

# Networking Disasters

The ring-u Hello Hub and phone service work great most of the time.

You can browse the web & check your email on a complete disaster of a network or internet connection, but adding a VoIP (Voice over Internet Protocol) phone system requires some network considerations to work well (or at all).

If you have been directed to this page: **Don't Panic.**

Most of our initial installation problems have been direct results of marginal or bad local networks and internet equipment.

The good news: as we eliminate those problems, everything (not just your phone system) will work better.

Also take a look at:

[Ideal Network Setup](#)

[Firewall/Network Configuration](#)

[Routers with Known Issues](#)

[Switches & Switching Loop](#)

[Port Forwarding / External Remote Phones](#)

## Upstream

The big bad problem everyone points to is the local internet provider.

Some companies and their equipment are specifically configured to only work with their voice/telephony service. We have a valid easy test to see if your upstream provider is blocking SIP/VoIP or using a VoIP/SIP "Algorithm" that causes problems. This is often called "SIP ALG".

### Test:

If possible, plug your Hello Hub directly into your upstream connection.

Reboot it.

### V1 Hello Hub

Wait for the green light on the right LED.

- If you can call your phone number and it answers, they aren't blocking your traffic.
- If you can't, they probably are blocking your VoIP traffic.

### V2 Hello Hub

Wait for the OLED screen to display an IP address.

- If you can call your phone number and it answers, they aren't blocking your traffic.
- If you can't, they probably are blocking your VoIP traffic.

## Router/Firewall

This is that little wonder box that plugs into your ISP (Internet Service Provider) that makes you your own network, and is the gateway to the Internet. The following are things to be aware of:

- That router from 10+ years ago is probably not capable or worthy of your upstream internet connection. The internet has gotten much faster, your internet provider has probably gotten much faster and that box could use an upgrade. For not much money (often less than \$100) a modern high speed router will make everything much faster and give you options for control.
- If you have a modern router, you may have options to enable/block SIP/VoIP traffic that need to be changed. The ring-u service does not require any port forwarding or special firewall rules, other than to be allowed to connect. Some router/firewalls (Microtik for example) ship with default settings that block VoIP traffic. Turning off "SIP ALG" or similar settings is all it takes to have a happy reliable network for your phone system.
- **Double-Nat-ing** is a crime. Though shalt not double chain or daisy chain routers. Yes, it kinda works. badly. If you are doing this to extend your WiFi coverage, the answer is to turn the secondary (and tertiary) systems into Access Points, which is usually one or two clicks on their interface. That way they just provide WiFi, and don't re-translate all of your network traffic a second (or third.. ) time.

## Switch/Hub

This is what plugs all of your ethernet devices together. Some router/firewalls have 3 to 8 switch ports on them, and that may be enough. But for most businesses, there is a box that looks like an octopus of cables that feeds your network. Lets look at the hit list:

- Is it a 10/100 device from ages past? Time to upgrade. Modern computers and even streaming video from the internet can use enough bandwidth and packets to turn these into Zombies. Upgrade. Rule of thumb: if you need 8 ports now, buy a 16. Need 16, get a 24 port.. You will need more ports and daisy chaining switches when not needed will slow things down. We highly suggest not chaining past 2 deep. ie: A main switch, and then smaller ones that go back to the main switch. If you have a main switch and 4 satellite's that go back to the main, some of your traffic must traverse 3 switches, each with a little latency and limiting factors.
- Are all the traffic lights on your switch blinking rapidly all the time? You may have some network traffic issues, or not enough switch.
- Does you network sometimes go nuts, and rebooting (unplugging and plugging back in) your switch cause it to work again? Look at your switch square in the blinky lights and consider an upgrade, Not sure? Talk to your local networking geek. Tell them what you have, if he/she stifles a gigglesnort, you know the answer.

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