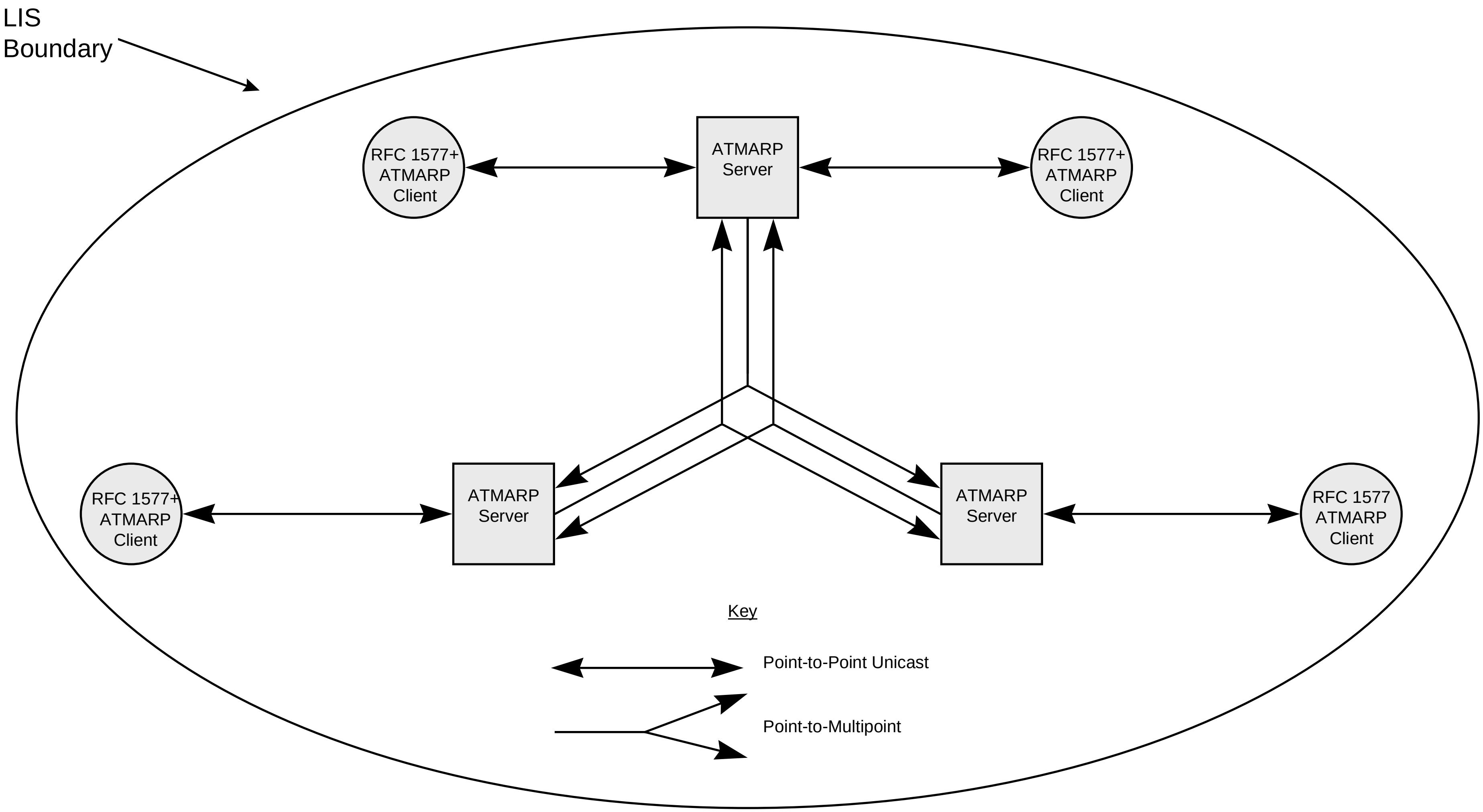
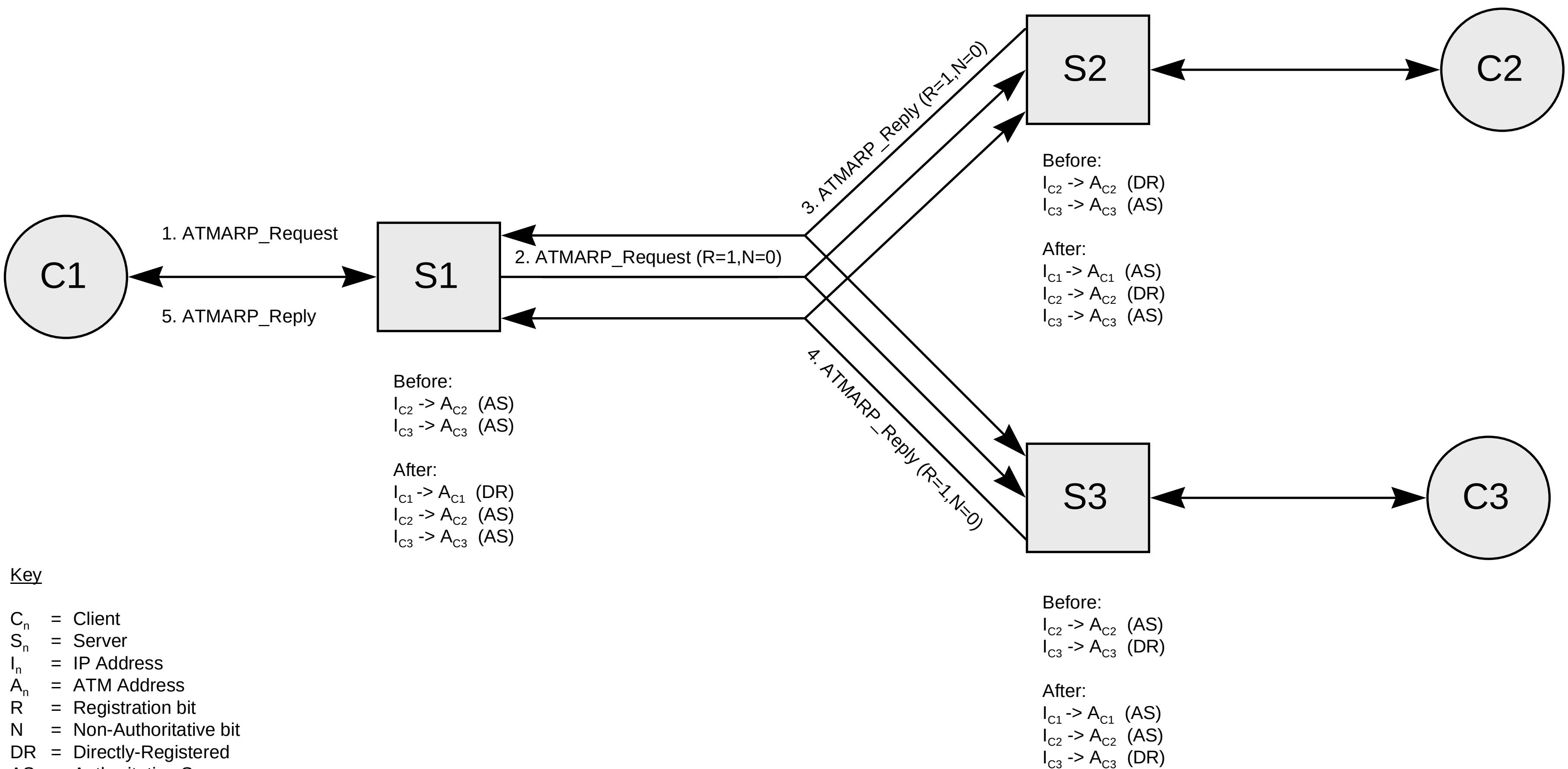
Distributed ATMARP Servers

Carl Marcinik
Maryann Perez Maher

Distributed ATMARP Model



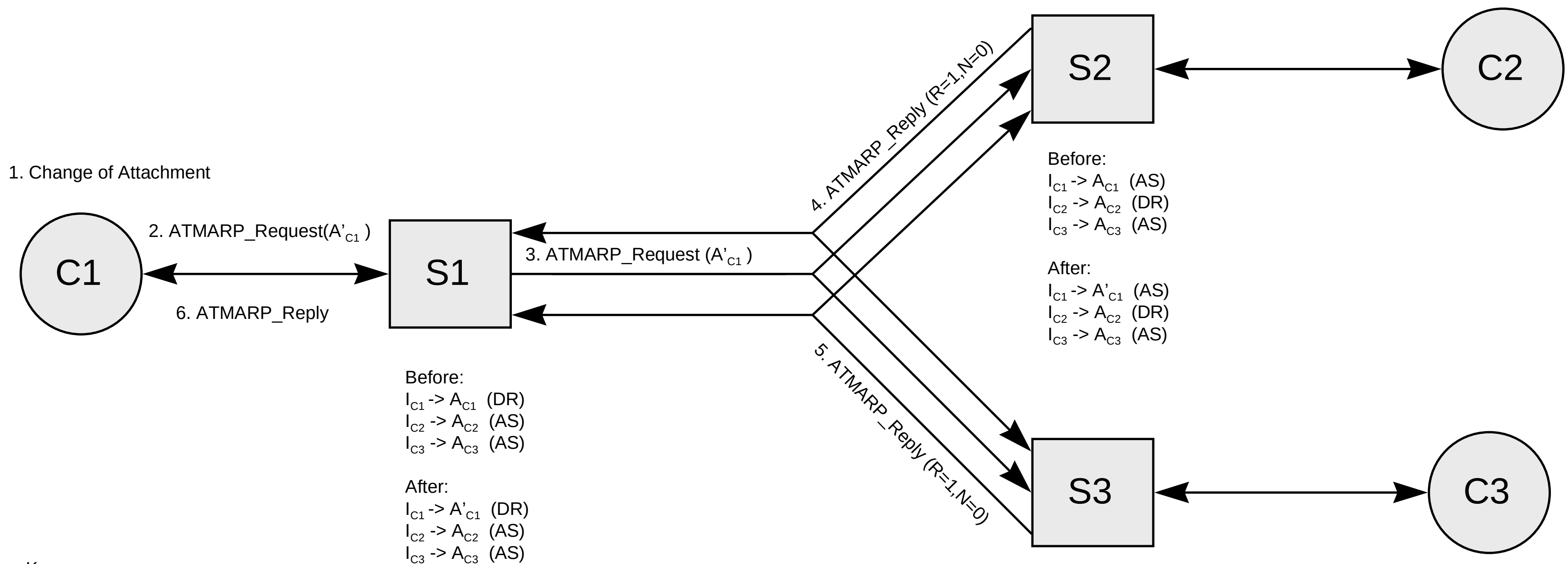
ATMARP Client Registration



Key

C_n = Client
S_n = Server
I_n = IP Address
A_n = ATM Address
R = Registration bit
N = Non-Authoritative bit
DR = Directly-Registered
AS = Authoritative Source
NS = Non-Authoritative Source

ATMARP Client Registration
(Client Change of Attachment)



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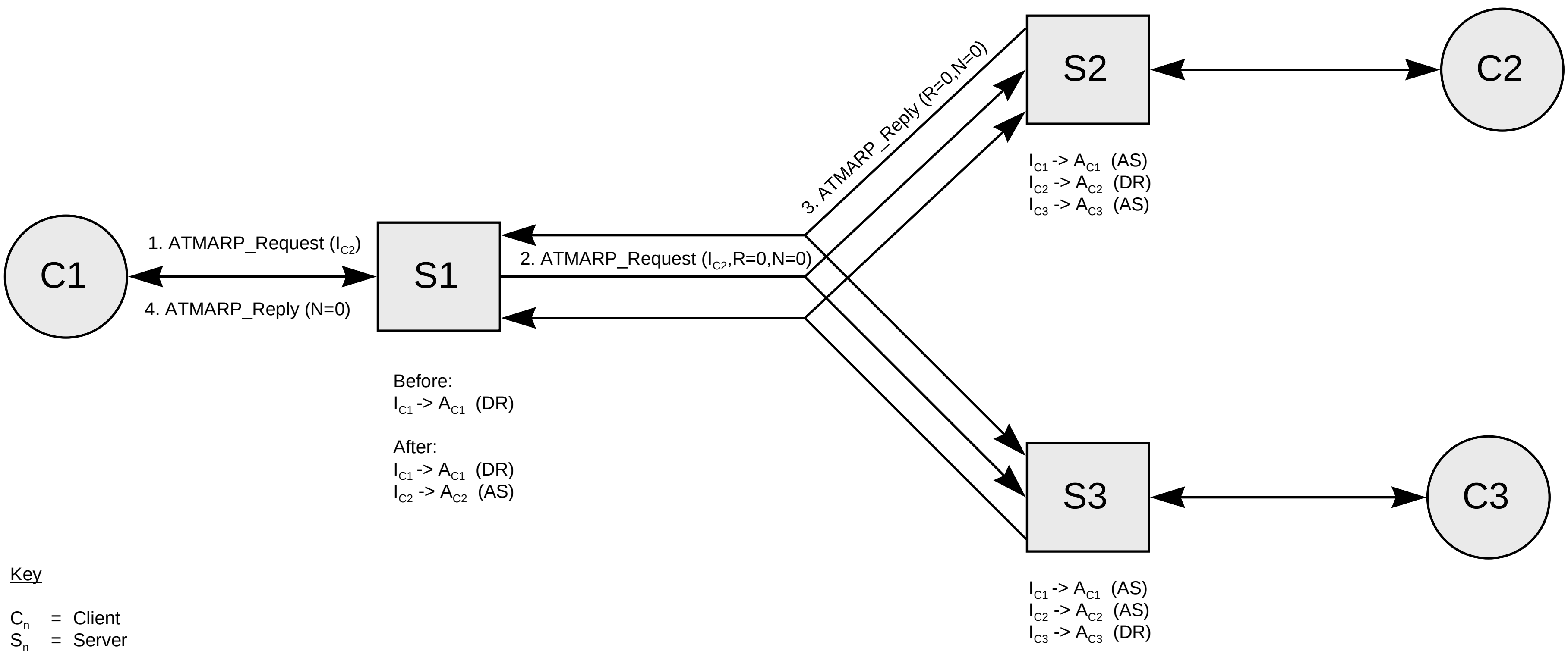
ATMARP Address Resolution

(Authoritative Request)



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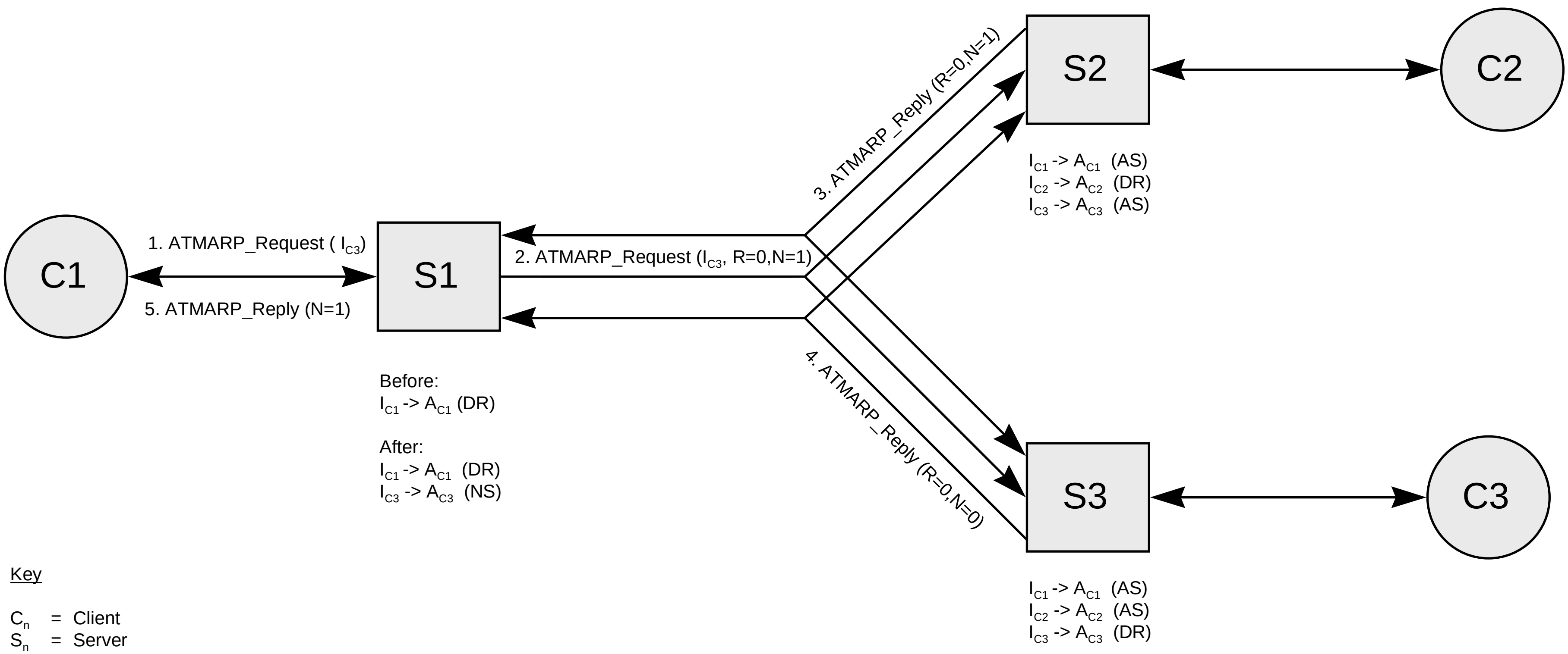
ATMARP Address Resolution

(Non-Authoritative Request)



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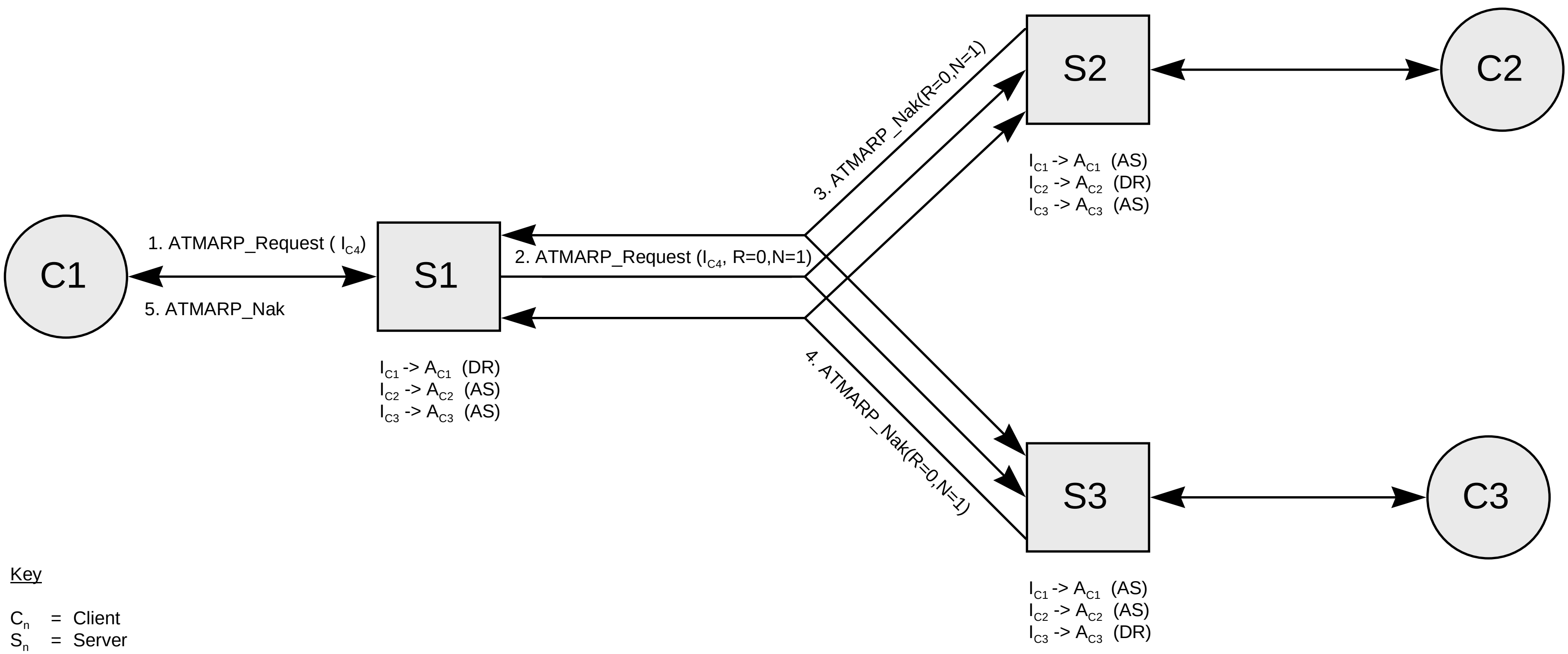
ATMARP Address Resolution

(Non-Authoritative Request, Target Not Found)



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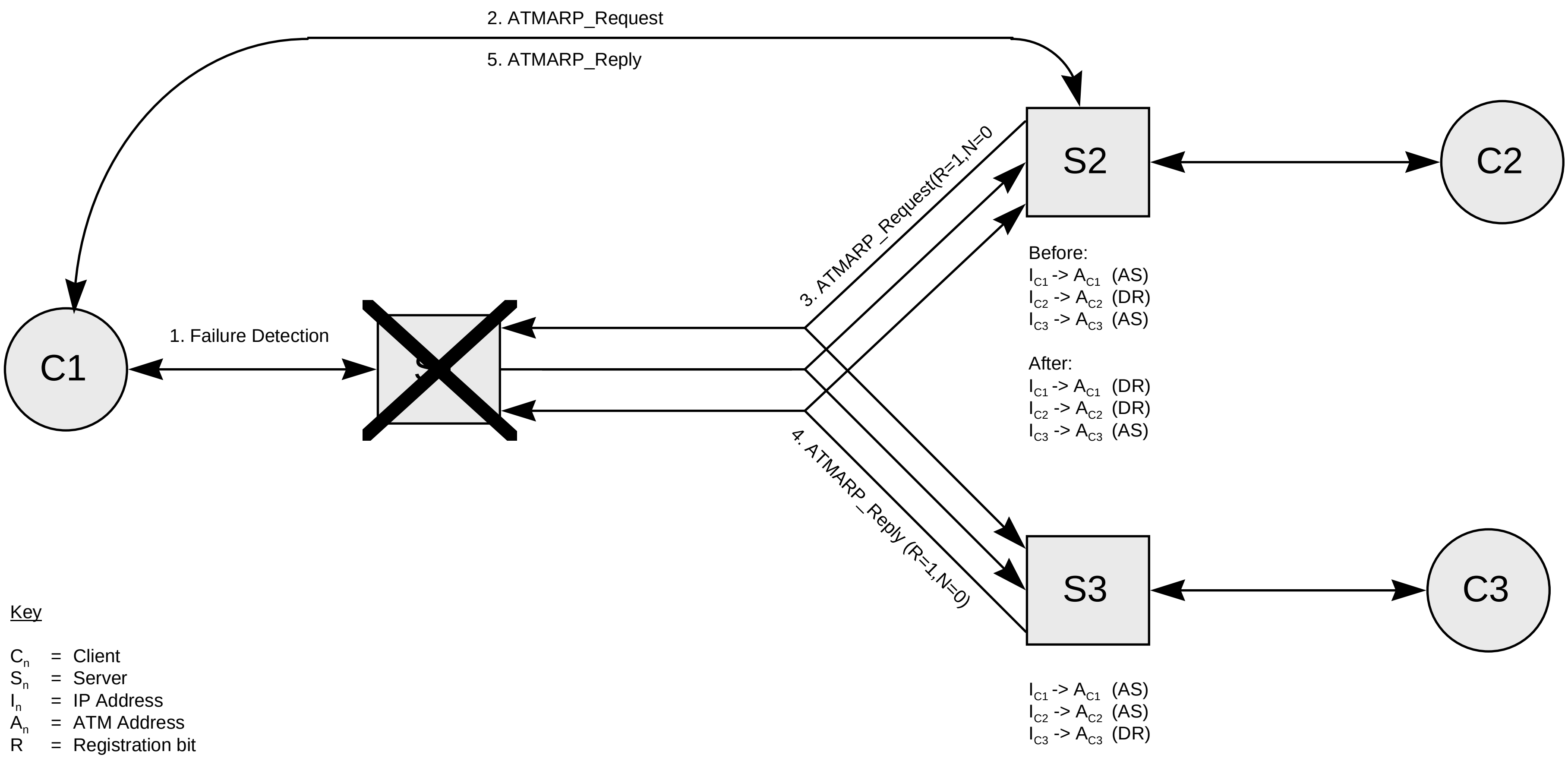
ATMARP Server Failure/Recovery

(Client Detection and Fail-over)



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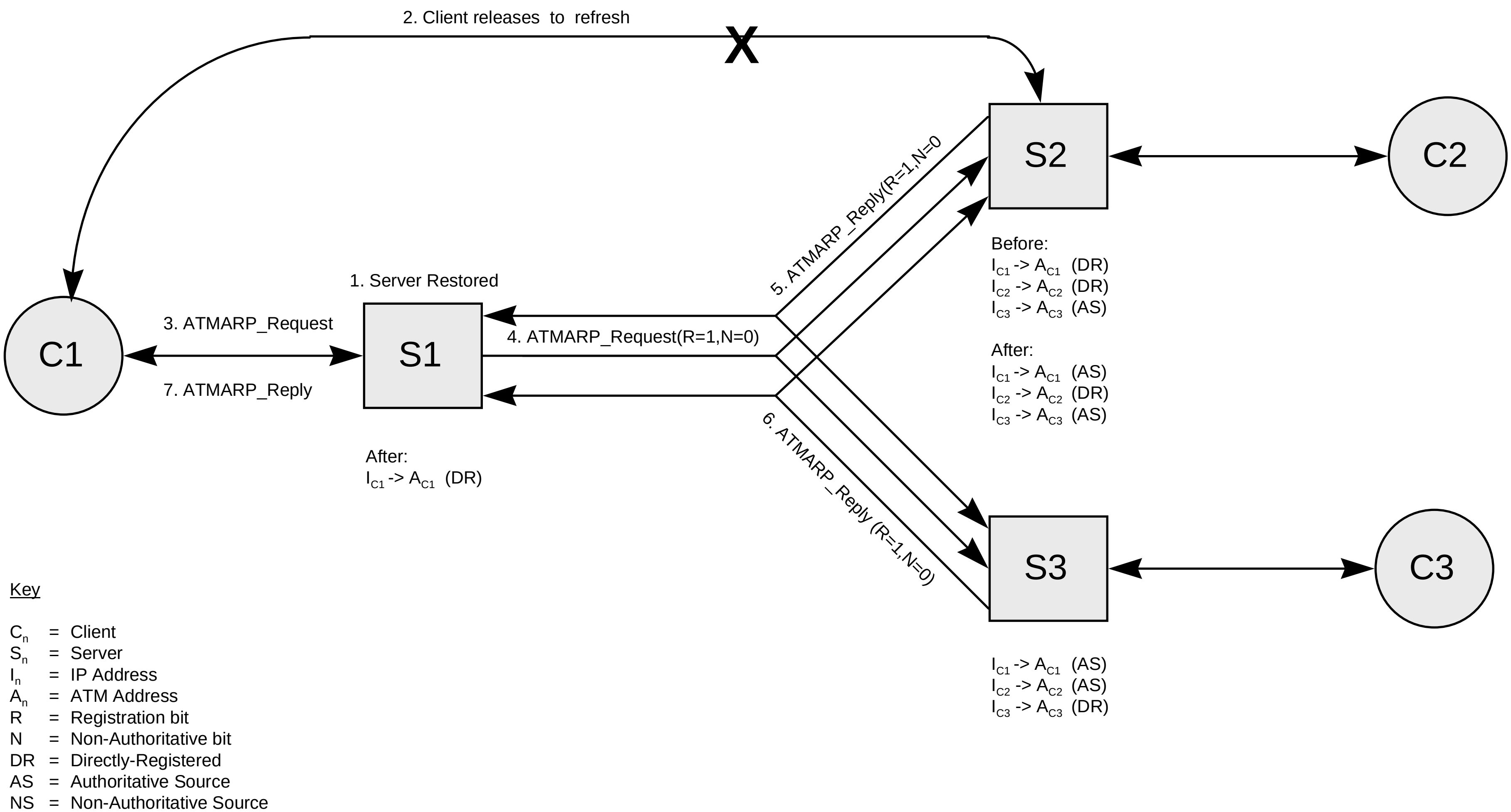
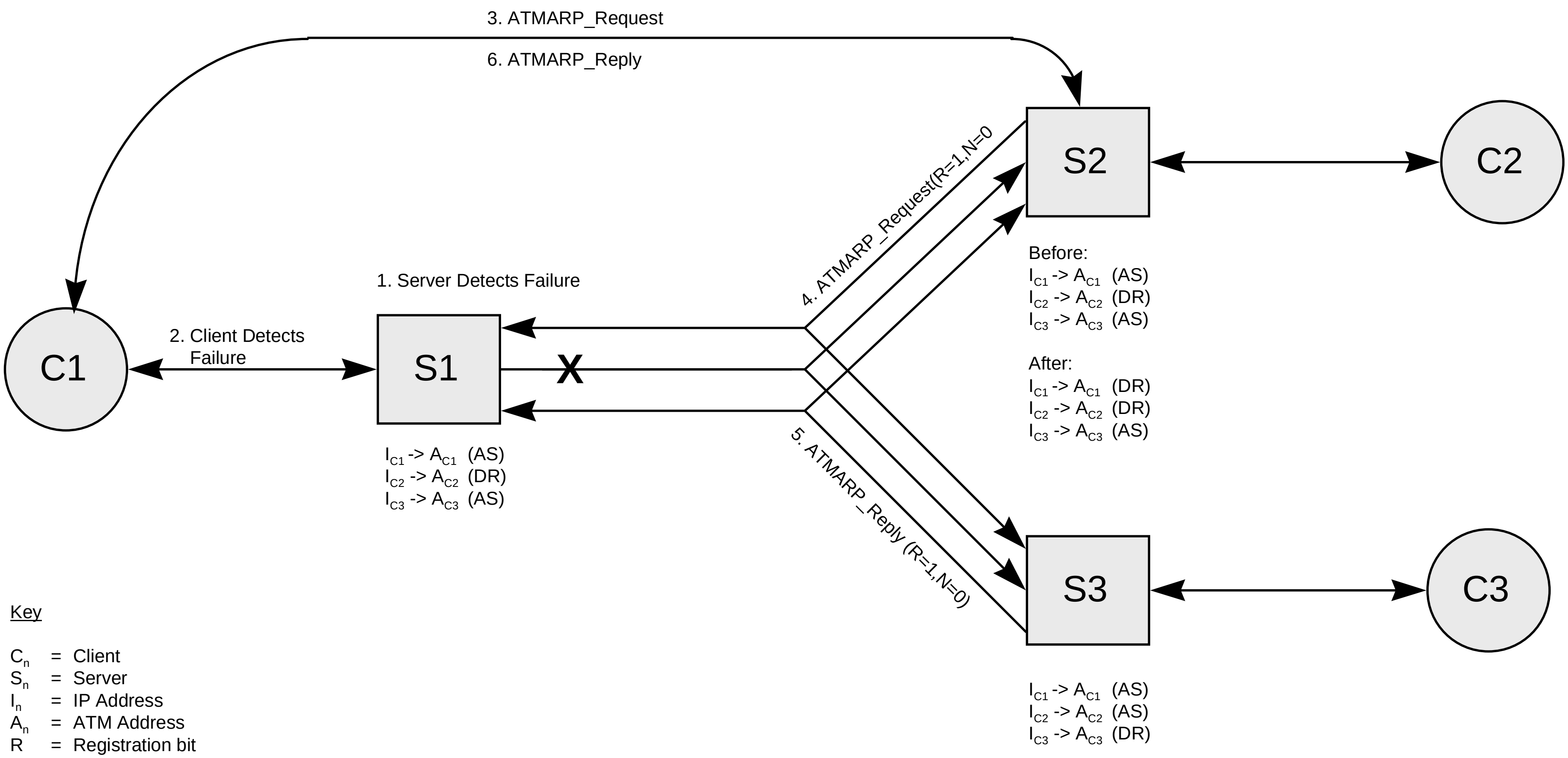
ATMARP Server Failure/Recovery

(Server Restoration and Client Redistribution)



ATMARP Server Failure/Recovery

(Outgoing PMP Failure)



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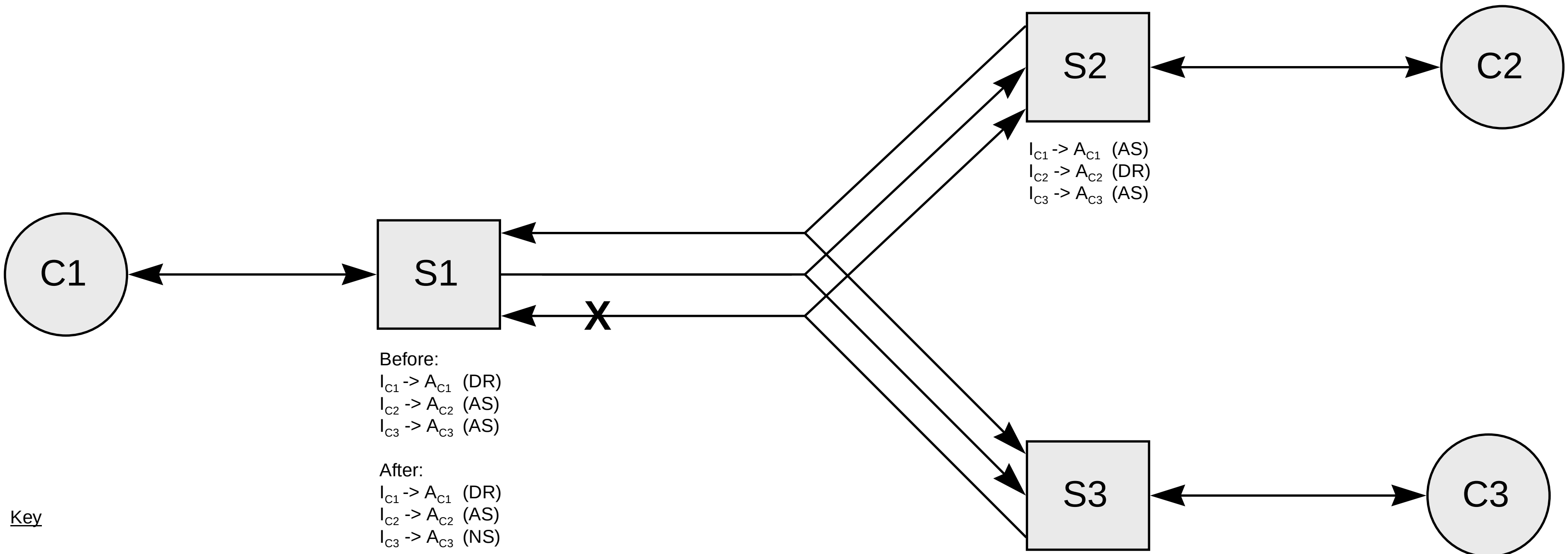
ATMARP Server Failure/Recovery

(Incoming PMP Failure)



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ATMARP Packet Formats

Client

<table>
<tr><td colspan="4">Hardware Type</td><td colspan="2">Protocol Type</td></tr>
<tr><td>N</td><td>E</td><td>LEN</td><td>SSTL</td><td colspan="2">Operation Code</td></tr>
<tr><td colspan="3">SPAL</td><td>THTL</td><td>TSTL</td><td>TPAL</td></tr>
<tr><td colspan="6">Source ATM Address</td></tr>
<tr><td colspan="6">Source ATM Subaddress</td></tr>
<tr><td colspan="6">Source Protocol Address</td></tr>
<tr><td colspan="6">Target ATM Address</td></tr>
<tr><td colspan="6">Target ATM Subaddress</td></tr>
<tr><td colspan="6">Target Protocol Address</td></tr>
</table>

Server

<table>
<tr><td colspan="6">Hardware Type</td><td colspan="2">Protocol Type</td></tr>
<tr><td>R</td><td>E</td><td>LEN</td><td colspan="3">SSTL</td><td colspan="2">Operation Code</td></tr>
<tr><td colspan="3">SPAL</td><td>N</td><td>E</td><td>LEN</td><td>TSTL</td><td>TPAL</td></tr>
<tr><td colspan="8">Server ATM Address</td></tr>
<tr><td colspan="8">Server ATM Subaddress</td></tr>
<tr><td colspan="8">Server Protocol Address</td></tr>
<tr><td colspan="8">Client ATM Address</td></tr>
<tr><td colspan="8">Client ATM Subaddress</td></tr>
<tr><td colspan="8">Client Protocol Address</td></tr>
</table>

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