



RFC 1918 and Consumer Routers

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The DHCPatriot™ is a broadband subscriber authentication device designed to give network administrators the same visibility on DHCP networks they once had on dial networks.

Introduction

The DHCPatriot system uses what we call unauthenticated or pre-auth subnets in conjunction with Captive Portal authentication to provide the optional authenticated DHCP feature. This feature allows a device to be tied to a username and any IP addresses that device uses in the future without the need to hand-associate the device's MAC address with some identifying credentials.

These pre-auth subnets are typically RFC 1918 (<https://tools.ietf.org/html/rfc1918>) addresses (10.0.0.0/8 ; 172.16.0.0/12 ; 192.168.0.0/16). These are used as there is no reason to use public addresses for the pre-auth purpose. During the pre-auth phase, the customers can only get to the Captive Portal. Subnets from 172.16.0.0/12 are a popular choice as we (FNGi) have long recommended 172.28.x.x subnets for this purpose.

The problem

Recently, we have been receiving reports that some consumer routers are auto-configuring access point (or sometimes referred to as bridge) mode when RFC 1918 addresses are encountered on the WAN interface. This creates problems for users as then their devices are competing for IP addresses on the WAN instead of the router receiving the IP address and performing NAT duties.

What can be done?

Some customers have reported some progress in this area. They have used RFC 6598 (<https://tools.ietf.org/html/rfc6598>) addresses (100.65.0.0/10) in place of the RFC 1918 addresses for the pre-auth subnets. This effectively prevents the router from setting access point mode as it did not detect RFC 1918 addresses on the WAN interface. It should be noted that RFC 6598 addresses are not really meant for this purpose but rather specifically for Carrier Grade NAT solutions. As such, it cannot be predicted if any technical problems will be encountered regarding the usage of RFC 6598 addresses in this manner.

How to Purchase

The DHCPatriot™ may be purchased direct, or through one of our reseller partners. If purchased direct, no discount from MSRP will be available.

To purchase through a reseller, please contact your reseller of choice. For a current list of resellers, with contact information, please visit <http://www.network1.net/products/dhcpatriot/>, email DHCPatriot@network1.net or call 800-578-6381 opt.3 (419-739-9240 if outside the United States of America) with your request.

To purchase direct or receive pre-sale support, please use the following contact information:

DHCPatriot@network1.net

800-578-6381 opt.3 (419-739-9240 opt.3 if outside the United States of America)

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