

**XOS ECORD/RCORD**

**VnoD:**

**Demo of NOKIA components**

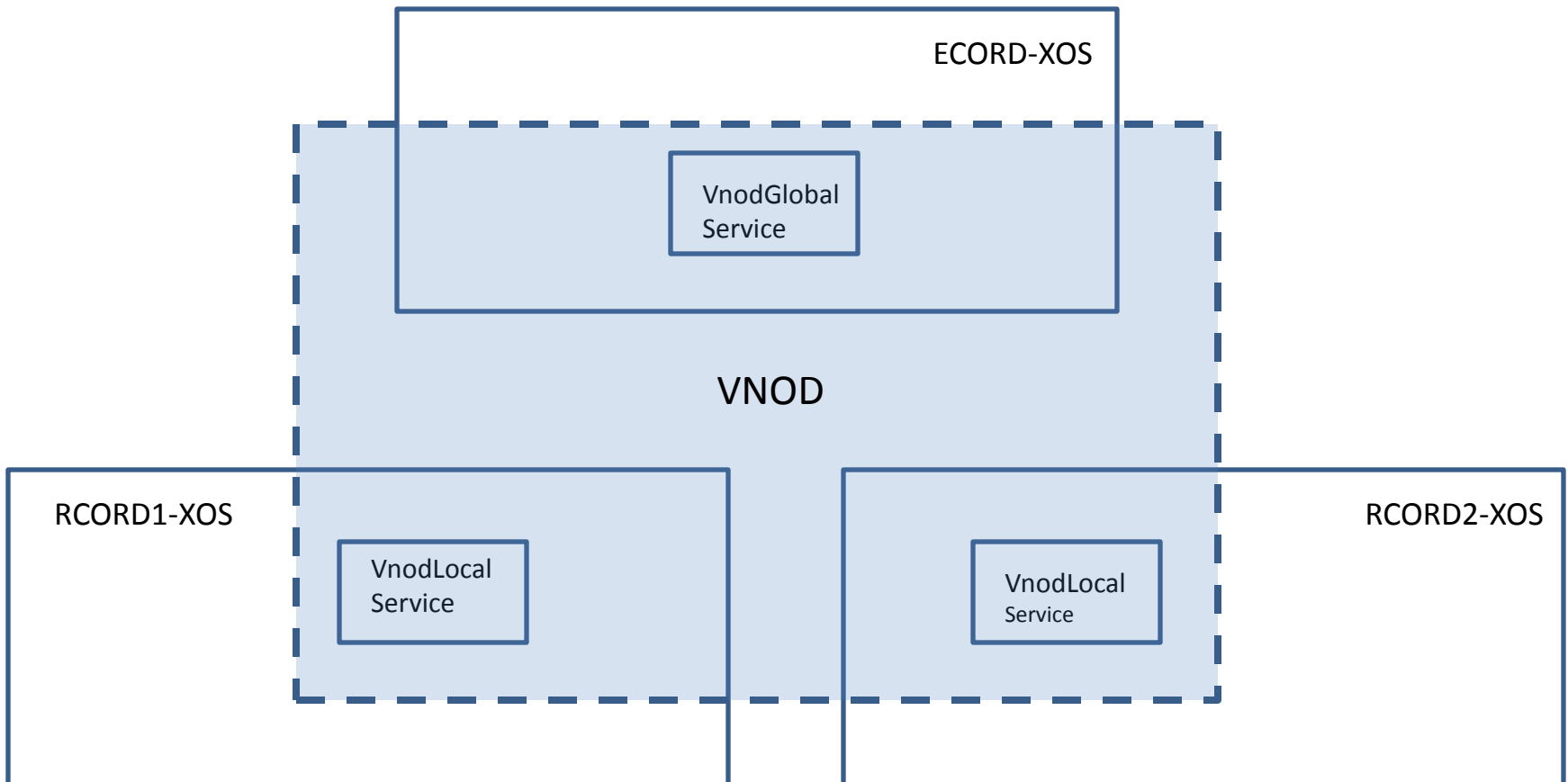
Michael Best Nov 11/2016

# Intro

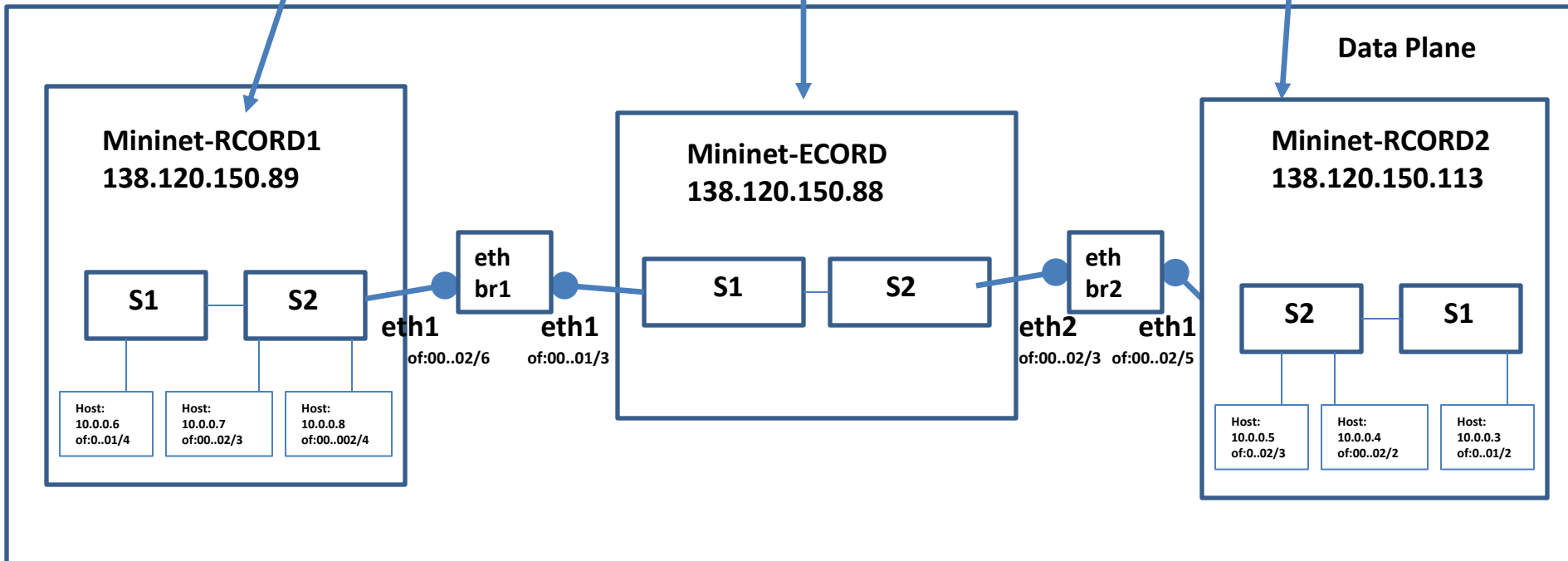
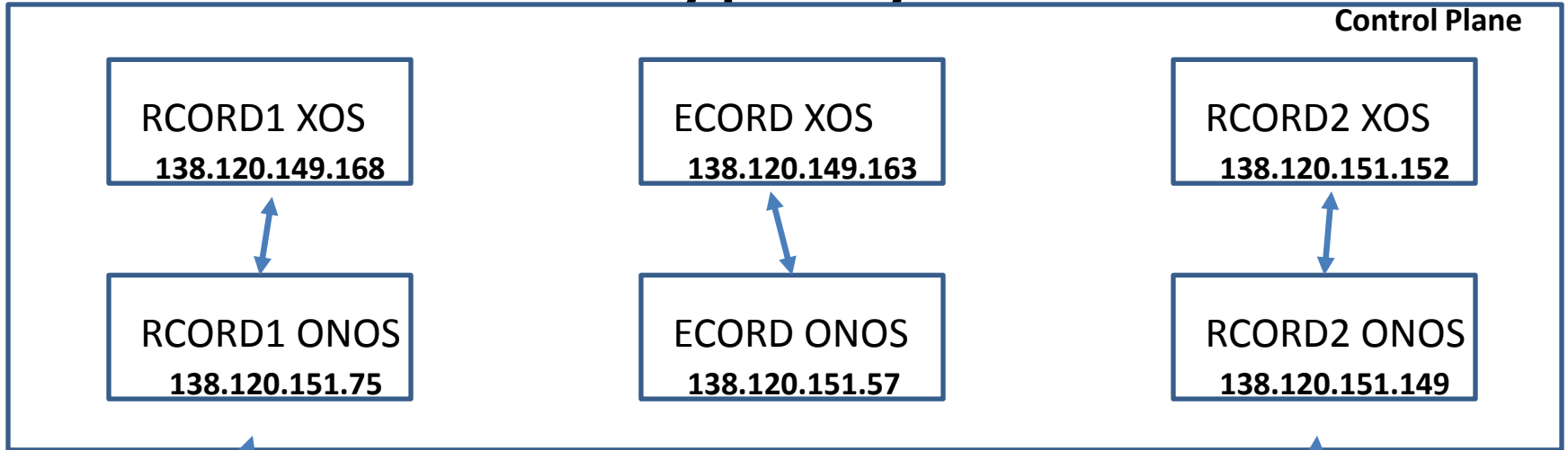
- Goal:
  - To provide a design overview on the NOKIA contribution to ECORD-VnoD Project
- Assumptions:
  - Familiar with ECORD
  - Familiar with VnoD\*
  - Familiar with RCORD

# What is VnoD?

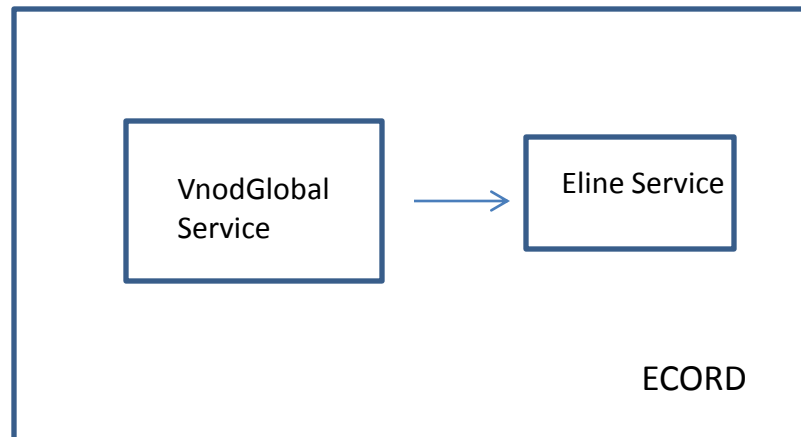
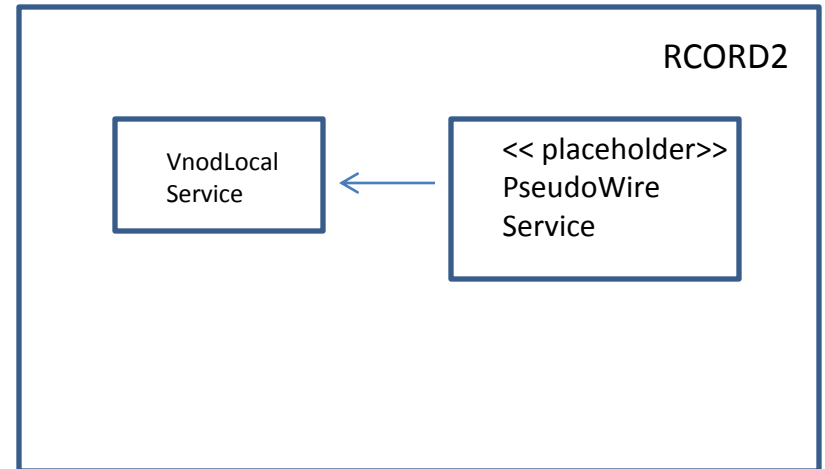
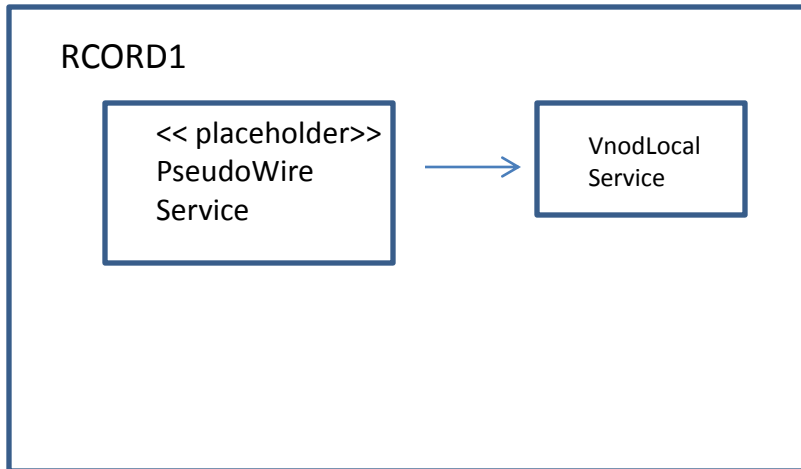
A system with XOS-based control plane Services in ECORD and RCORD. The system uses a combination of 'top down' and 'bottom up' Service interactions to enable end-to-end networks in the data plane.



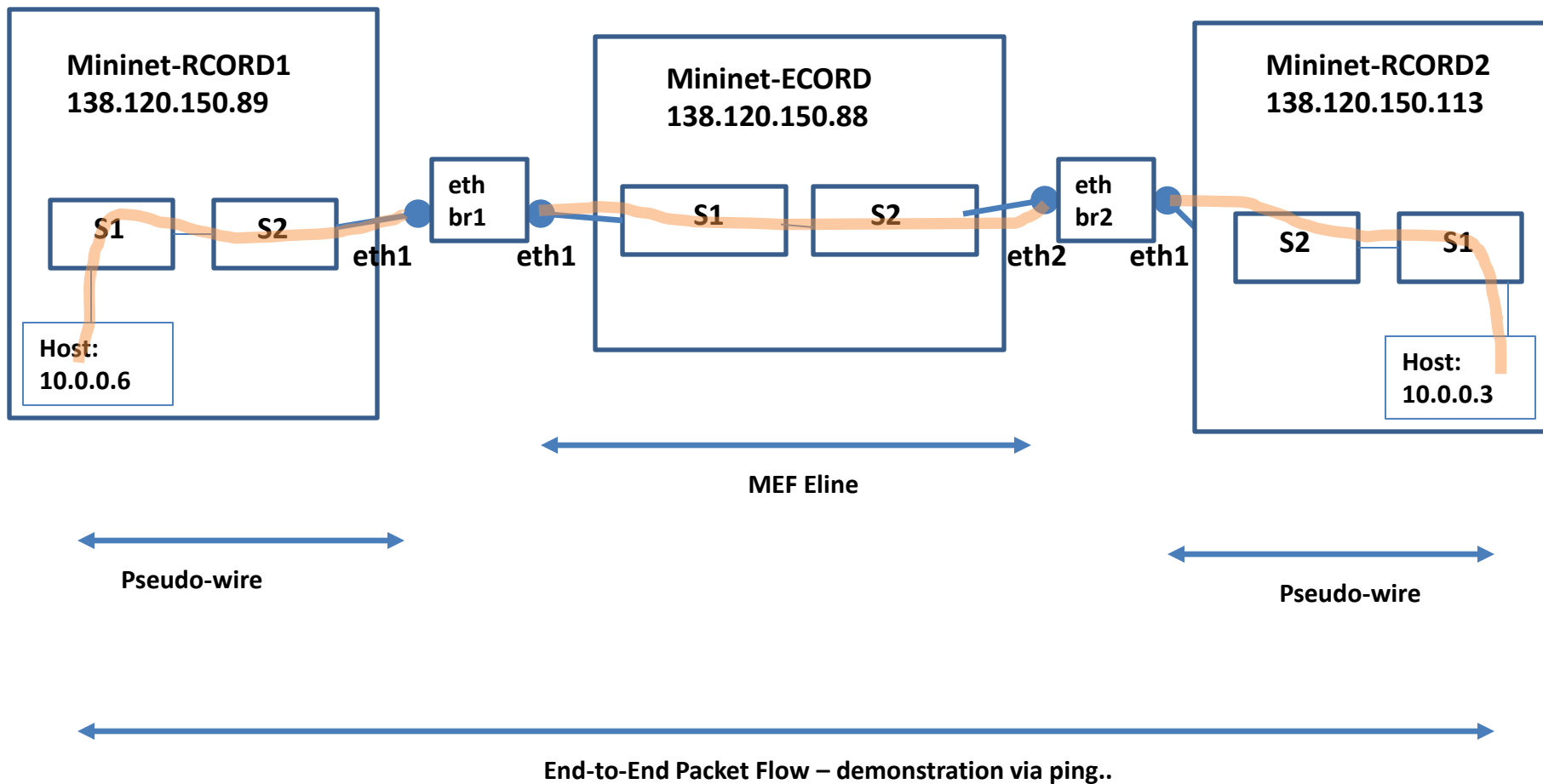
# Prototype System



# Demo Fast-Forward: XOS View



# Demo Fast Forward: Data Plane (ping 10.0.0.3 $\leftrightarrow$ 10.0.0.6)



## Vnod Eline Creation:

RCORD1

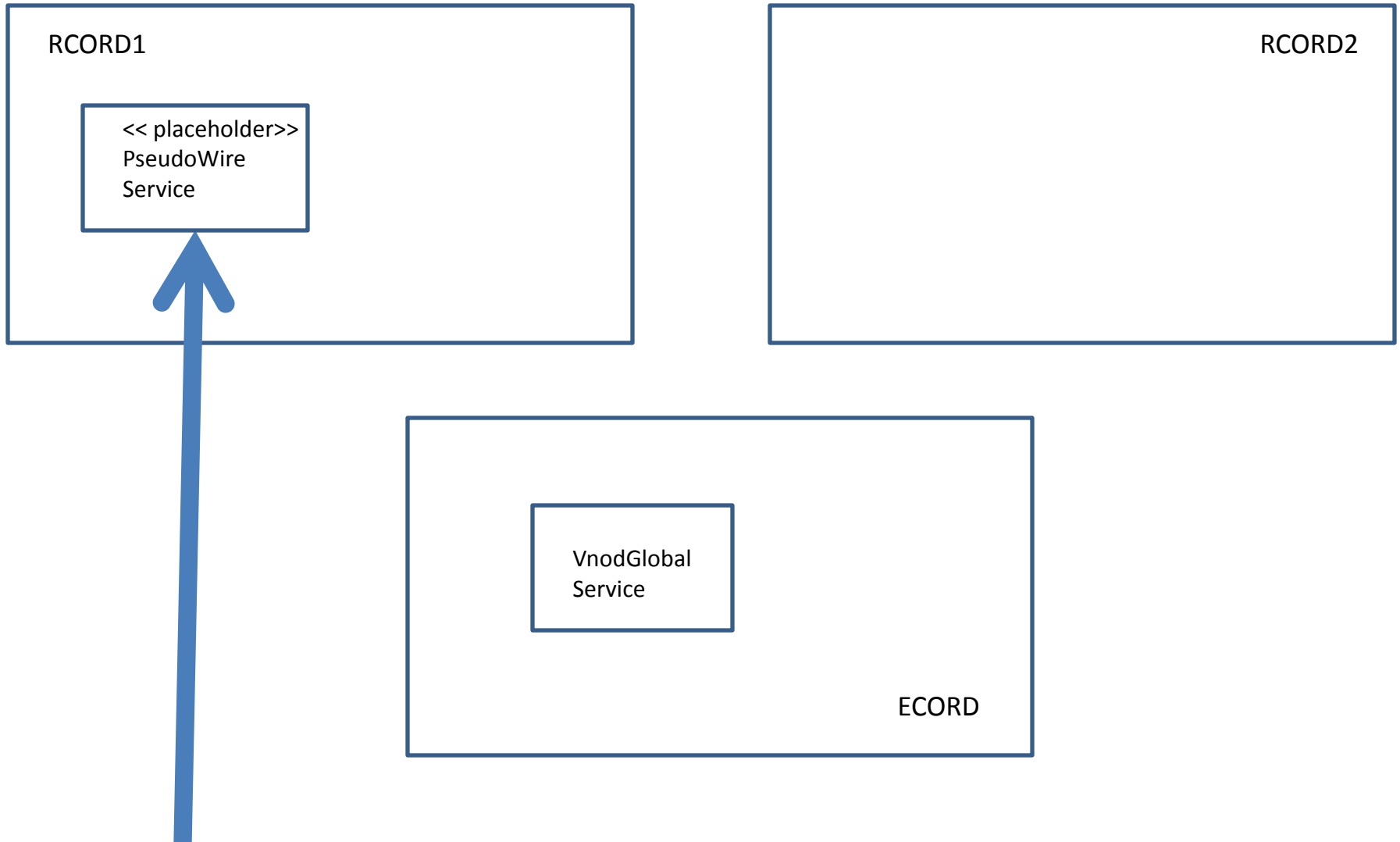
RCORD2

VnodGlobal  
Service

ECORD

Step 1: In ECORD Create 'VnodGlobalService'  
Params: "String: servicehandle", "Enum: Eline, Etree, Elan",  
Array[Intended RCORD Sites].

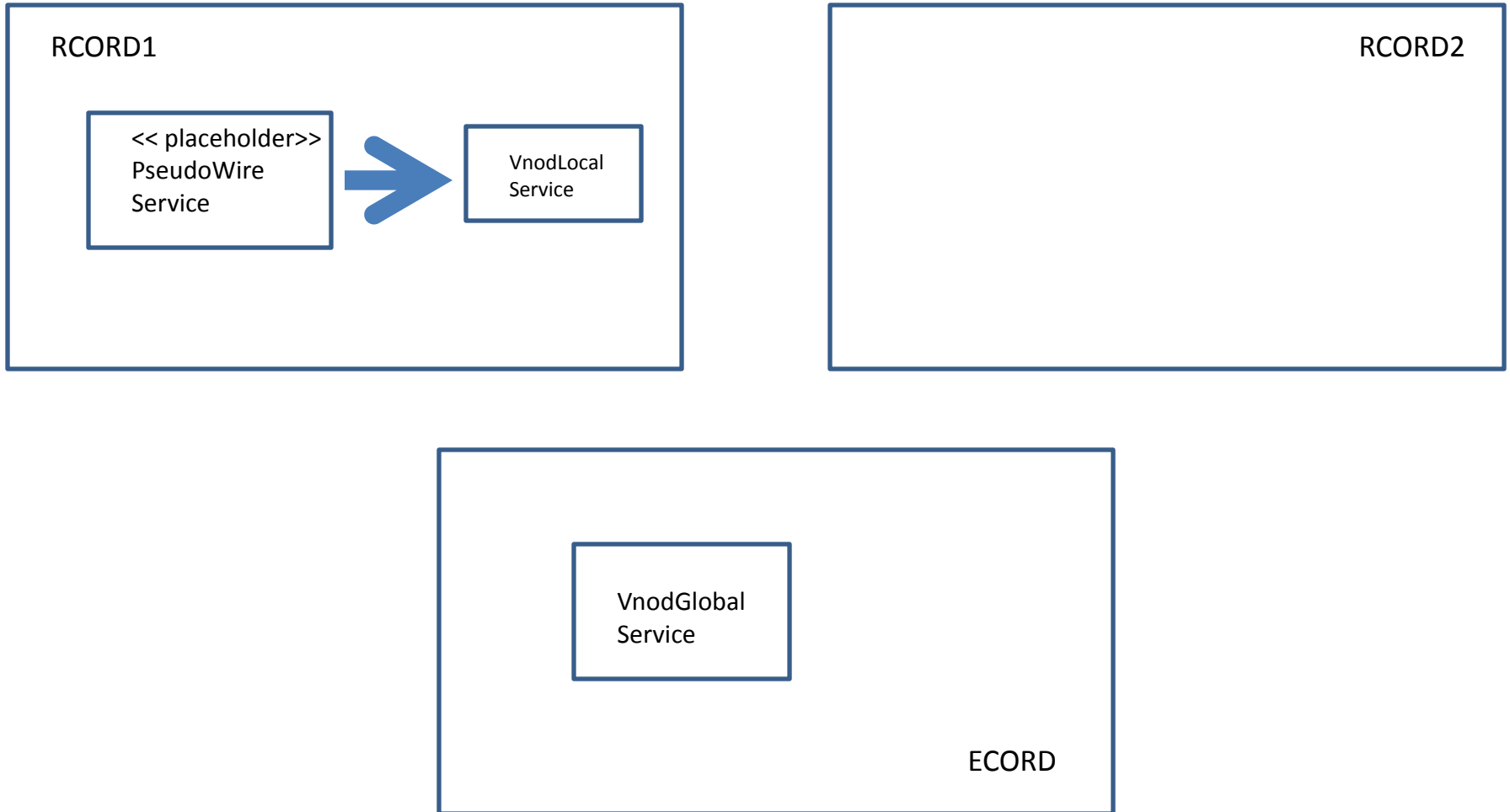
## VnoD Eline Creation:



Step 2: In RCORD1, using 'serviceHandle' from ECORD and a local 'sourcePort' create 'PseudoWire Service' Service and request activation

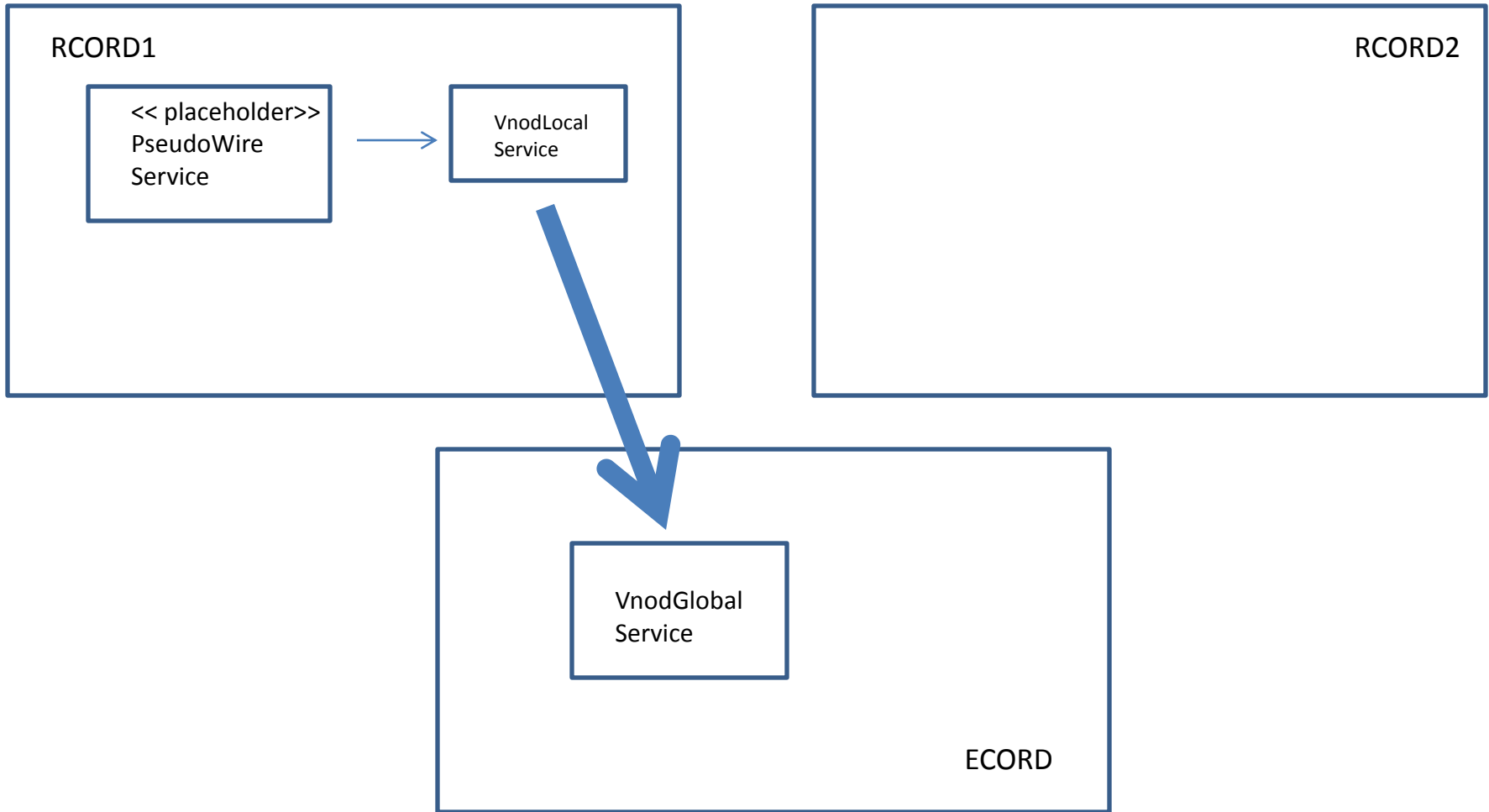


## VnoD Eline Creation:



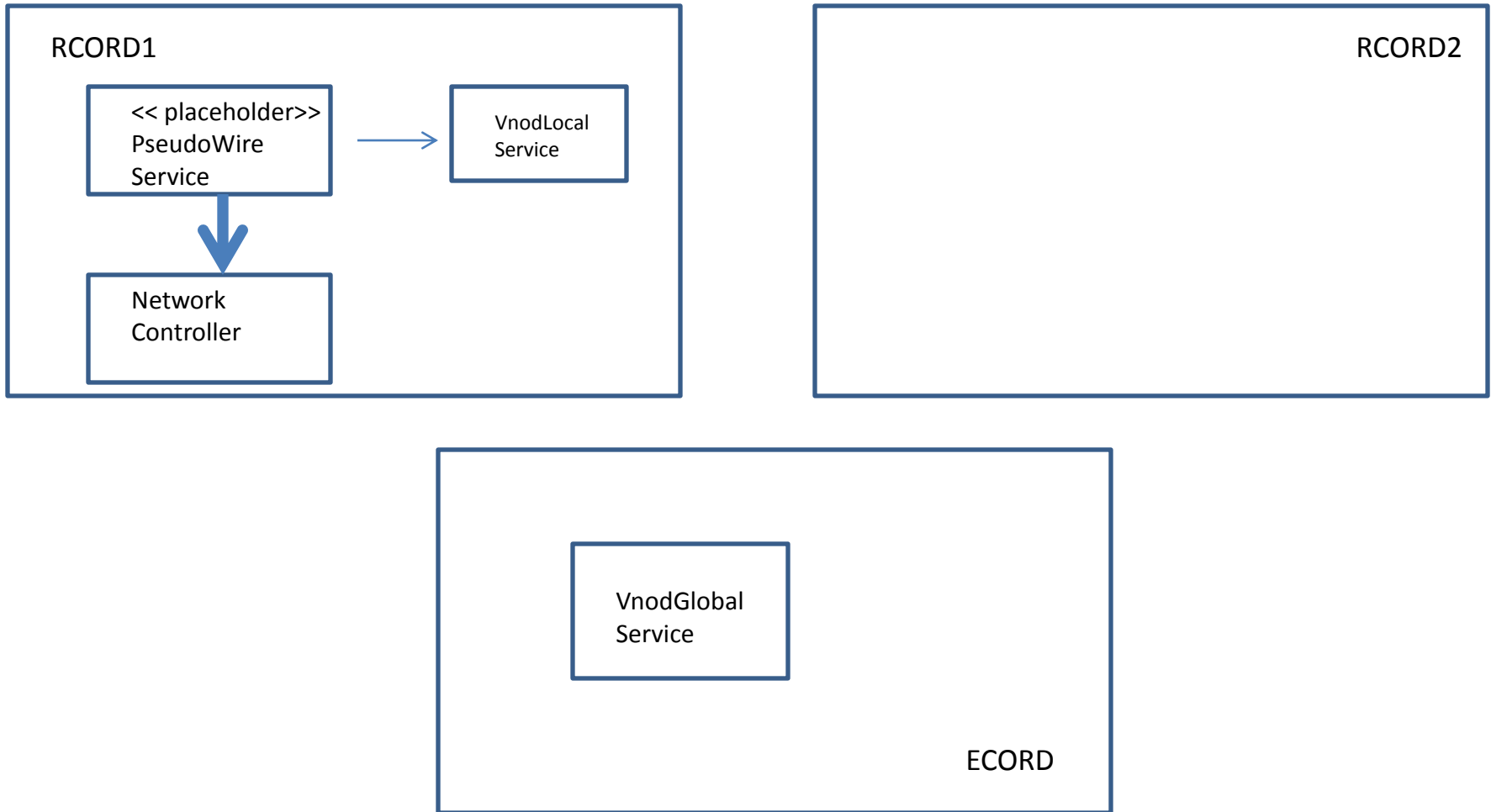
Step 3: In RCORD1, 'PseudoWire Service' creates a 'VnodLocal Service' providing the 'serviceHandle'

## VnoD Eline Creation:



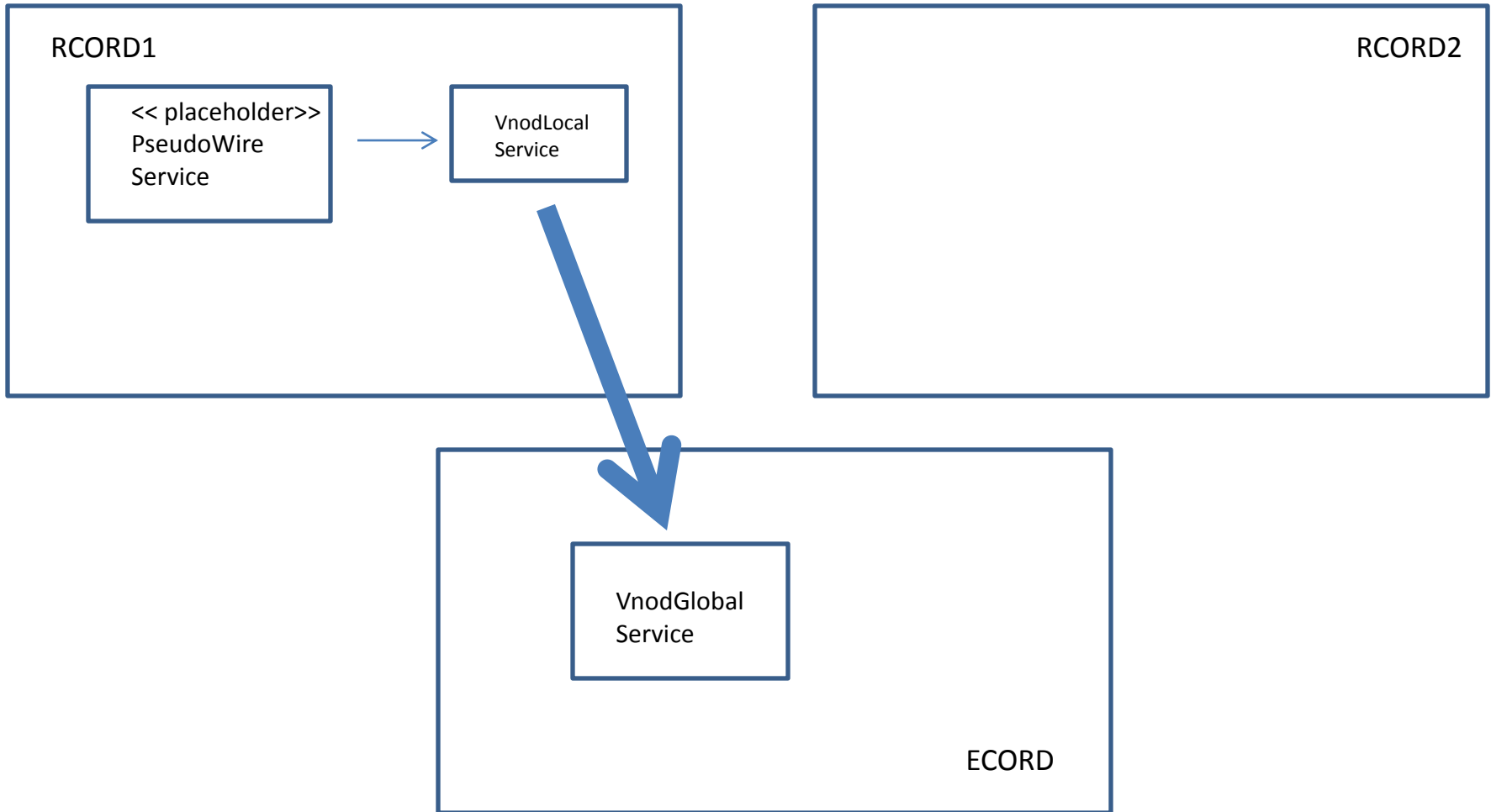
Step 4: In RCORD1, using the ECORD REST API with the 'serviceHandle' parameter the 'VnodLocal Service' retrieves NNI Port and VLAN configuration from ECORD

## VnoD Eline Creation:



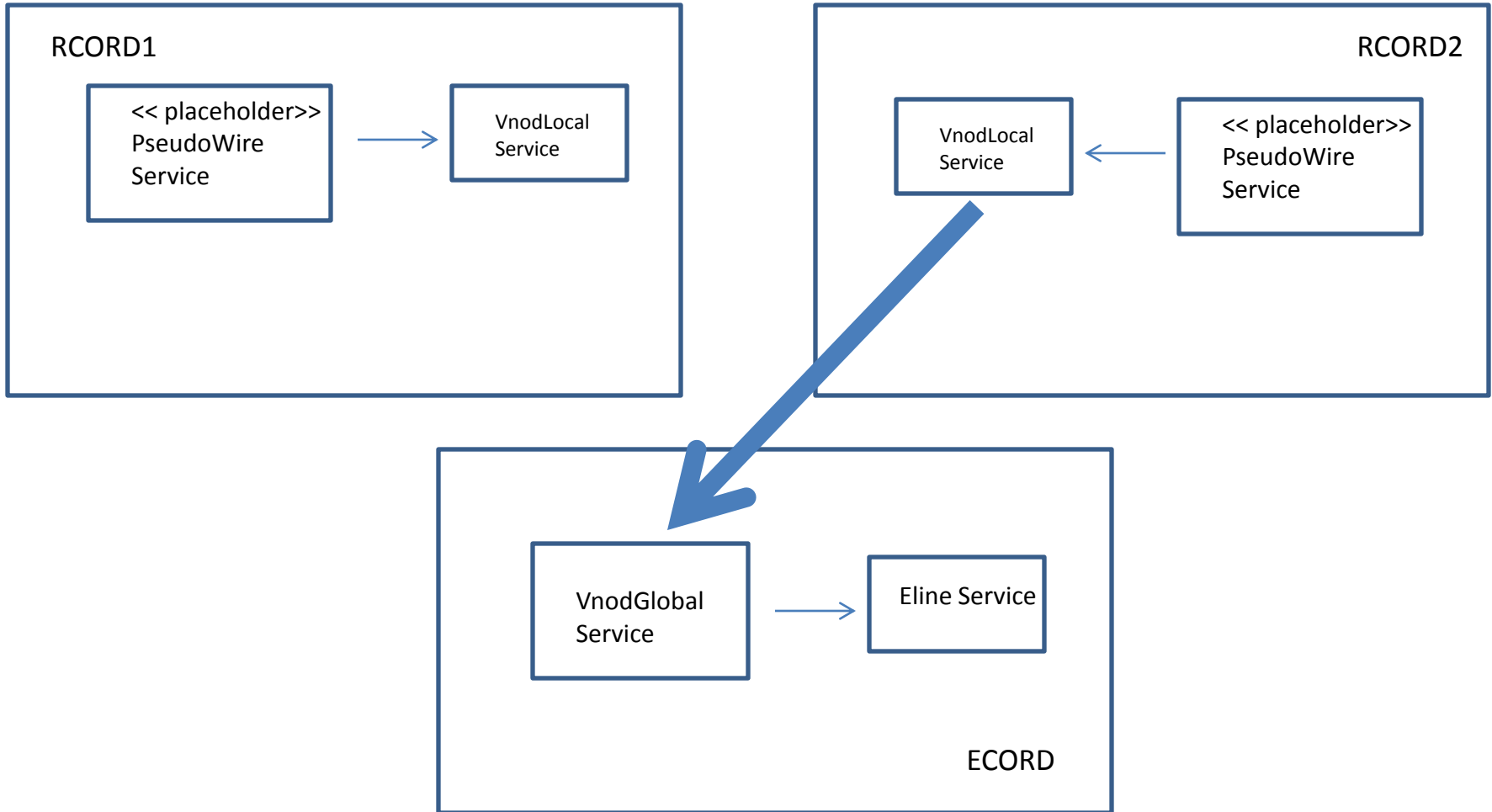
Step 5: In RCORD1, the 'PseudoWire Service' uses its sourcePort and the NNI/Vlan info from the VnodLocal to activate a PseudoWire via the Network Controller

## VnoD Eline Creation:



Step 6: In RCORD1, using the ECORD REST API with the 'serviceHandle' parameter, the VnodLocal Service Activation is reported to the VnodGlobal Service object in ECORD. The VnodGlobal Service notes the Spoke state change.

## VnoD Eline Creation:



Step 7: In RCORD2, same procedure as Steps 2-5, using the ECORD REST API with the 'serviceHandle' parameter, the VnodLocal Service Activation is reported to the VnodGlobal Service object in ECORD. The VnodGlobal Service notes the Spoke state change. Since both Spokes are Activated an Eline Service is created – bits flow!!