Port Mapping Between Ucast/Mcast RTP Sessions
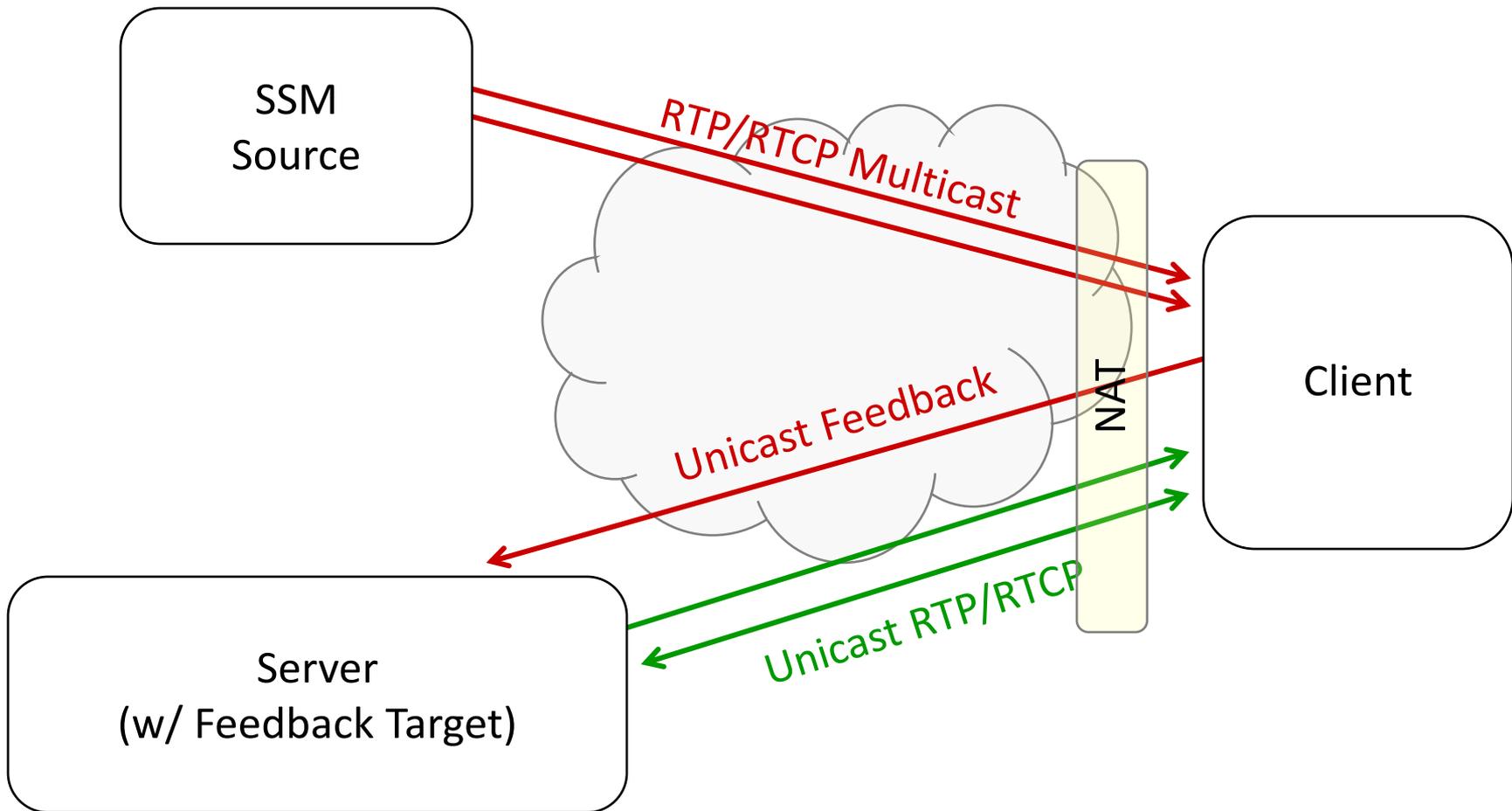
`draft-ietf-avt-ports-for-ucast-mcast-rtp-02`

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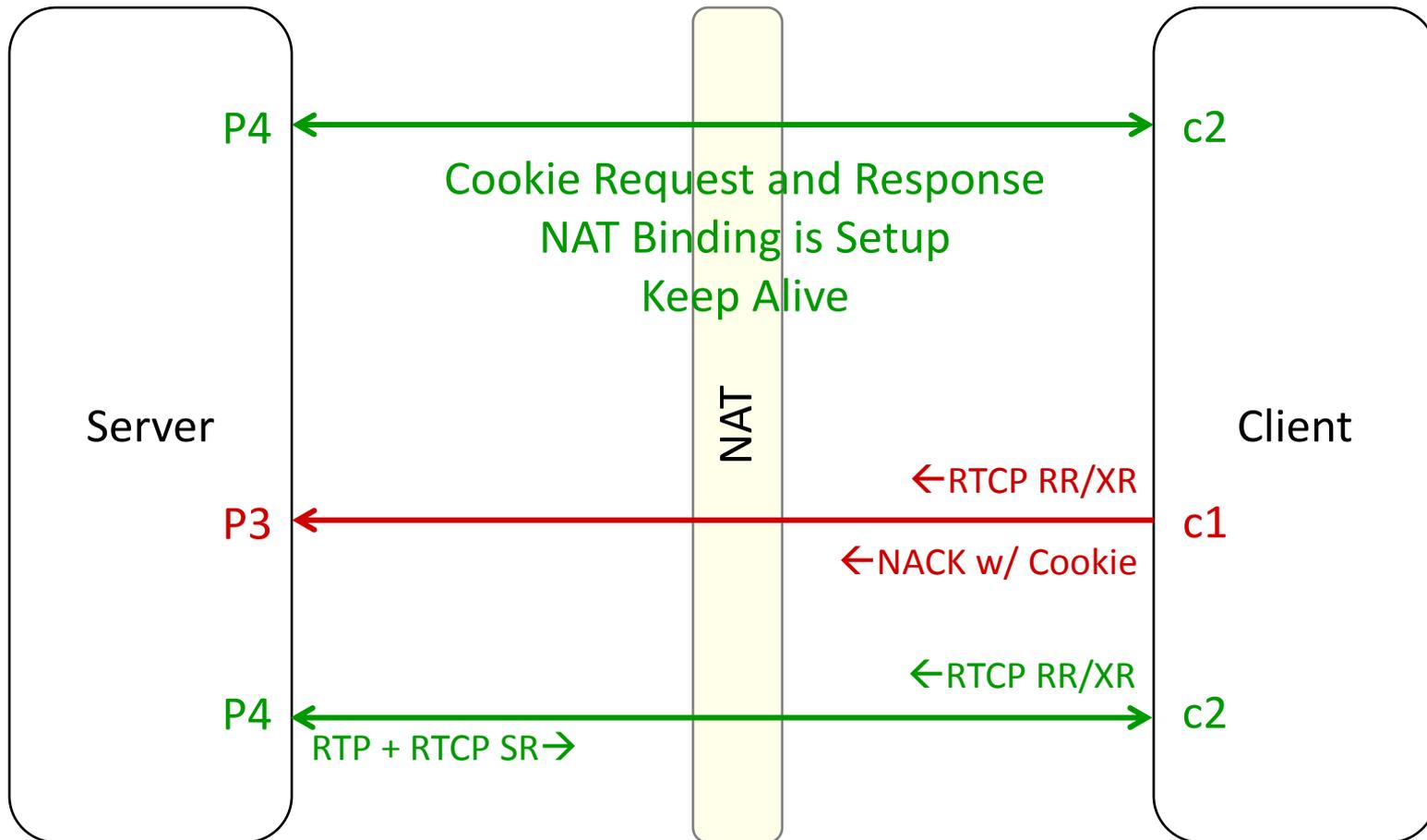
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Example: SSM + Unicast Retransmissions

Server and Client <u>Support</u> RTP/RTCP Muxing

Server

NAT

Client

P4 ←——————————————————→ c2

Cookie Request and Response
NAT Binding is Setup
Keep Alive

←RTCP RR/XR

P3 ←——————————————————— c1

←NACK w/ Cookie

←RTCP RR/XR

P4 ←——————————————————→ c2

RTP + RTCP SR→

c1 and c2 are chosen by the client and could be the same port

SDP Example

Multicast RTP port

```
a=group:FID 1 2
m=video 41000 RTP/AVPF 98
i=Primary Multicast Stream
c=IN IP4 233.252.0.2/255
a=source-filter:incl IN IP4 233.252.0.2 198.51.100.1
a=rtpmap:98 MP2T/90000
a=multicast-rtcp:42000
a=rtcp:43000 IN IP4 192.0.2.1
a=rtcp-fb:98 nack
a=mid:1
m=video 51000 RTP/AVPF 99
i=Unicast Retransmission Stream
c=IN IP4 192.0.2.1
a=sendonly
a=rtpmap:99 rtx/90000
a=rtcp-mux
a=fmtp:99 apt=98; rtx-time=5000
a=cookie-req:52000
a=mid:2
```

Multicast group address

Source address

Server (Feedback target)

RTCP port on the server (P3)

This port does not mean anything

RTCP (and RTP) port for unicast session on the server (P4)

Open Issues

- Which keep-alive method should we choose?

- Should we stick with 4585 packet format for cookie request and response? (Yes)

    How do we set the media sender SSRC?

    Use client's SSRC in both packet sender and media sender SSRC fields

- Should the client use the same SSRC/CNAME in both sessions so the reports received in two sessions can be linked? (Yes)

- Should the server respond if a cookie request is rejected? (Yes, with an empty Cookie)

- Should the server indicate the expiration date for the Cookie explicitly in the response message? (Yes)