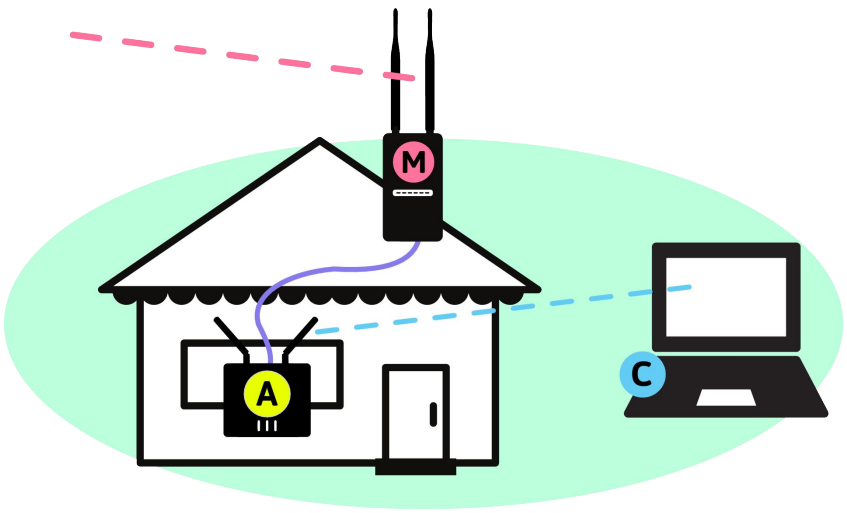
Guidelines for Mesh Networks

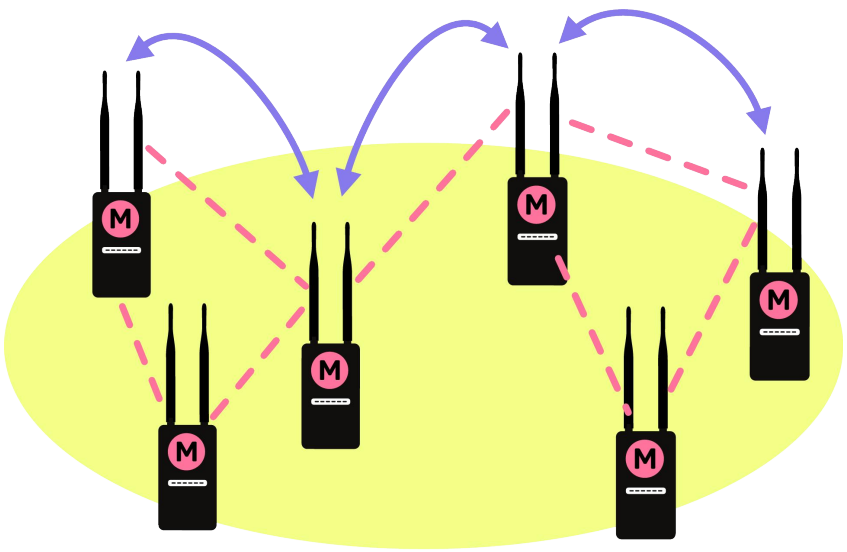
Every router should do just one thing

Avoid using the same router for an Access Point and a Mesh link, unless it has multiple radios. Use a separate Access Point device for people to connect to.



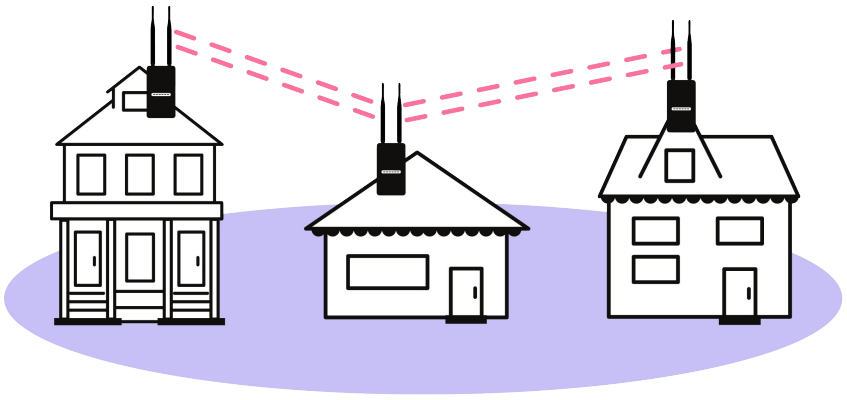
Minimize the hops on the network

Try to limit the network to 2-3 hops between locations, especially to an application server or Internet connection.



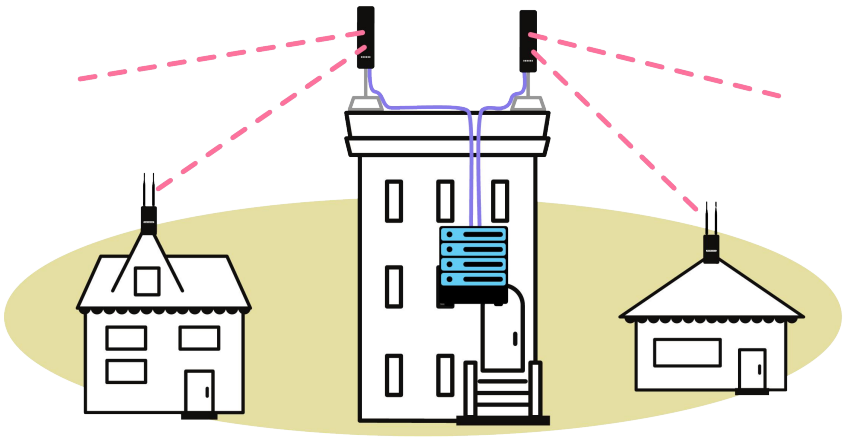
Use routers that handle multiple streams (MIMO)

For the main links in the network, use higher bandwidth devices. Some examples are Ubiquiti Rocket M, NanoStation M, or NanoBridge M devices, TP-Link WDR3600 or WDR4300 routers, and MikroTik 411 or 433 boards with MIMO radio cards.



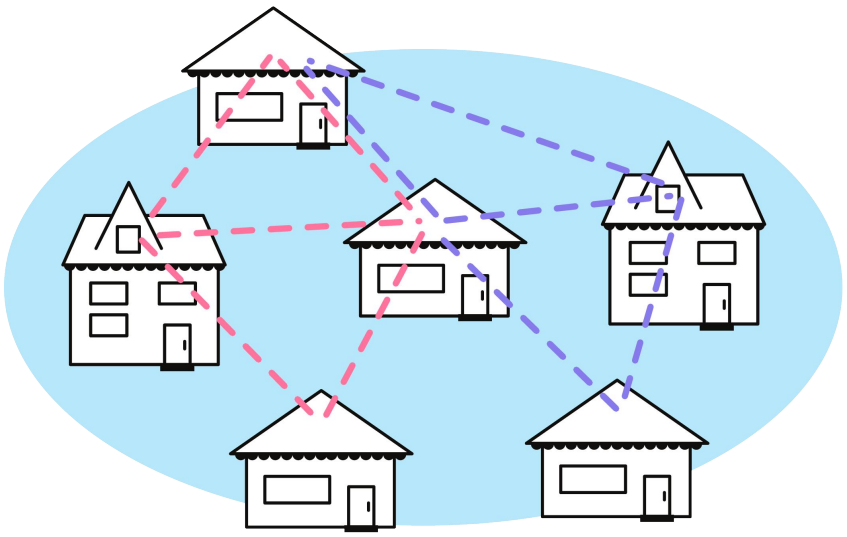
Provide multiple connections for gateways and servers

Create hubs with multiple routers to prevent bottlenecks, and increase bandwidth across the mesh.



Segment the network into smaller sections

Limit the number of connections to mesh nodes, to prevent bottlenecks. Create subsections on the network by using separate channels or wireless bands.



For more information, see the full **Guidelines for Mesh Networks** document.