



## MSRP Handling on CSN Networks

IEEE Meeting Denver, CO

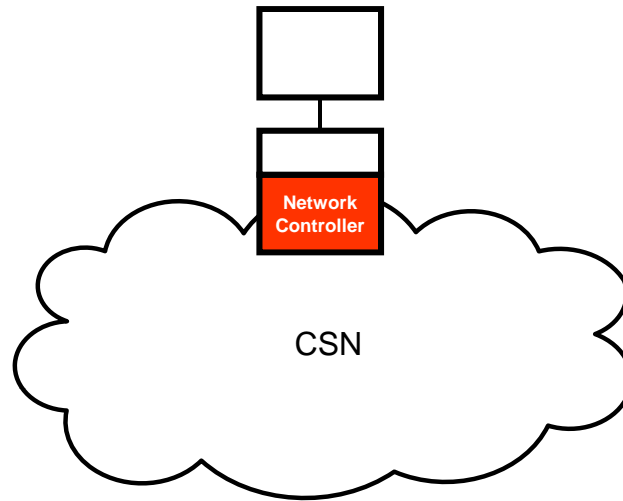
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# CSN Network Coordinator Characteristics

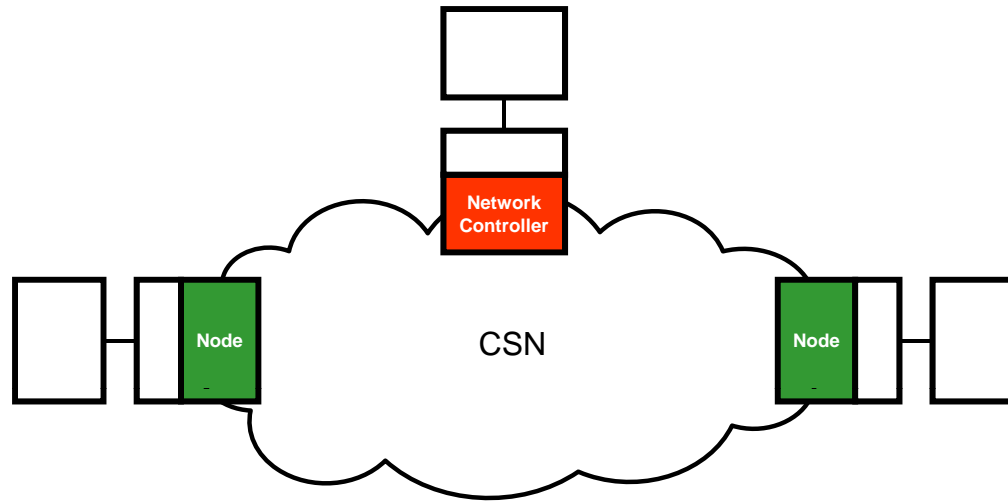
- CSN's Network Coordinator (NC) is in most case dynamically selected
- First node to join the CSN network acts as NC
- NC node could move to another node:
  1. **Scheduled move - NC Handover**
    - a new node with better NC capabilities joins the network and initiates an NC handover
    - the NC node is gracefully shut down and prior to disconnecting, initiates an NC handover with an other node
  2. **Unscheduled move – NC Backup**
    - The NC node disappeared from the network and the NC backup node takes control

# CSN Network - NC Selection [1]



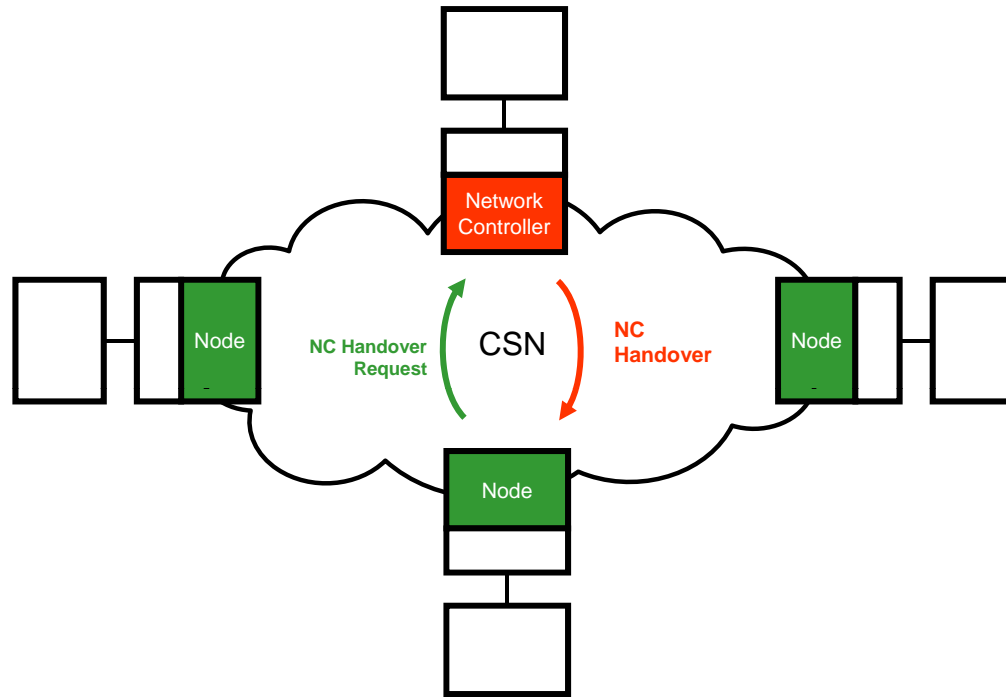
First Node to join the CSN network is the initial NC...

# CSN Network - NC Selection [2]



Subsequent Nodes are joining the CSN network...

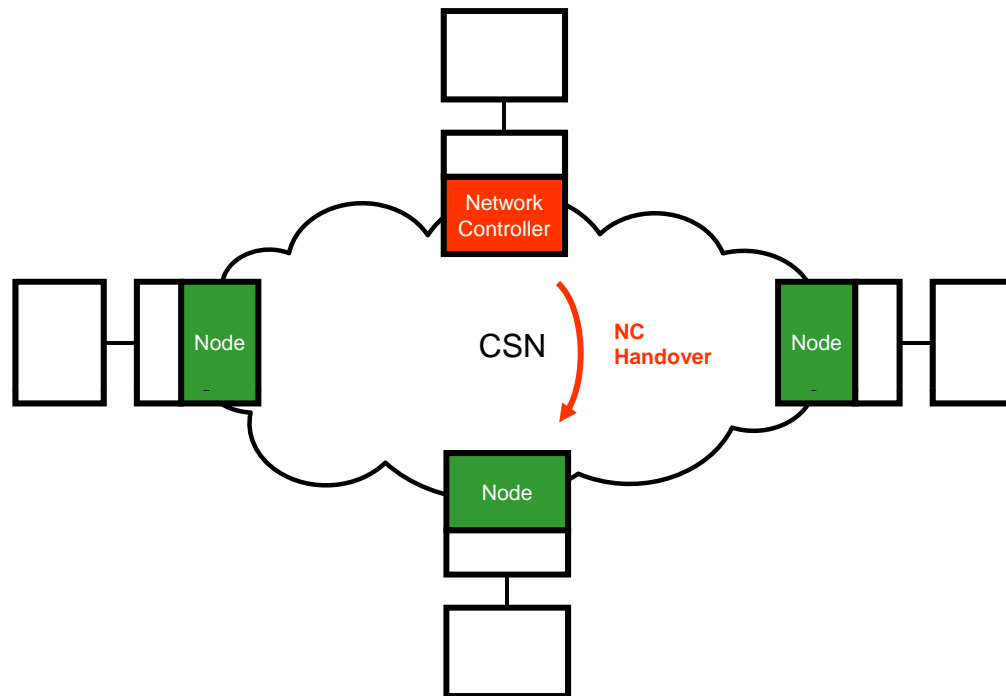
# CSN Network – NC Handover [1]



The NC node **could dynamically change** if:

- 1) a new node with better NC capabilities joins the network

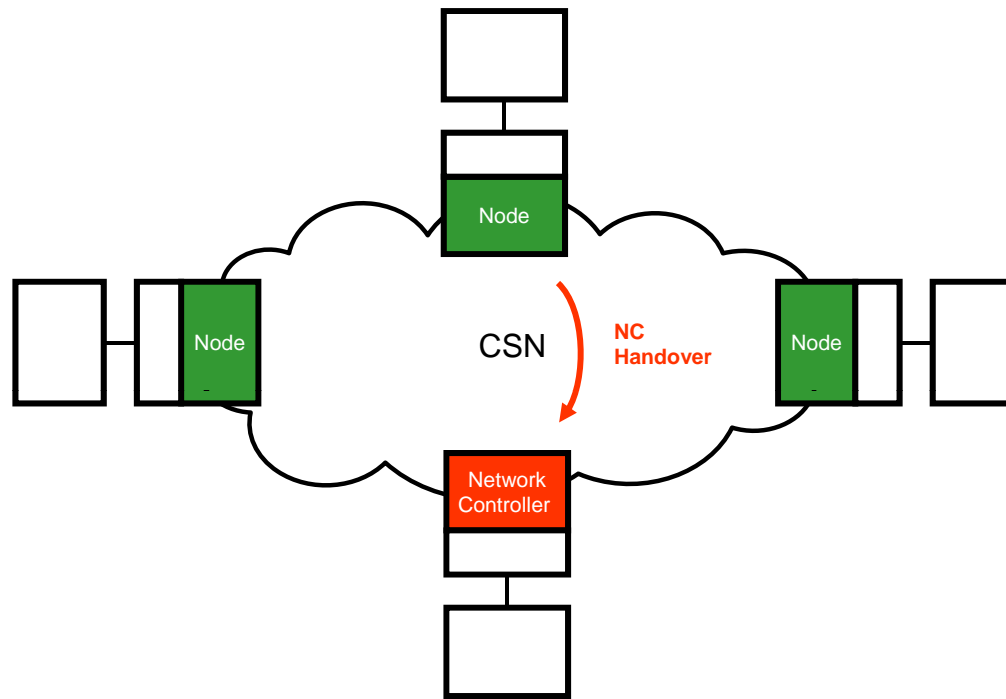
## CSN Network – NC Handover [2]



The NC node could dynamically change if:

- 1) a new node with better NC capabilities joins the network
- 2) the NC node handovers the control to another node before gracefully shutting down**

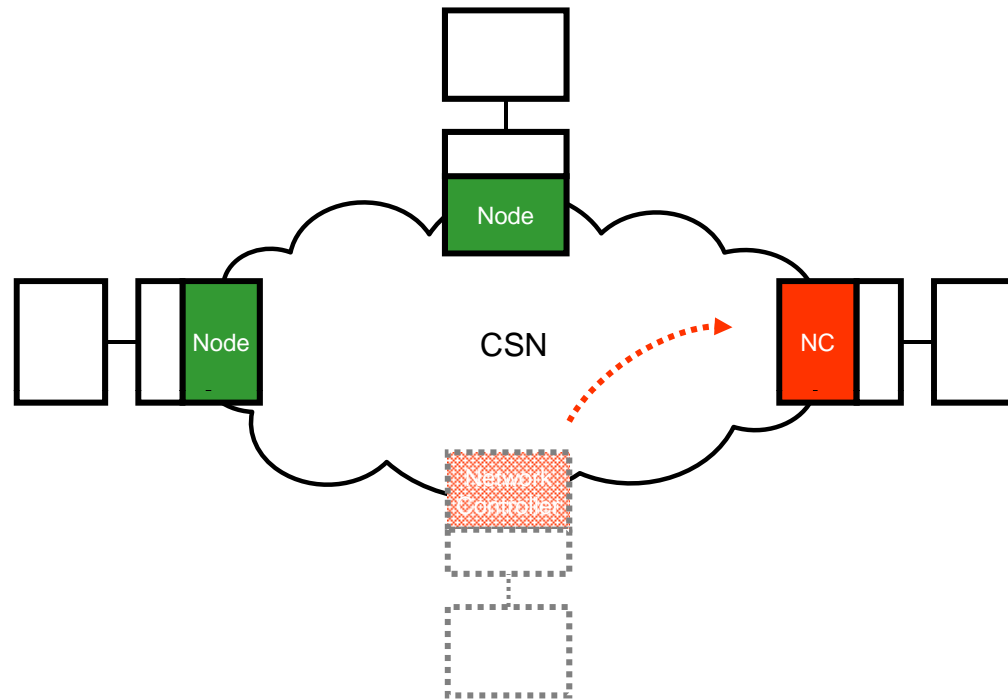
# CSN Network – NC Handover [3]



The NC node could dynamically change if:

- 1) a new node with better NC capabilities joins the network
- 2) the NC node handovers the control to another node before gracefully shutting down**

# CSN Network – NC Backup



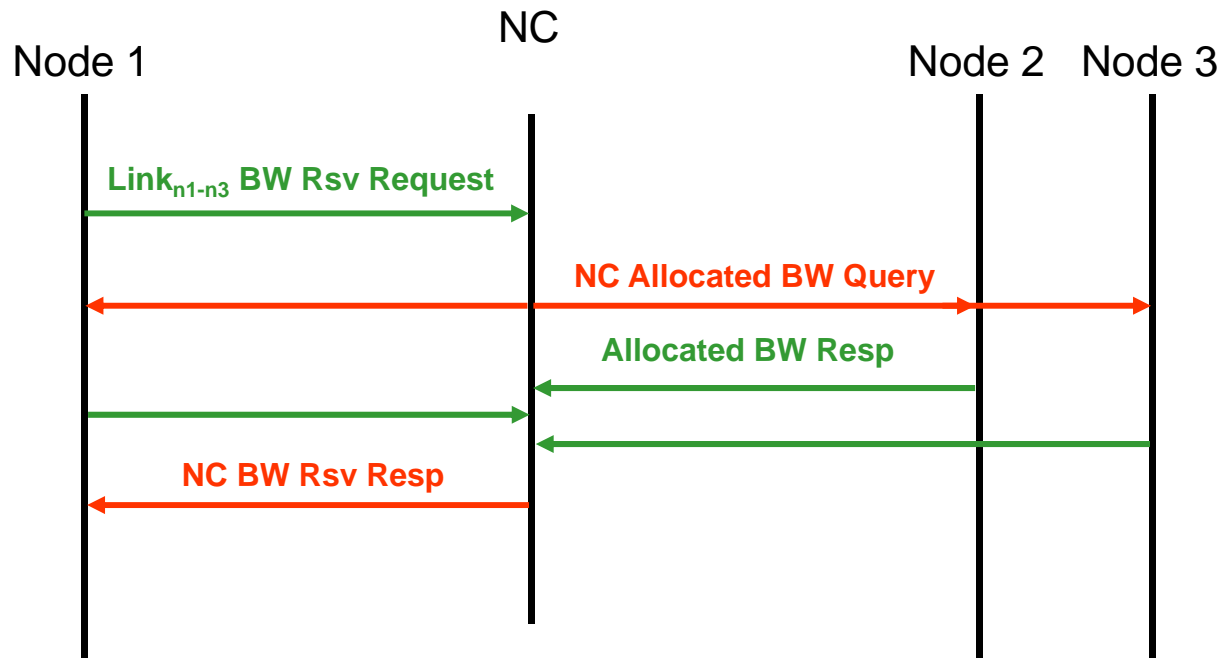
The NC node could dynamically change if:

- 1) a new node with better NC capabilities joins the network
- 2) the NC node handovers the control to another node before been gracefully shut down
- 3) the NC node fails and the NC Backup node takes control**



# CSN Network – Bandwidth Reservation

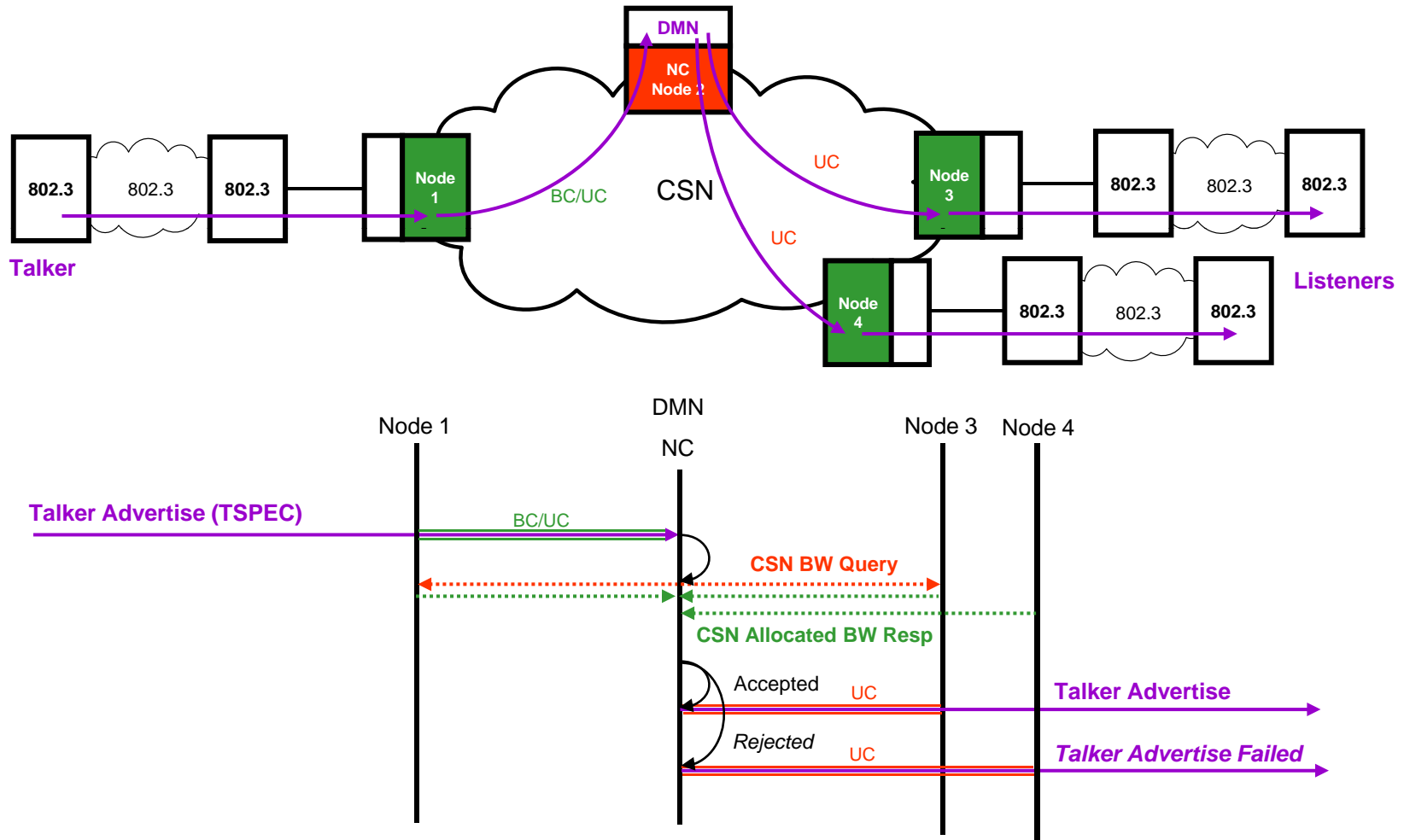
NC **does not** maintain a central BW Reservation database but dynamically queries the nodes on each new BW reservation request



# MSRP Handling on CSN

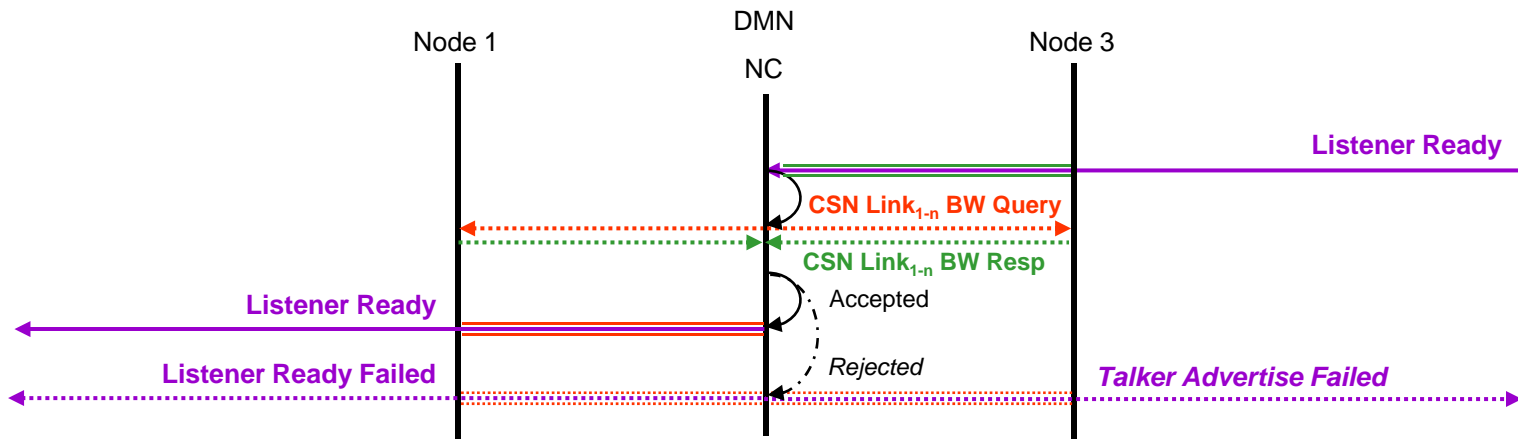
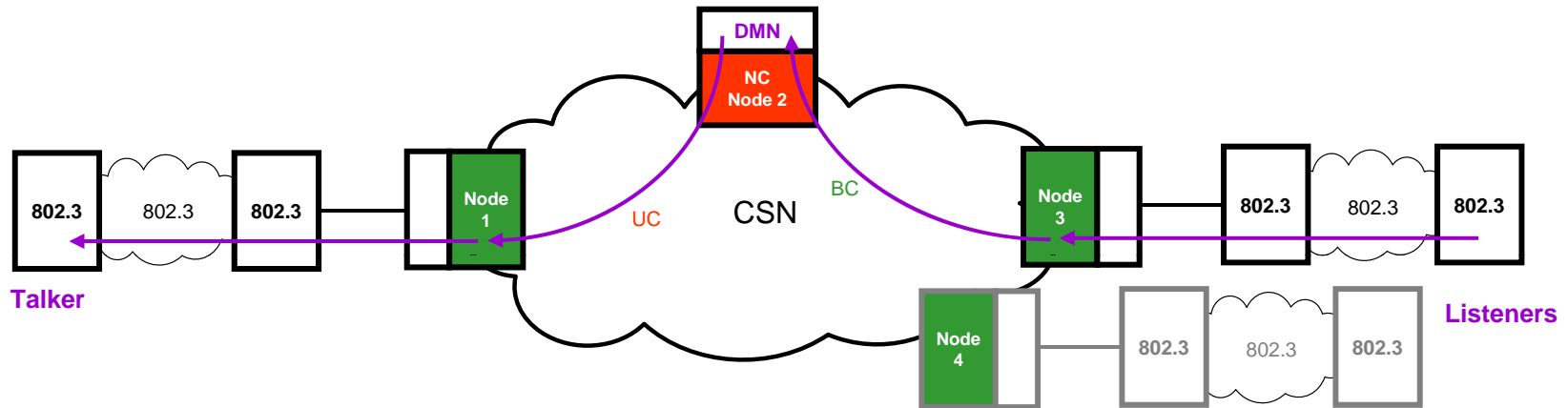
# MSRP over CSN Backbone

## 1. Talker Advertisement



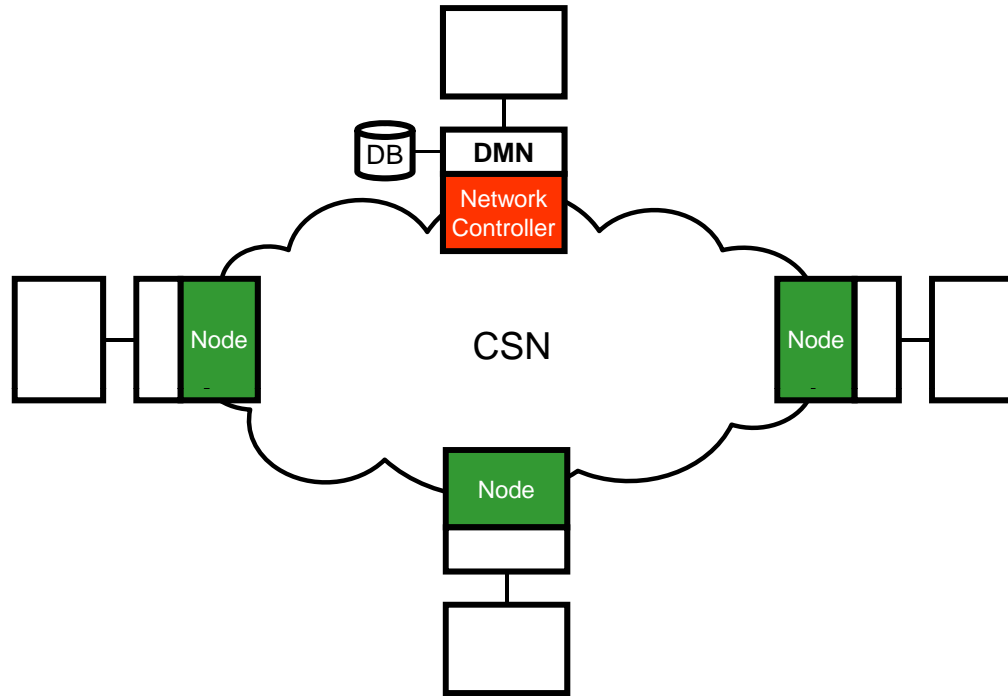
# MSRP over CSN Backbone

## 2. Listener Request



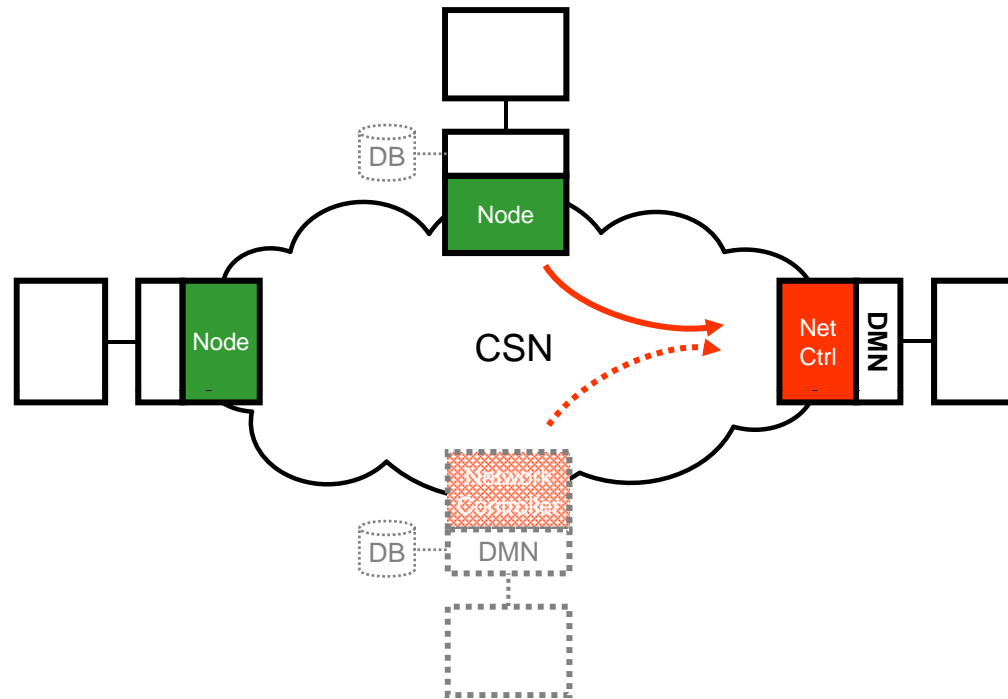
# DMN handling on CSN

# DMN Node



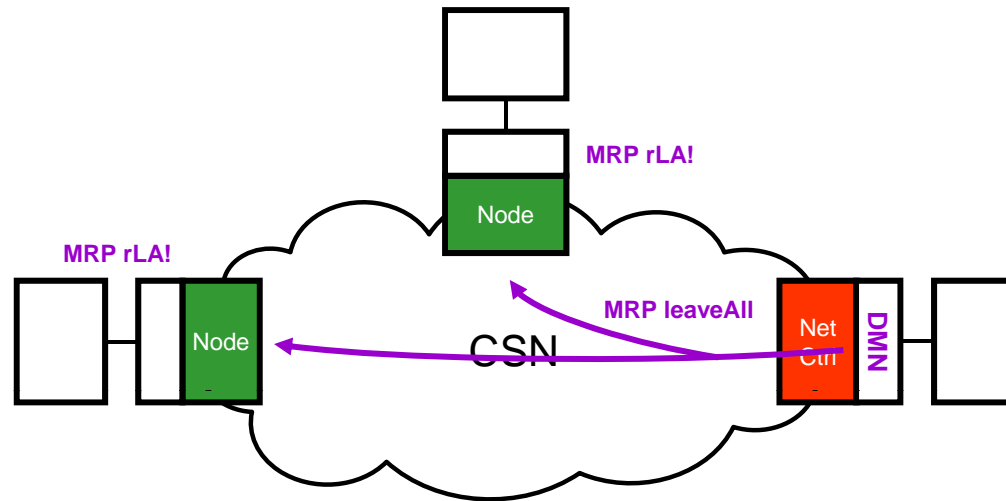
Initial DMN node is the NC node...

# DMN DB Handling for NC Handover & Backup



In case of NC Handover or Backup , **dynamically** recreate the DB on the **new** DMN

# DMN DB Handling for NC Handover & Backup

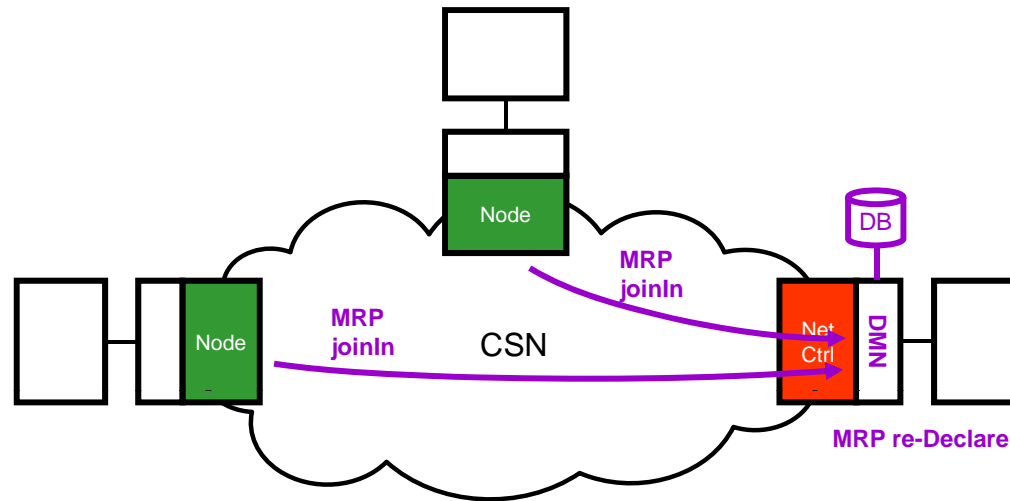


In case of NC Handover or Backup , **dynamically** recreate the DB on the **new** DMN:

**1) the new DMN generates a leaveAll message**



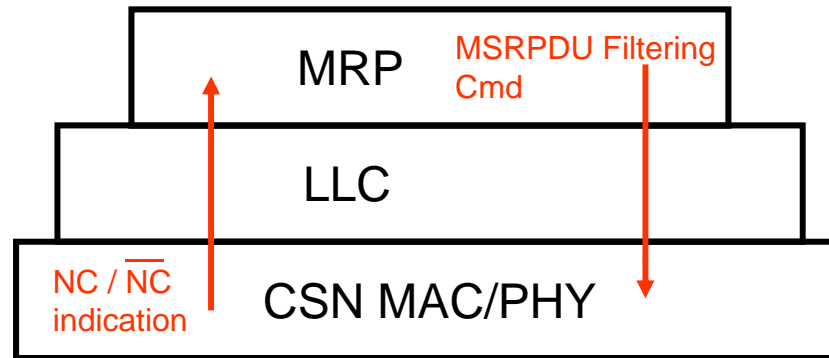
# DMN DB Handling for NC Handover & Backup



In case of NC Handover or Backup , **dynamically** recreate the DB on the **new** DMN:

- 1) the new DMN generates a leaveAll message
- 2) **the MRP Participants re-register to the DMN ,allowing the new DMN to build its database**

# MSP Layer – CSN Node Interface



Interface/API between the CSN & DMN entities to:

- CSN **NC indication** to start/end the DMN service based on the CSN's node attribute (NC or regular node)
- MRP **command** to enable/disable MSRPDU filtering



Questions ?

Thank you !