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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 Spring into action by discussing support for new devices coming out nearly every day. We also take a look at expanding your income with co-location services and our own partnership with Western Digital® expanding our storage solutions for you with their Intelliflash system. Finally we close on the second article in the API series for the DHCPatriot.



FOCUS

YOUR CONNECTION TO FIRST NETWORK GROUP NEWS

April — June 2019

Supporting New Devices and Services

In the ever changing world of IT, few things change as quickly and can have as big of an impact on your customer base than the software and hardware your customer's use. Sure, the technologies that power the internet "behind the scenes" evolve and change, but that deployment is typically paced and well planned out. The consumer space is a totally different animal and learning how to support your customer today and tomorrow is dynamic challenge.

In 2018, our End-User Technical Support Services took over 30 calls from callers who still had dial-up service. Compare that to 100's of calls we've taken customers with Roku® video streaming devices. That's not only a wide gulf in total calls, but a huge change in technology and how customers are using the internet. Does your team remember how to enable hardware-based flow control for a dial-up connection or know how to find the MAC address on a Roku® Streaming Stick?

It's easy to support dial-up in 2019. It's extremely rare and all the in's and out's, complications and error messages are well established and known. However, making sure you can support the latest technology in Cell Phone Operating Systems, consumer routers, streaming devices and modern Computer Operating Systems is difficult when they change so frequently. Since the release of Windows 10 in July of 2015, Microsoft has changed the content, layout and usability of the Settings App in 5 different refreshes and a myriad of minor changes! With this simple example of the highly dynamic user space of consumer devices, it's easy to see how difficult it is to stay up-to-day to effectively assist and support your customers.

Thankfully if you use our End-User Technical Support Service, you don't have to worry about any of this. We worry about it for you. Your staff can spend their energy directly on your product offering, sales, and customer retention. Keeping up-to-date and adapting to this exciting and often changing landscape is our job and something we pride ourselves on. From 100's of DSL and Cable Modems to the latest gaming consoles to email setup on a 3 year old iPhone, your customer is safe when contacting us for assistance.

If you don't currently subscribe to our End-User Technical Support Service or Call Center Services, give us a call today to find out more about our product and how we can make things easier on you and your staff and, most importantly, give your customers the attention, assistance and detailed knowledge that is required in today's consumer electronic space.

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From the Desk of "The Network Guy"

Colocation/Hosting for PR and Profit.

Many, if not most, of your business customers have inadequate strategies in place for disaster recovery. The good news is that you may be in the best position to provide them with an excellent solution. A strong solution includes network as well as power redundancy, and these are the rules rather than exceptions in the Telecom world. If you are already connected to the customer, you can be very creative about implementing private network that only carries their backup/redundant traffic letting you keep the data on your facilities and saving both you and the customer the unnecessary cost of Internet connectivity and while increasing security.

You may recall that First Network Group recently expanded our own backup capacity to increase our geographic diversity. Our live parallel backup systems are in our ILEC's Central Office. Our new backup location is fifteen miles away, in an office they operate in a nearby market. The sites are already connected and the distant location is equipped with automatic standby power. FNGi rented a rack, and transport on the existing route. We provided our own hardware and battery backup (to accommodate the lag on generator startup.)

The Public Relations component is that you are in a position to understand your customer's needs and to provide a reasonably priced robust solution - strengthening your existing relationship. If a disaster strikes, you will be part of the solution not part of the problem. Depending on your current IT offerings, you may also be in a position to provide the expertise for the backup solution, beyond location and transport.

All in all it can be a win-win solution for you and for your customer.

Sincerely,



Stephen C. Walter
The Network Guy
Founder and President, First Network

Group, Inc.

Expanded Your Storage

First Network Group now offers an expanded lineup of storage offerings to cover a wider range of applications and price points.

We have partnered with Western Digital to offer their line of IntelliFlash storage systems as an alternative to NetApp's offerings that we continue to support. These are both very good options for primary storage for virtualization and other critical workloads.

The Western Digital IntelliFlash line consists of models ranging from hybrid flash+disk to all-flash and NVMe to cover many different use cases and budgets. Hardware options are significantly simplified compared to other vendors and all software features are included. All systems run the same operating system and have the same management options, which also simplifies deployment and operation.

We are now also offering white-box storage systems that can run various different operating systems, such as FreeNAS, standard Linux, or nearly anything else. These come in at a much lower price point than fully-integrated systems. These options will not have the same sort of high-availability options and advanced management as Western Digital IntelliFlash or NetApp. They do, however, serve as perfect second or third tier storage for non-critical or backup needs.

First Network Group's engineers can build you the perfect combination of primary, disaster recovery, and backup storage to meet your needs, all integrate with the appropriate servers, networking, and software. In addition, we can monitor and manage your entire IT infrastructure to reduce the need for local, highly-trained, dedicated employees or to free up your existing employees to do other important duties.

For more information on our storage offerings or any other server or networking needs, call Randy Carpenter, VP of IT Services at 1-800-578-6381, option 1.



API Example: User Account / Device management without authentication (known clients)

This article is the second in a series about the API functionality available in the DHCPatriot and how it can make the management of your subscribers more streamlined. The DHCPatriot system has a rather extensive API system for automated remote management. Our API documentation is available in the DHCPatriot manual at our website <http://www.network1.net>.

This article will focus on using standard DHCP API calls to manage subscribers without authentication. This can be done only if the MAC address of the subscriber device is known, most likely only if these devices are provided by the ISP. If done correctly, the sessions will still show an identifier that is supplied during the API calls with the MAC address so that the subscriber may be easily identified.

This article assumes that the DHCPatriot system is not configured for captive portal authenticated DHCP with the subscribers referenced here. It also assumes that the devices' MAC addresses are known to the ISP (such as if the devices are provided by the ISP). The standard DHCP dynamic subnets are set to "Allow Only Known Clients". Subscriber devices' access is being controlled via the "Known Client" list.

A new subscriber, John, signs up for service. During the signup process, a modem/router combo is assigned to John. The billing system or middleware being used to assign the modem/router combo uses the DHCPatriot system API call "Add Known Client" on page 92 of the manual to add the device to the DHCPatriot system including the customer's account number as the identifier (API abuse complaint tools will be discussed in a future article). This will make it easier to identify the subscriber (John) during abuse complaint resolution or similar. When the installer arrives at John's residence, he does not need to do anything other than hook up the equipment properly for

John's service to begin functioning.

Several months later, John fails to pay his bill. At this point, the billing system or middleware will use the API call "Delete Known Client" (page 93) to remove John's access. This allows cutting off the subscriber's access for failure to pay without having to do something with his physical service or similar. This is often desirable as customers tend to pay after a short time. After John pays his bill, the API call "Add Known Client" (page 92) will be used again to reactivate John's service.

Several years later, John is moving out of the area and so cancels his service. At this point, the billing system or middleware will use the API call "Delete Known Client" (page 93) to remove John's former modem/router combo device. This makes the device ready to use for future customers.

Throughout this entire scenario, no one (not John, nor any employee of the ISP) had to directly interact with the DHCPatriot system. John didn't have to interact with anything. The ISP only needed to interact with the billing system or middleware. This streamlines day to day operations at the ISP as well as makes for happy customers.

— Darren Ankney
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Calix Cloud Support

Does your company use Calix Support Cloud (or Compass) to manage end-user services?

Our End-User Technical Support team is fully trained in this system and ready to assist your customers 24 hours a day! If you haven't already set up our access for your customers, contact us today to get started!

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