

DiffServ

for

Quality of Service

Quality of Service

- Effective use of available resources
- Respecting the application requirements
- Differentiating the level of service

How DiffServ can help?

- Improve client satisfaction
- Ease router configuration
- Optimize the use of network resources

When should you use this?

- more than 1 router
- only IP traffic
- improve quality

Traditional model

- Per-customer queues
- Equal cost multipath routing
- Client-based configuration on each hop

DiffServ approach

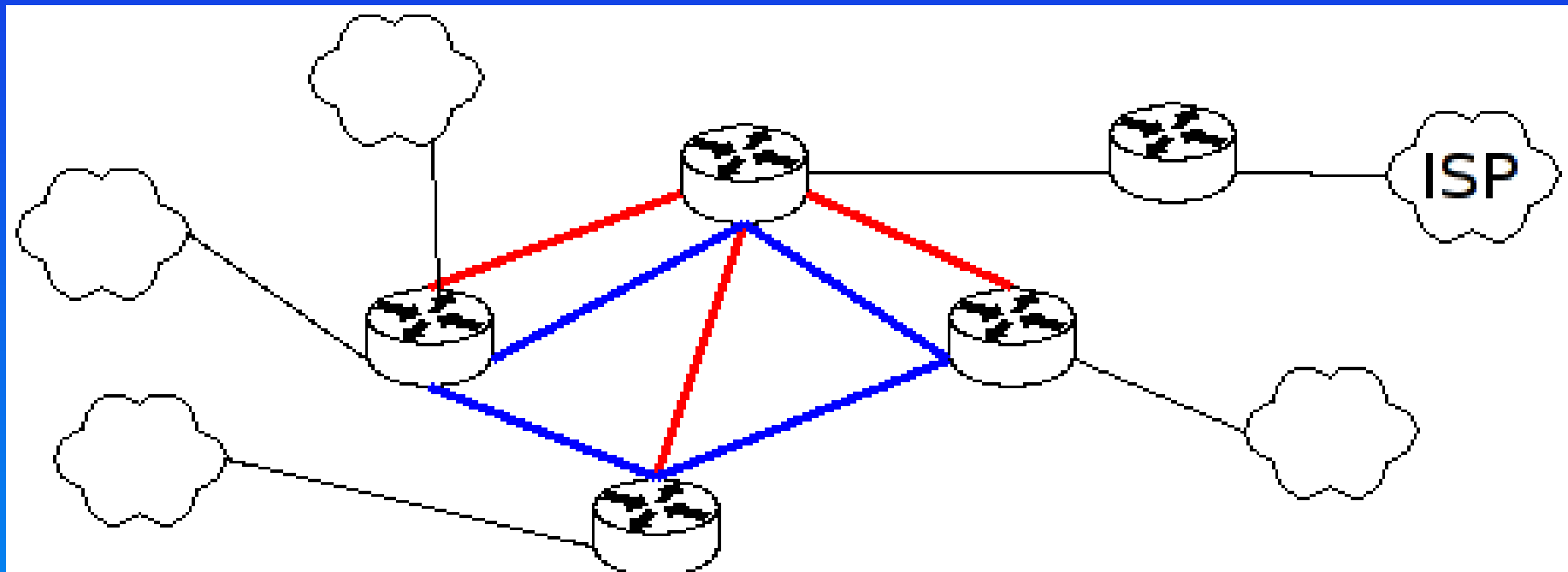
- Respect service level agreements
- Aggregate flows
- Prioritize services

MPLS – a new buzzword

- Multi Protocol
- Hyperfast (no routing decisions)
- Tag Switching

MPLS – Label Switching

- Traffic Engineering
- Different links – different properties
- Service-based forwarding behavior



Bringing all together

- Border routers to mark and police
- Interior routers to do traffic engineering and revise policies

Identifying

- Resources and service requirements:
 - Speed
 - Latency
 - Reliability
- Defining behavior aggregations

Marking borders

- Put DSCP mark on the received traffic
 - `/ip firewall mangle action=change-tos new-tos=???`
- Apply shaping rules and priorities, based on the DSCP label
 - `/ip firewall mangle`
 - `/queue`

Middleware

- Choose the appropriate route
 - `/ip firewall mangle`
 - `/ip route`
- Revise traffic policies
 - `/ip firewall mangle`
 - `/queue`

