802.1AX-REV Data Plane issue

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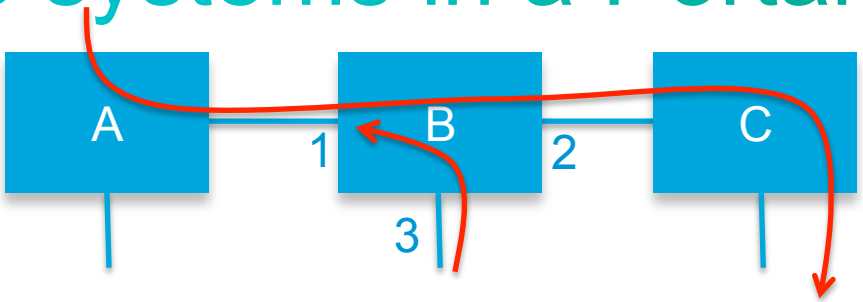
Ver 01

If three systems in a Portal are allowed



- A, B, and C form a Portal. No link at present between A and C.
- The Gateway for VLAN 5 (red) is A.
- The Aggregation Link for VLAN 5 is attached to C.
- We are being permissive on reception, because we don't know the other Portal's distribution algorithm.
- So, VLAN 5 frames received through B (3) must be directed to A.

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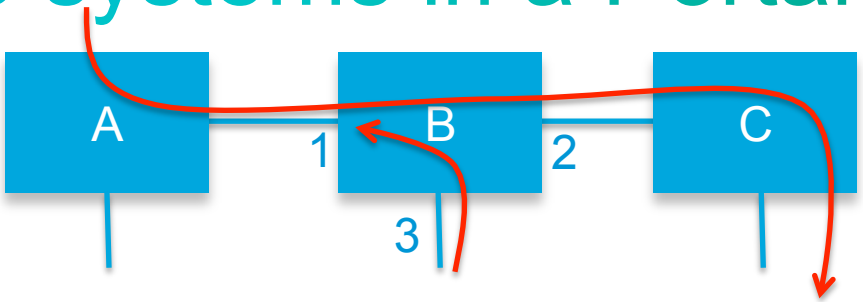
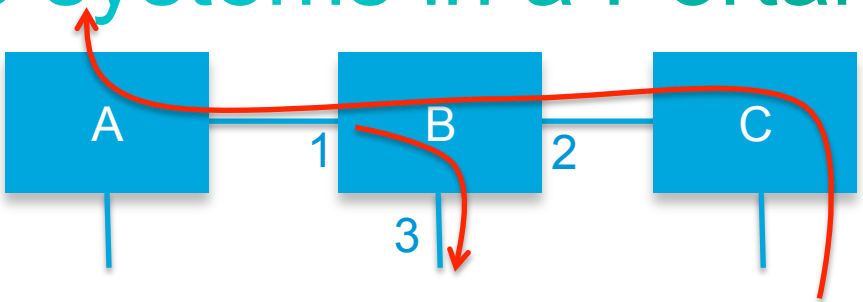


- Consider system B:
  - A frame on VLAN 5 received from A (1) must be sent to C (2).
  - A frame on VLAN 5 received from the other Portal (3) must be sent to A (1).
  - A frame on VLAN 5 received from C (2) must be sent to A (1).
- **This cannot be handled easily by the existing Filtering Database**, because where the frame goes depends on where it came from, in more ways than just, “not back out on the receiving port.”
- I believe it is possible to do accomplish this with VLAN translation on the ports, and by using a lot of VLAN IDs.

If three systems in a Portal are allowed



- A similar case occurs when the normal output port for VLAN 5 is B3, and the Gateway is A.
- If a frame arrives on Port 1, it must be a Down frame, and should go out Port 3 only.
- If a frame arrives on Port 2, it must be an Up frame, and should go out Port 1 only.
- Again, this cannot be handled by the current Filtering Database except by using lots of VLAN ID mapping.

What should we do?

- Mention the required VLAN mapping in a NOTE? An ANNEX?
- Make support of three-system Portals optional?
- Remove support for three-system Portals?