

draft-ietf-dime-agent-
overload-01.txt

Agenda

- Extensions to DOIC
- Questions
- Review of representative use cases

New report type

- Peer report type used to report agent overload
- New feature bit defined to indicate support for the peer report type

Interaction with Host and Realm report types

- Abatement treatment for host and realm reports first
- Abatement treatment for peer based on remaining traffic targeted towards the peer

Attribution

- Attribution of OC-Supported-Features to determine downstream peer support
 - Use to determine if and when OC-OLR is sent
- Attribution of OC-OLR
 - Use to ensure that the overload report came from a peer
- Uses OC-SourceID AVP
 - Contains the DiameterIdentity of the Diameter node that includes the parent AVP

Abatement Algorithm Selection

- Algorithm selected for peer report can be different than algorithm selected for host and realm reports
- OC-Peer-Algo AVP added to OC-Supported-Features AVP to communicate algorithm to be used for peer overload reports

- Does peer report apply to the application for transaction or all transactions sent to peer?
- If all applications then is there complexity in determining which transactions are to be subject to abatement treatment?

Representative Use Cases

Message nomenclature

- OC-S-F (C)(L,P) in requests
 - OC-Supported-Features
 - OC-SourceID=C
 - OC-Feature-Vector=Loss, Peer
- C inserted the OC-S-F AVP in the message
- C supports the Loss and Peer Features

Message nomenclature

- OC-S-F (A1)(L,P)(L) in answers
 - OC-Supported-Features
 - OC-SourceID=A1
 - OC-Feature-Vector=Loss, Peer
 - OC-Peer-Algo=Loss
- A1 inserted the OC-S-F AVP in the message
- The Loss Algorithm will be used for host and realm reports
- The Loss algorithm will be used for peer reports

Message nomenclature

- OC-OLR(A1)(L)

- OC-OLR

- OC-SourceID=A1

- OC-Report-Type=Peer

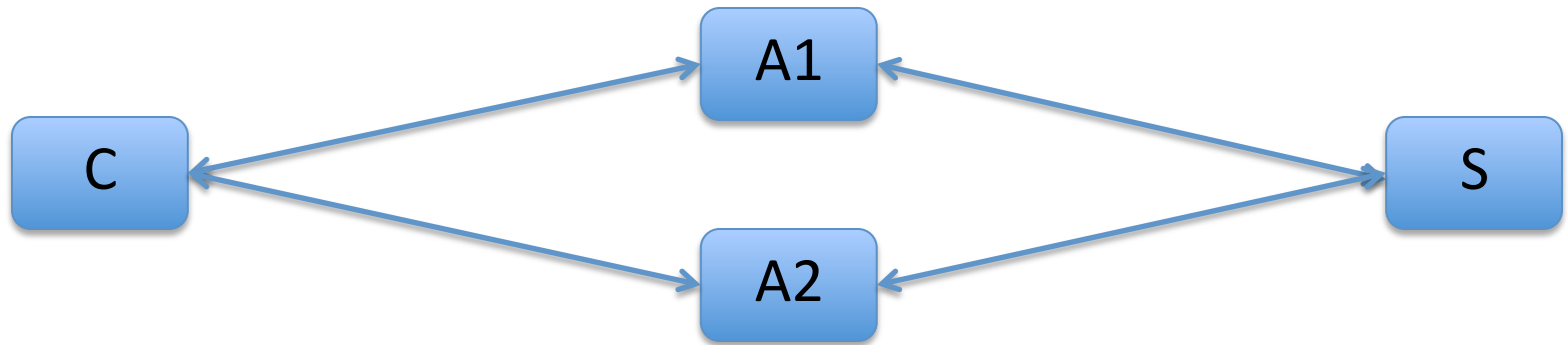
- A1 inserted the OC-S-F AVP in the message

- The report of type peer contains parameters for the algorithm specified in the OC-S-F, OC-Peer-
Algo AVP. In this case that is the loss algorithm.

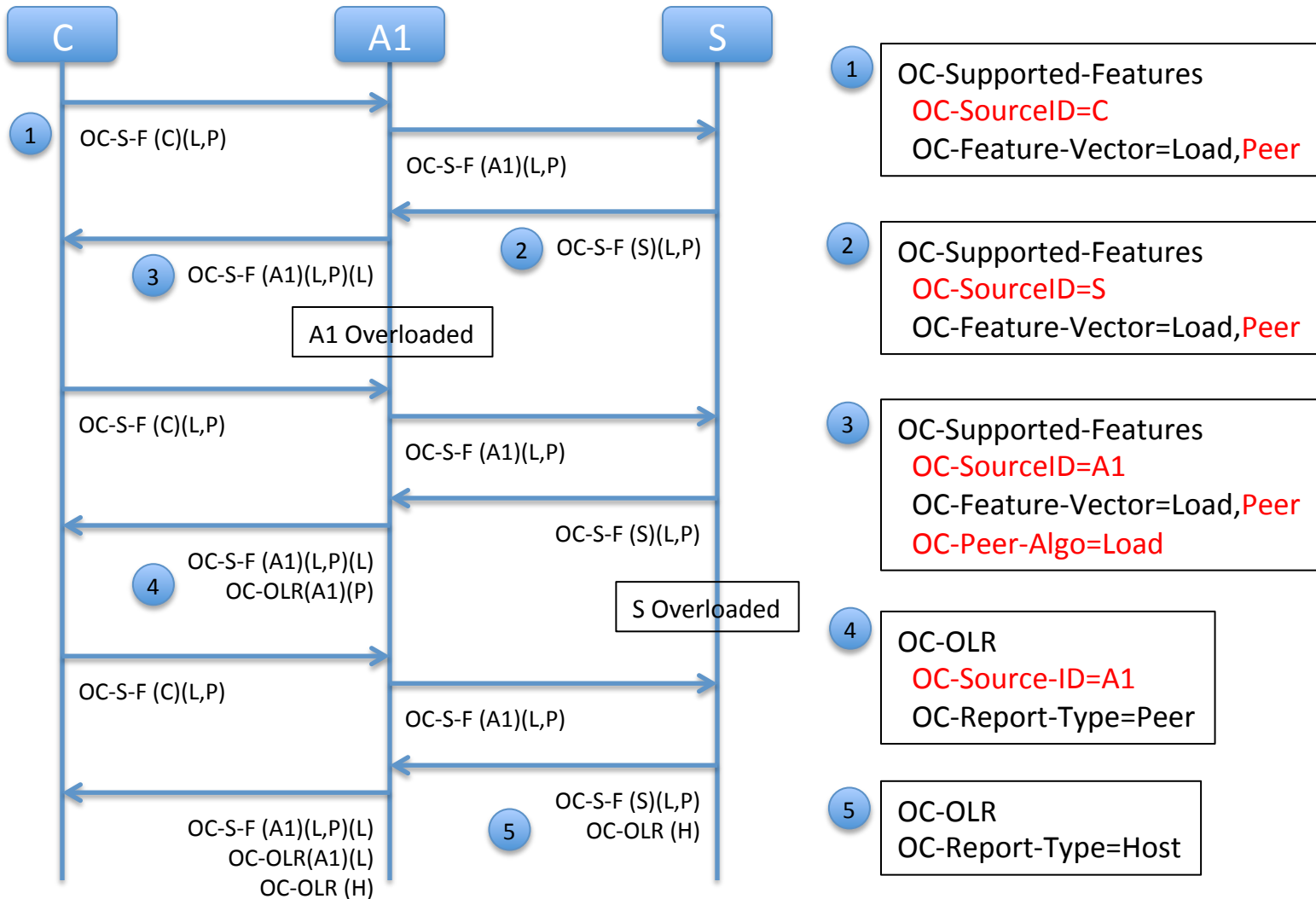
Message nomenclature

- OC-OLR(L)
 - OC-OLR
 - OC-Report-Type=Host
- Normal DOIC host report
- The report of type loss contains parameters for the algorithm specified in the OC-S-F, OC-Feature-Vector AVP. In this case that is the loss algorithm.

Single Agent, All Nodes Support Peer



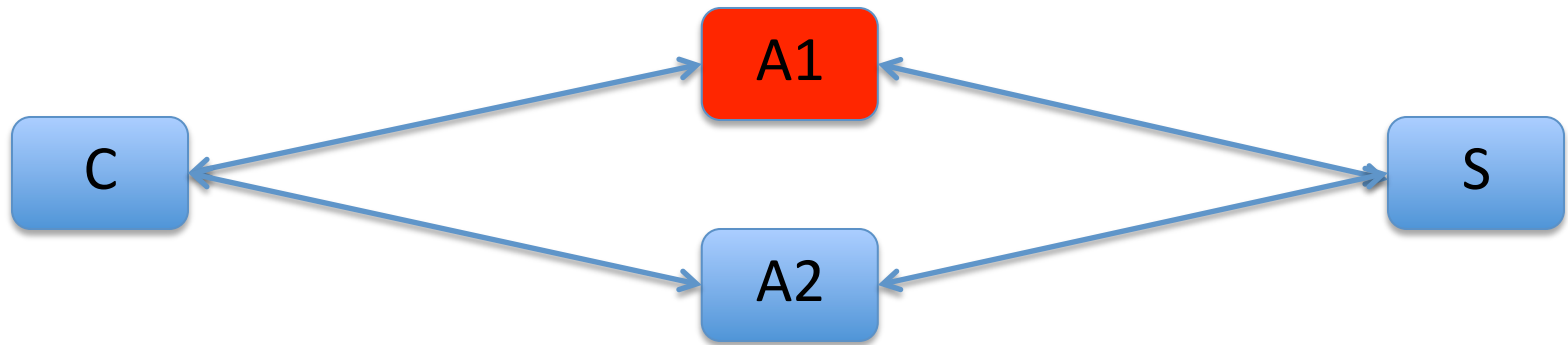
Single Agent



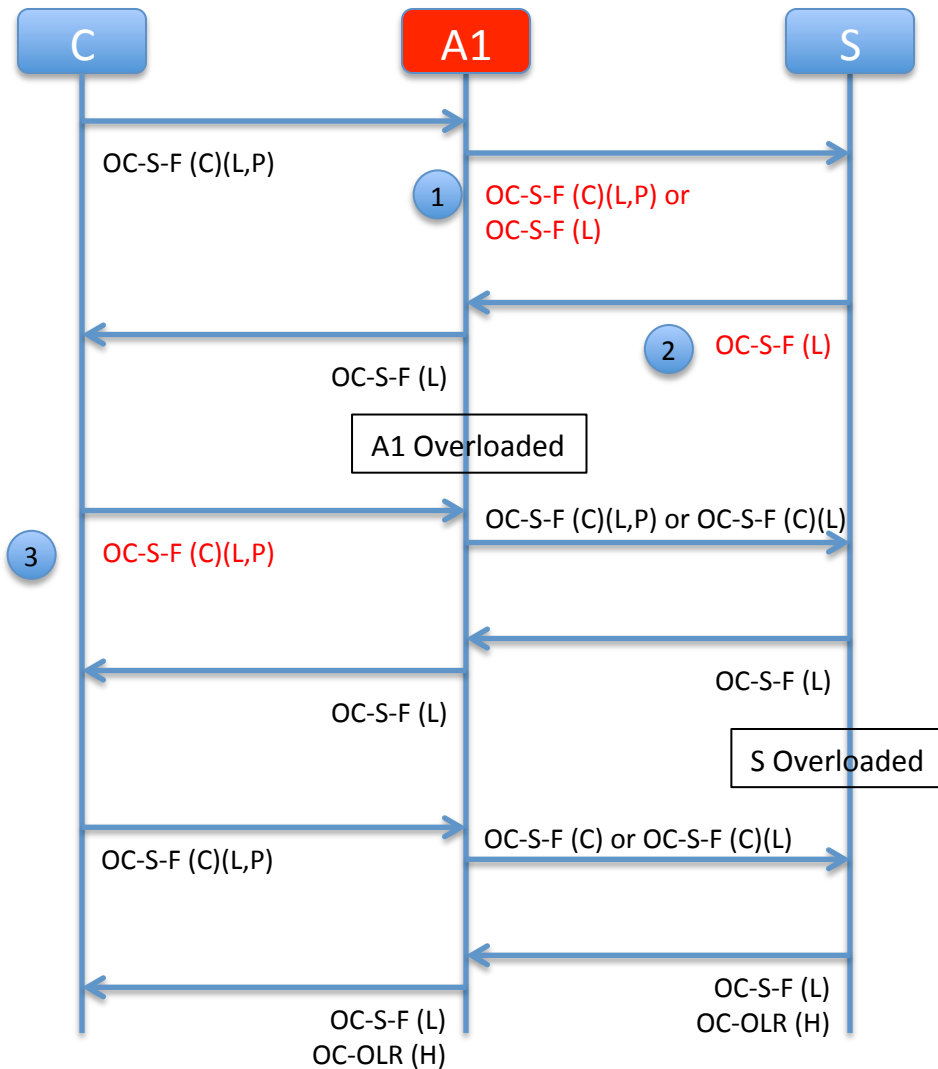
Notes

- If a Diameter node indicates support for the peer features in the OC-Supported-Features AVP then the Diameter node MUST include the OC-SourceID AVP in the OC-Supported-Features AVP.
 - Note: This applies to both request and answer messages.
- If a Diameter node will send a Peer report when overloaded then the Diameter node MUST include the OC-Peer-Algo AVP indicating the overload abatement algorithm in all OC-Supported-Features AVPs in all answer messages.
- If a Diameter node sends a peer overload report – and OC-OLR with OC-Report-Type of Peer – then the Diameter node MUST include the OC-SourceID in the OC-OLR AVP.

A1 does not support Peer



A1 Supports DOIC, does not support Peer



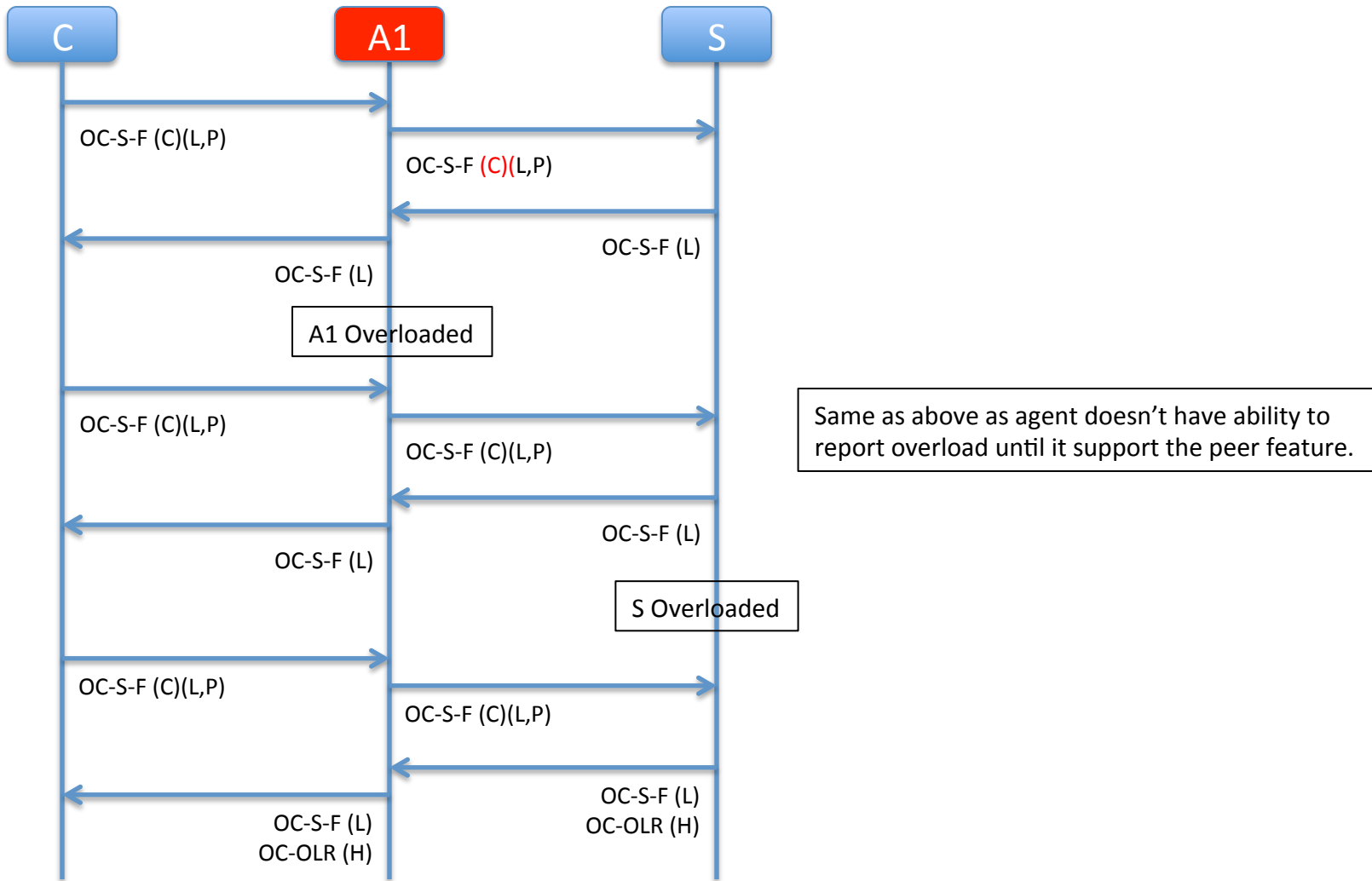
1 Features advertised by the agent depends on agent policy. It can either pass the received features or modify them based on agent capabilities.

2 S knows A1 does not support peer thus proceeds using non peer DOIC signaling.

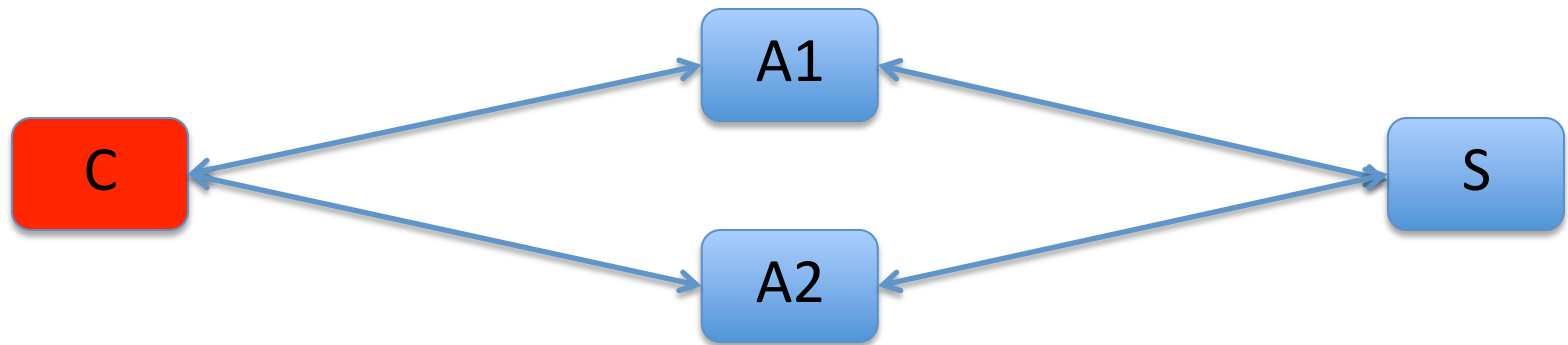
3 Even though C knows A1 does not support peer it continues to advertise support.

If C does not continue to advertise support then it will never know when A1 starts to support peer.

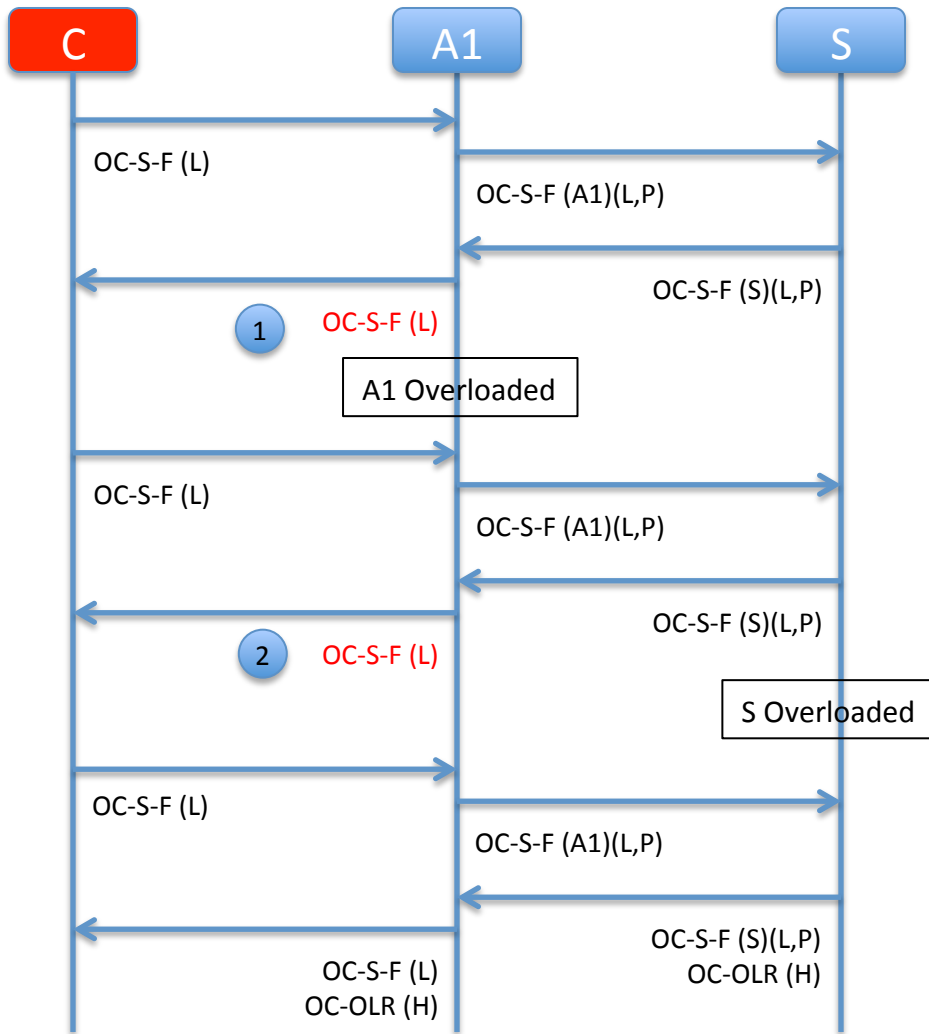
A1 Does not supports DOIC



C does not support peer



C does not support peer



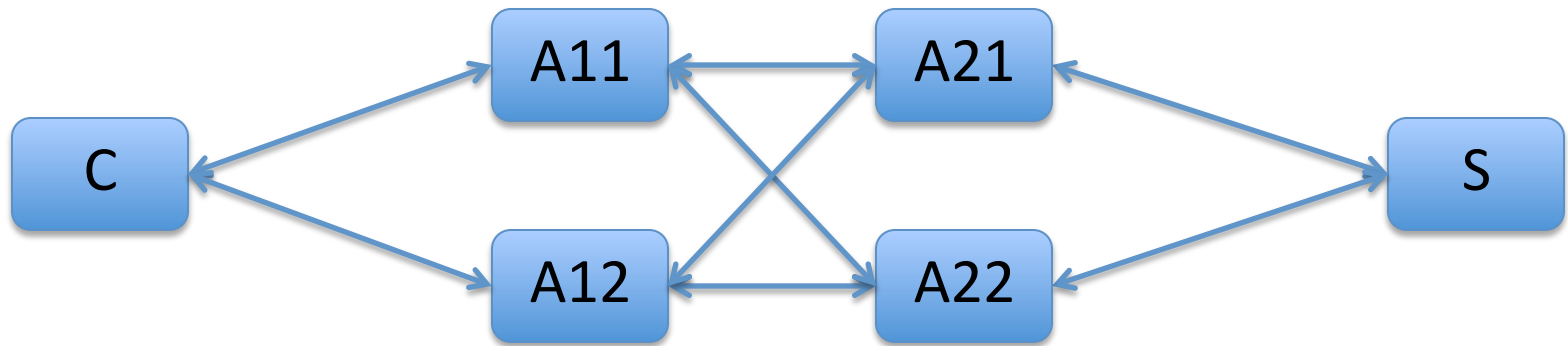
1

A1 knows C does not support peer thus proceeds using non peer DOIC signaling.

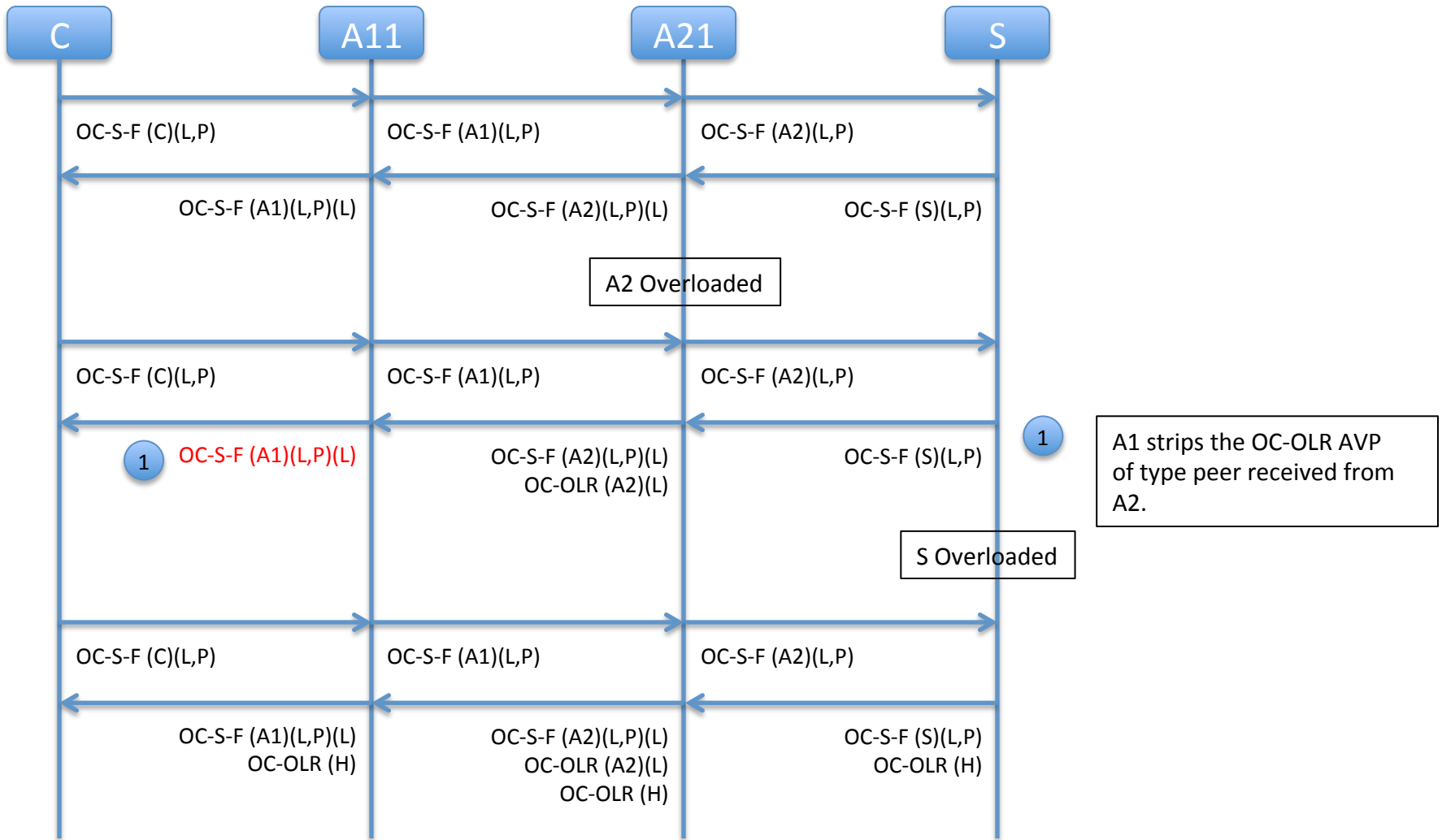
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A1 knows C does not support peer thus does not include the OC-OLR of type peer in answer messages for transactions received from A.

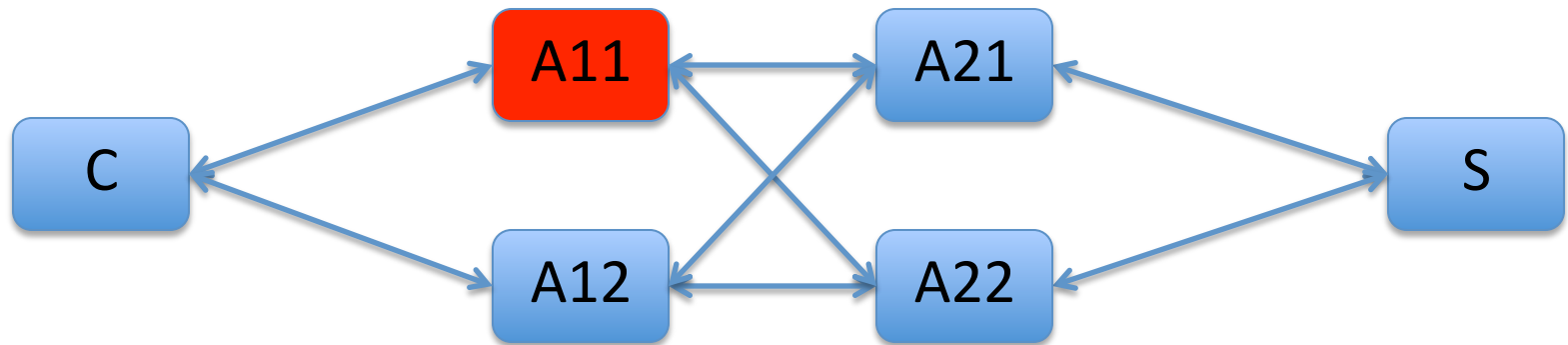
Agent Chain – All nodes support peer



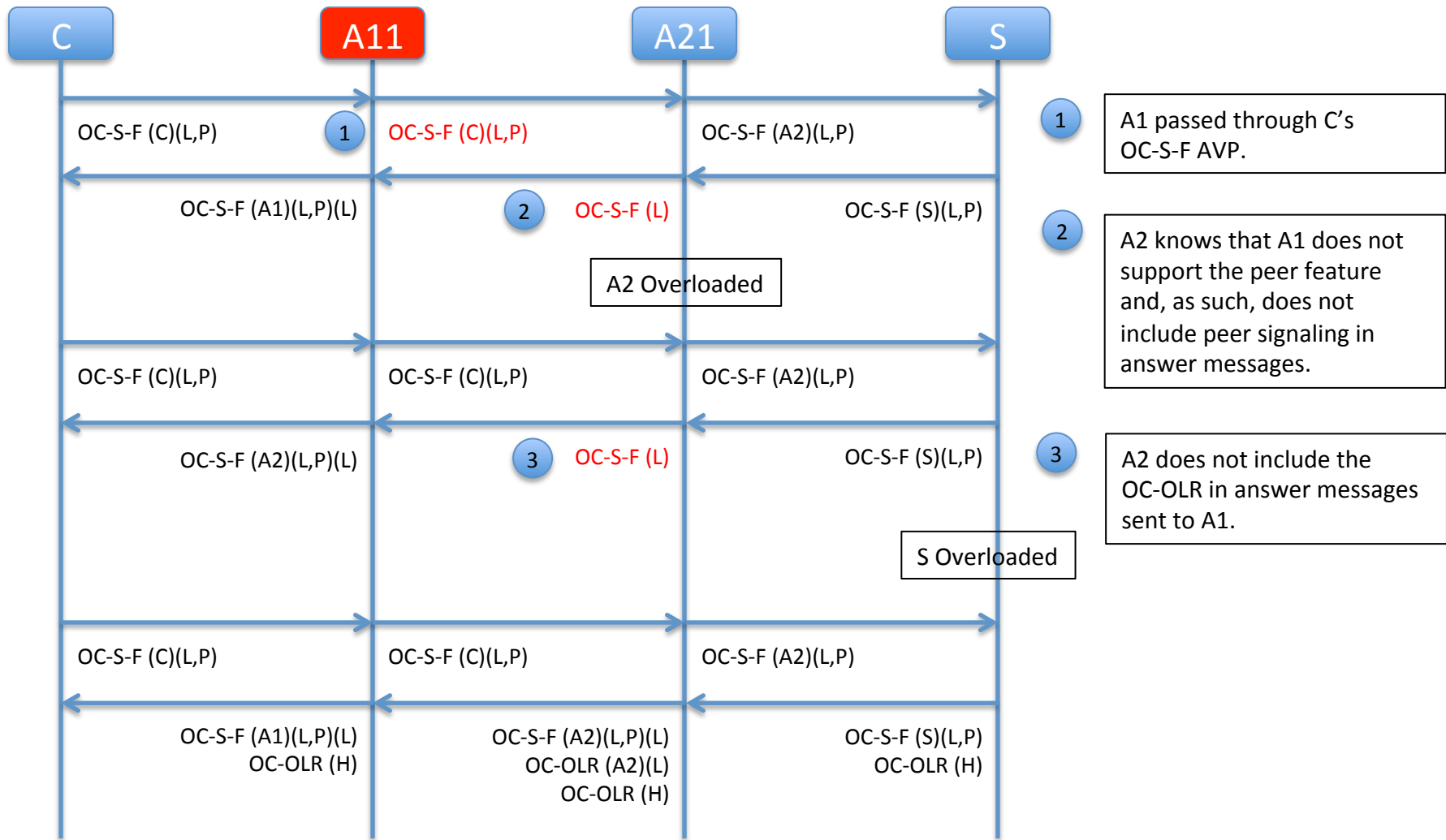
Agent Chain – A2 overloaded



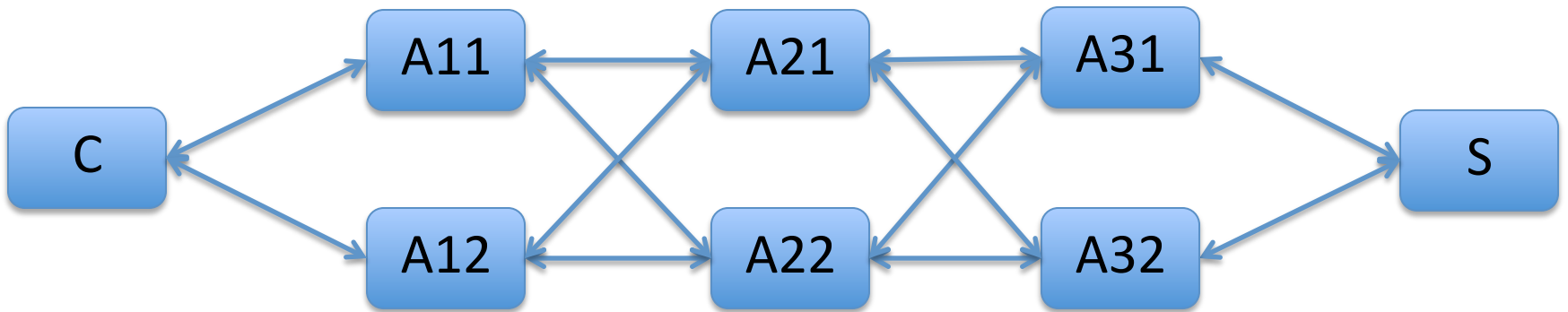
Agent Chain – A11 does not support peer



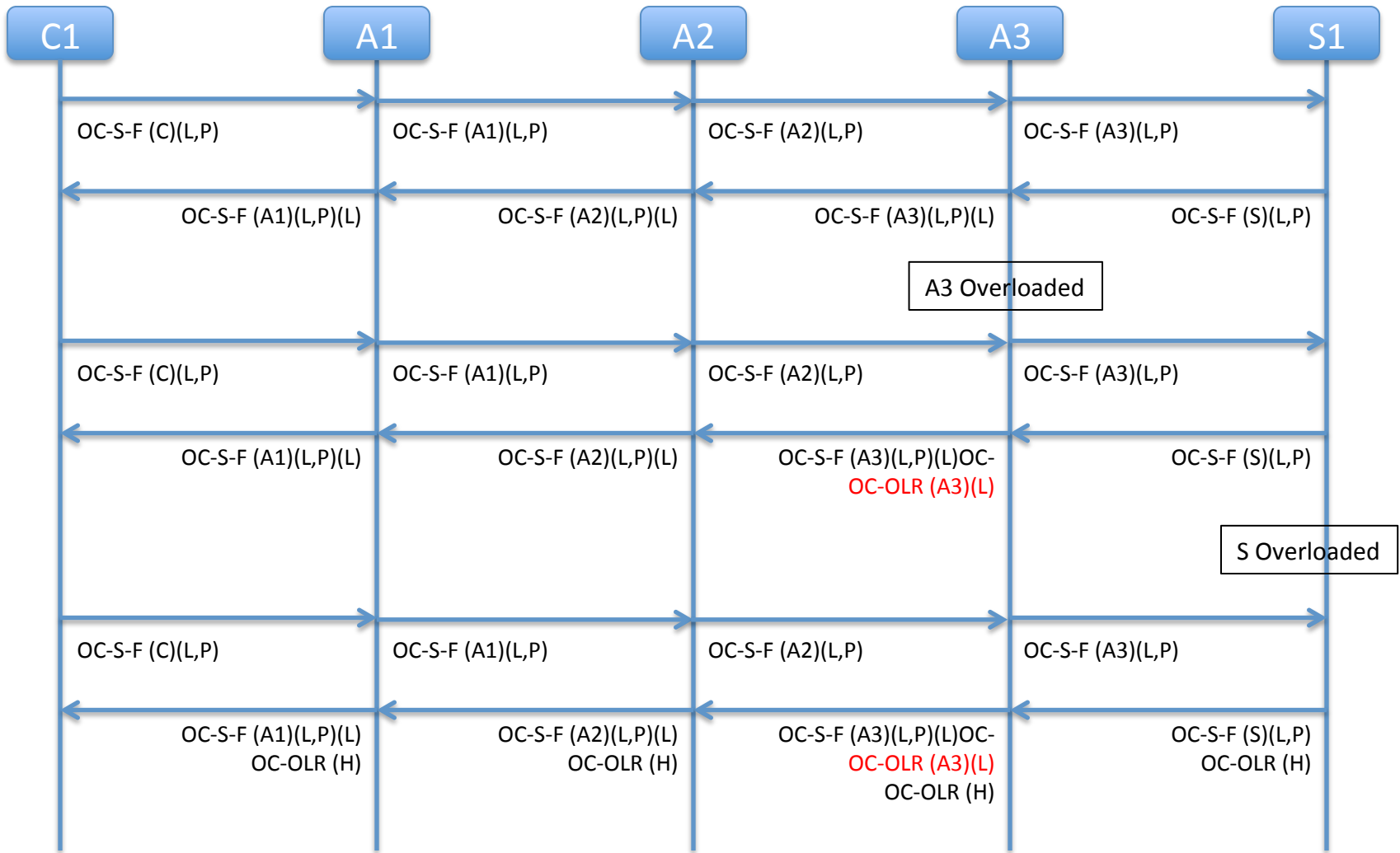
Agent Chain – A11 does not support peer



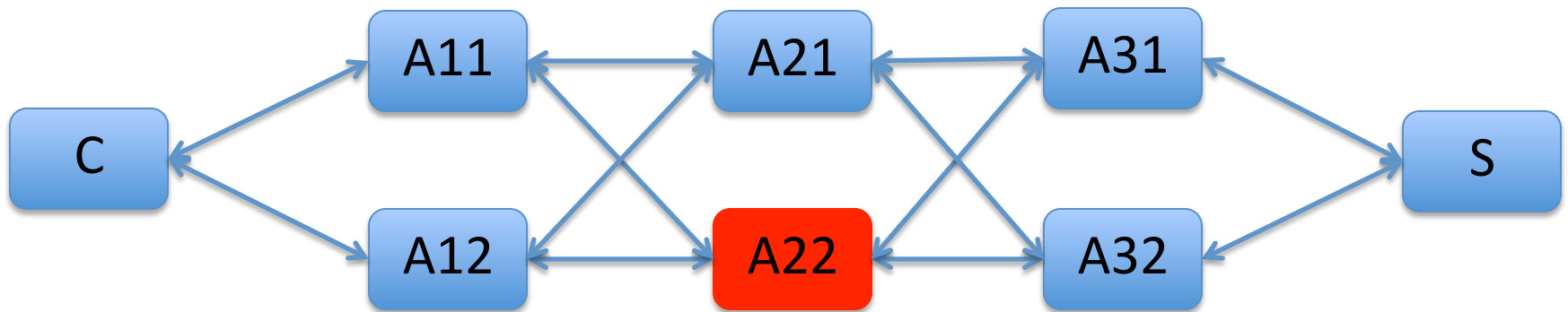
Long Agent Chain



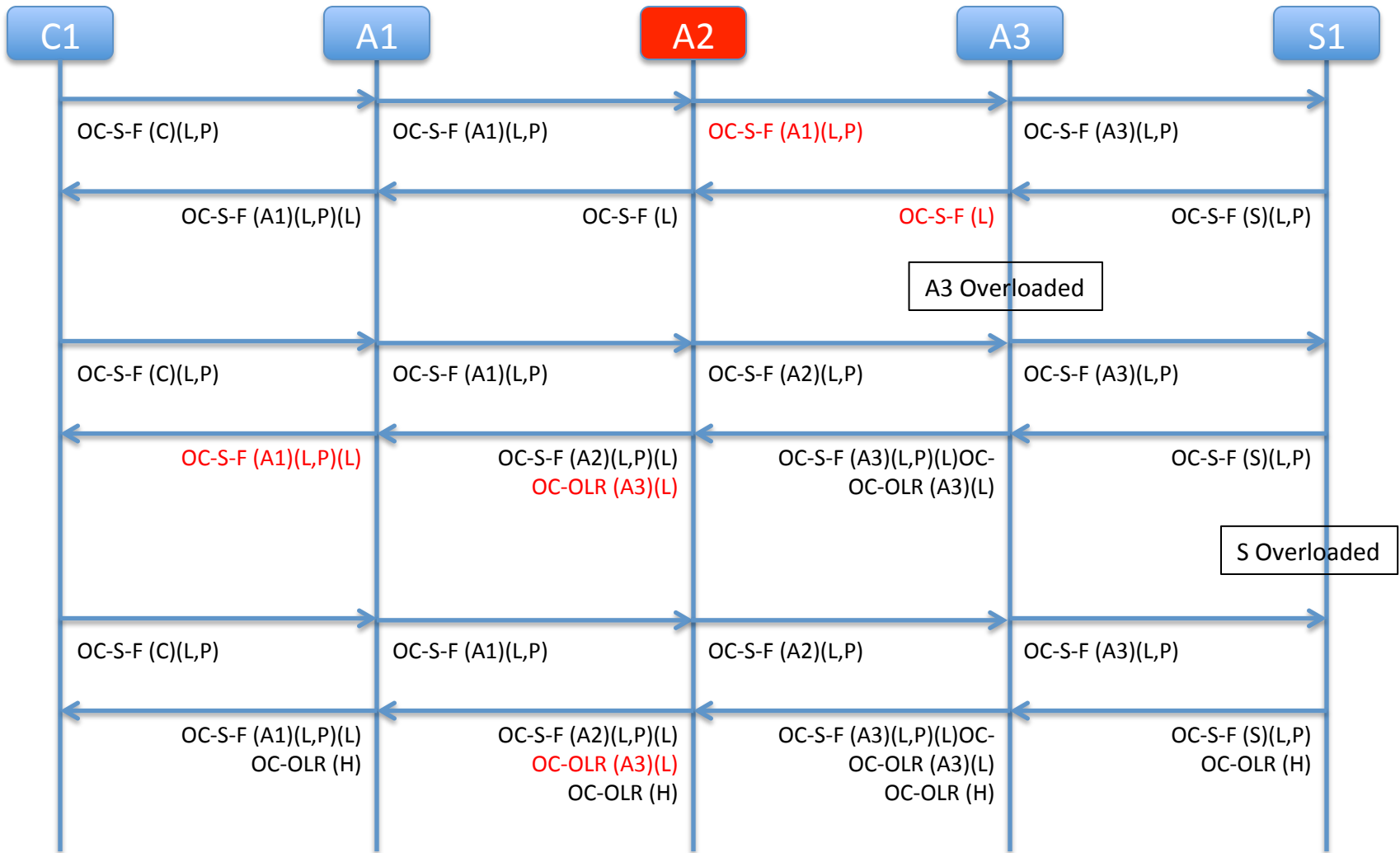
Long Agent Chain



Long Agent Chain – Agent doesn't support DOIC



Long Agent Chain – Agent doesn't support DOIC



Next Steps

- Working group review of draft