

Network Growing Pains

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Dear E.

You've been with us a long time, we have seen each others businesses grow. I have respect and admiration for the journey you have made. It's time for a technology reality check.

Your network at your new location is lacking. Lets start with our [Reliability and Stability](#) basics. You are using your cable company router for main phone system network, it is providing DHCP (Addresses for devices) and all NAT (Network Address Translation) and firewalling for all of your phones and some other devices, plus the network behind the SonicWall that most of your office is on. You can't manage the cable router, you can't reserve an address for your Hello Hub specifically, so every time there is a glitch, reboot or power outage, everything gets new addresses. This is the number one reason some phones have to be reconfigured constantly. The Hello Hub must find the phones and configure them constantly. **This device is also simply overloaded providing NAT and services to 80+ devices.**

At the physical level, you seem to have network connection problems at specific locations. You have tried swapping phones and ethernet cables to the wall jack, and the same locations often need a phone reboot, to get an address and join the network again. This is symptomatic of physical wiring or ethernet switch problems. It could be something like: ethernet cables wrapped around/over building wiring that causes a problem when the florescent lights go on and off or a "switching loop".

My recommendations:

You need a good network tech. That person will want to:

- Put your cable modem in "bridge" aka "public IP mode" - At no point should you be "double-natted" like you are now.
- Install a modern business grade firewall/router capable of handling your traffic. I recommend [Ubiquiti](#) equipment a lot, current Sonicwall and other gear would also work. Specifically, you have grown past commodity consumer or pro-sumer equipment. Your tech should have experience and knowledge with the product they recommend.
- Test and repair your existing cabling. We see a lot of variability of ping times, indicative of poor wiring. I use a slightly older version of [Fluke Cable Testers](#) but I've installed thousands of drops in my past, Your network tech should have an actual tester, not just plug things in and say 'works for me'.
- Evaluate your network switches. They might be fine, you might need some upgrades. It might be as simple as noticing that you have what is called a "switching loop" and relocating some cables.
- WiFi AP's.. Your network tech should have experience with and recommend business grade high density WiFi Access points. Again, I like [Ubiquiti WiFi](#), but Cisco and other vendors provide solid WiFi AP's. These should be wired back to your main ethernet switch. In no case should a real

business use “mesh” or “repeater” technologies. Good campus/business WiFi AP's provide coverage as a team, over wide areas, with seamless hand-off. Using your overloaded cable company router for WiFi is the main problem with your WiFi phones.

Respectfully Submitted, -Mike Harrison- Chief Technologist at ring-u.com and an old experienced network geek.

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