

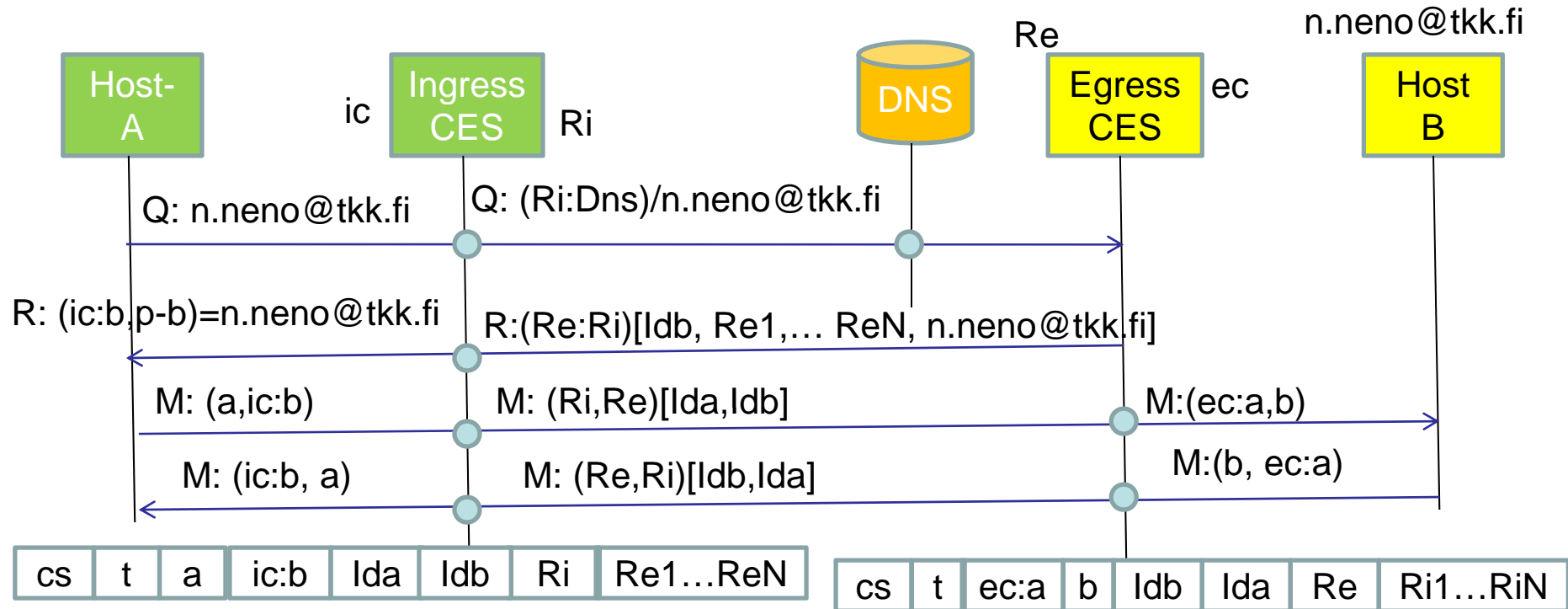
Future Internet PPP Position Paper: Connecting Internet of Things with the Current Internet

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Message Flow in case of IP core



a – IP address of host a

ic – address pool of ingress CES

ic:b – IP address representing host b to host a

p-b – port allocated by i-CES for communication with host b

R_i (R_{i1}...R_{iN}) – Routing locators of ingress CES

Re (Re1 ...ReN) – Routing locators of egress CES

l_{da} – ID of host a

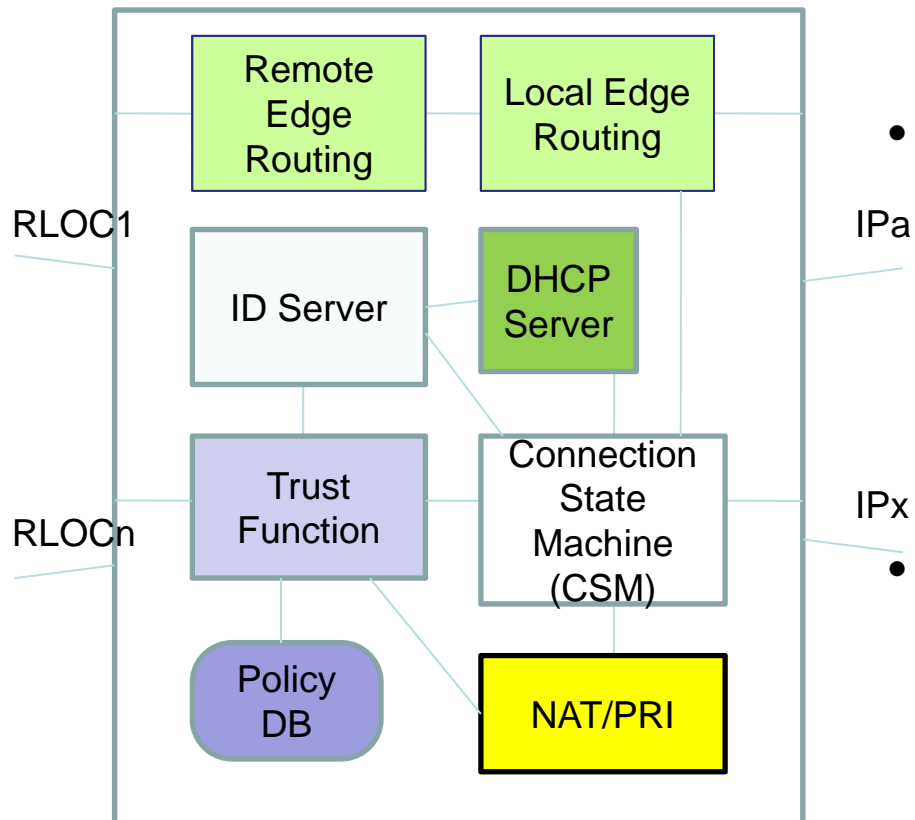
l_{db} – ID of host b

ec – address pool of egress CES

ec:a – IP address representing host a to host b

cs – connection state, t - timeout

CES Functions and Benefits



- Easy to deploy: no changes in hosts, nor DNS RRs or DNS protocol, compatible with legacy IP sources and destinations
- Separates Addresses and IDs
 - Defines a clear addressing principle: none of the trust domains publishes its internal addressing to other trust domains
- Takes further the ongoing IETF work on address sharing and Tunneling at the Edge
 - Defines a new Trust-to-Trust Protocol between 2 CES devices
 - Leverages Mobile Operator Infrastructure
 - Global communication takes place using global names, local addresses and local IDs.
 - Does not rely on IPv6 as the final solution
- End-to-End connectivity is based on switching on trust boundaries + routing elsewhere
 - is like NAT x NAT
 - Independent of Core Network forwarding protocol