



# Vodafone Business Broadband IP User Guide

Built with business  
in mind

The future is exciting.

**Ready?**



# Contents

|                                                          |          |
|----------------------------------------------------------|----------|
| <b>1. What is an IP address?</b>                         | <b>3</b> |
| Dynamic                                                  | 3        |
| Static                                                   | 3        |
| Multiple Static                                          | 3        |
| <hr/>                                                    |          |
| <b>2. How to configure a Single Static IP address</b>    | <b>4</b> |
| <b>2.1 How to configure a Multiple Static IP address</b> | <b>7</b> |

# 1. What is an IP address?

Every machine on a network has a unique identifier called an Internet Protocol address or IP address for short. Think of it as their personal phone number, every device can use this number to communicate with other devices via the internet.

An IP address consists of numbers and periods (eg: 192.168.1.1).

## **Dynamic IP address**

Most devices use dynamic IP addresses, which are assigned by the network when they connect. These IP addresses are temporary and change regularly; they are used for general internet usage such as:

- WEB browsing
- Emails
- Downloading/uploading files
- Chat services and social media

## **Single Static IP address**

Static IP addresses remain the same and are used by business for private internet browsing such as:

- Hosting your own website or server
- Accessing files from a corporate server (Virtual Private Network) such as remote CCTV monitoring

## **Multiple Static IP addresses**

Multiple Static IP addresses can be assigned to a customer's network which enables:

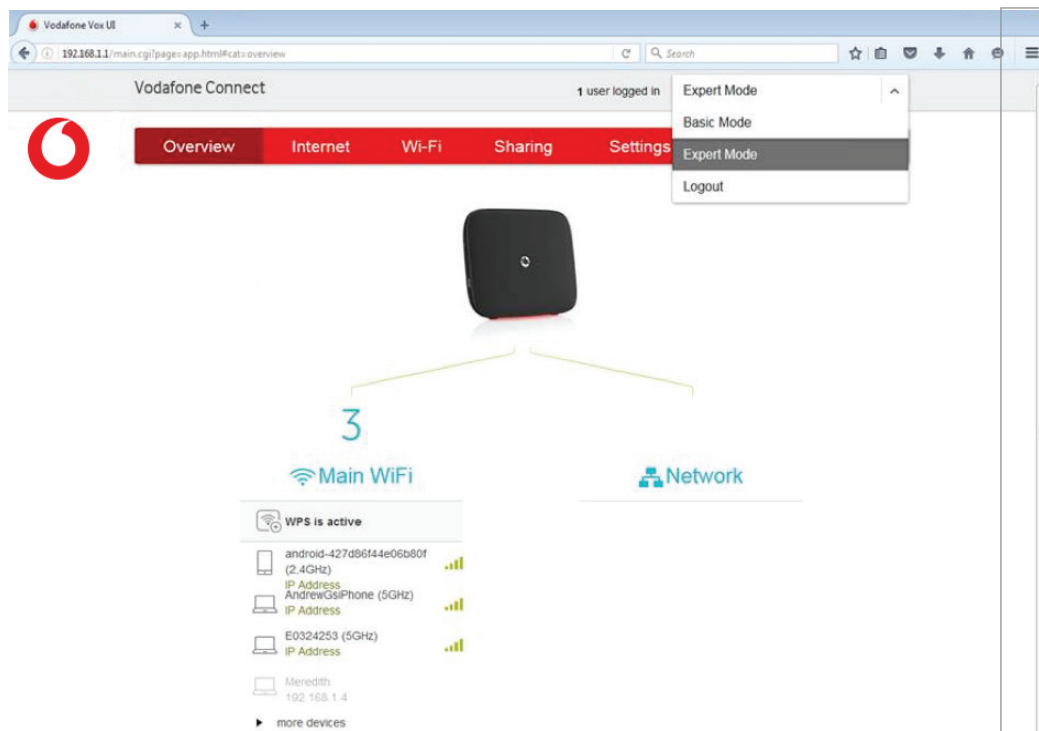
- File Transfer Protocol (FTP) hosting
- CCTV cameras or hosting your own website or server

## 2. Single Static IP address

Generally, when connecting to the internet you will be using a dynamic IP address. However, there may be times when a static IP address is required, for example, for streaming footage from a CCTV camera remotely or hosting a web or gaming server. Vodafone offers a Single Static IP address, which you can order at any time for use with your Vodafone Enterprise Broadband Service.

If you order a Single Static IP address, we will send you the address details once your Vodafone Enterprise Broadband Service has been activated. No configuration is required on the router hardware itself, this is completed by Vodafone prior to dispatch. If, however, the traffic pointed at the static IP address is to be directed to a certain location in your network then the following steps need to be taken:

1. Log in to the settings for the router.
2. Ensure '**Expert mode**' is enabled.





3. Go to the '**Internet**' tab.
4. Select '**Exposed Host**'.

Overview Internet Wi-Fi Sharing Settings Status & Support

Firewall

Port Mapping

**Static NAT/DMZ**

DNS & DDNS

## Static NAT/DMZ/Exposed Host

If you have a local network device that can't run an internet application properly behind the firewall, you can allow unrestricted internet access to the network device (Exposed Host).

Exposed Host Function ☒

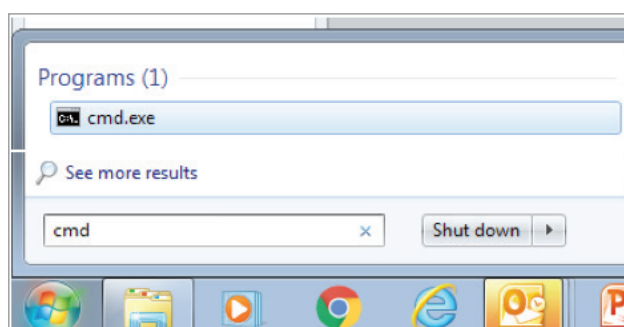
**Warning:** By using the Exposed Host function, you're bypassing the Vodafone Connect router's firewall. Please make sure that your device is protected against attacks from the internet. The following Ports will not be forwarded:

Choose the local IP address that should be exposed to the internet. Additionally you should configure this IP Address as a static DHCP address for your device (see Settings/Network).

Public IP Address 0.0.0.0

Local IP Address 0 0 0 0

5. Toggle Exposed Host Function to '**On**'.
6. In the '**Local IP Address**' field, enter the IP address of the local device to be exposed.
7. To retrieve the address of the machine you are using click '**Start**' and type '**cmd**' into the Search bar. Click on '**cmd.exe**'.



8. Type '**ipconfig/all**' and hit the 'return' key.
9. Enter the IPv4 address into the free text field described above.

```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Fleming11>
C:\Users\Fleming11>ipconfig/all

Windows IP Configuration

Host Name . . . . . : E0176711
Primary Dns Suffix . . . . . : internal.vodafone.com
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : vfl.vodafone
                                   vf-uk.internal.vodafone.com
                                   eito-dublin.local
                                   internal.vodafone.com
                                   internal.vodafone.co.uk
                                   ad.plc.cwintra.com
                                   hosts.plc.cwintra.com
                                   dc-dublin.de

Ethernet adapter Local Area Connection 2:

Connection-specific DNS Suffix . : internal.vodafone.com
Description . . . . . : Cisco AnyConnect Secure Mobility C
Virtual Miniport Adapter for Windows
Physical Address. . . . . : 00-05-9A-3C-7A-00
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . : Yes
IPv4 Address. . . . . : 10.255.57.126(Preferred)
Subnet Mask . . . . . : 255.255.248.0
Default Gateway . . . . . : 10.255.56.1
DNS Servers . . . . . : 10.33.32.18
                          10.33.32.19
Primary WINS Server . . . . . : 10.33.36.92
Secondary WINS Server . . . . . : 10.33.36.46
NetBIOS over Tcpip. . . . . : Disabled

Wireless LAN adapter Wireless Network Connection:

Connection-specific DNS Suffix . : 
Description . . . . . : Intel(R) Centrino(R) Advanced-N 6200
Physical Address. . . . . : 10-0B-A9-8F-6F-74
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . : Yes
IPv4 Address. . . . . : 192.168.0.6(Preferred)

```

10. Click '**Apply**' to save changes.
11. It is also useful to put the MAC address – available in the same CMD/ipconfig/all location into the DHCP reservation settings. It would also be good practice to assign a local IP address to the connected device; you can do this locally or via DHCP reservation on the router. This is assigned according to the MAC address (Physical address) of the connected device.

### DHCP Server parameters

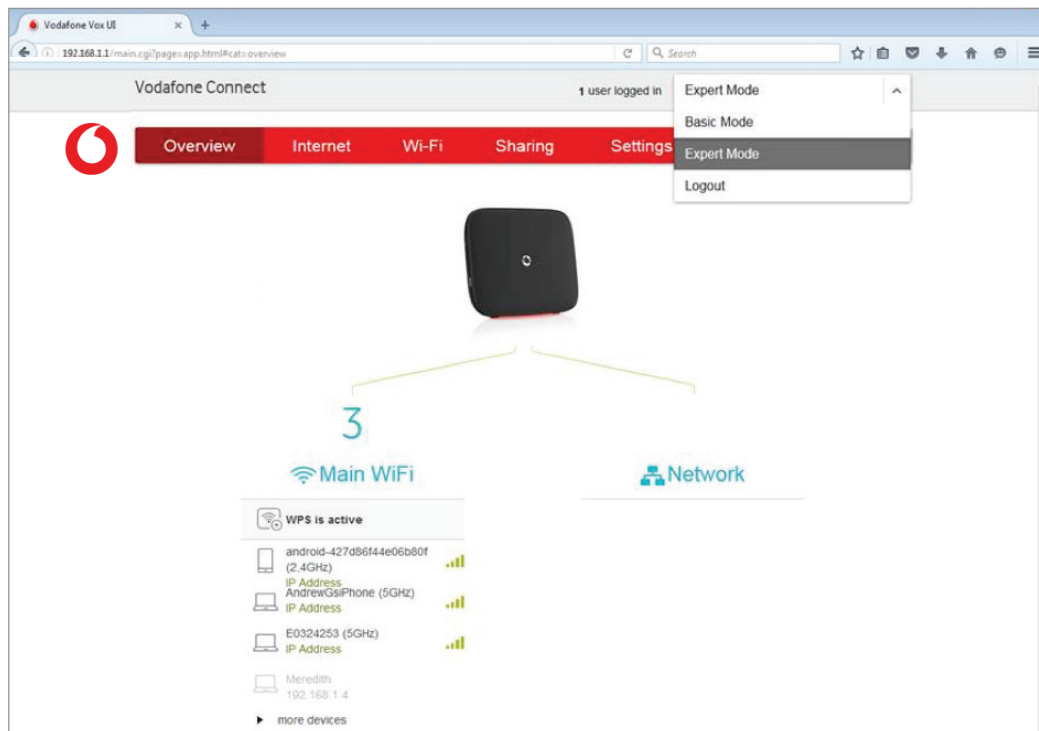
| Home network                               | Guest Network                              |
|--------------------------------------------|--------------------------------------------|
| Address Pool Start IP<br>192 · 168 · 1 · 2 | Address Pool Start IP<br>192 · 168 · 5 · 2 |
| Address Pool End IP<br>192 · 168 · 1 · 200 | Address Pool End IP<br>192 · 168 · 5 · 200 |
| Lease time<br>One Day ▾                    | Lease time<br>One Day ▾                    |

### Static DHCP - Home Network

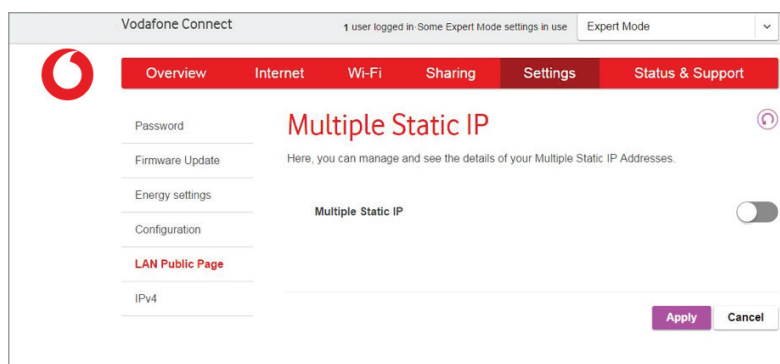
| Device name  | MAC Address | IP Address |
|--------------|-------------|------------|
| No rules set |             |            |

## How to Configure Multiple Static IP Addresses on Vodafone Broadband

1. Log into router via 192.168.1.1 or vodafone.connect in your browser.
2. Ensure '**expert mode**' is enabled.

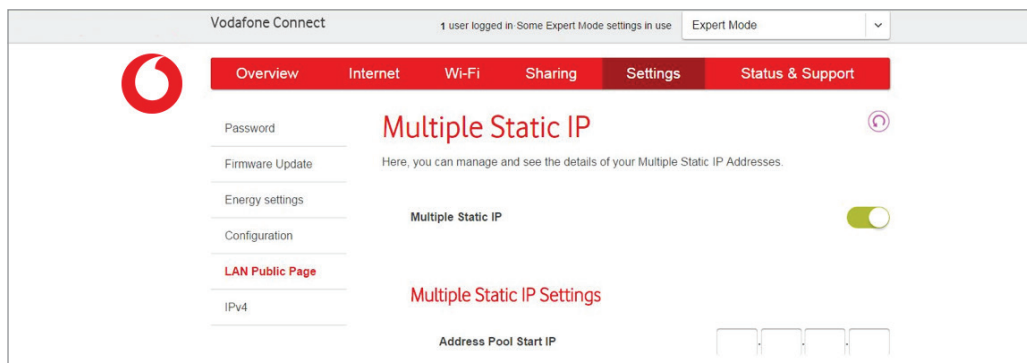


3. Select '**Settings**', and the '**LAN Public Page**'.



4. Toggle the button to '**on**'.

The IP range needs to be entered into the Vodafone Broadband router using a subnet mask rather than CIDR notation. For example 87.75.199.128/29 becomes 87.75.199.128 255.255.255.248.



5. In the **Address Pool Start IP** field, enter the first usable IP of the range.  
For example 87.75.199.129.
6. Enter the subnet mask into the **Address Pool Mask**.
7. In the **CPE IP Address** field, enter a chosen IP from the range assigned. See screenshot for example.



8. Click on '**Apply**' at the bottom of the page.
- At this stage, you can assign your public IP's manually to the devices within your network. However, if you would prefer your Vodafone Broadband router to perform that task using DHCP then you can enable and configure that feature once you have completed the Multiple Static IP configuration.



Copyright © 2018 Vodafone Limited. All rights reserved to Vodafone or third-party licensors and materials may not be used in any way or copied in whole or part without prior written permission of Vodafone Limited. Vodafone and the Vodafone logo are trademarks of Vodafone Group Plc or its associated companies.

Charges exclude VAT which shall be charged at the standard rate. Charges may be subject to change in accordance with the terms of the Agreement.