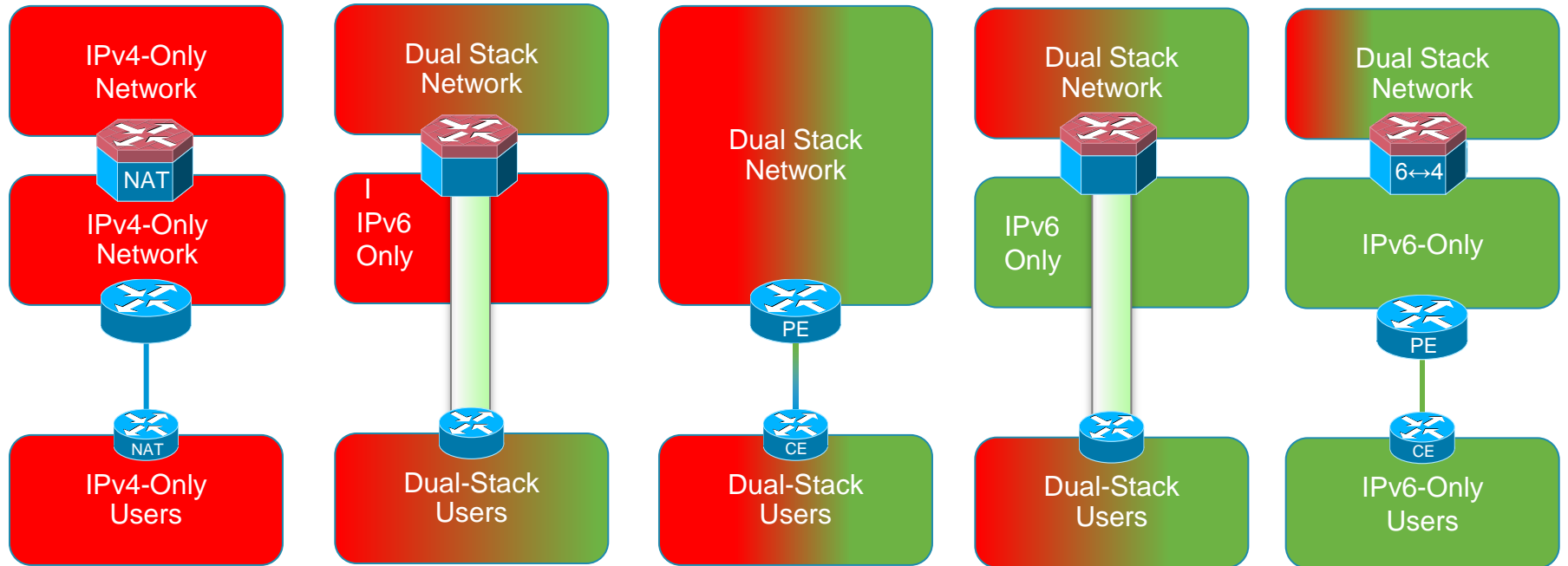

SD-NAT

Alain Durand

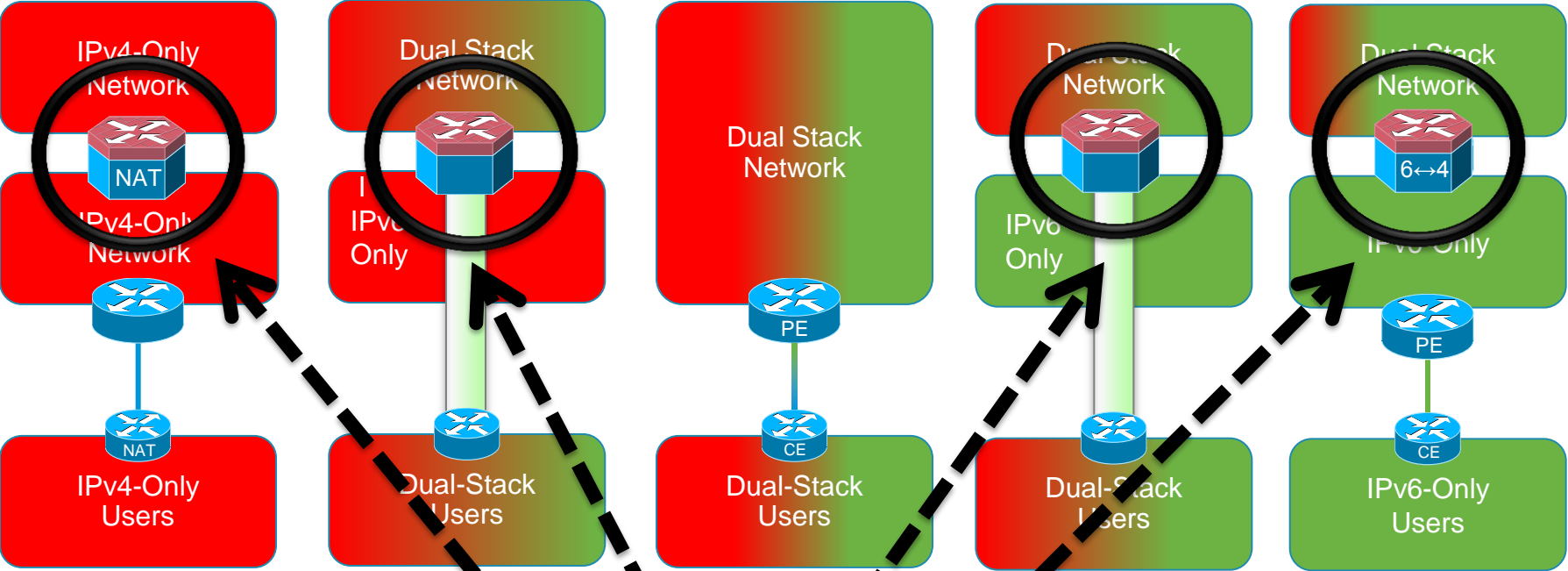
Transition Steps Instead of Leaps...



Credit: Mark Townsley "One vision for IPv6"



Transition Steps Instead of Leaps...



NAT

- NAT44
- NAT444
- DS-Lite
- NAT64
- NAT46



SD-NAT: MAKE THOSE NATS WORK BETTER

“Stateless operation” of ISP equipment

- Push state at edges
- Easy high availability
- High performance (NAT at line rate)

Reduce OPEX cost

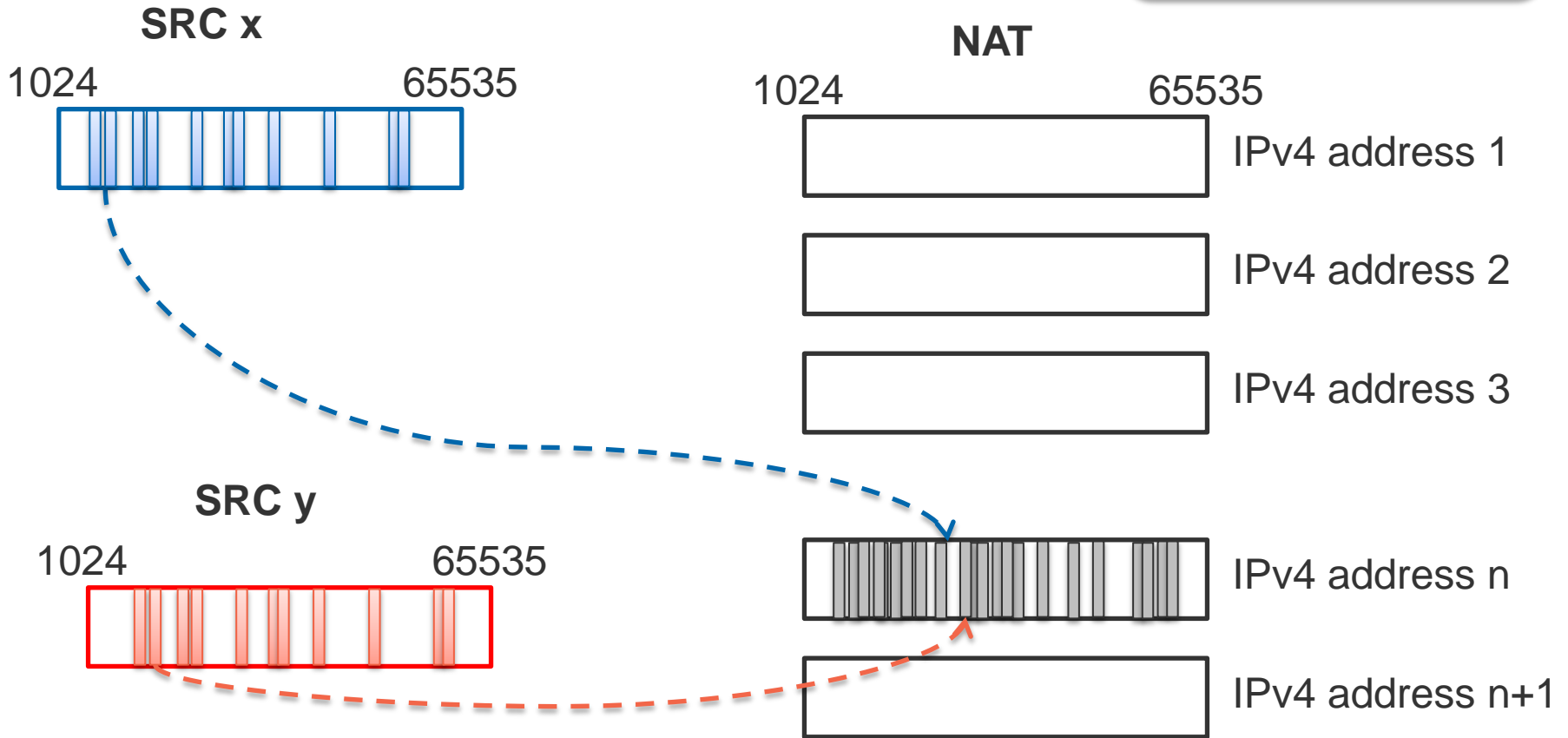
- IPv4 addresses are expensive resources
- Move IPv4 addresses to maximize ARPIP (Average Revenue Per IP Address)

Works across various flavors of NAT

- NAT44, NAT444, DS-Lite, NAT64, NAT46

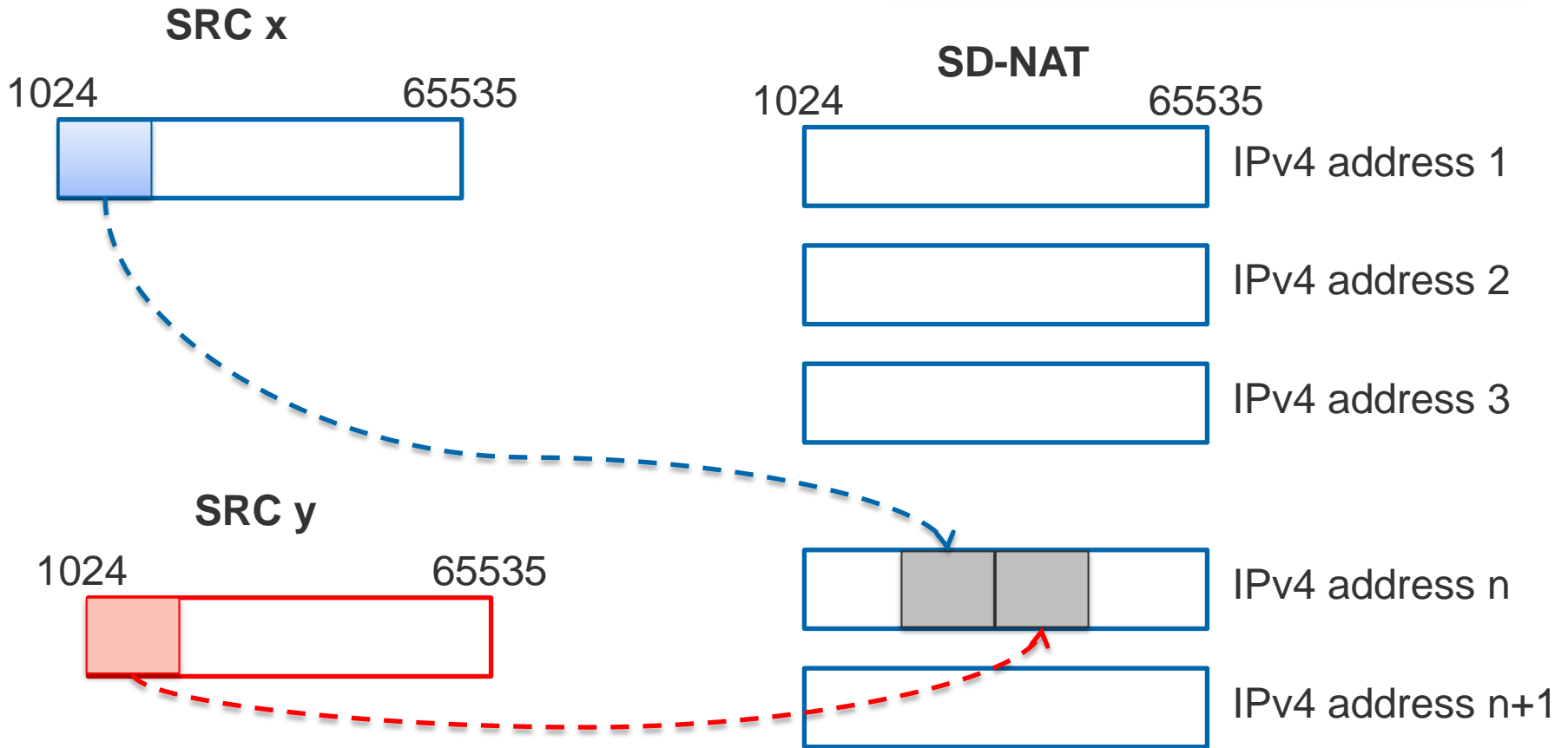
PORT MAPPING ON TRADITIONAL NAT

NAT needs to keep state to remember src port mappings



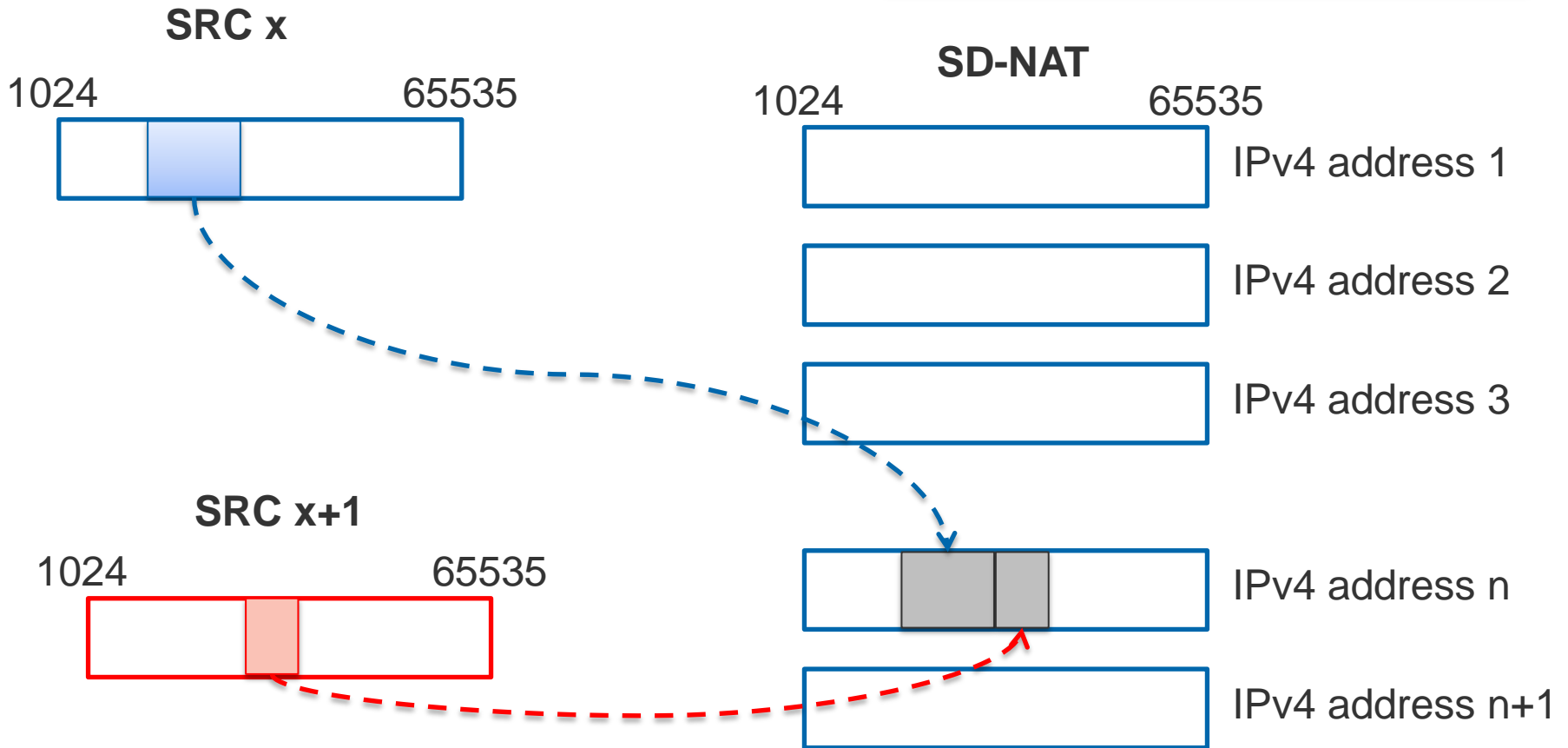
PORT MAPPING ON SD-NAT

SD-NAT is **stateless**.
A per-user table or a formula maps
inside and outside port blocks.



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