



DiffServ Switch Requirements

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Assumption

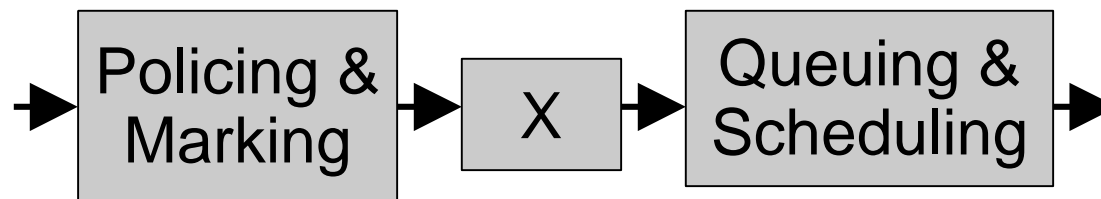
- Both Traffic Class (TC) and level of Drop Precedence (DP) of IP packet are mapped to the User Priority field of the MAC packet header
- Supports up to eight combinations of TCs and DPs, which is in most cases adequate



Mapping Example

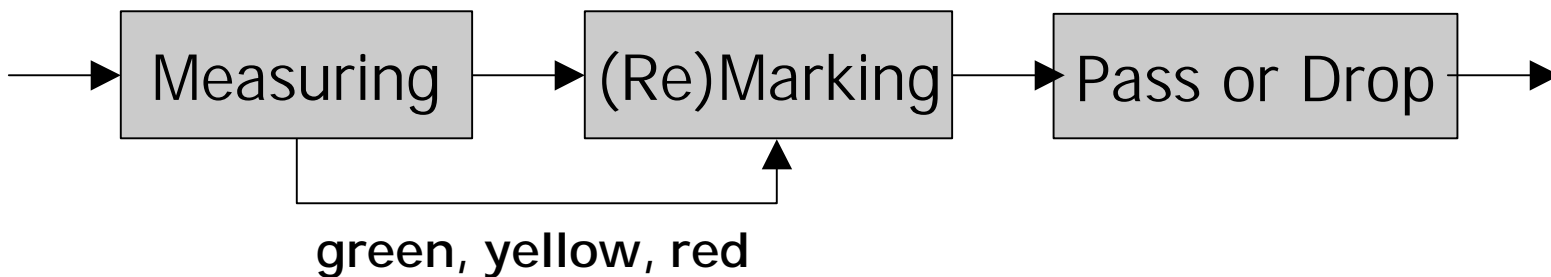
IP Control	=>	User Priority 7
Assured Delay	=>	User Priority 5
Assured Bandwidth DP 1	=>	User Priority 4
Assured Bandwidth DP 2	=>	User Priority 3
Assured Bandwidth DP 3	=>	User Priority 2
Best Effort	=>	User Priority 0

Switch Architecture



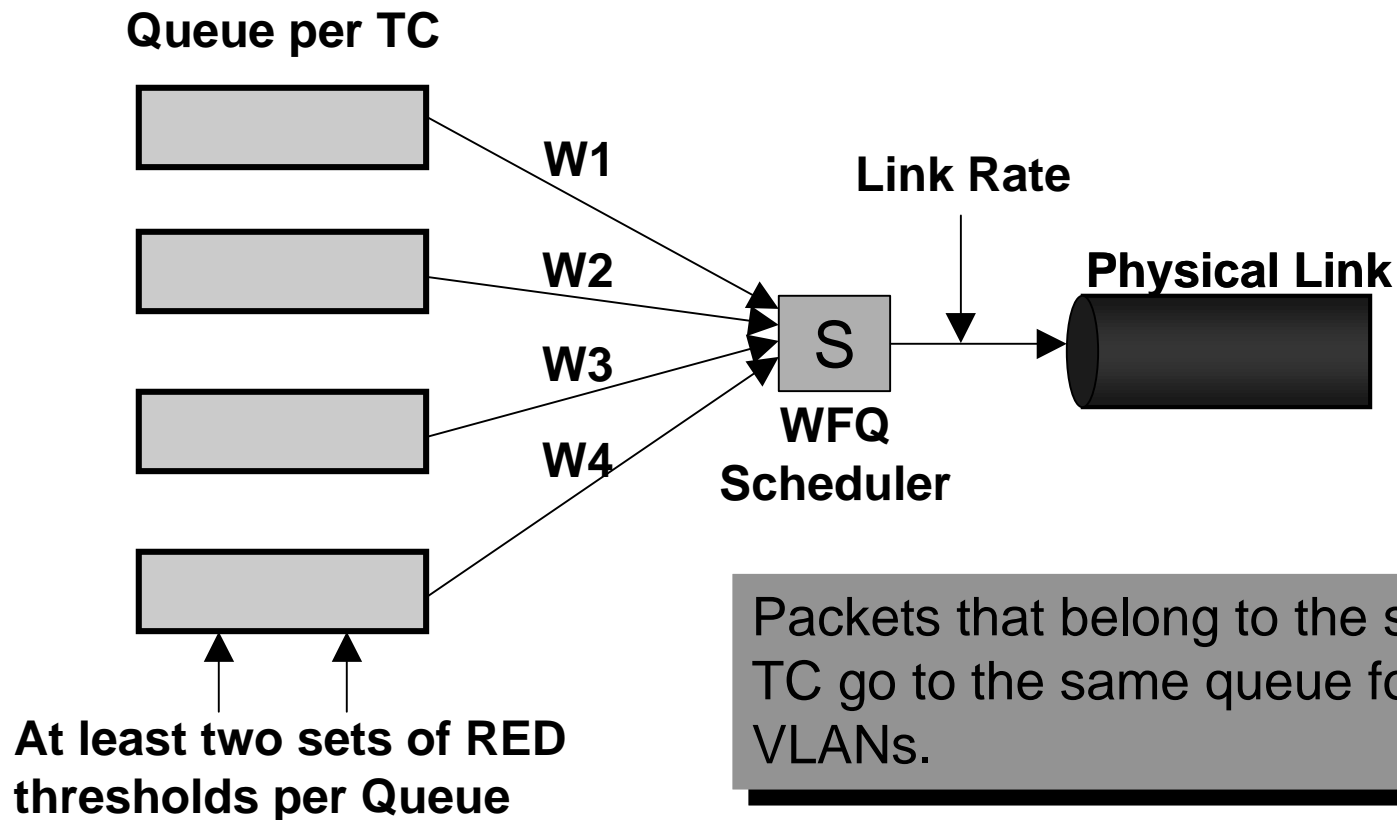
Policing & Marking only at the Edge Switch

Policing & Marking

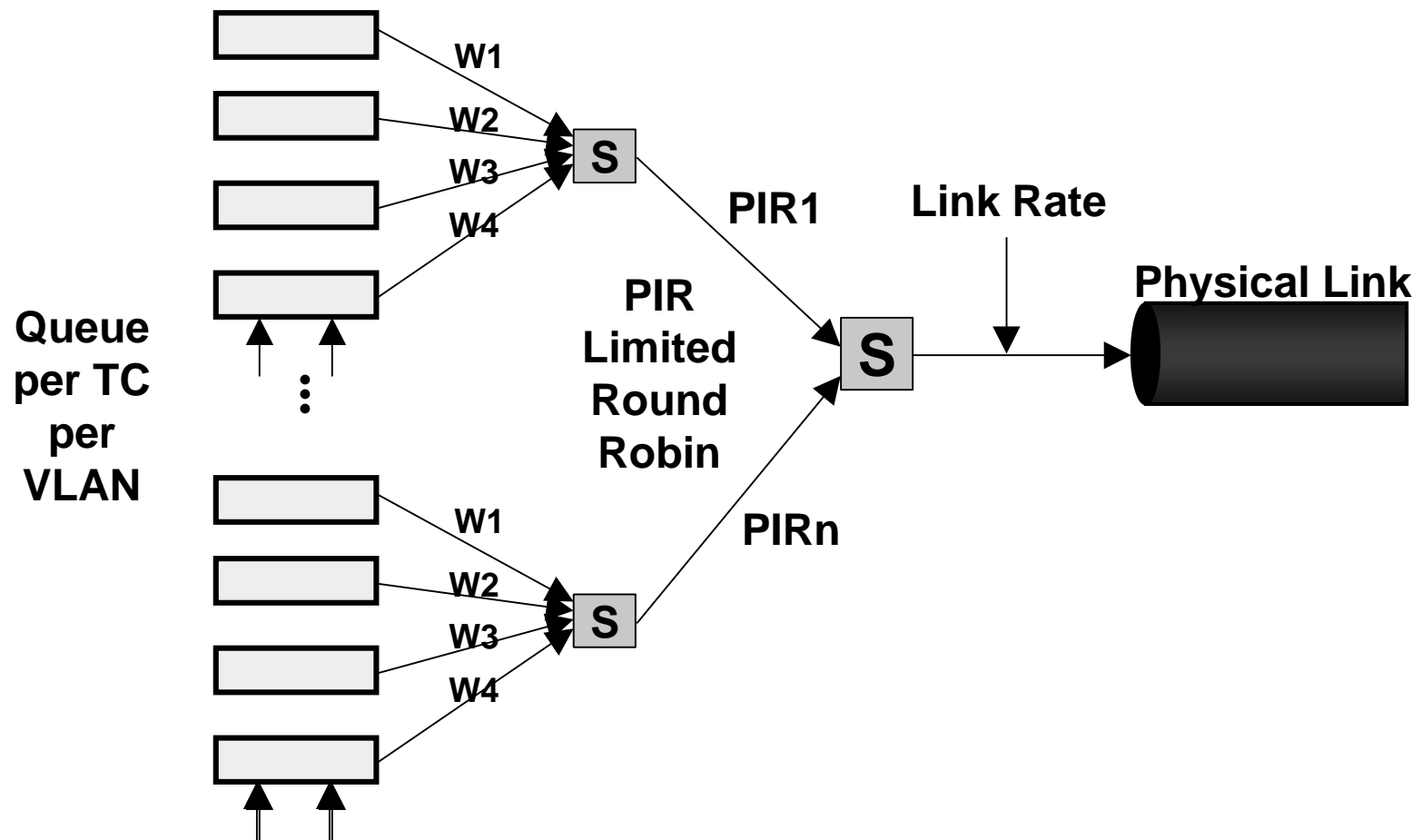


Measuring is per Traffic Class per logical interface
(VLAN)

Queuing & Scheduling: Trunk



Queuing & Scheduling: Edge





Implications

- Each TC (more than two) should have its own configurable forwarding resources
- Low-DP packets should be delivered with low loss no matter which TC they belong to or where they come from
- Node based fairness (if any) should only apply to High-DP packets in each TC