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Located in historic downtown Wapakoneta, Ohio, FNGi has been instrumental in developing and supporting Internet Networks across the U.S. since 1993. The FNGi team can assist you with all phases of your Internet Network from initial planning through long-term support.

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FOCUS Newsletter

In this issue we discuss how to get ready or bolster your existing IPV6 deployments and how tighter integration with our services makes for a better end product for your customers. We also dive into a new way to interact with your core customers and engage them in a way you may have not considered before and finally we take a look at just some of the customization options for the DHCPatriot.



YOUR CONNECTION TO FIRST NETWORK GROUP NEWS

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IPv4 still available, but not for long.

Deploying IPv6 is vital. The Internet as a whole is getting closer to a time when all Internet service providers will be required to have fully working IPv6 networks in order to deliver a full and competitive experience for end-users. It is vital that everyone who provides network connectivity or services on the Internet start their IPv6 deployment as soon as possible.

While the global pool of IPv4 addresses has “officially” been depleted, the American Registry for Internet Numbers (ARIN), who is responsible for allocating addresses to entities in North America, still has a pool of addresses left. This pool, however, is dwindling quickly. If you need additional blocks of IPv4 addresses, it is crucial that it be addressed as soon as possible.

This topic that can seem very confusing at first. Our team can help you understand how IPv6 works, and assist you in determining a viable action plan for deploying IPv6 infrastructure to your networks, servers, and customers.

While IPv6 is a major focus going forward, IPv4 will still do some of the heavy lifting in the next few years. ISPs will need to continue to support and develop their IPv4 networks in parallel with IPv6 for the foreseeable future.

If you are an ISP that has a direct IPv4 allocation from ARIN and are being told that you cannot have any more addresses, First Network Group can help you understand the policies and assist in organizing your documentation in order to get the address allocation for which you qualify.

If you are assigned IPv4 addresses from an upstream provider, and are being told they have no additional addresses available, then your upstream provider is likely in a similar position. We can help by discussing this situation with your upstream provider, or assisting you in getting your own address allocation from ARIN.

Contact us today!



Better Together

Over the last several years, our Call Center and Tech Services department has significantly improved the caller's experience and nearly every metric thru the enhanced access to our customer's CRM, ticketing and service software via secure VPN connections.

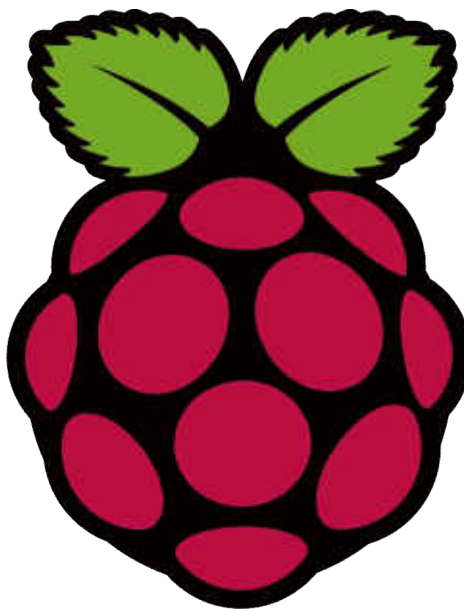
Providing technical support for an internet connection or television service in a vacuum is extremely difficult. If you currently use our Call Center and/or Technical Support Services for your customers the quality of this product only increases with the info that you share with our team.

The pinnacle of this synergy is our ability to remotely connect to your equipment or software via a VPN connection and can actually work on the customer's issue "closer to the metal" - for example, logging into an ONT or double checking a service address or other account information in your CRM system. Contact Cory Lykins at coryl@network1.net to find out how we can work together to better integrate our systems to provide the best customer service and solutions we can.

According to Google, the Internet contains 5 million Terabytes of data. Google's search index is about 0.004% of this.



Microcomputing may yield a major opportunity to build customer loyalty.



I recently scanned the network at our vacation home to identify our connected devices and catalog the MAC addresses. Who would have thought that a childless middle aged couple would have 15 Internet connected devices? Personal computers on one hand: notebooks, tablets, and smartphones, on the other hand: cameras, smart outlets, an Amazon Echo, Smart TVs and video streaming (ROKU) devices, a smart thermostat; plus a (Raspberry Pi) microserver running home automation that is a bridge between the two worlds.

From the Amazon Dash Button that lets you wirelessly reorder laundry detergent with a press, to Internet connected kitchen appliances, to the

long promised smart home, the Internet of Things (IoT) is not coming, it is here.

There has also been an explosion of home hobbyists and "makers" using credit card sized, Single Board Computer (SBC) microcomputers (like the Raspberry Pi) and microcontrollers (like the Arduino) and leveraging Linux to run their home automation and security, manage media, develop their own "things" for the Internet, and program their own robots.

The latest generation of this credit card size computer sports a quad core processor, 1GB RAM, HDMI video, 4 USB ports, and built in WiFi and Bluetooth. The RasPi3 will run several flavors of Linux - commonly configured on and booting from an 8GB microSD card - and runs on only 5 volts at 2.5 amps. The \$35 Raspberry Pi was designed in Great Britain for use in an expanding elementary Computer Science curriculum. (<http://www.raspberrypi.org>)

This "maker" community is a unique and exciting way an ISP could capitalize on the enthusiasm and growth in this market is to show support for the early adopters among your users. Sponsor a user group for Raspberry Pi enthusiasts (or the SBC of choice in your market), perhaps provide the space for a regular group meeting. Your small company flexibility and sense of community are two of the advantages you have over many national competitors and using those advantages to recognize and connect with your power users and early adopters is one unique way that you can build customer loyalty.

- Steve Walter
President & CEO First Network Group



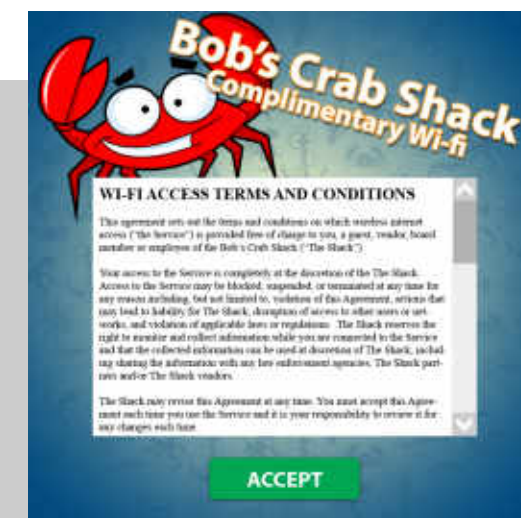
Customize Your Experience

The DHCPatriot supports a wide variety of customizable options and reports. Things like the customizable Captive Portal page allow for many possibilities to enhance the user experience.

The Captive Portal page is the first page a customer will see before they have registered on your network. A simple addition of your company logo and colors to provide consistent branding is a simple change you can make. You can even fully change all the associated HTML to allow the page to display any content you'd like to show. This is done by using the various configuration options under Auth DHCP Config -> Captive Portal.



Default Captive Portal



Custom Captive Portal

You don't actually have to require a "username" from the customer to perform authentication. Anything that is text based can be used including account numbers, student or employee ID numbers, etc. The page can also be setup to simply display an agreement page to allow people to connect.

Finally, authentication has options, and actually isn't required at all. The DHCPatriot supports the backend of authentication in two ways. Login credentials from the captive portal page can be sent to an external RADIUS server or the credentials can be authenticated locally on the DHCPatriot system against a predefined list.

When not requiring authentication (aka Standard DHCP) there are situations where you might not want to do authentication. One would be in the case of non-internet equipment such as IPTV Set Top Boxes or ONTs. Another would be when option 82 information is being recorded by the DHCPatriot system. This information usually contains the circuit ID of the customer. Therefore, you would be able to identify the customer without authentication.

The DHCPatriot system truly is a flexible product. You have complete control over the appearance of the captive portal login page. If you are doing authentication, you can use whatever text you want for the username or password. Authentication can be done against a RADIUS server, locally on the DHCPatriot system itself, or not at all.

