Pursuant to section 180(1) of the Communications and Multimedia Act 1998 [Act 588], the Malaysian Communications and Multimedia Commission (“the Commission”) is responsible for the development of a numbering and electronic addressing plan. As provided under section 3.3 Part A of the Numbering and Electronic Addressing Plan (“the Plan”), the Commission hereby varies the Plan as follows:

1. Amendment of Part B: Section III Sub-Section 10: Electronic Address- IP Addressing

The Plan is varied by substituting Sub-Section 10 with the following:

10.1. Overview

10.1.1. An IP address is a number that identifies each sender or receiver of information that is sent in packets across the Internet. When a HTML page is requested or an e-mail is sent, the Internet Protocol part of TCP/IP includes the IP address in the message and sends it to the IP address that is obtained by looking up the domain name in the Uniform Resource Locator which was requested or in the recipient’s e-mail address. The recipient is able to see the IP address of the Web page requestor or the e-mail sender and can respond by sending another message using the IP address it received.

10.1.2. An IP address has two parts: the identifier of a particular network on the Internet and an identifier of the particular device (which can be a server or a workstation) within that network. On the Internet, only the network part of the address is looked at, that is, between the router that move packets from one point to another along the route.

10.1.3. There are two types of IP Addresses currently use in Malaysia; Internet Protocol Version 4 (‘IPv4”) and Internet Protocol Version 6 (‘IPv6”). An IPv6 address is a protocol that was developed to support the recent exponential growth of the Internet and development of new applications.
10.2. IP Addressing Structure

10.2.1. IPv4 Addressing

10.2.1.1. IPv4 Addresses use 32 binary bits ($2^{32}$) to create a single unique address on the network and contains 4.3 billion addresses.

10.2.1.2. IPv4 Addresses use four decimal numbers and each decimal number is separated by a dot. This is sometimes known as the dot address or “dotted-decimal notation”. Dotted-decimal notation divides the 32-bit Internet address into four 8-bit fields and specifies the value of each field independently as a decimal number with the fields separated by dots.

10.2.1.3. The IPv4 address structure is as follows:

![Figure 10.1: Address Structure for IPv4 – Reference from the Internet Assigned Numbers Authority (IANA)](image)

Where,

$X =$ Decimal numbers where the value are between 0 and 255

10.2.2. IPv6 Addressing

10.2.2.1. IPv6 Addresses use 128 binary bits to create a single unique address on the networks and the end-users and contain $2^{128}$ addresses.

10.2.2.2. IPv6 Addresses use eight sets of four hexadecimal address (16 bits in each set), separated by a colon ‘:’.

10.2.2.3. The IPv6 address structure is as follows:
FIGURE 10.2: ADDRESS STRUCTURE FOR IPv6 – REFERENCE FROM THE INTERNET ASSIGNED NUMBERS AUTHORITY (IANA), IETF STANDARD DOCUMENT (RFC 4291)

![IPv6 Address Structure Diagram]

Where,

X = Hexadecimal numbers where the value are between 0000 and FFFF of the eight 16 bit of the address

10.3. Provision of IP Addresses

10.3.1. IP Addresses are currently obtained from APNIC or through holders of IP Address assignments located in Malaysia. The Commission intends to continue with this process subject to the conditions set out in this Plan.

10.3.2. APNIC assigns IP Address blocks based on an open policy as outlined at [http://www.apnic.net](http://www.apnic.net). These open policies have been developed and are reviewed in conjunction with users and other interested parties from time to time under the ICANN RFC (Request for Comments) Procedure.

10.3.3. Only those assignment holders who are either Malaysian or Malaysian permanent residents, who have been issued with IP Addresses by APNIC, shall be required within 30 working days of such provision to inform the Commission in writing.

10.3.4. Applicable Principles

10.3.4.1. All holders of IP Addresses shall be entitled to further provide IP Addresses to its end-users on a permanent basis (i.e. fixed IP Address) for use in Malaysia in accordance with the following principles:

(a). The provision of IP Addresses to the end-users shall be made in a fair, equitable and non-discriminatory manner; and

(b). The provision of IP Addresses to the end-users shall be assigned with unique public IP Addresses.
10.3.5. Conditions of Use

10.3.5.1. Notwithstanding anything to the contrary in any conditions of use imposed by APNIC, the holder of any IP Addresses shall comply with the following conditions of use as set out in 10.3.5.2 subject but not limited to any other conditions referred in this Amendment Notice.

10.3.5.2. The use of any IP Address shall be subjected to the following conditions:

(a). The use of any IP Address shall be subjected to this Plan;

(b). The IP Addresses issued shall not be charged, sold, auctioned, traded or transferred otherwise than as permitted under this Plan;

(c). Comply with the conditions imposed by APNIC to the extent that they are not contrary to these conditions; and

(d). IP Addresses that have been issued to end-users shall not be suspended or cancelled by the provider except:

   (i). Where the end-user has not complied with the conditions of the network service or application service to which the numbers relate, such as timely payment of charges associated with the service;

   (ii). In compliance with instructions from the Commission; or

   (iii). Upon the end-user’s request.

10.3.6. Retention of Information

10.3.6.1. Assignment holders of IP Addresses shall keep or retain the following information:

(a). The assignment holder’s use of IP Addresses issued by APNIC;

(b). The assigned IP Addresses; and

(c). The identity of each end-user of paragraph (b).

10.3.6.2. Assignment holders of IP Addresses issued by APNIC shall within 45 working days after the commencement of this Plan, submit the information stated in 10.3.6.1 (a) to (c) to the Commission.