

Exchange Route Servers

(A quick primer)

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Route Servers

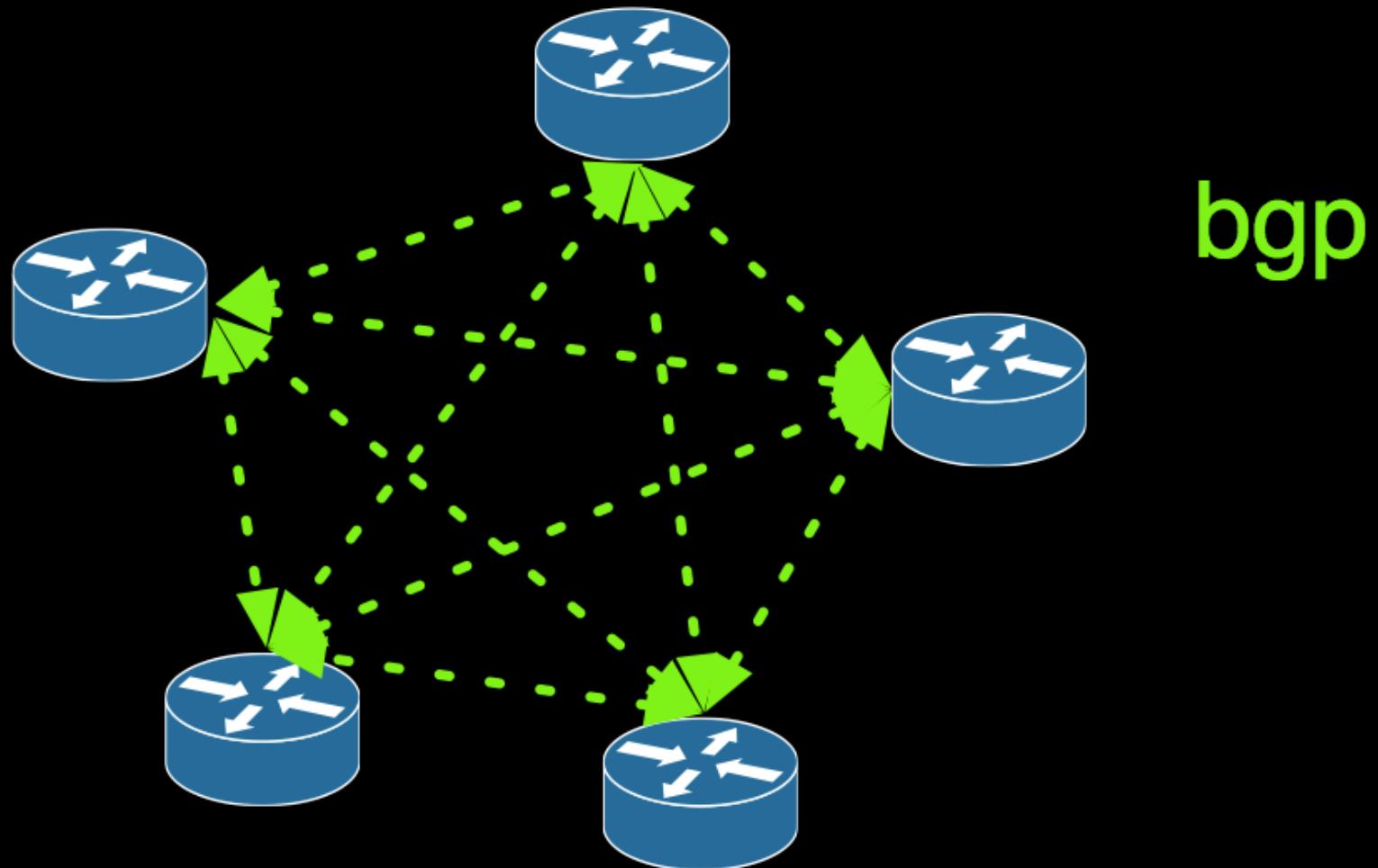
1 Session Many Peers

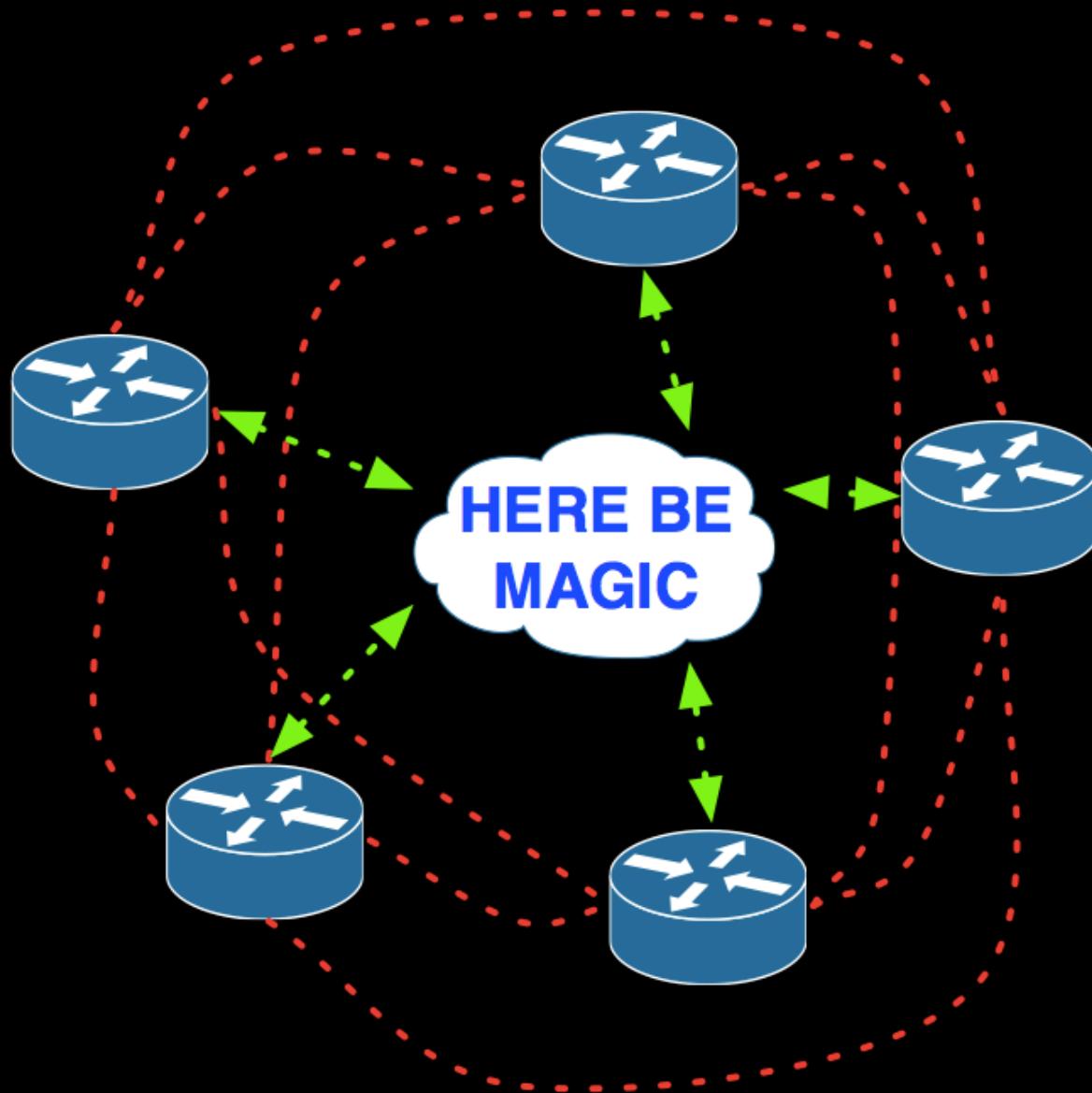
Reliable

Optional

Exchange point motivation

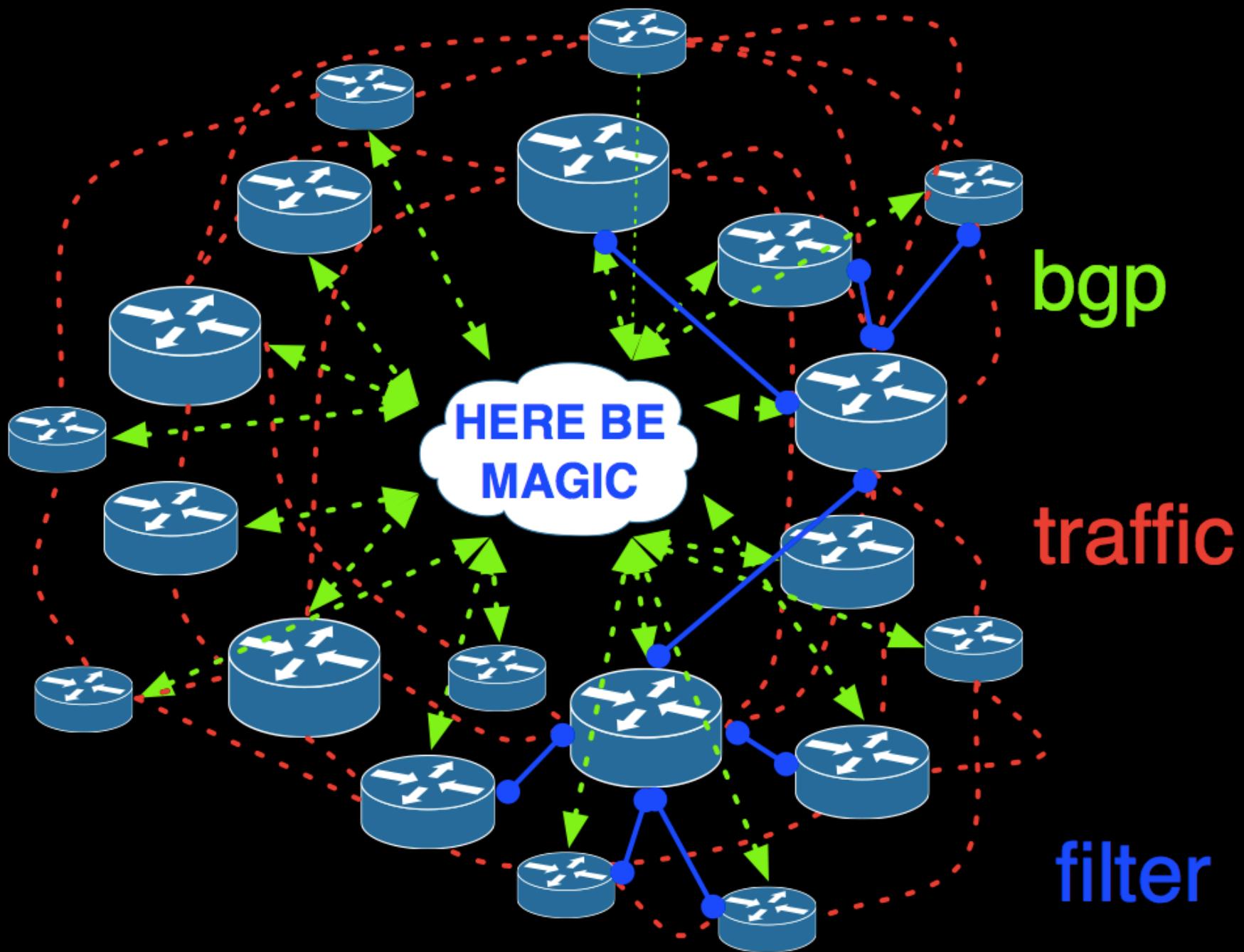
- Instant traffic on connection
- Encourage peering where one may not have taken place
- sell more ports and grow traffic!



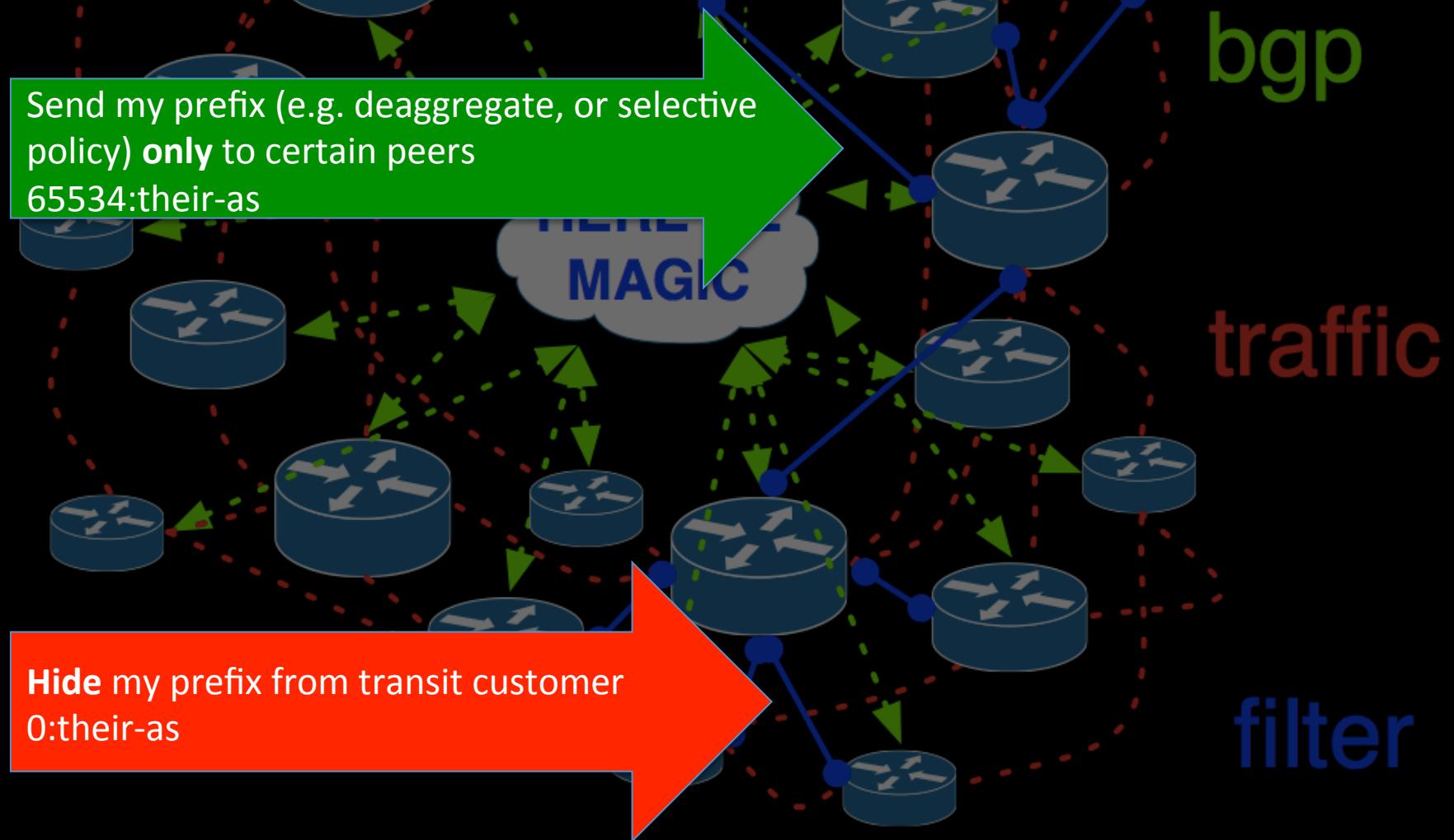


bgp

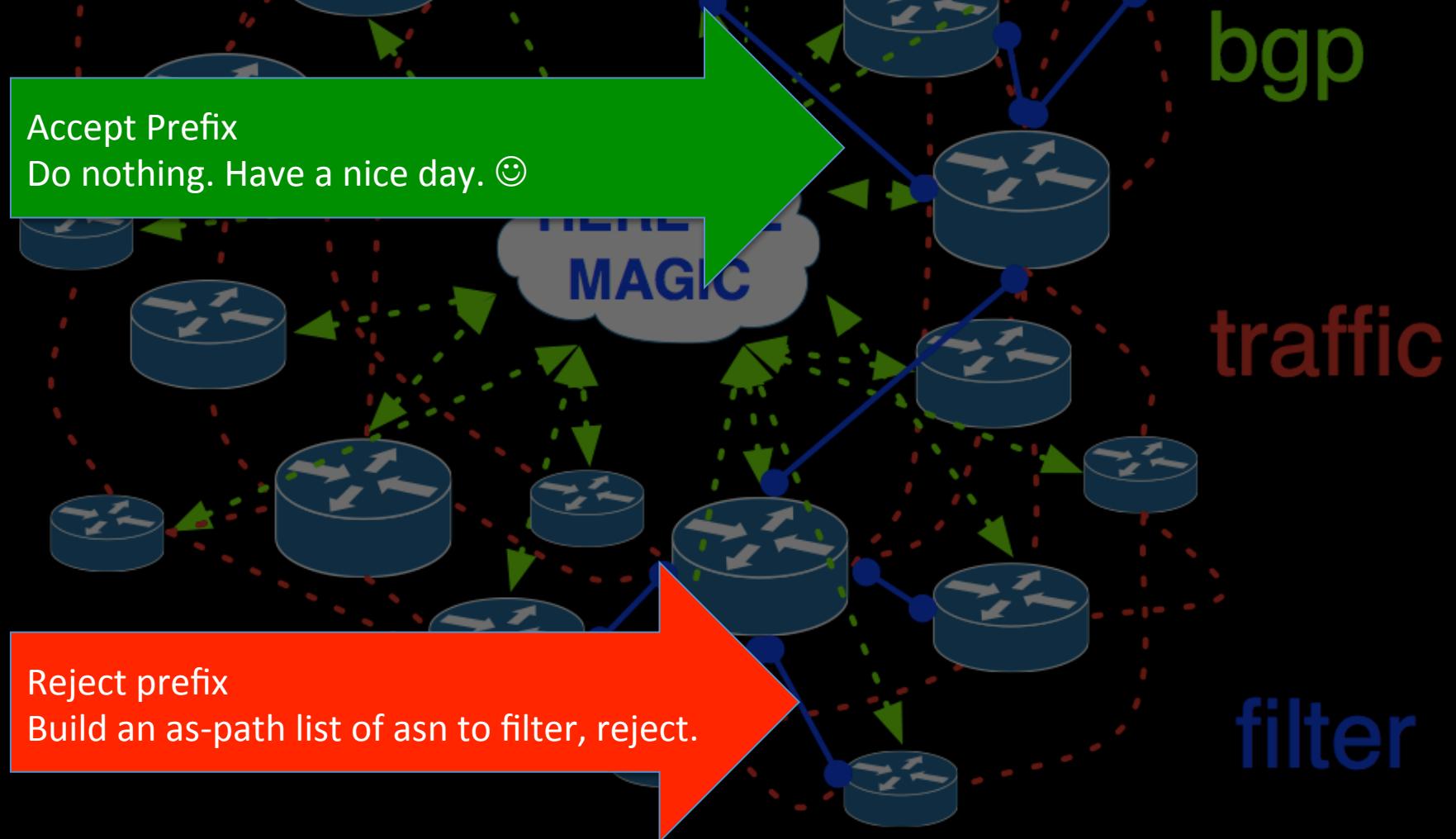
traffic



Outbound filters



Inbound filters



Hygienic Peering

- The exchange is stable because we have rules and enforce them strictly
 - Enforced **IRR database filtering** on MLP (you do not need to filter the MLP)
 - Required to **peer with both** MLP servers ?
 - Config change via **automation system** to reduce human error impact

Cisco Example

```
router bgp 123
    no bgp enforce-first-as
    neighbor trex-rs peer-group
    neighbor trex-rs remote-as 197032
    neighbor trex-rs desc TREX Route-Servers
    neighbor trex-rs route-map trex-rs-in in
    neighbor trex-rs route-map trex-rs-out out
    neighbor trex-rs maximum-prefix 10000
    neighbor 195.140.192.1 peer-group trex-rs
    neighbor 195.140.192.2 peer-group trex-rs
route-map trex-rs-out
    match as-path 10 (or however you match pfx)
    set community xxx
route-map trex-rs-in
    set local-preference 1000
```

Cisco example with peer-templates

```
router bgp 123
    no bgp enforce-first-as
    template peer-session trex-peer-rs
        remote-as 197032
        inherit peer-session trex-peer
        description Peering with TREX Route-servers
    exit peer-session
    template peer-policy trex-peer-rs
        inherit peer-policy trex-peer
        route-map trex-rs-in in
        route-map trex-rs-out out
    exit peer-policy
    neighbor 195.140.192.1 inherit peer-session trex-peer-rs
    neighbor 195.140.192.1 inherit peer-policy trex-peer-rs
    neighbor 195.140.192.2 inherit peer-session trex-peer-rs
    neighbor 195.140.192.2 inherit peer-policy trex-peer-rs
    route-map trex-rs-out
        match as-path 10
        set community xxx
    route-map trex-rs-in
        set local-preference 1000
```

Juniper example

```
protocols { bgp {
group trex-rs {
peer-as 197032;
description "TREX Route Servers";
family inet {
unicast { prefix-limit {
maximum 10000;
teardown 99; }

}
import [ trex-in rejectpolicy ];
export [ as65534 bgp_customers aggregate reject ];
neighbor 195.140.192.1;
neighbor 195.140.192.2;
}
}
}
```