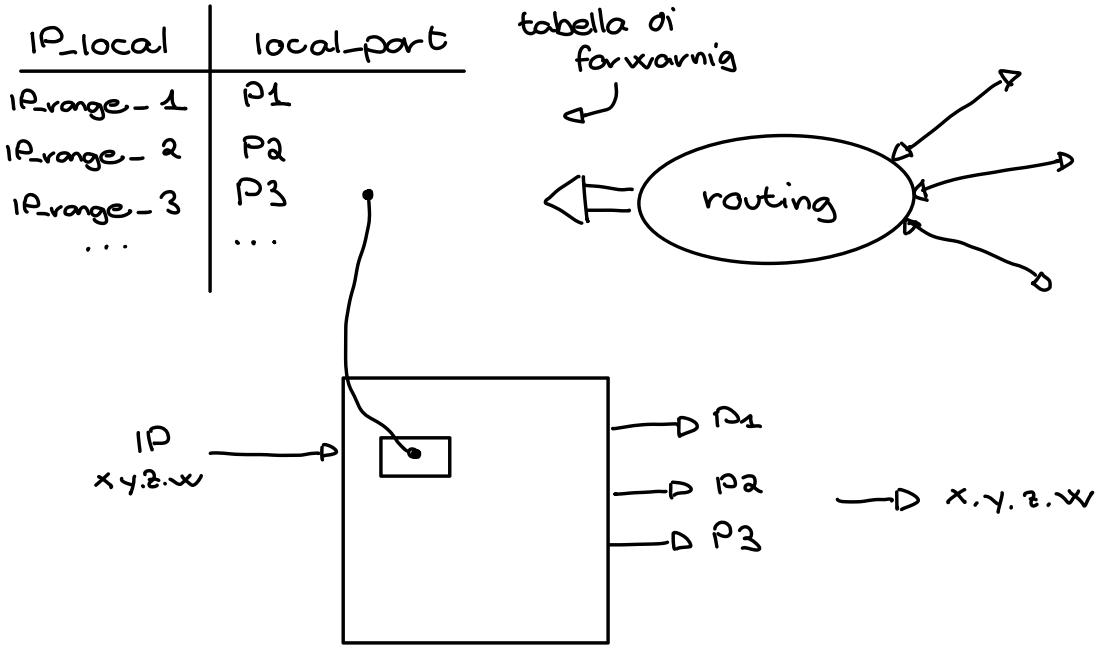
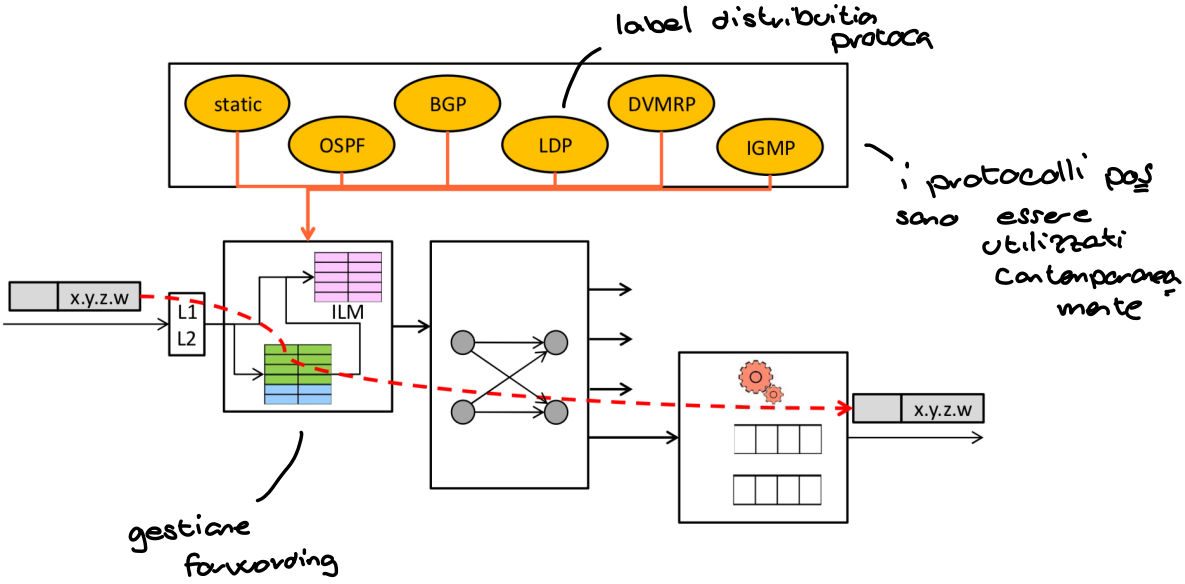
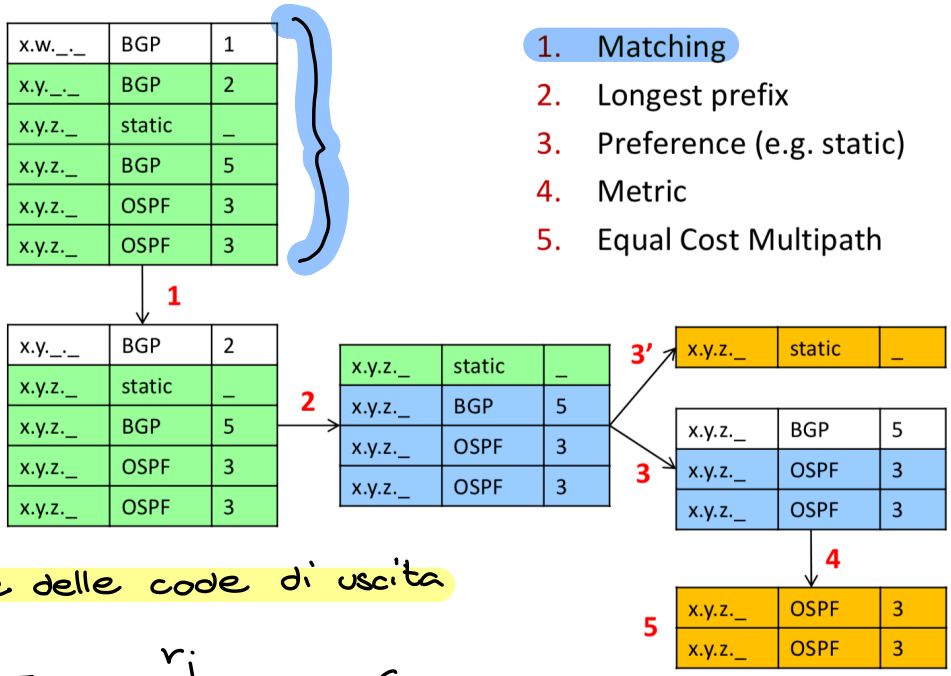
Router Ideale



Un router meno ideale



→ Il processo di forwarding



1. Matching
2. Longest prefix
3. Preference (e.g. static)
4. Metric
5. Equal Cost Multipath

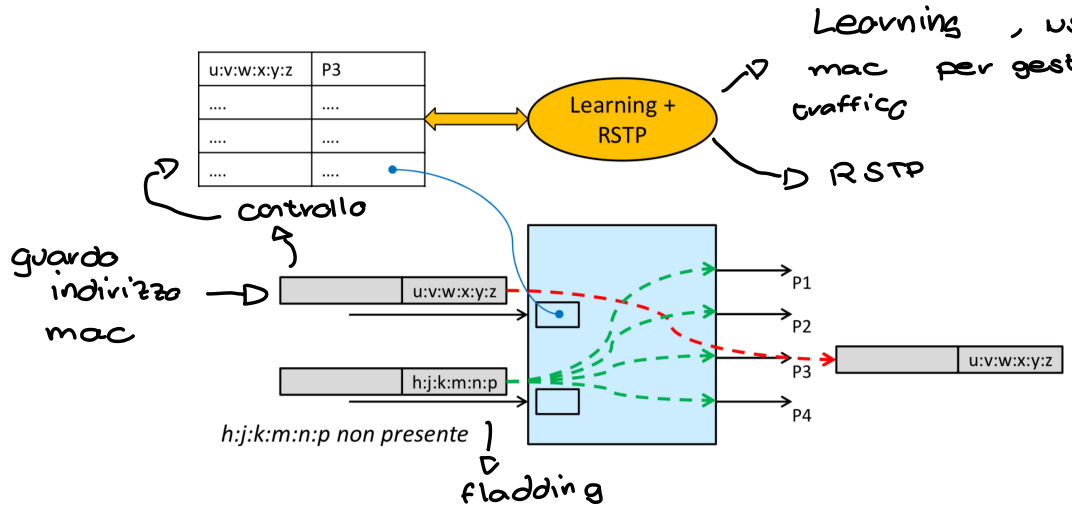
Gestione delle code di uscita

$$C_i = \frac{r_i}{\sum_j r_j [j \text{ attivo}]} C$$

→ partizione del link con algoritmi di fair queuing.

Date n classi di traffico con quota r_i $i=1,\dots,n$ la capacità C del link si divide in quote

→ Uno switch ideale



Switching moderno: TRILL

- Transparent Interconnection of Lots of Links
- RFC 6325, 6326 et al.
- Topologia distribuita mediante IS-IS
- Equal Cost Multipath mediante hashing dell'header incapsulato.
- Soluzioni alternativa: IEEE 802.1aq Shortest Path Bridging.

Middleboxes e Server

- Ulteriori funzioni necessarie per l'infrastruttura di rete
  - Load Balancer
  - Firewall, anti-DDoS
  - Nat / VPN

  } middleboxes

- Server
  - Autenticazione (Radius)
  - DHCP
  - DNS
  - CDN