.168.22.1 / DNS = Google)

7. Login to the 2nd HD2 (HD2-2)
8. Set the Network IP to:-
 - a. 192.168.20.1
 - b. VLAN1 – 192.168.21.1
 - c. VLAN2 – 192.168.22.1
9. Change the Port Settings
 - a. LAN1 = Access VLAN1
 - b. LAN2 – Access VLAN2
 - c. LAN3 – Access Untagged
 - d. LAN 4 – Access Untagged
10. Advanced Outbound Policy
 - a. Force 192.168.21.1 network to use Cell 1
 - b. Force 192.168.22.1 network to use Cell 2
11. Set WAN Connections

- a. WAN1 = 192.168.11.2 (Gateway = 192.168.11.1 / DNS = Google)
- b. WAN2 = 192.168.12.2 (Gateway = 192.168.12.1 / DNS = Google)

Physical Cables:-

Cable 1 = HD2-1 WAN 1 -> HD2-2 LAN 1
Cable 2 = HD2-1 WAN 2 -> HD2-2 LAN 2
Cable 3 = HD2-2 WAN 1 -> HD2-1 LAN 1
Cable 4 = HD2-2 WAN 2 -> HD2-1 LAN 2

Step by Step – HD4 Active / Active

NOTE – LAN as WAN Licence will need to be applied to both HD4's

1. Login to the 1st HD4 (HD4-1)
2. Set the Network IP to:-
 - a. 192.168.10.1
 - b. VLAN1 – 192.168.11.1
 - c. VLAN2 – 192.168.12.1
 - d. VLAN3 – 192.168.13.1
 - e. VLAN4 – 192.168.14.1
3. Change the Port Settings
 - a. LAN4 = Access VLAN1
 - b. LAN5 – Access VLAN2
 - c. LAN6 – Access VLAN3
 - d. LAN7 – Access VLAN4
 - e. LAN8 – Access Untagged
4. Advanced Outbound Policy
 - a. Force 192.168.11.1 network to use Cell 1
 - b. Force 192.168.12.1 network to use Cell 2
 - c. Force 192.168.13.1 network to use Cell 3
 - d. Force 192.168.14.1 network to use Cell 4
5. Set WAN Connections
 - a. WAN1 = 192.168.21.2 (Gateway = 192.168.21.1 / DNS = Google)
 - b. WAN2 = 192.168.22.2 (Gateway = 192.168.22.1 / DNS = Google)
 - c. WAN3 = 192.168.23.2 (Gateway = 192.168.23.1 / DNS = Google)
 - d. WAN4 = 192.168.24.2 (Gateway = 192.168.24.1 / DNS = Google)

6. Login to the 2nd HD4 (HD4-2)
7. Set the Network IP to:-
 - a. 192.168.20.1
 - b. VLAN1 – 192.168.21.1
 - c. VLAN2 – 192.168.22.1
 - d. VLAN3 – 192.168.23.1
 - e. VLAN4 – 192.168.24.1
8. Change the Port Settings
 - a. LAN4 = Access VLAN1
 - b. LAN5 – Access VLAN2
 - c. LAN6 – Access VLAN3
 - d. LAN7 – Access VLAN4
 - e. LAN8 – Access Untagged
9. Advanced Outbound Policy
 - a. Force 192.168.21.1 network to use Cell 1
 - b. Force 192.168.22.1 network to use Cell 2
 - c. Force 192.168.23.1 network to use Cell 3
 - d. Force 192.168.24.1 network to use Cell 4
10. Set WAN Connections
 - a. WAN1 = 192.168.11.2 (Gateway = 192.168.11.1 / DNS = Google)
 - b. WAN2 = 192.168.12.2 (Gateway = 192.168.12.1 / DNS = Google)
 - c. WAN3 = 192.168.13.2 (Gateway = 192.168.13.1 / DNS = Google)
 - d. WAN4 = 192.168.14.2 (Gateway = 192.168.14.1 / DNS = Google)

Health Check for ALL WAN (Cellular & cabled) – DNS Lookup using 8.8.8.8 and 8.8.4.4

Physical Cables:-

Cable 1 = HD4-1 WAN 1 -> HD4-2 LAN 4

Cable 2 = HD4-1 WAN 2 -> HD4-2 LAN 5

Cable 3 = HD4-1 WAN 3 -> HD4-2 LAN 6

Cable 4 = HD4-1 WAN 4 -> HD4-2 LAN 7

Cable 5 = HD4-2 WAN 1 -> HD4-1 LAN 4
 Cable 6 = HD4-2 WAN 2 -> HD4-1 LAN 5
 Cable 7 = HD4-2 WAN 3 -> HD4-1 LAN 6
 Cable 8 = HD4-2 WAN 4 -> HD4-1 LAN 7

Diagram showing HD4 connections:-

