

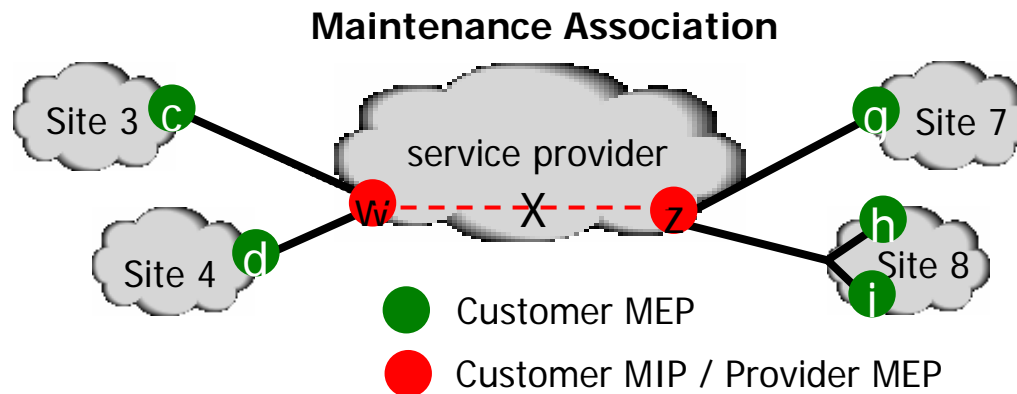
Some Suggestions On Alarm Propagation and Suppression

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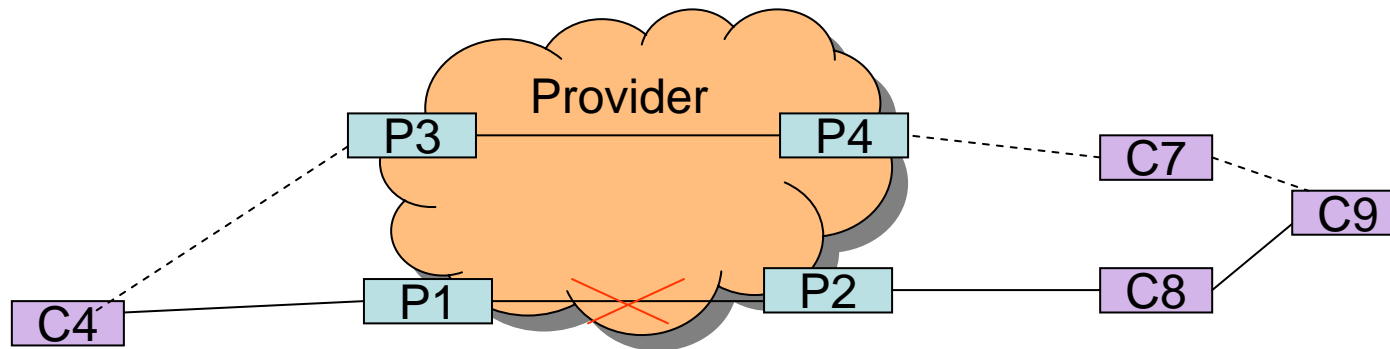
AIS Current Status

- **The current proposal:**
 - MIP sends AIS to the affected MEPs upon detecting MIP connectivity failure
- **Still under discussion**
 - Mechanisms to pass the affected MEPs on the other side to the affected MEPs
 - For example, the i, h, g are the affected MEPs on the other side of MIP z.



Issues with the MIP sending AIS

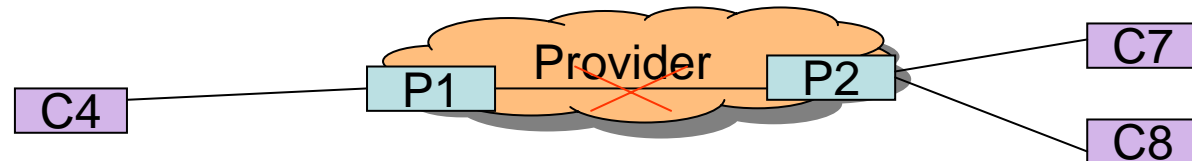
- **MIP's failure may not necessarily affect MEPs. There might be multiple paths across a provider domain. It is difficult for a MIP to determine if its failure will affect other MEPs.**



- **Two possible ways to send MIP failure to the affected MEPs**
 - MIP send periodic AIS to the affected MEPs
 - Issue: there are a lot of messages flooding the administrative domain
 - AIS is sent when a MIP detects failure, AIS Clear message is sent when the MIP recover from its connectivity failure.
 - Issue: what happens to newly added bridges who didn't receive the AIS?

Alternative Way to Propagate MIP failure

- **MIP doesn't propagate faults/alarms to MEPs until a MEP detects connectivity failure and the MEP needs to suppress alarms**
 - Some MEPs may choose to report connectivity failure even if the failure is caused by other causes
- **When a MEP detects connectivity failure, the MEP will check if the failure is caused by its supporting MIPs to determine if the alarm report is to be suppressed:**



C4 to P1: I lost connectivity to C8, are you to blame?

P1: Checks its MIP/MEP table to determine if the connectivity loss between C4 and C8 is caused by its own connectivity failure to P2.

P1 to C4: "Yes", my failure to P2 caused your problem

C4: OK, I can suppress my alarm report

Alarm Suppression Mechanisms by MEPs

- **If MEP doesn't get reply from its supporting MIPs, it could be the MIP is dead, or connectivity from MEP to MIP is lost. MEP can consider the MEP's connectivity failure as the result of the failing MIPs.**
 - MEP can choose to suppress the MEP connectivity failure alarm or
 - Report an alarm that MEP losing connectivity to its supporting MIP.
- **If MEP receives reply from its supporting MIPs:**
 - If the response is “Yes”
 - MEP can suppress the alarm report, or
 - MEP can report supporting MIP failure alarm
 - If the response is “No”, then report connectivity loss to its network management system

Should the “AIS Request Message” be Uni-cast or Multicast?

- **If the “AIS Request Message” is Uni-cast:**
 - Each MEP needs to be aware of its supporting MIPs.
 - For the diagram below, the P3 and P1 are the supporting MIPs for C1/C2/C3/C4
 - Advantage: Less message flooding in the network
- **If the “AIS Request Message” is Multicast:**
 - 802.1ag needs to add a multicast address which is only terminated by the supporting MIP
 - Advantage: each MEP doesn't need to know the MAC address of supporting MIP(s)

