

The Pis ethernet is connected to an internal USB Hub , which also provides the Pis USB ports. This internal Hub is also connected via USB to the SoC , so all bandwidth of USB and LAN is shared (480 mbps). It also puts some load onto the CPU , which manages this traffic.

Using routers: The problem of multiple subnets and open driver support becomes an issue on a router to router basis. While the list of Open/dd-wrt supported routers is growing, it won't work with everything. Further, the process of flashing the router (and fidgeting with the makefiles, startup scripts, and configs) is entirely variable, depending on the router model. Custom firmware is perhaps more robust than using a Pi, but it's more geared towards superusers who want to enrich their home network, and would be hard to make deployable. OpenWRT

- Preloaded package manager (ipkg).
- Set up a VPN, runs lightweight server software
- more flexible than DD-WRT
- Create packages (perl, C) and Kernel Modules. Flash executables onto the router, or bind them to the firmware image.
- Has a (semi-supported) image for Raspberry Pi
- Per packet inspection (via monitor mode) is totally doable. Socket programming, no problem.

DD-WRT

- Supports any OpenWRT package
- Create custom modules in C or Python (requires a lot of space).

The takeaway: Raspberry Pi or OpenWRT. Assuming that a router can talk to a neighbor router (on a separate network) over wifi, OpenWRT seems like the way to go. However, raspberry pi has its advantages.