Choices of Network Redundancy and loadbalancing

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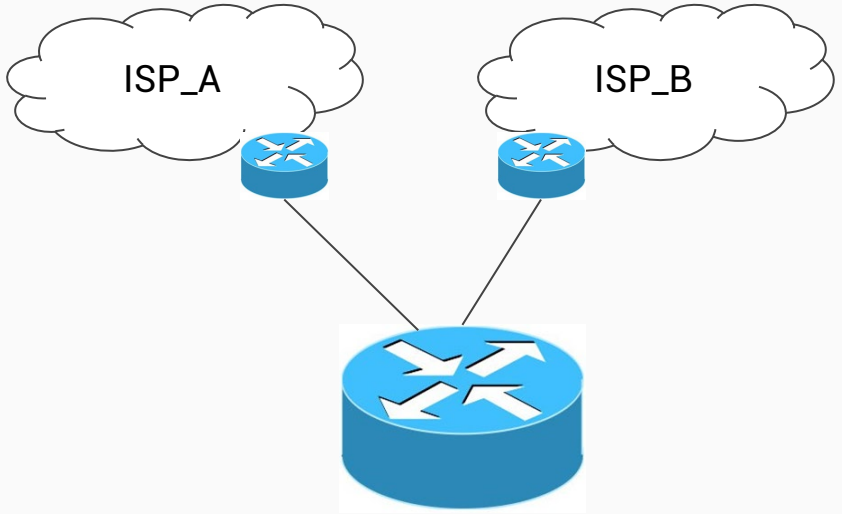
Why do we need to talk in this topic?



Choices for Redundancy/ loadbalancing

- CDN services
- On cloud/ on premise?
- Multi links/ multi providers?

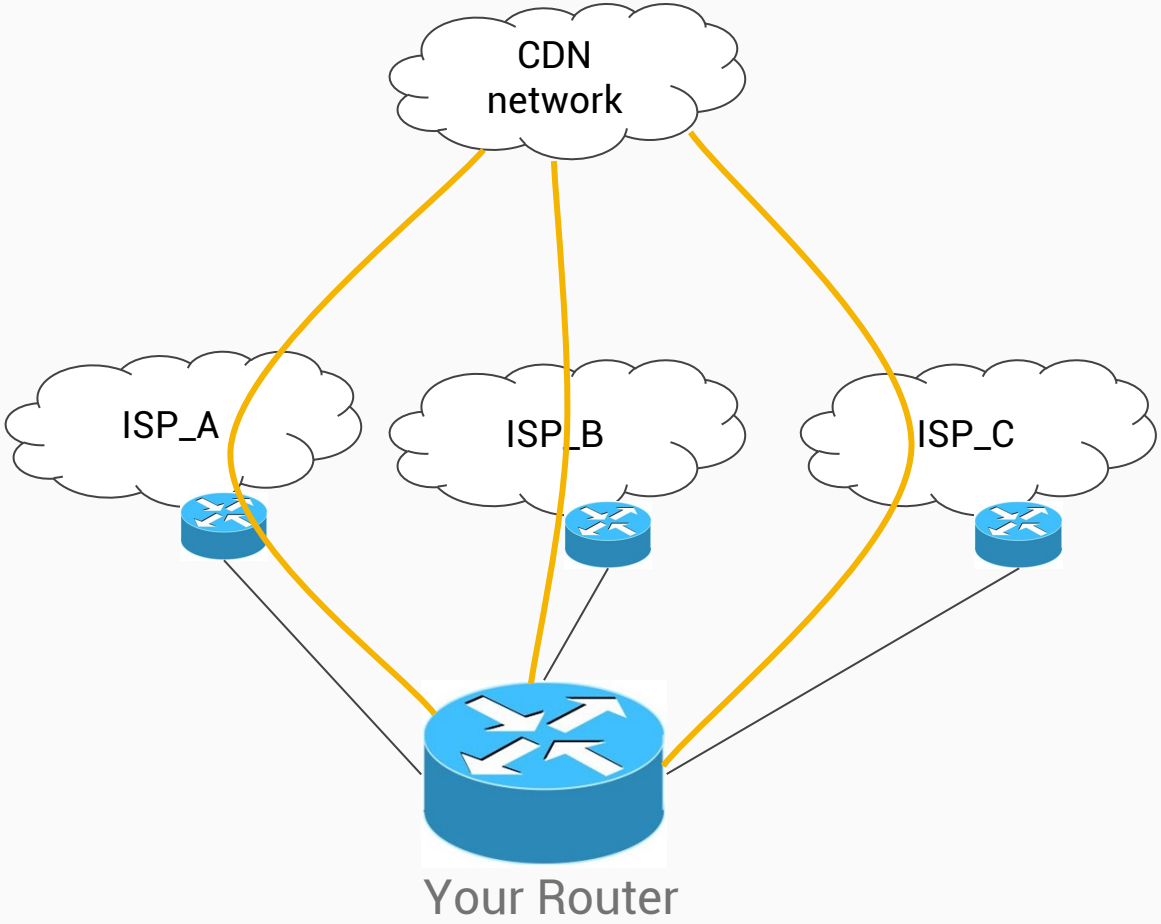
CDN network

Technical

- Tunnel ?
- Public IP ?

Non technical

- Policy?
- Geolocation / Latency?



Let's go to back to classic scenarios

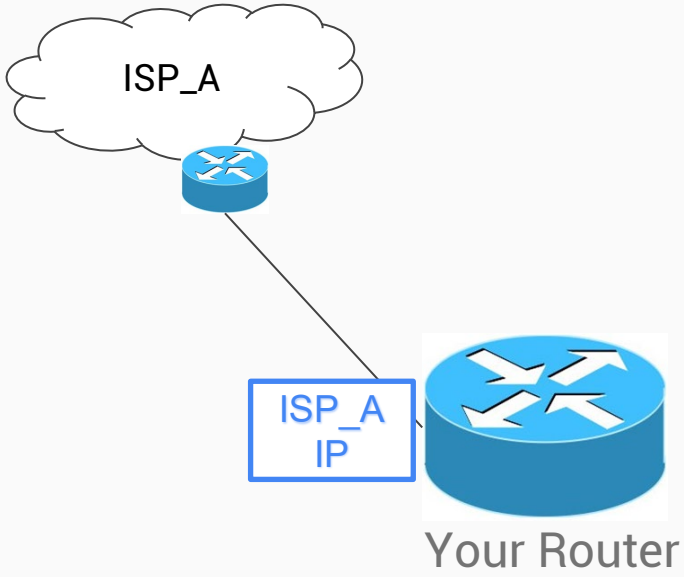
Legacy Network Single ISP

Technical

- Public IP
- Port forwarding (DNAT)

Non technical

- Redundancy?
- Policy?
- Price of change?



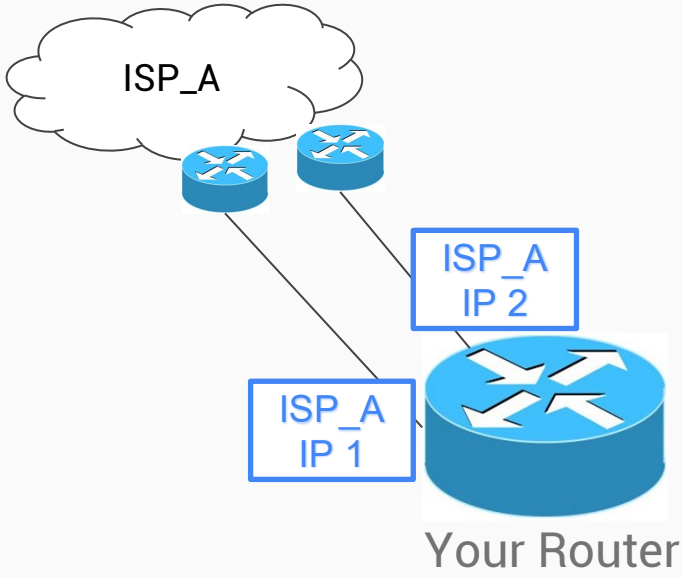
Legacy Network Single ISP/N-links

Technical

- Public IPs?
- Port forwarding (DNAT)
- Route mark?

Non technical

- Redundancy?
- Policy?
- Price of change?



The other perspective to scale up from Single ISP scenario.

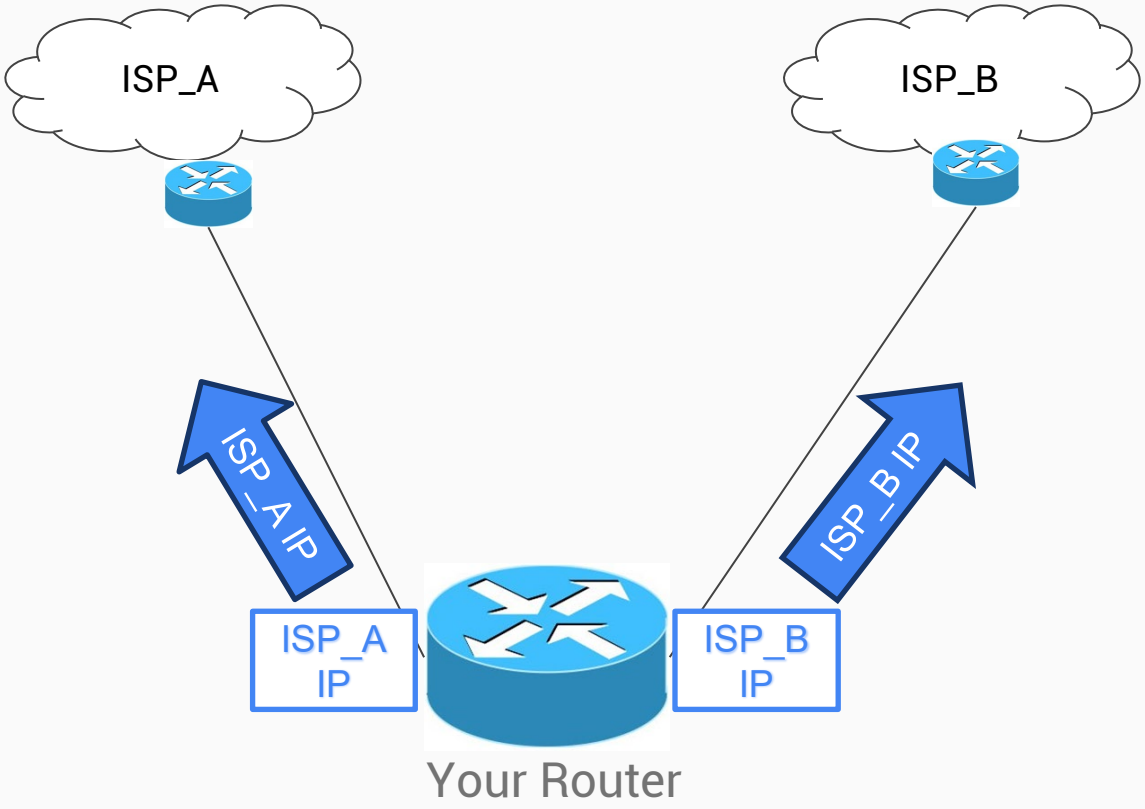
Legacy Network 2 ISPs

Technical

- Public IPs
- Balancing links
- Single connection with huge traffic?
- Route Marks/BCP38?
- Fail over links?

Non technical

- Policy?
- Price of change?



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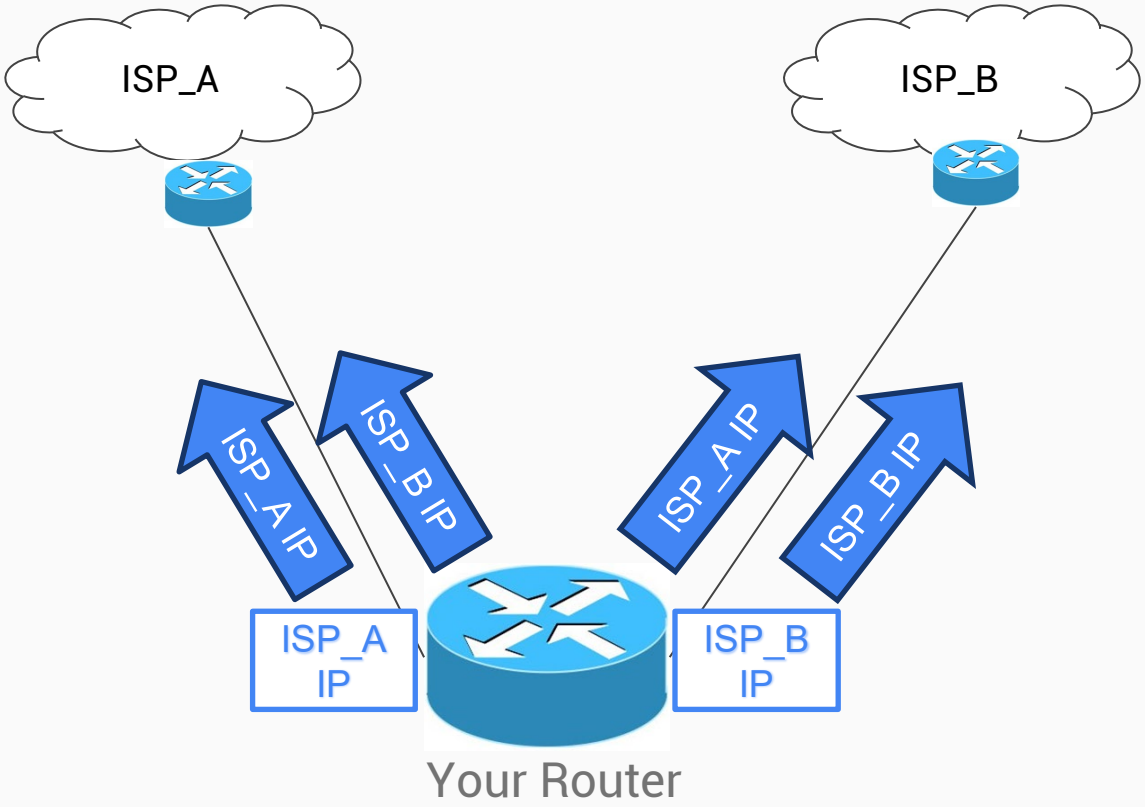

MANRS

Action2

Good to implement for prevent customer to attack the other network

- Prevent traffic with spoofed source IP addresses – Filtering
- Usually use loose uRPF filtering
- But they has no policy for add the exception for the asymmetric route customer

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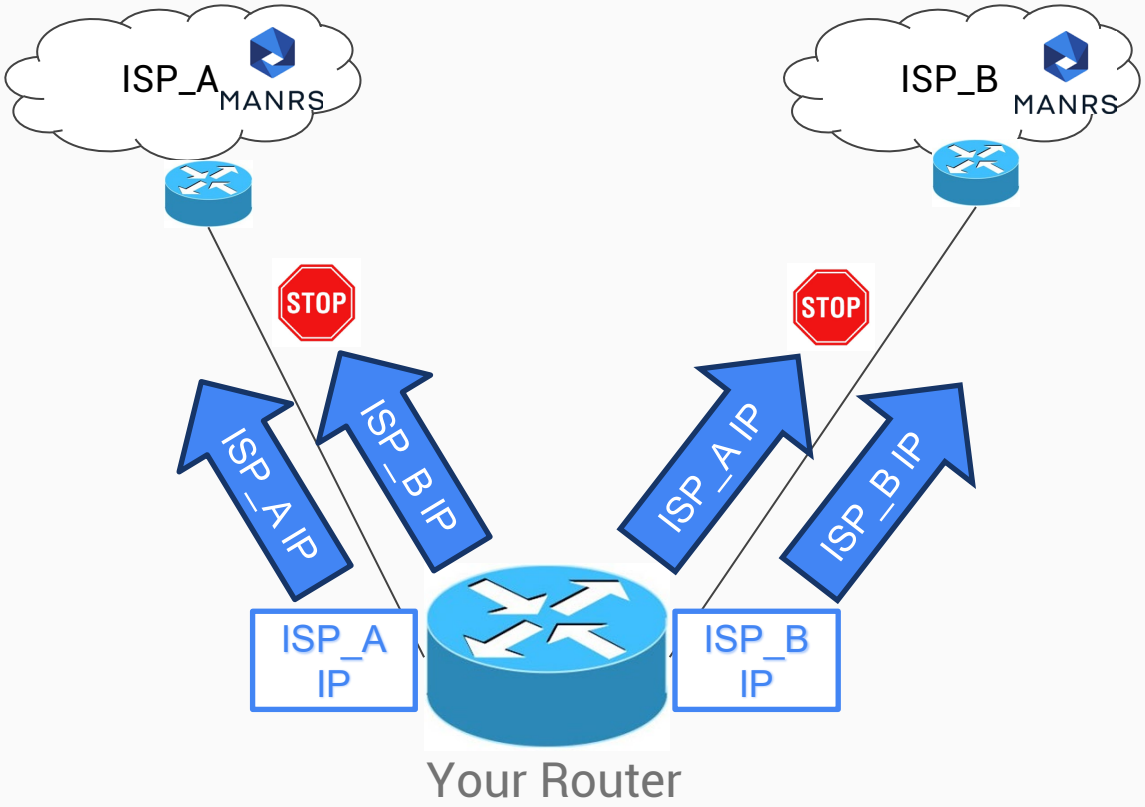

Legacy Network N ISPs

Technical

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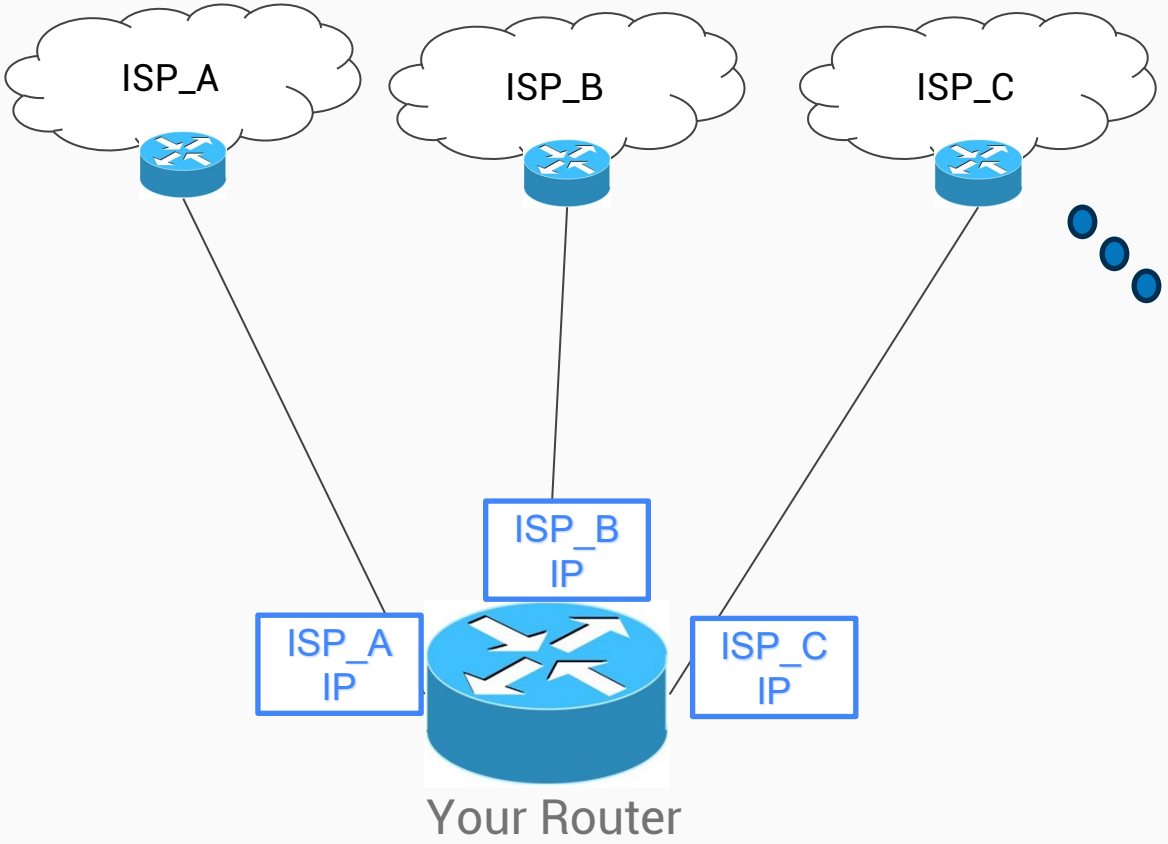
Non technical

- Policy?
- Price of change?



What if you are providing/using Realtime service?

Legacy Network N ISPs

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Non technical

- Policy?
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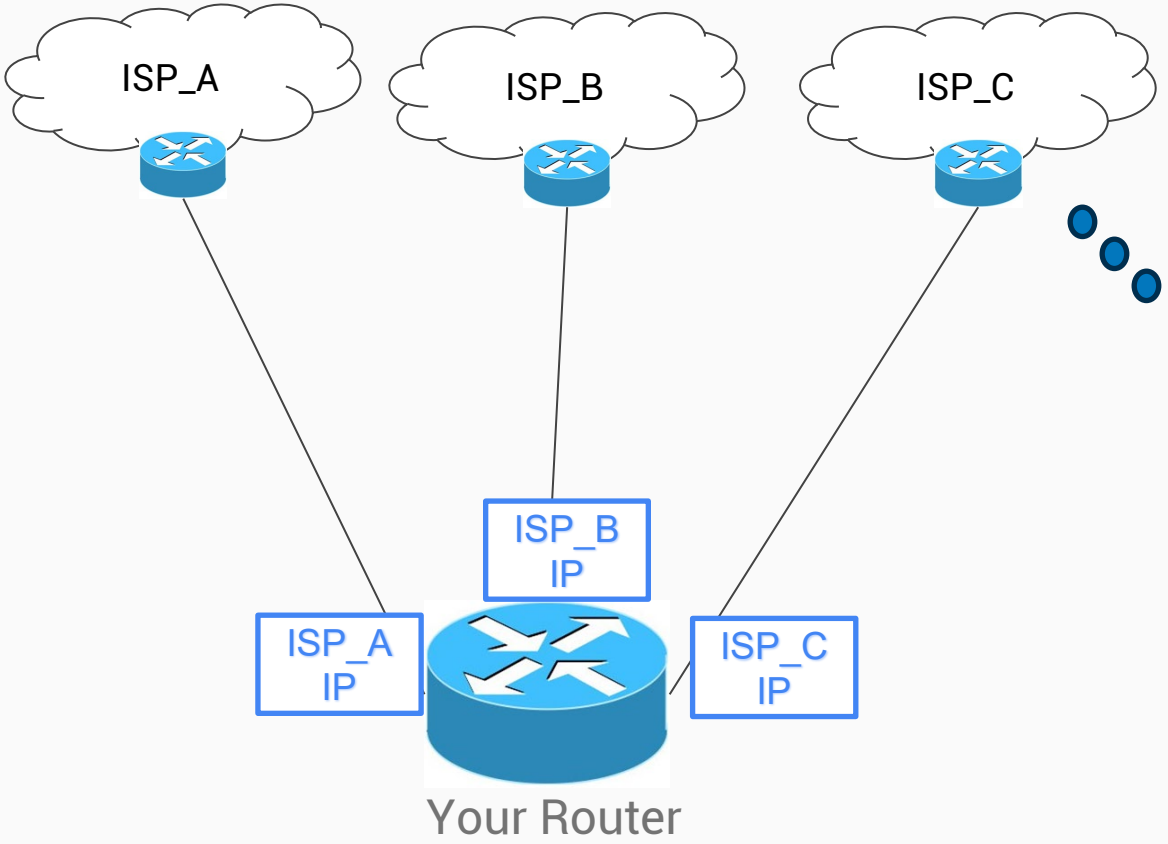


Extremely Abnormal technique

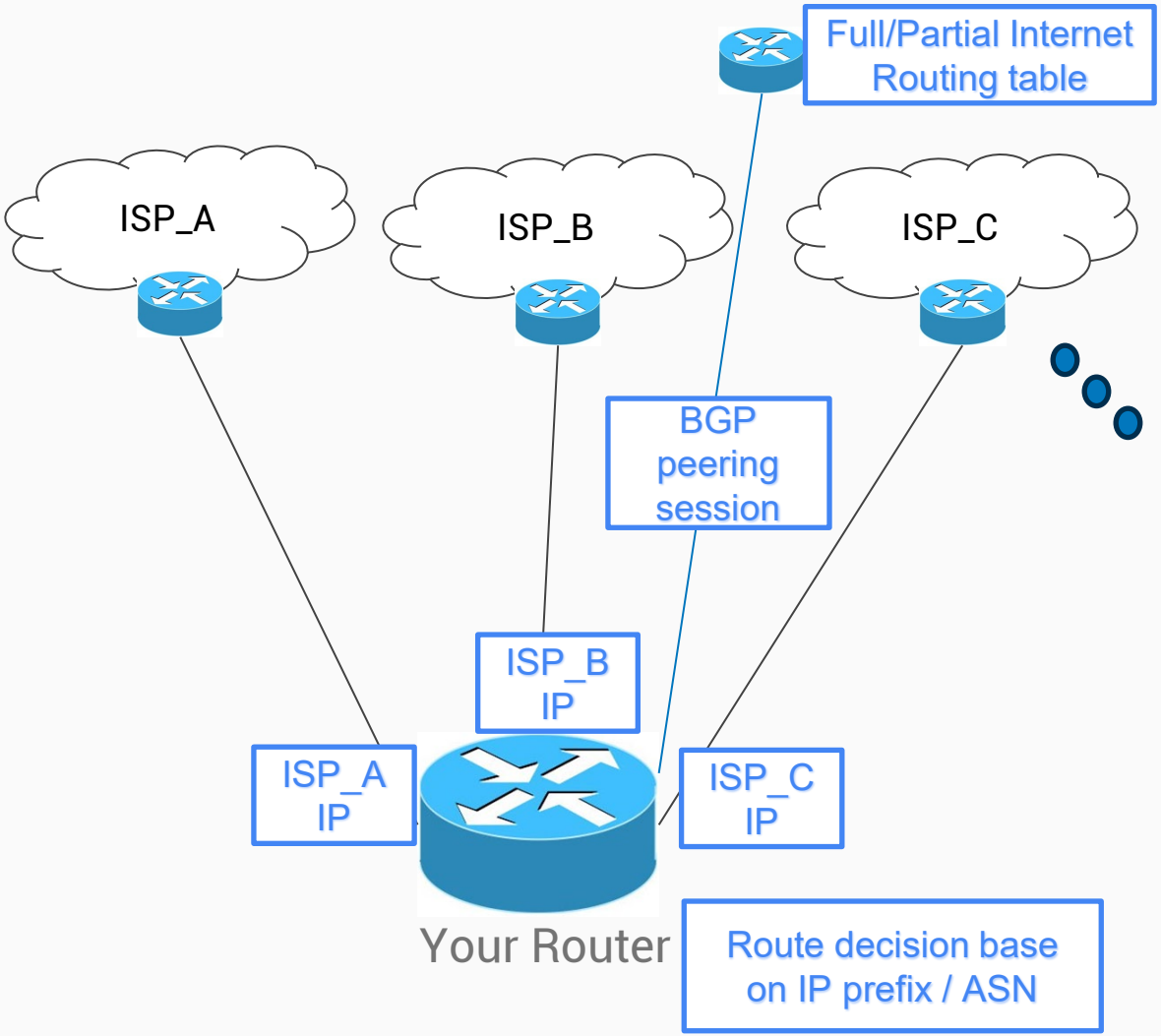
Not recommend to implement this

Using Internet routing information to make decision

Route assisted Network N ISPs

Technical

- BGP feed is required
- Strong knowledge / ISP connectivity is required
- Lots of work
- Too complex!!!



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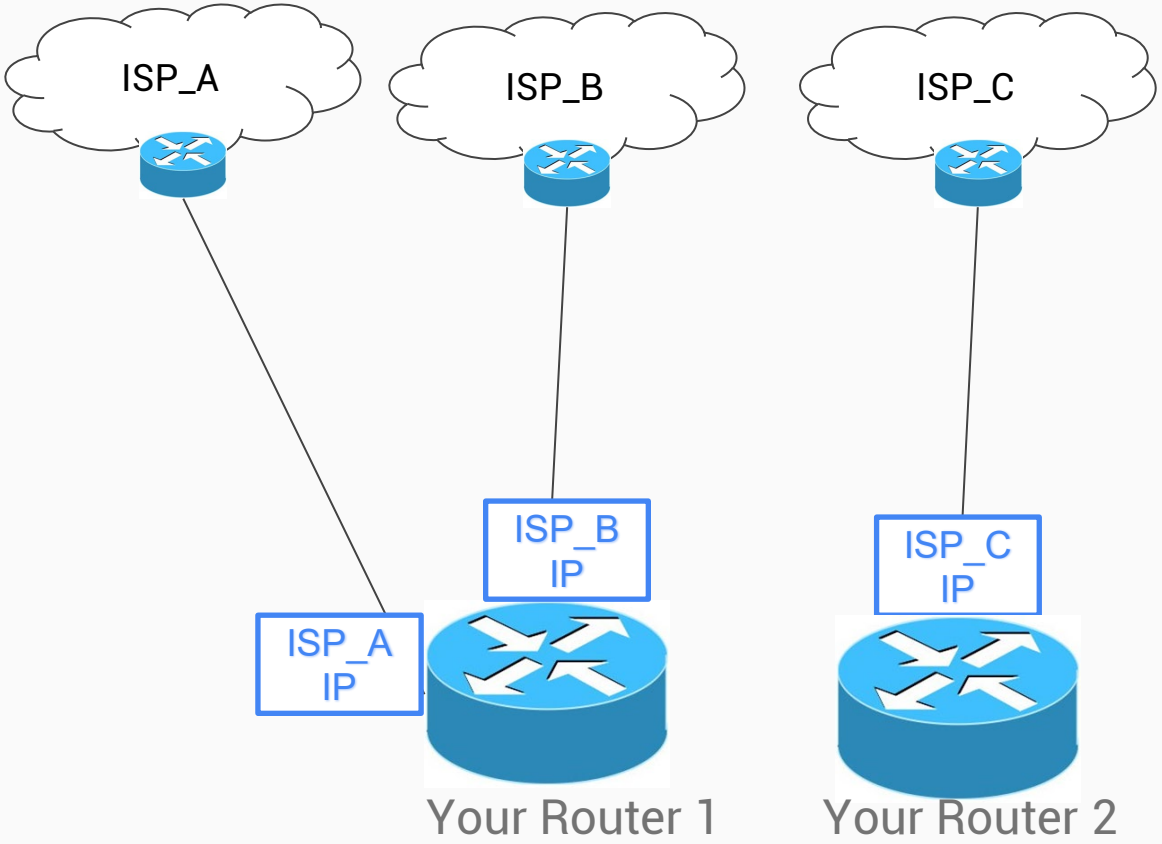


What if goes to the another technique (involved with ISP)?

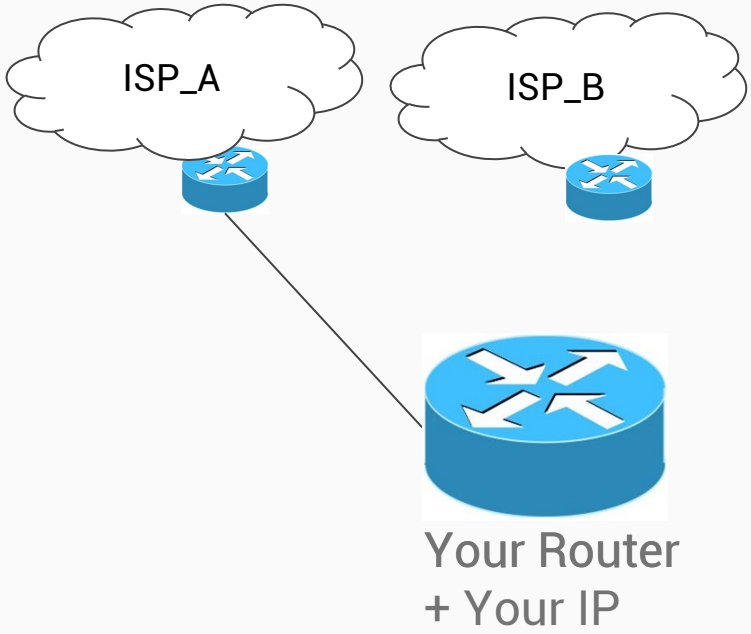
Single-homed Network

Technical

- Public IP
- Port forwarding (DNAT)?

Non technical

- Redundancy?
- Policy?
- Price of change?



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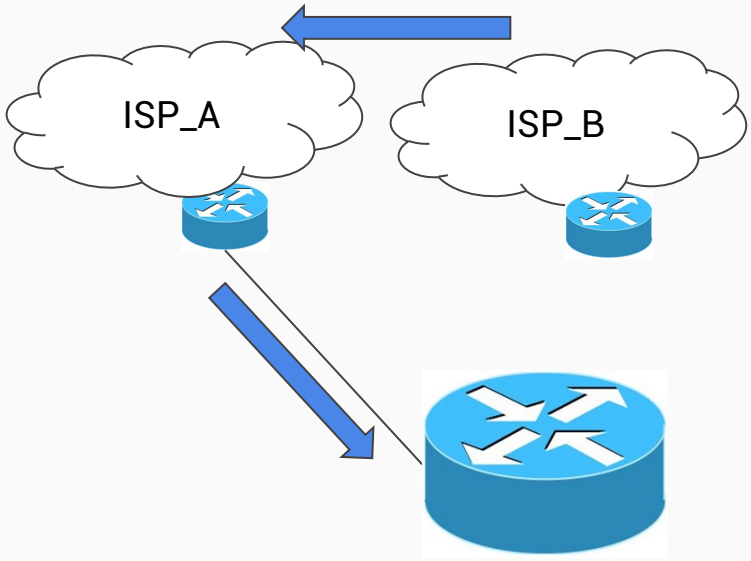

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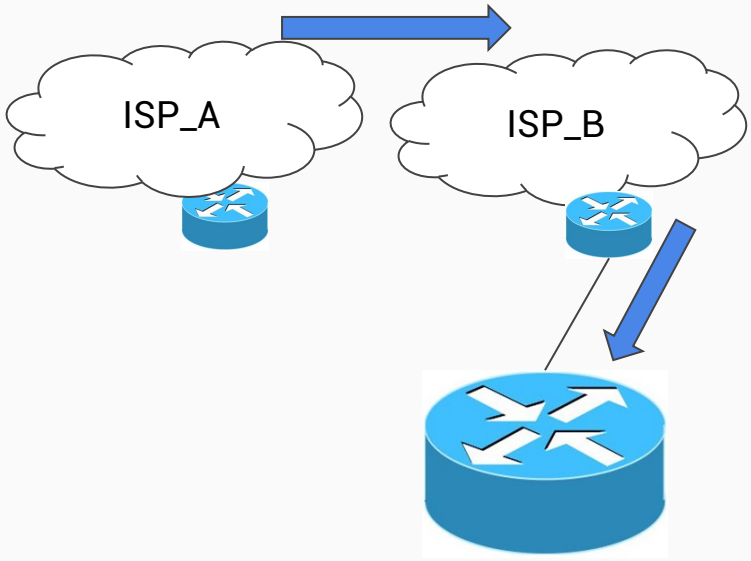

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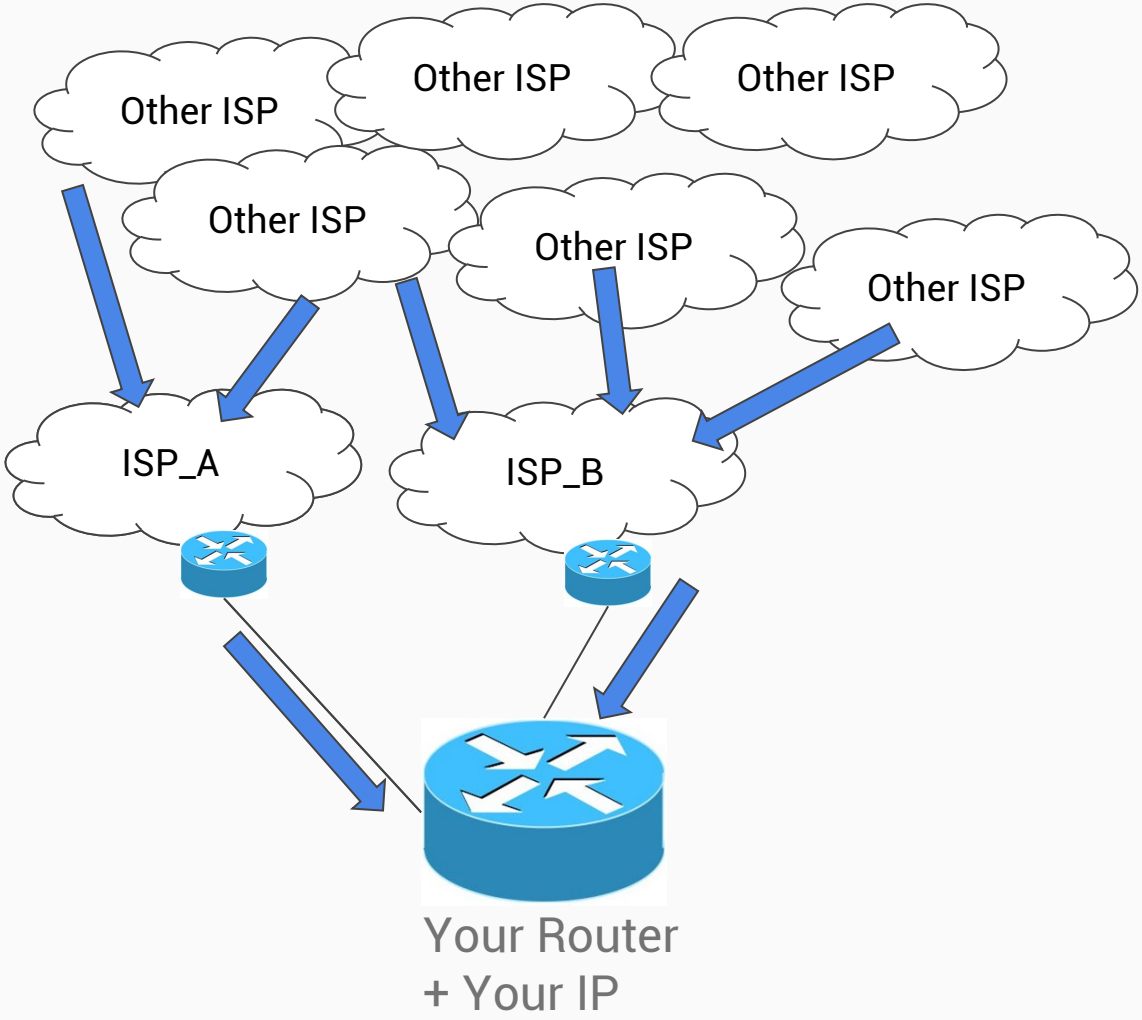

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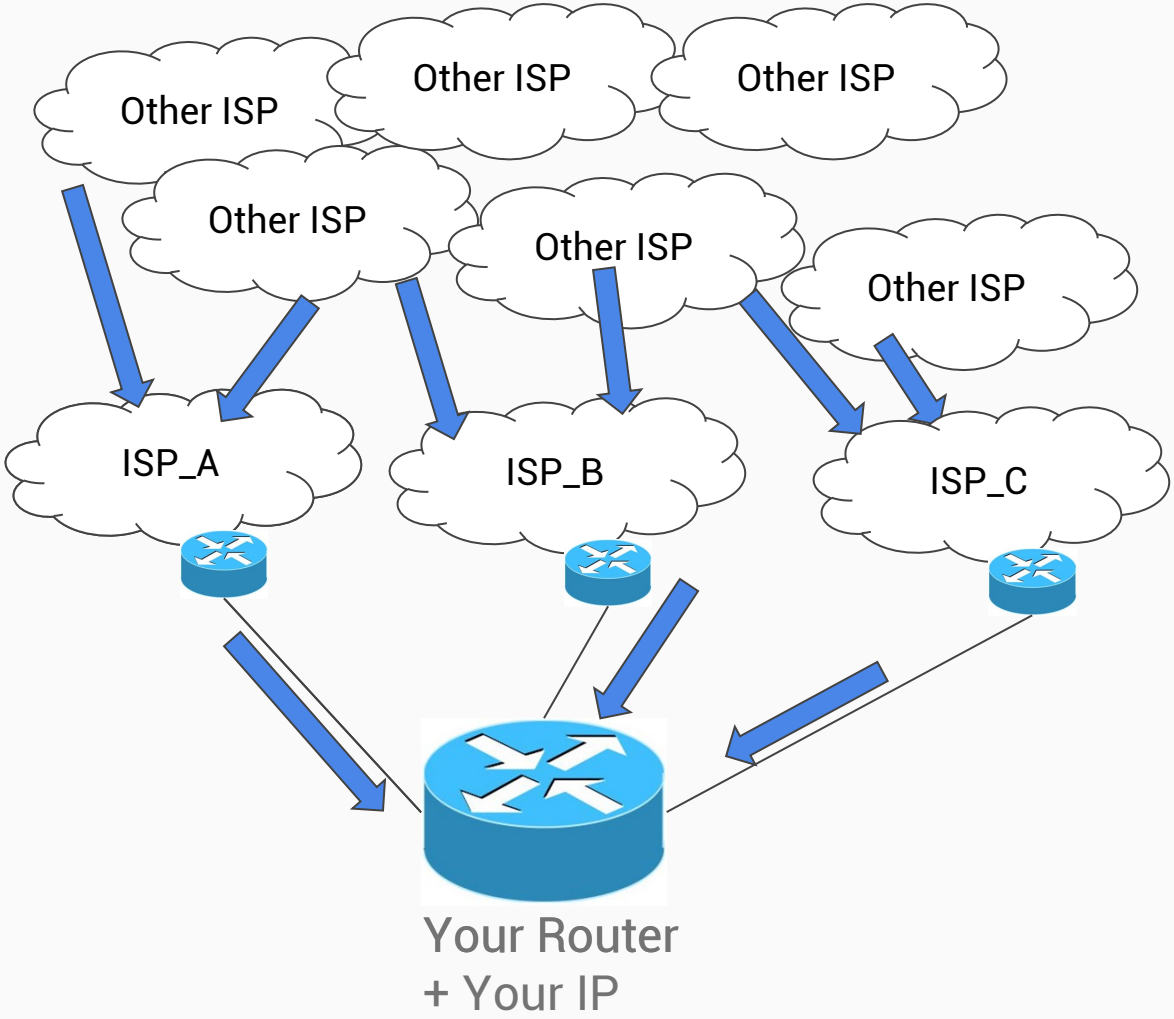

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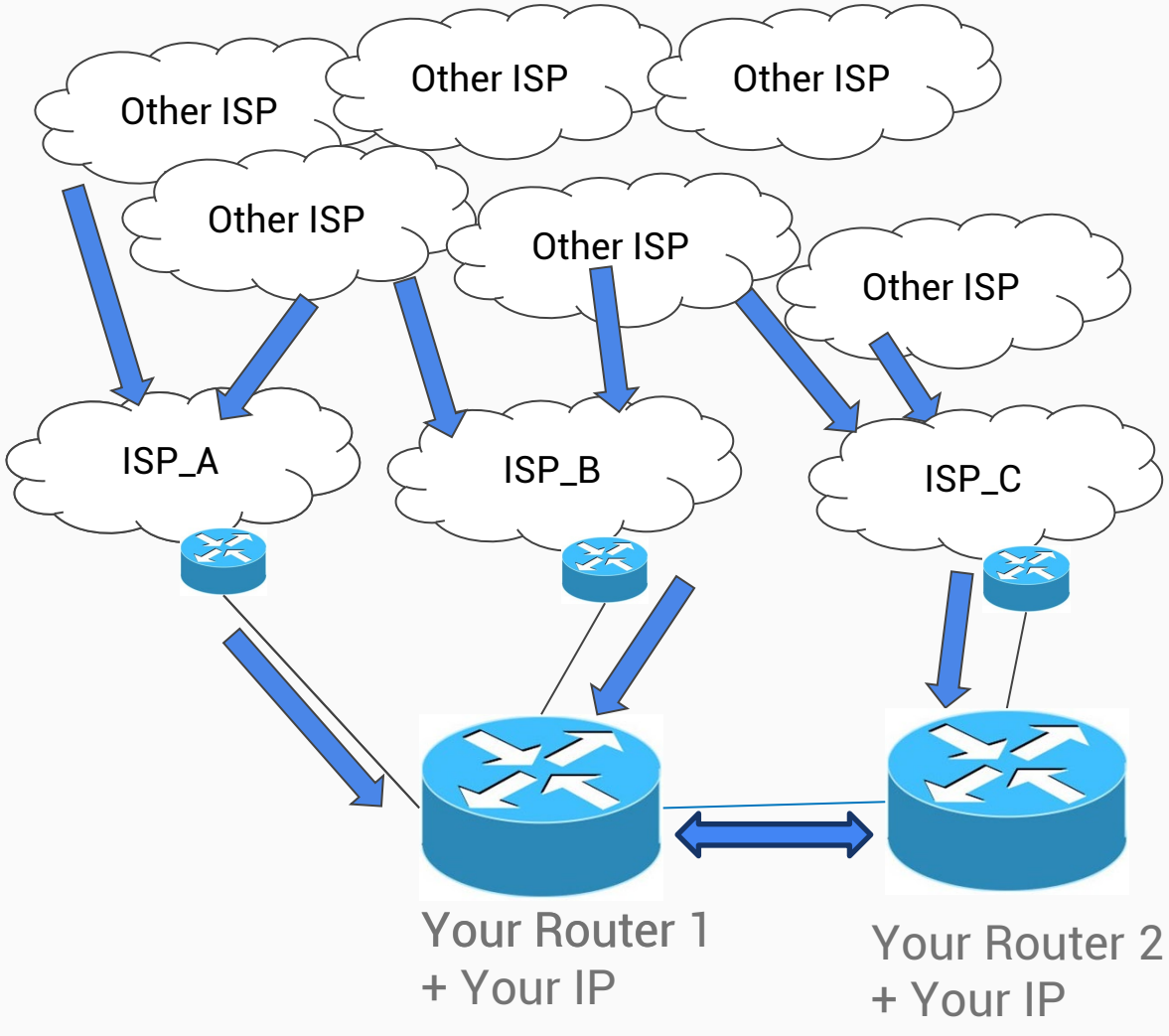

Some problems in Real world?

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