

In Depth: NEMS

One of the things that I have to do is troubleshoot network issues. In the past, I've used a virtual machine running [Wireshark](#), or more recently I've been using [this](#) on my MacBook Pro. Both are useful for situations where a network issue was pretty clear and easily found. But the problem with both these solutions is that if I am hunting for something that isn't easily found, or I have to catch it in the act so to speak, they're impractical. I would have to set either of these on something that the customer owns. The same is true if I want to set it up for constant monitoring of a network to make sure that it is running as it should.

Enter [NEMS](#) which is short for [Nagios](#) Enterprise Monitoring Server. It is a pre-configured and ready-to-deploy Nagios Core image designed to run on the [Raspberry Pi 3](#) micro computer which can be found on Amazon for just over \$50 CDN. Making it a cheap and easy way to set up network monitoring for networks big and small.

NEMS watches hosts and services that you specify and alerts you when things go wrong on your network. For example, I was having problems on my home network accessing my mail server. Since the traffic to and from my mail server is encrypted, I used NEMS to isolate that traffic on my network and I was able to see that the traffic was being altered by the router that I was using at the time which my mail server was rejecting because it had been altered. That allowed me to take action and replace the router. In short, NEMS gave me a very easy and quick way to figure out an issue that would have puzzled me for days. But besides trying to figure out odd issues on your network, you can be alerted if your server's hard drive is getting full, if your web site goes down, or if your server room is getting warm. That way you can take action before things get critical.

The project is run by Robbie Ferguson, President [Category5 TV Network](#). I spoke to him recently and he's a big believer in trying to push down this sort of technology which used to be available only to big companies down to anyone who needs it. He's thought this through from a setup and deployment standpoint, so if you have a basic understanding of how networks work, and you have an adventurous streak, you don't need someone like me to deploy NEMS. Or if you're someone like me who troubleshoots networks among other things, I can deploy this solution and give my clients enterprise grade network monitoring for next to nothing.

If you're responsible for a network, or you have a strange network issue, I'd suggest grabbing a Raspberry Pi and a copy of NEMS. From my experience, you'll understand what is going on when it comes to what's on your network, which will allow you to better manage and troubleshoot it.

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