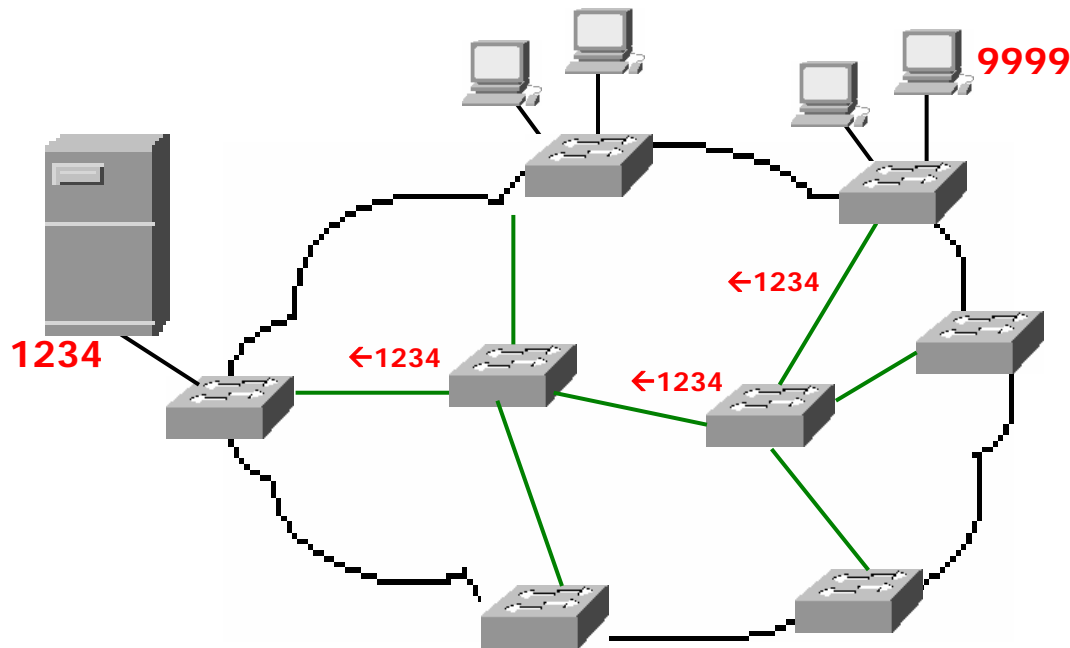# Requirement for Individual MAC Registration in Bridged LANs
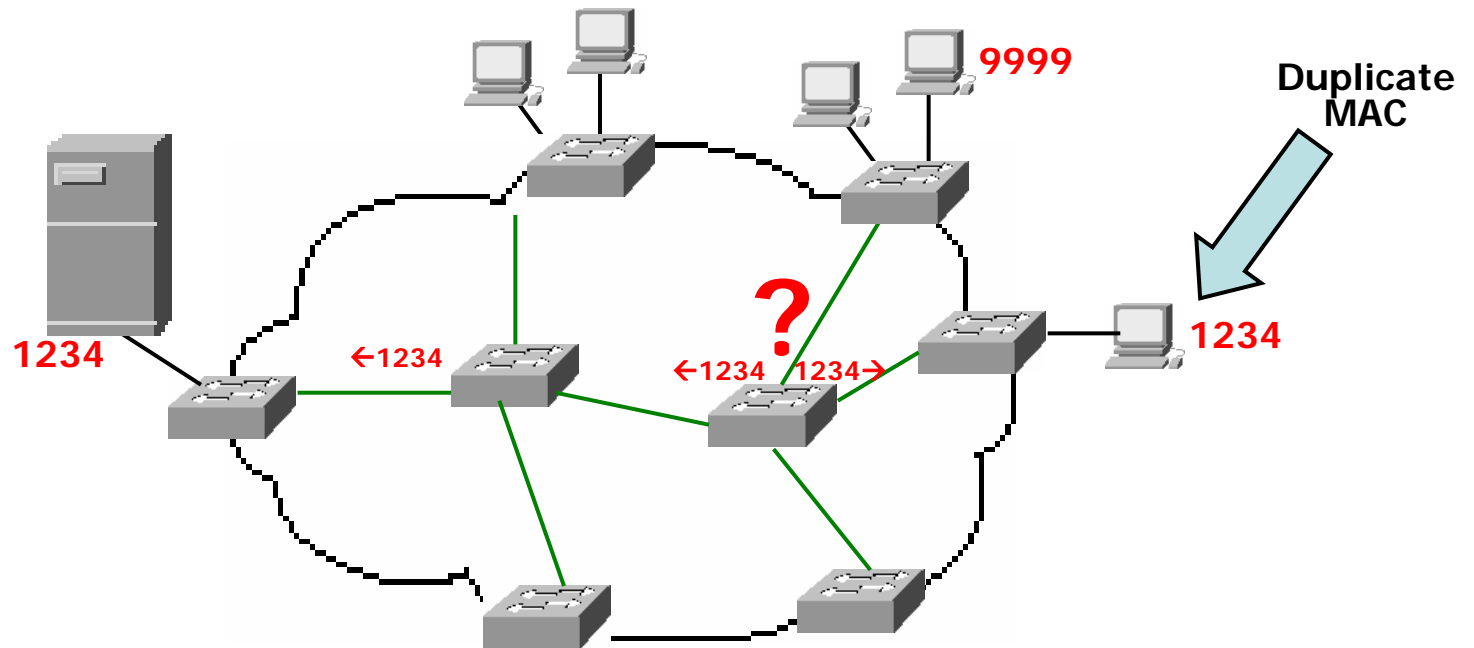
Bob Sultan

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May 2006

Bridge learning with dynamic FDB entries

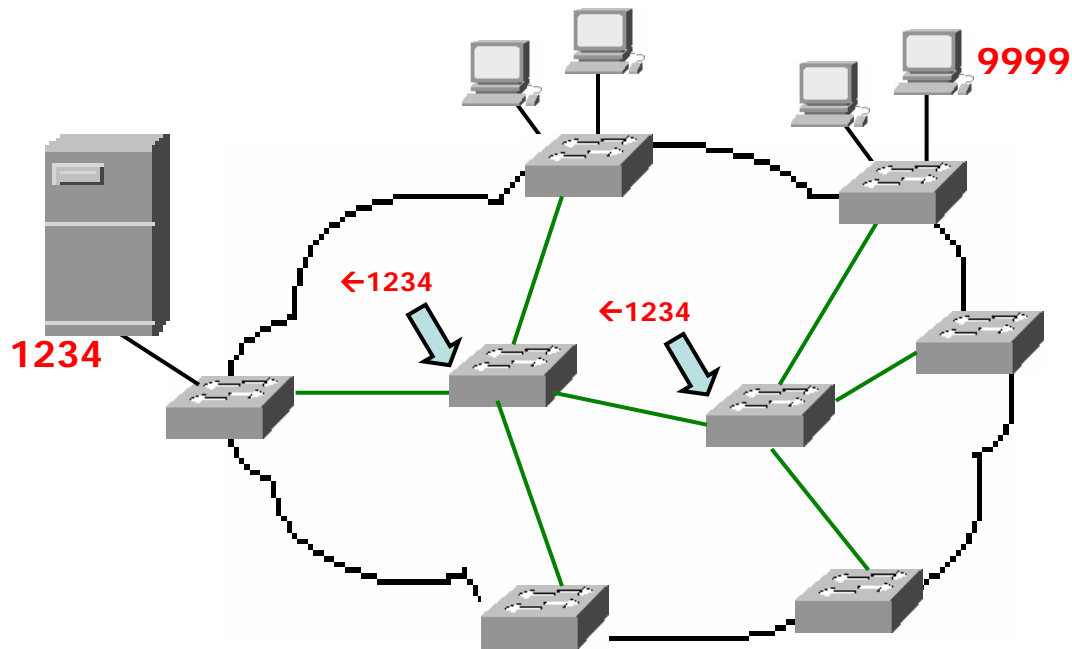- **Host 9999 floods first time on unicast to server 1234**
- **Server sends non-flooded response to host**
- **Server 1234 learned along path to host 9999**
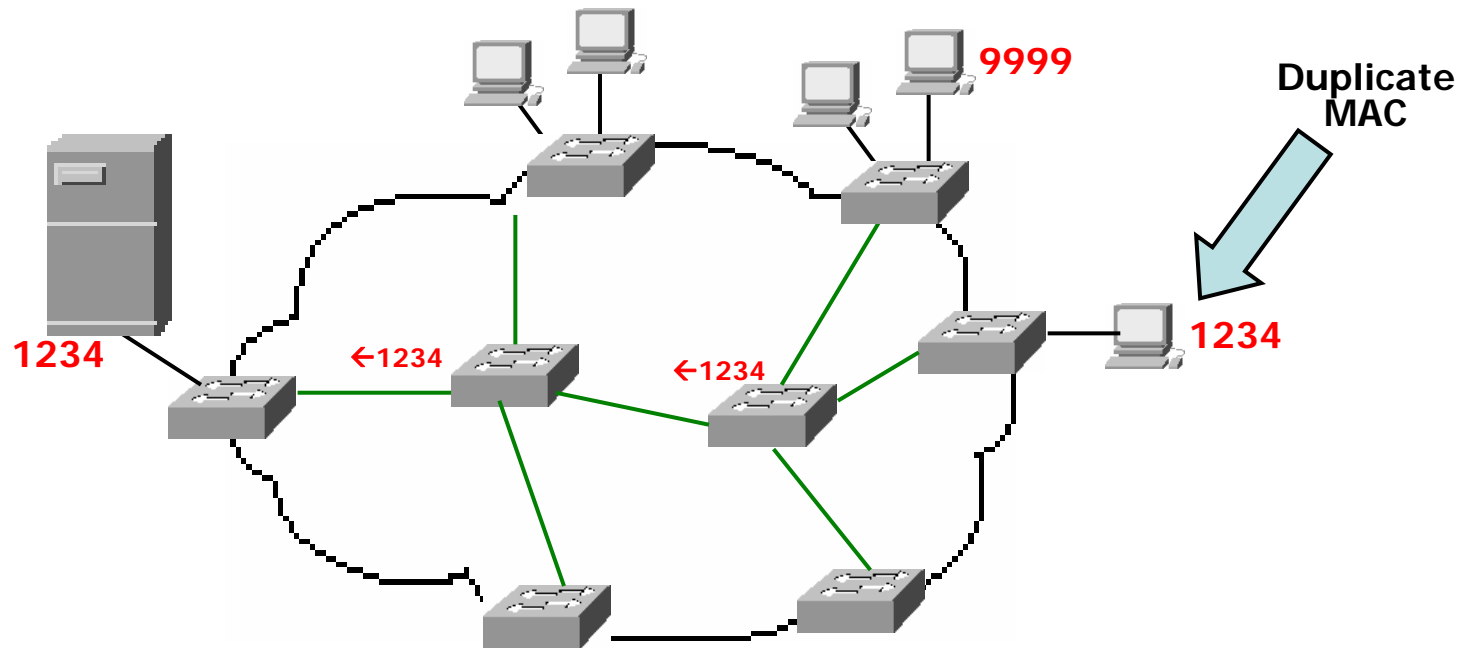
Host added with MAC same as server

- **Perhaps error in coordinating locally assigned MAC**
- **Perhaps duplicate burned-in MAC**
- **Conflicting dynamic FDB entries overwrite each other**

Can avoid problem with static FDB entries

- **Static entry locally installed by operator at each bridge**
- **Location of MAC 1234 no longer learned**

Dynamic FDB entry will not displace static
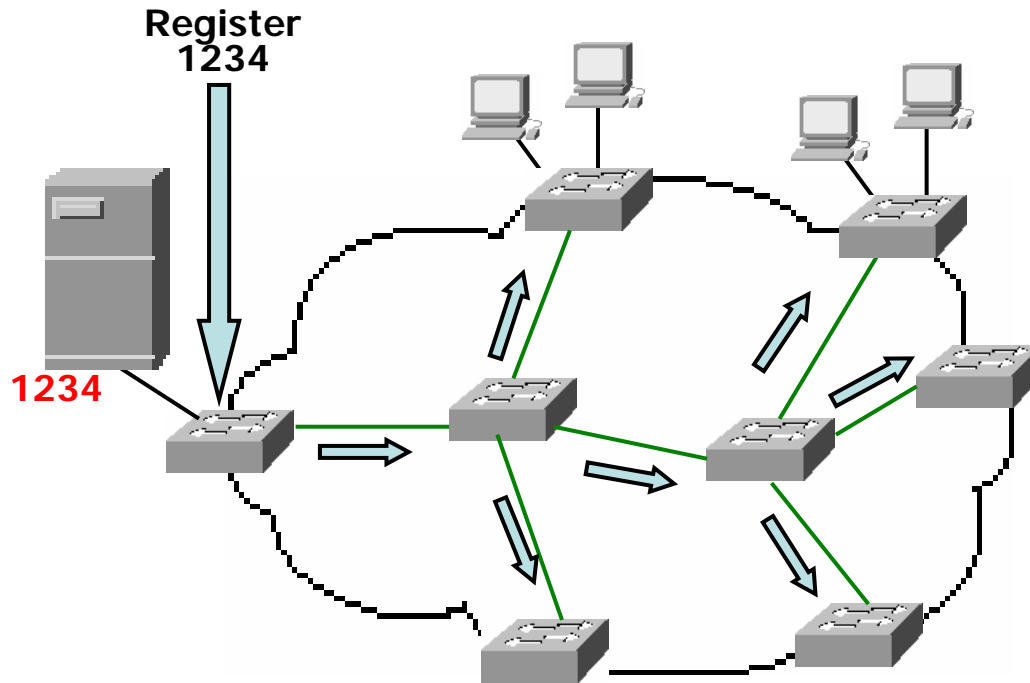

- **Dynamic FDB entry pointing to duplicate MAC**
  - will <u>not</u> be created as static entry exists with same address
- **Traffic to server is not disrupted**

# But local provisioning of a static MAC at every switch is a significant operational burden
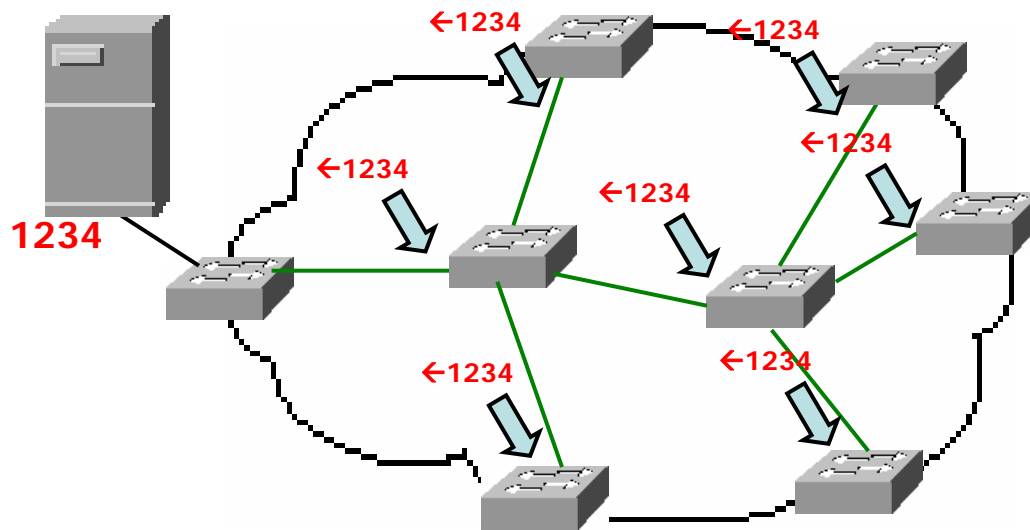
- **And entries must be changed to reflect any changes in topology**

Support Individual MAC Address Registration

- **Entry is same as learned (in steady state), but static**
- **Straightforward changes to 802.1ak, Draft 5.1 so that individual address registration not excluded**

Static entries resilient across topology change
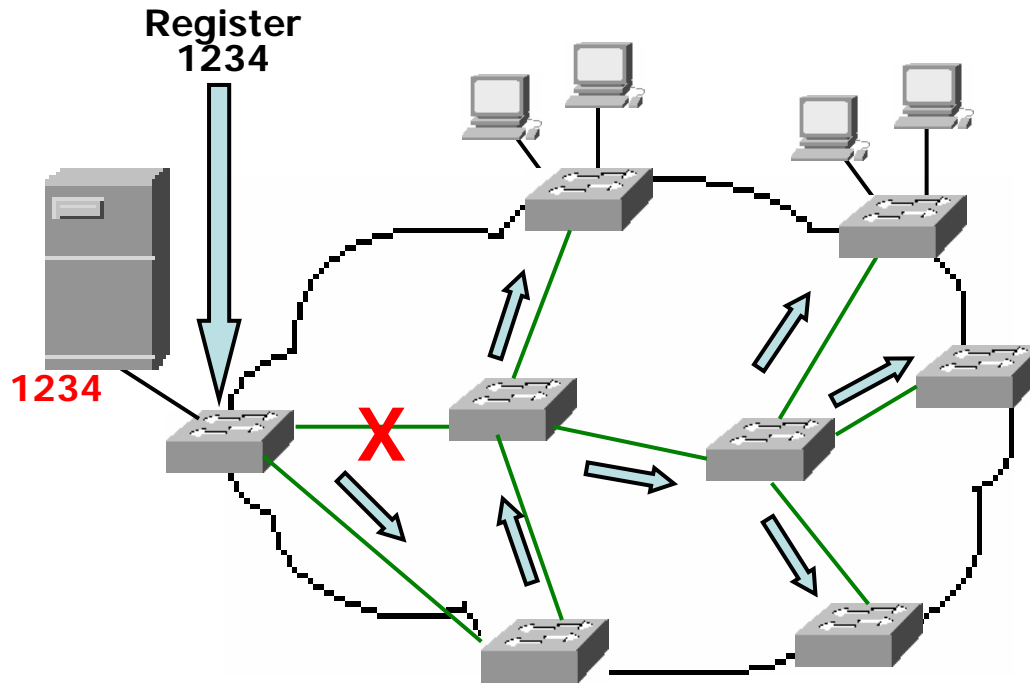
- **Relieves operation burden of re-entering adjusted static entries when topology change occurs**

Conclusions

- **Local installation of static individual address is function that is useful and supported.**

- **Use of registration to 'automate' an existing bridge-related activity.**

- **Particularly useful in larger bridged networks (e.g., PBN/PBBN where MAC address coordination may be more difficult).**

- **Can be supported by relieving restrictions in .1ak**

- **<u>Please read posted document with a proposed set of changes to MMRP</u>**

- **Seeking feedback on any concerns**