

Information flows for P802.1Qcc

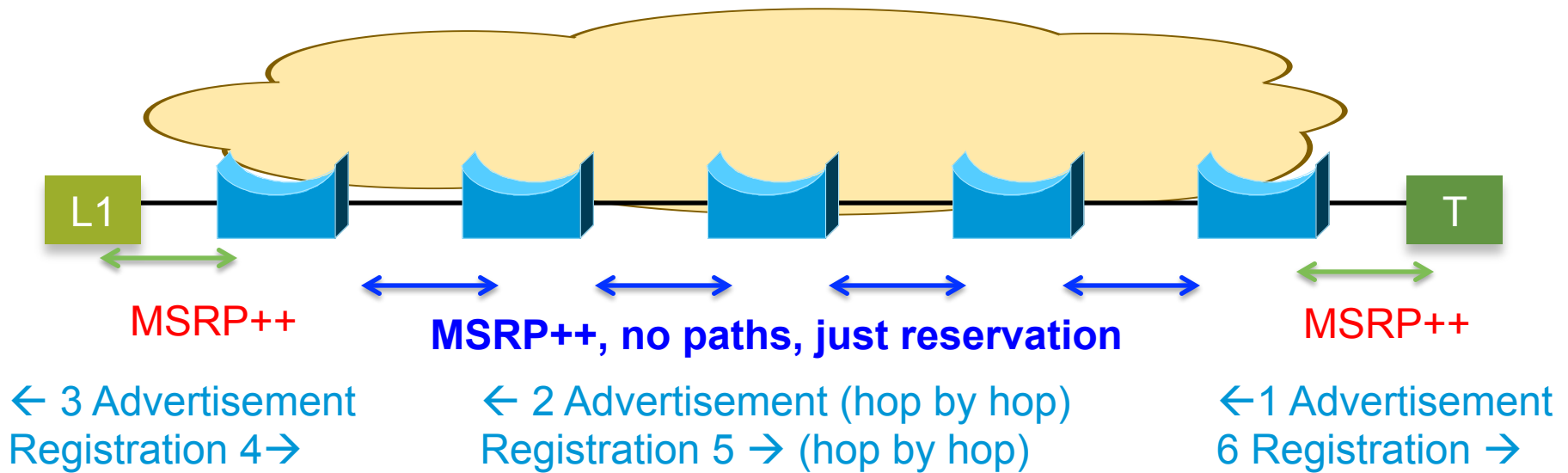
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Principles

- We need a Central Server to compute multiple paths, and to perform complex operations such as changing schedules or paths for some flows while other flows are still running and obtaining guaranteed services.
- We have to be able to do without a Central Server for backwards compatibility, and where we simply don't need the features that a Central Server can best supply.
- **We have to understand the flow of control information before we can pick protocols.**
- The control information flow is dictated by the QoS requirements, and is independent of whether we're doing L2 or L3.
- **An L2-only solution is absolutely required.**

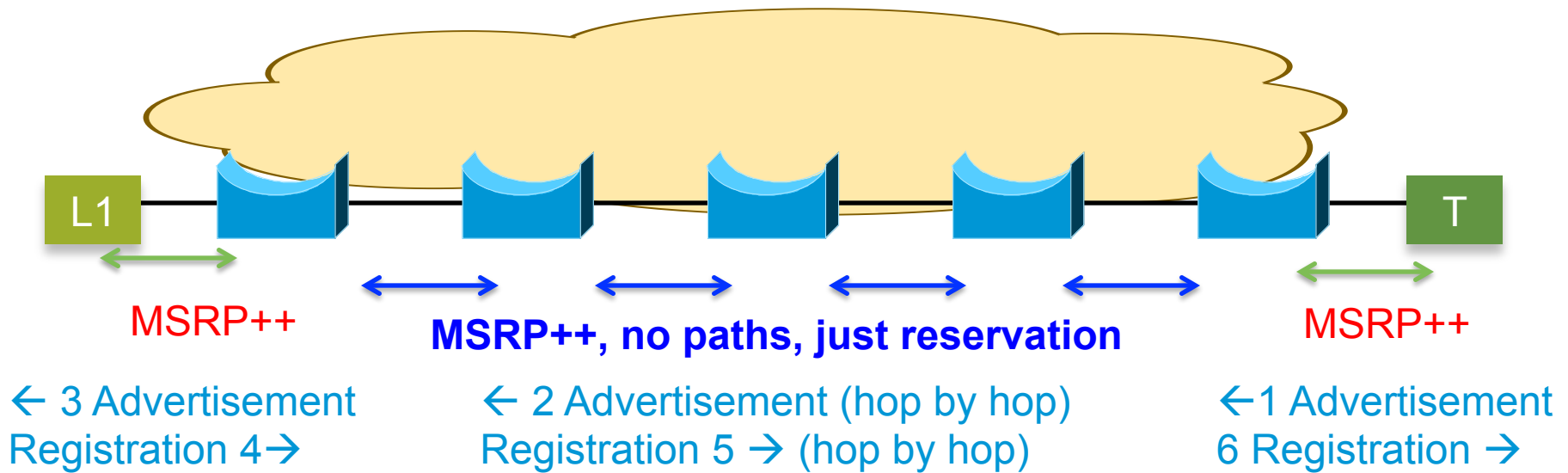
1. Network built without Central Server

a. Listener uses advertisements to learn about streams



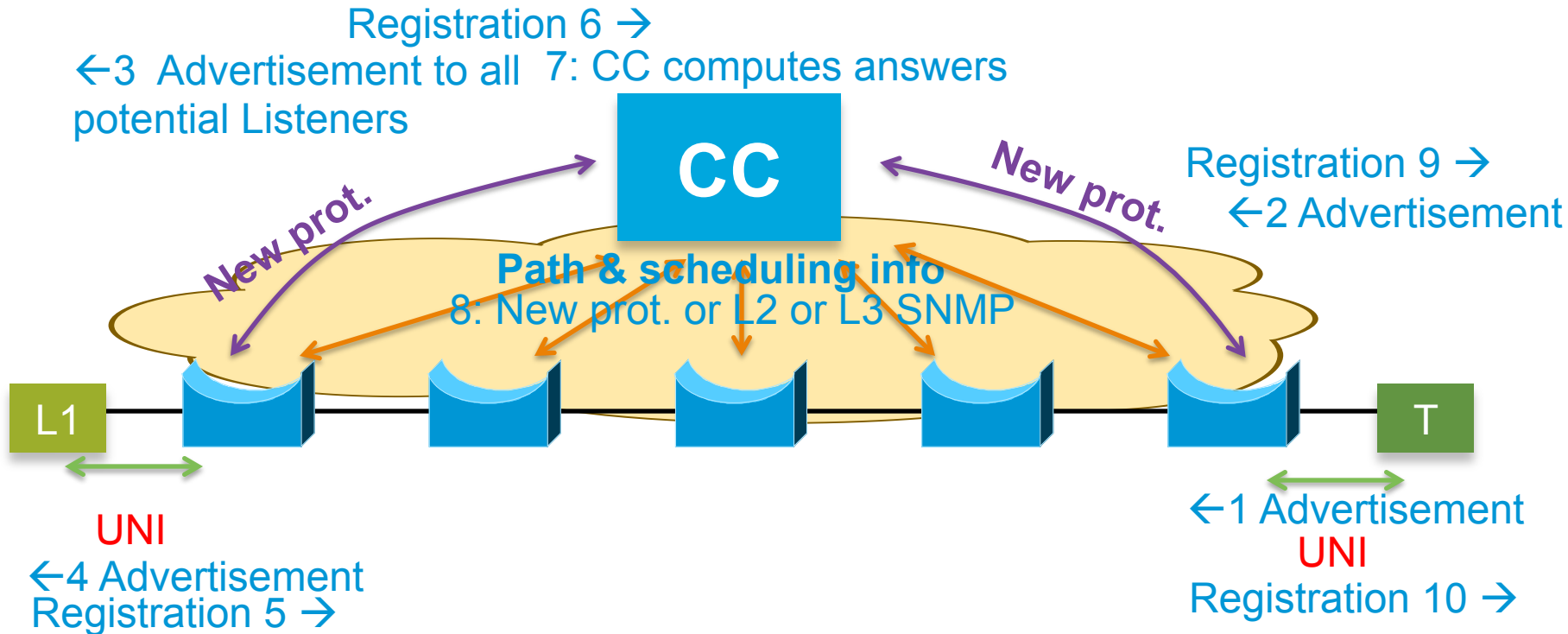
1. Network built without Central Server

b. Listener knows ahead of time about the flow (talker pruning)



2. Listener uses advertisements to learn about streams

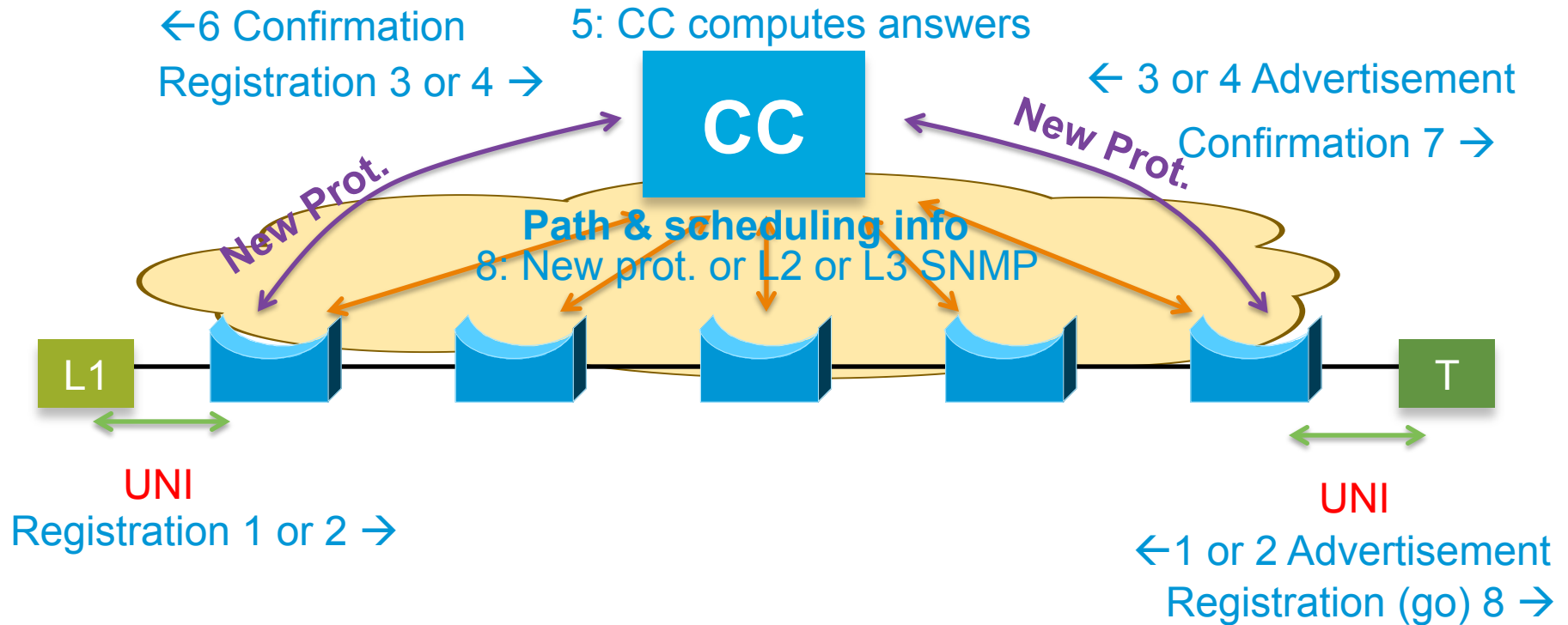
a. Listener uses advertisements to learn about streams



- The answers from the CC can be sent to the network nodes via existing SNMP channels. IEEE 802.1 can also invent a new protocol, that is more efficient, and/or use a modified IETF PCEP protocol.
- Relaying Advertisements/Requests to/from the CC requires a new protocol.

2. Listener uses advertisements to learn about streams

b. Listener knows ahead of time about the flow (talker pruning)



There are other control flows possible

- There are other control flows possible:
 1. E.g.: Talker → first network node → CC, Reply from CC → first network node contains all path and reservation information. First network node sends that information → hop-by-hop through the network towards Listener(s).
 2. E.g.: All information is pre-configured in a CC. Expected requests are handled as Talker/Listener expect. Unexpected requests are refused.
 3. E.g.: All information is pre-configured in every network node, Talker, and Listener.
- Let us concentrate on the flow proposed in these slides. Preconfigured scenarios seem to work automatically. Scenario 1, above, does not fall out automatically.