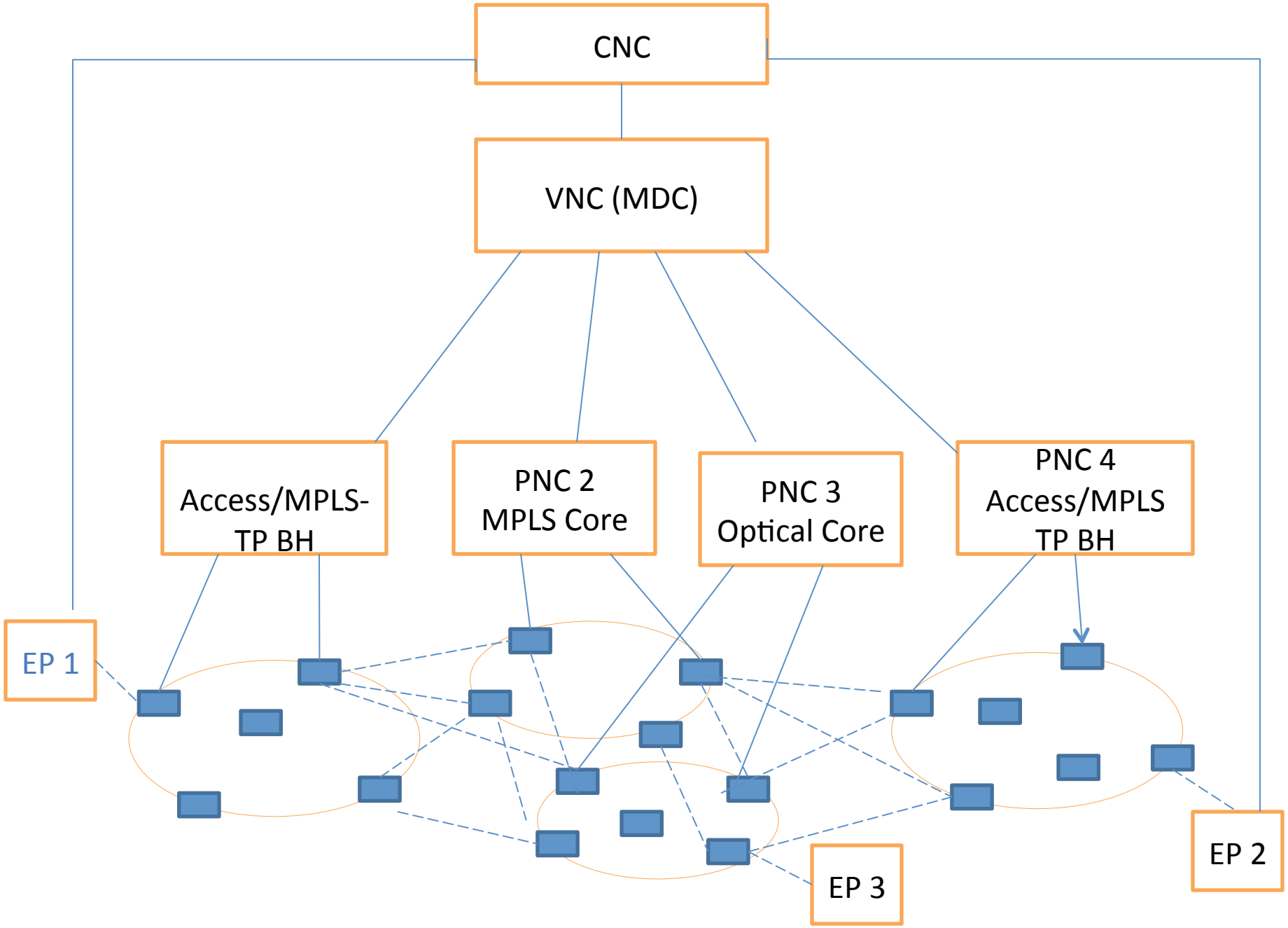
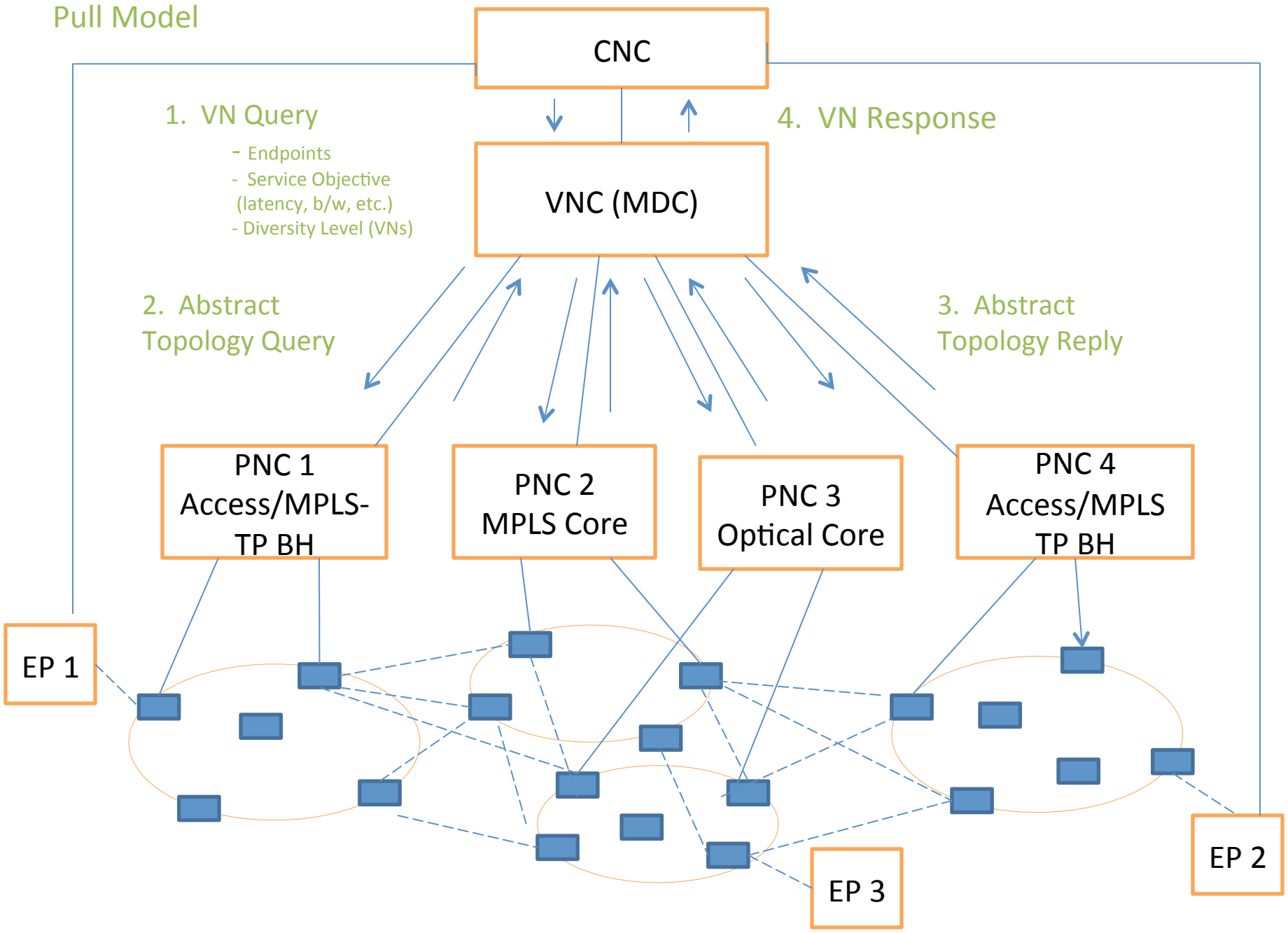
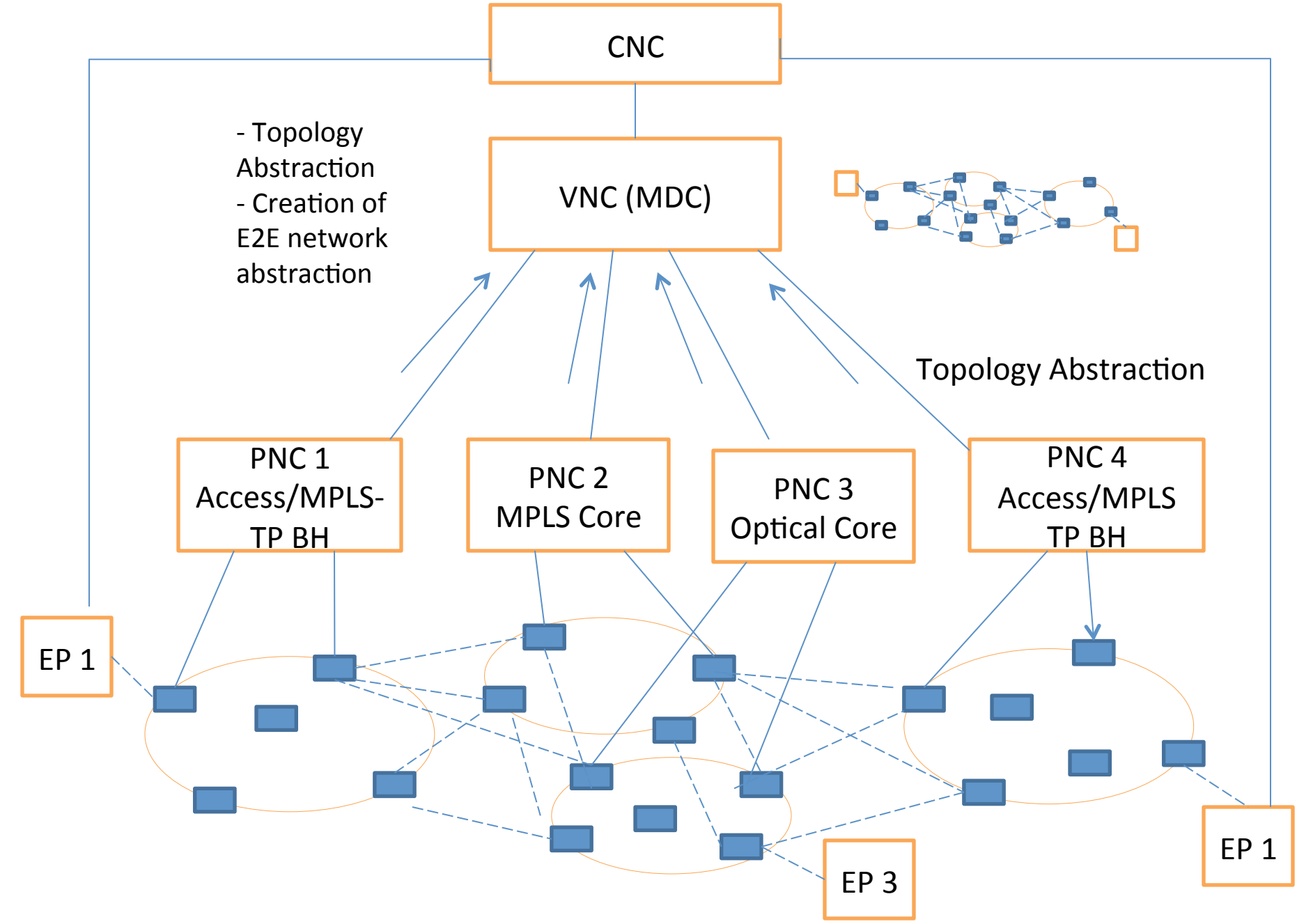
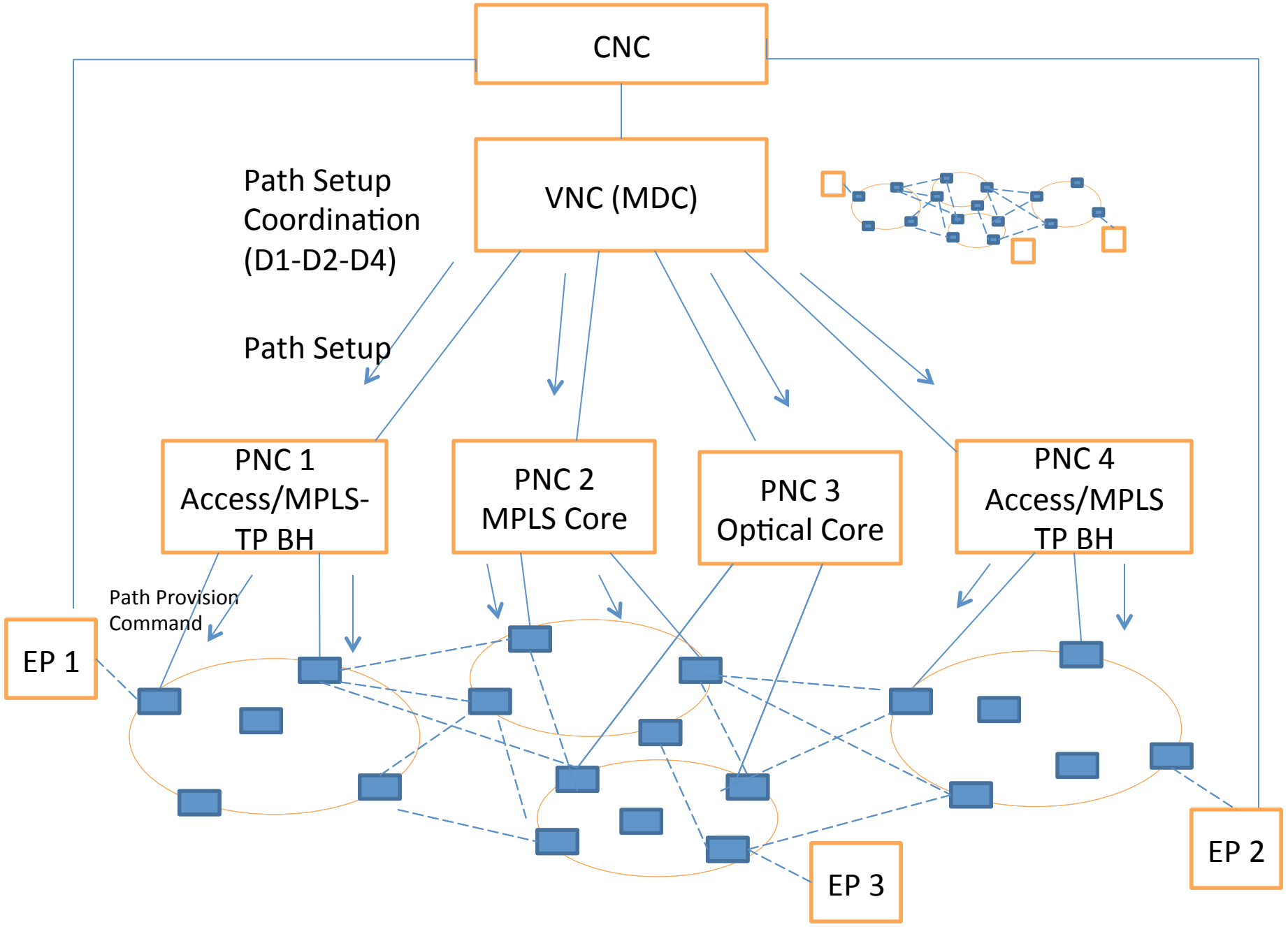
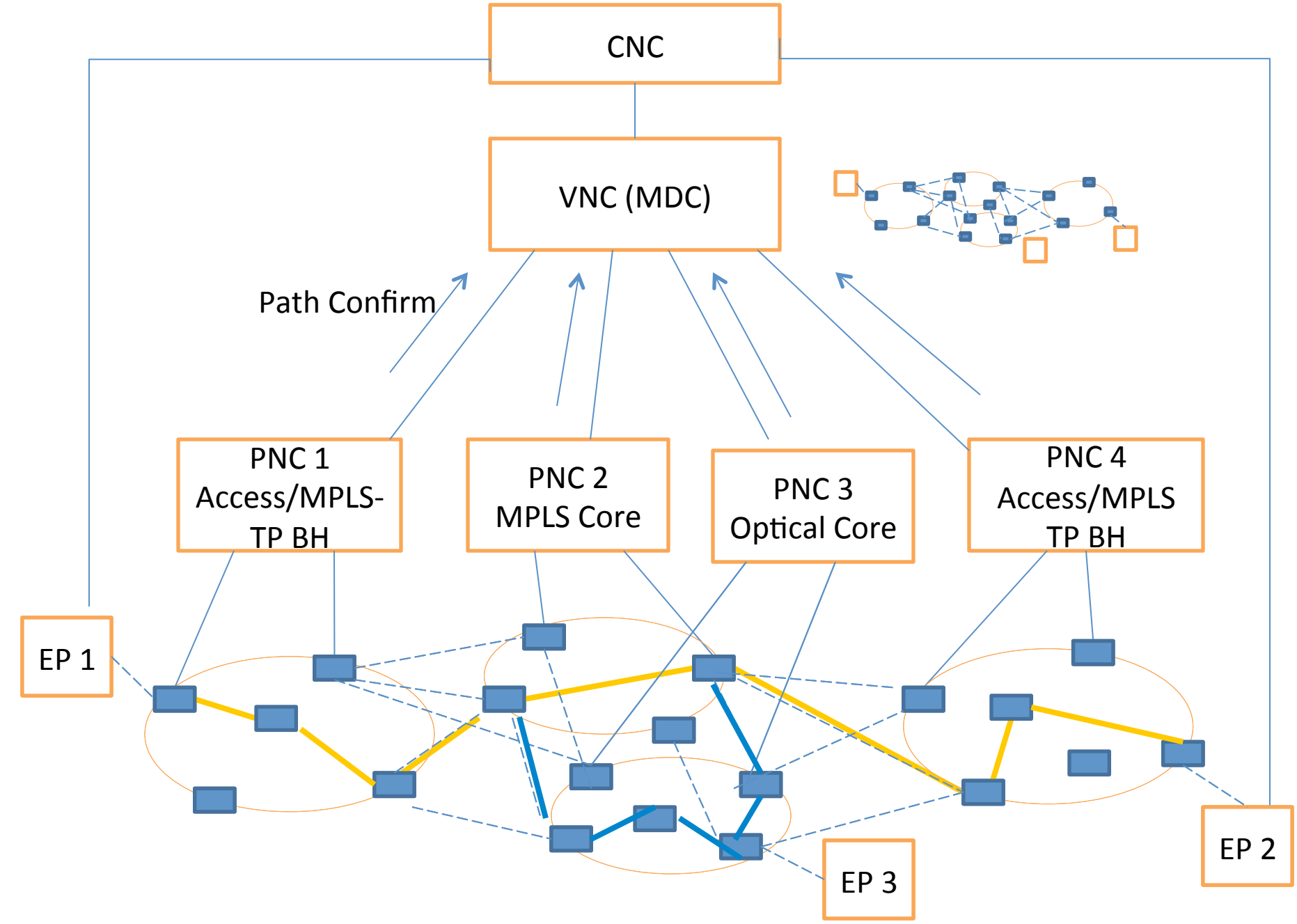
ACTN Requirement

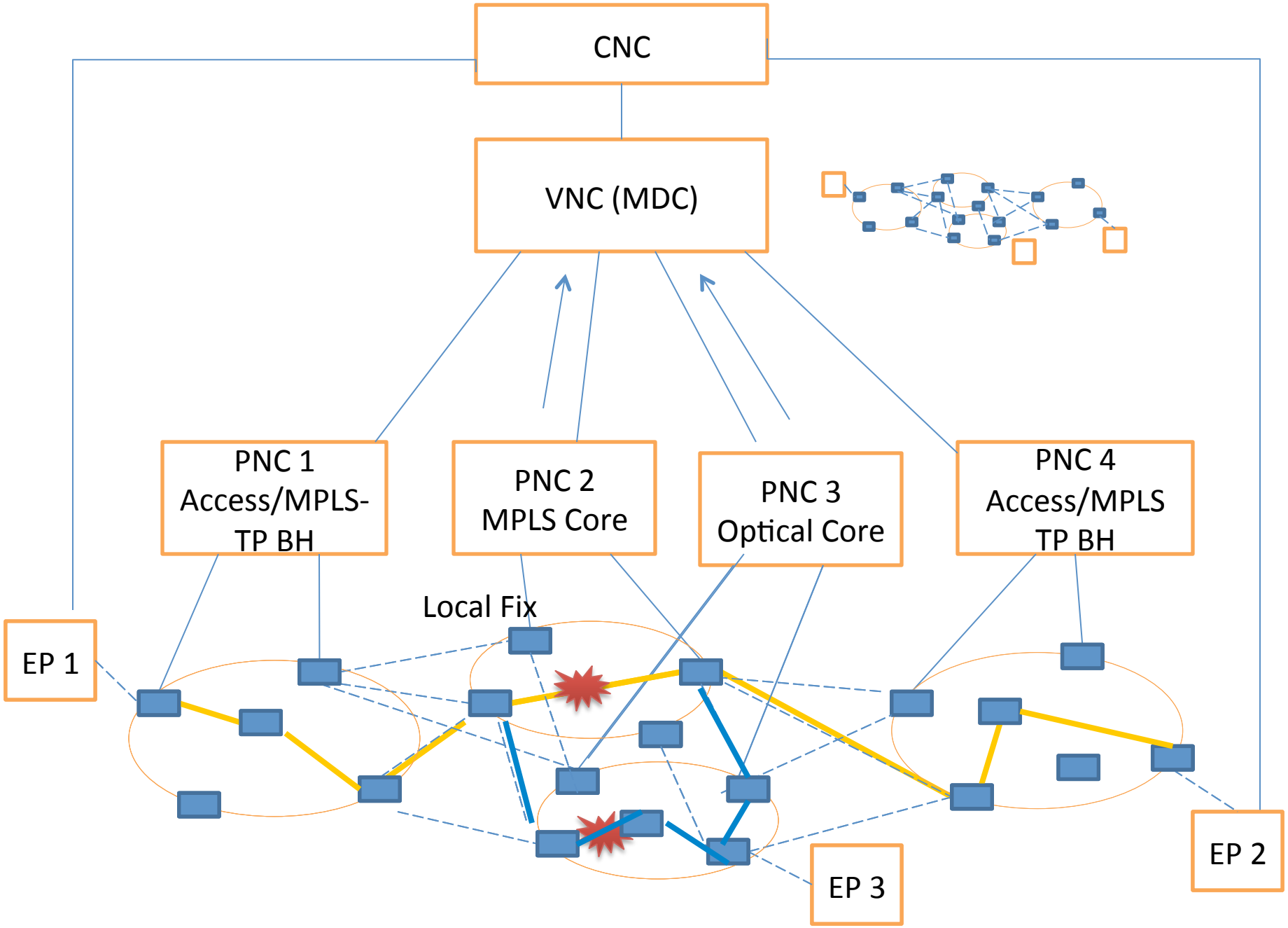

CNC
VNC (MDC)
Access/MPLS-
TP BH
PNC 2
MPLS Core
PNC 3
Optical Core
PNC 4
Access/MPLS
TP BH
EP 1
EP 2
EP 3

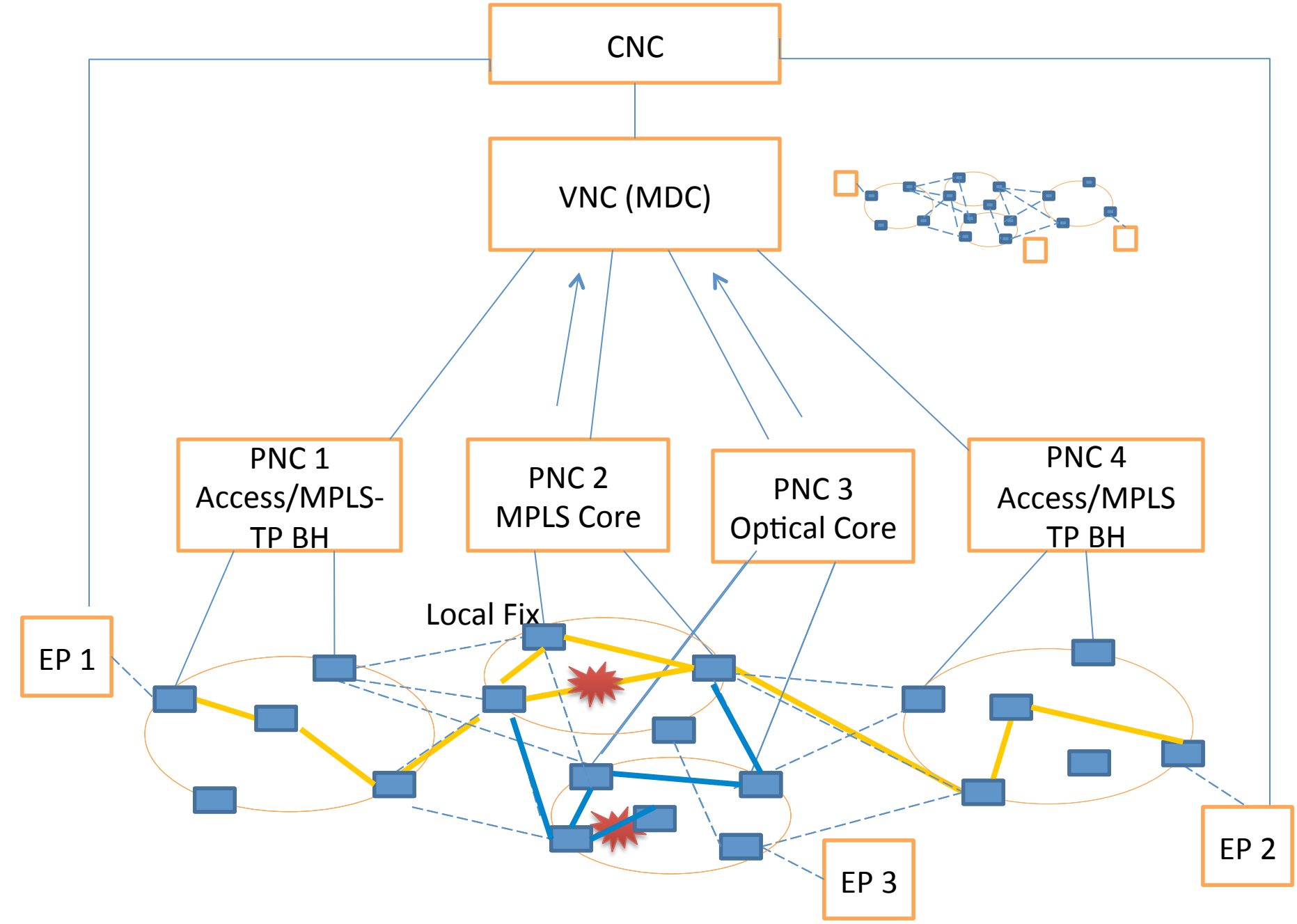

Pull Model
CNC
1. VN Query
- Endpoints
- Service Objective
(latency, b/w, etc.)
- Diversity Level (VNs)
4. VN Response
VNC (MDC)
2. Abstract
Topology Query
3. Abstract
Topology Reply
PNC 1
Access/MPLS-
TP BH
PNC 2
MPLS Core
PNC 3
Optical Core
PNC 4
Access/MPLS
TP BH
EP 1
EP 2
EP 3

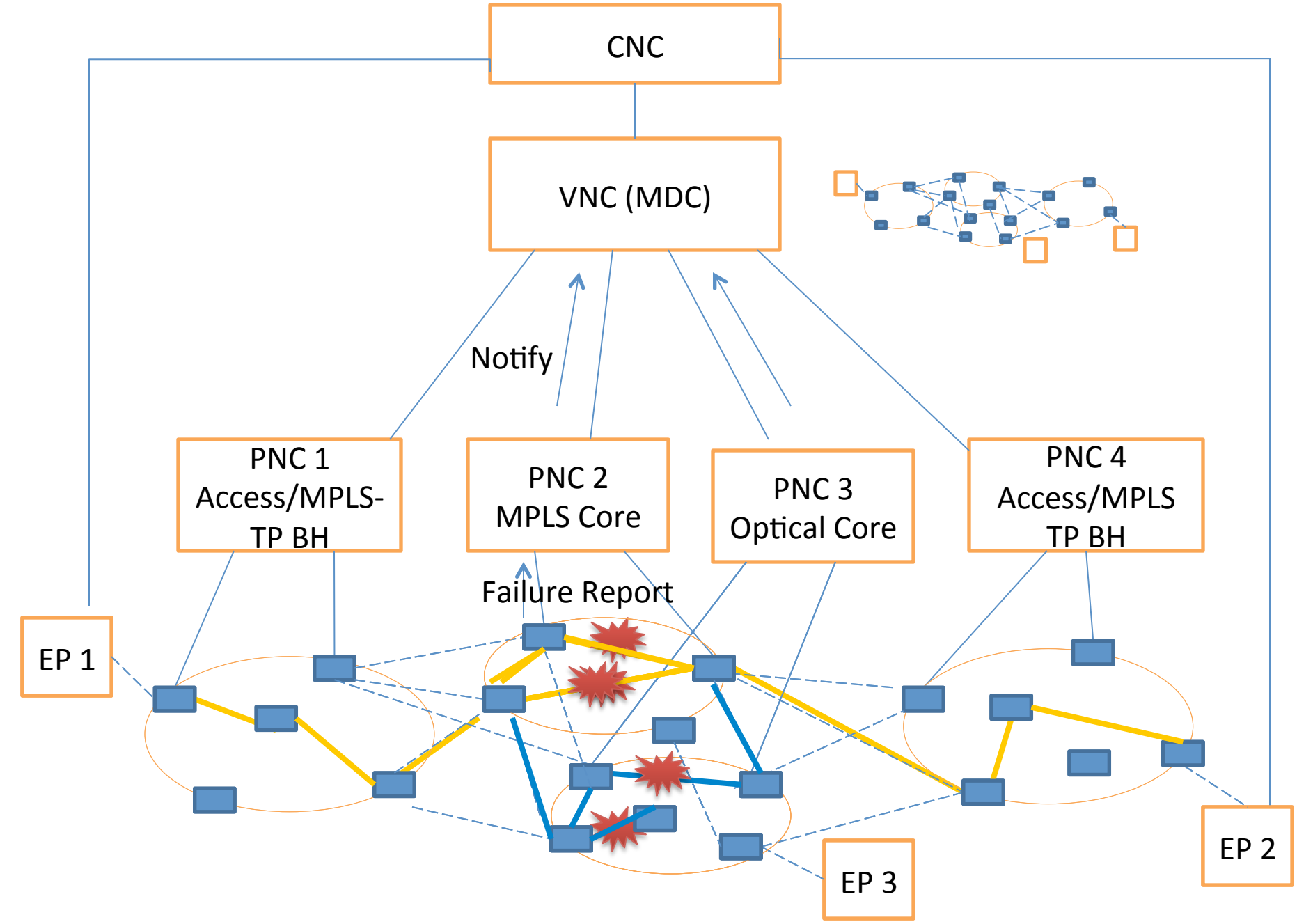

CNC
- Topology Abstraction
- Creation of E2E network abstraction
VNC (MDC)
Topology Abstraction
PNC 1 Access/MPLS-TP BH
PNC 2 MPLS Core
PNC 3 Optical Core
PNC 4 Access/MPLS TP BH
EP 1
EP 3
EP 1

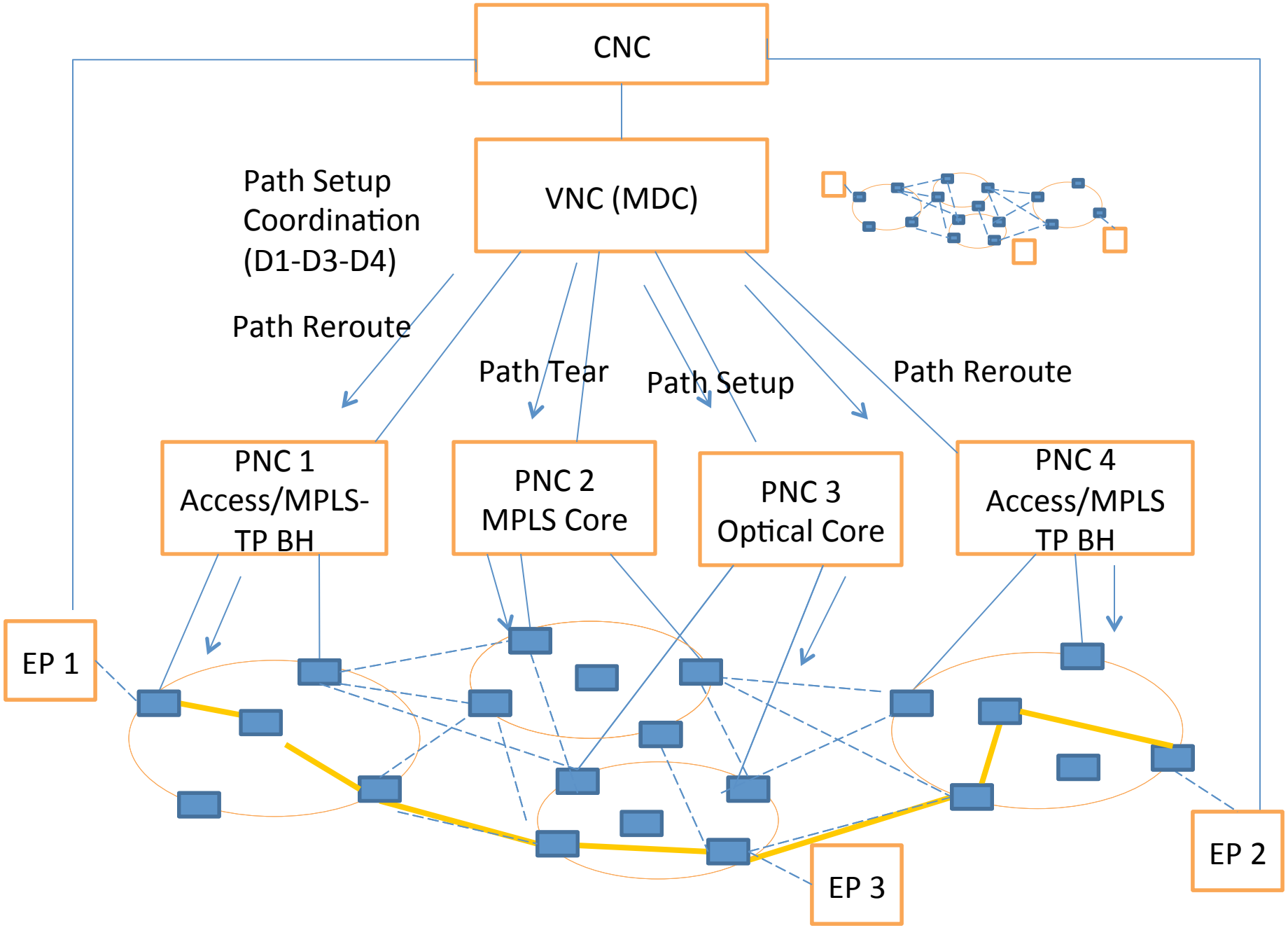

CNC
VNC (MDC)
Path Setup Coordination (D1-D2-D4)
Path Setup
PNC 1 Access/MPLS-TP BH
PNC 2 MPLS Core
PNC 3 Optical Core
PNC 4 Access/MPLS TP BH
Path Provision Command
EP 1
EP 2
EP 3

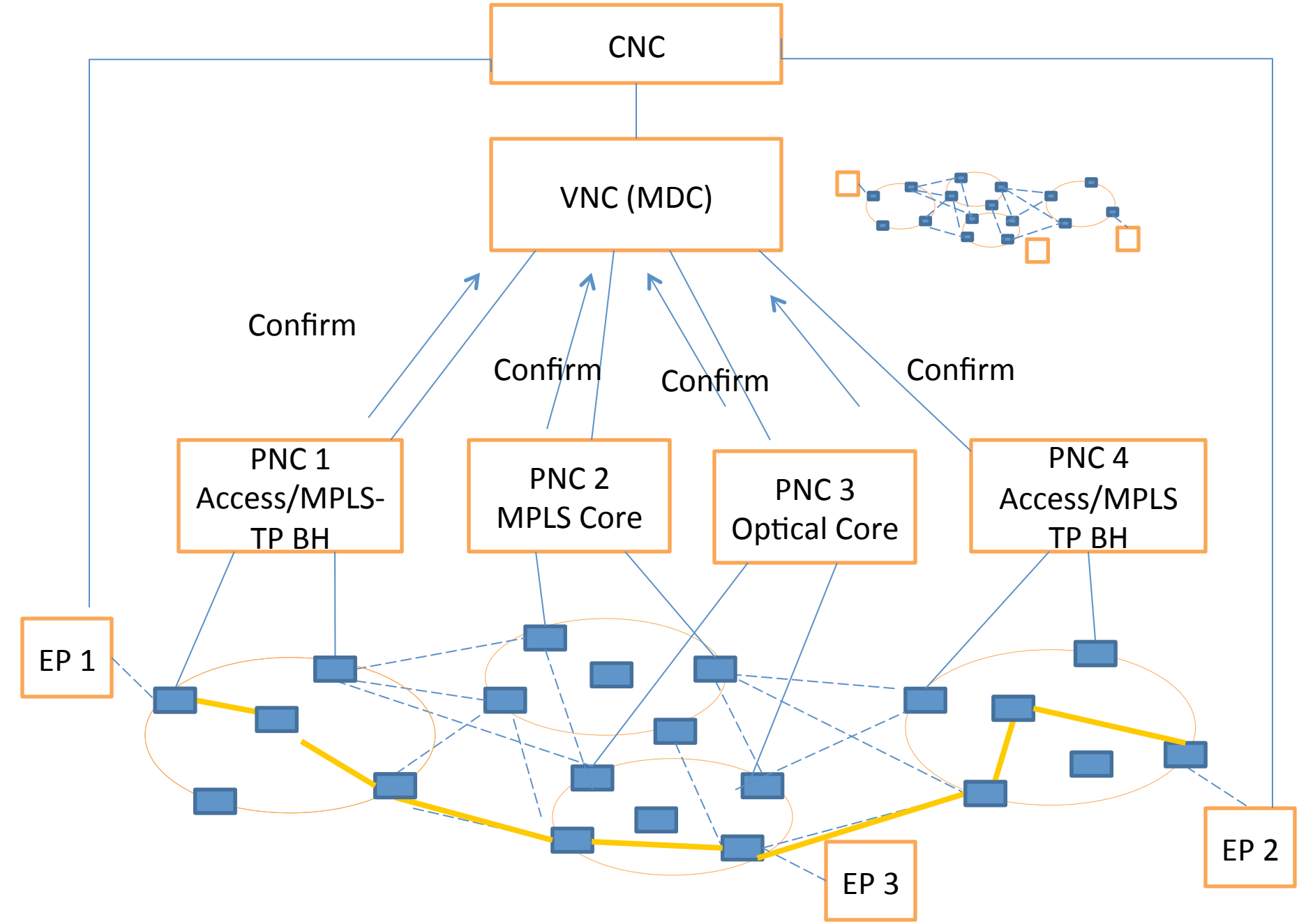

CNC
VNC (MDC)
Path Confirm
PNC 1
Access/MPLS-
TP BH
PNC 2
MPLS Core
PNC 3
Optical Core
PNC 4
Access/MPLS
TP BH
EP 1
EP 2
EP 3

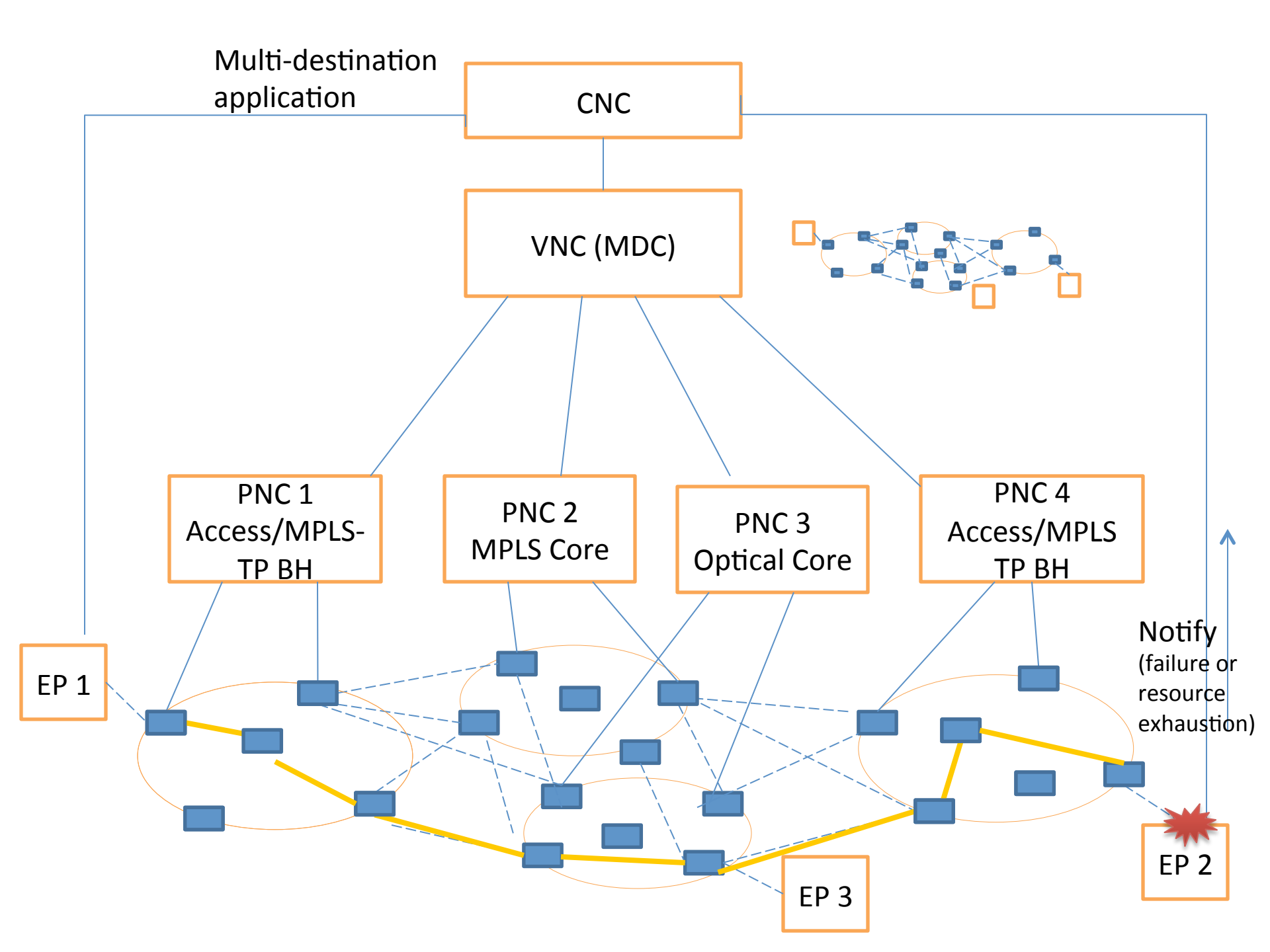

CNC
VNC (MDC)
PNC 1
Access/MPLS-
TP BH
PNC 2
MPLS Core
PNC 3
Optical Core
PNC 4
Access/MPLS
TP BH
Local Fix
EP 1
EP 2
EP 3

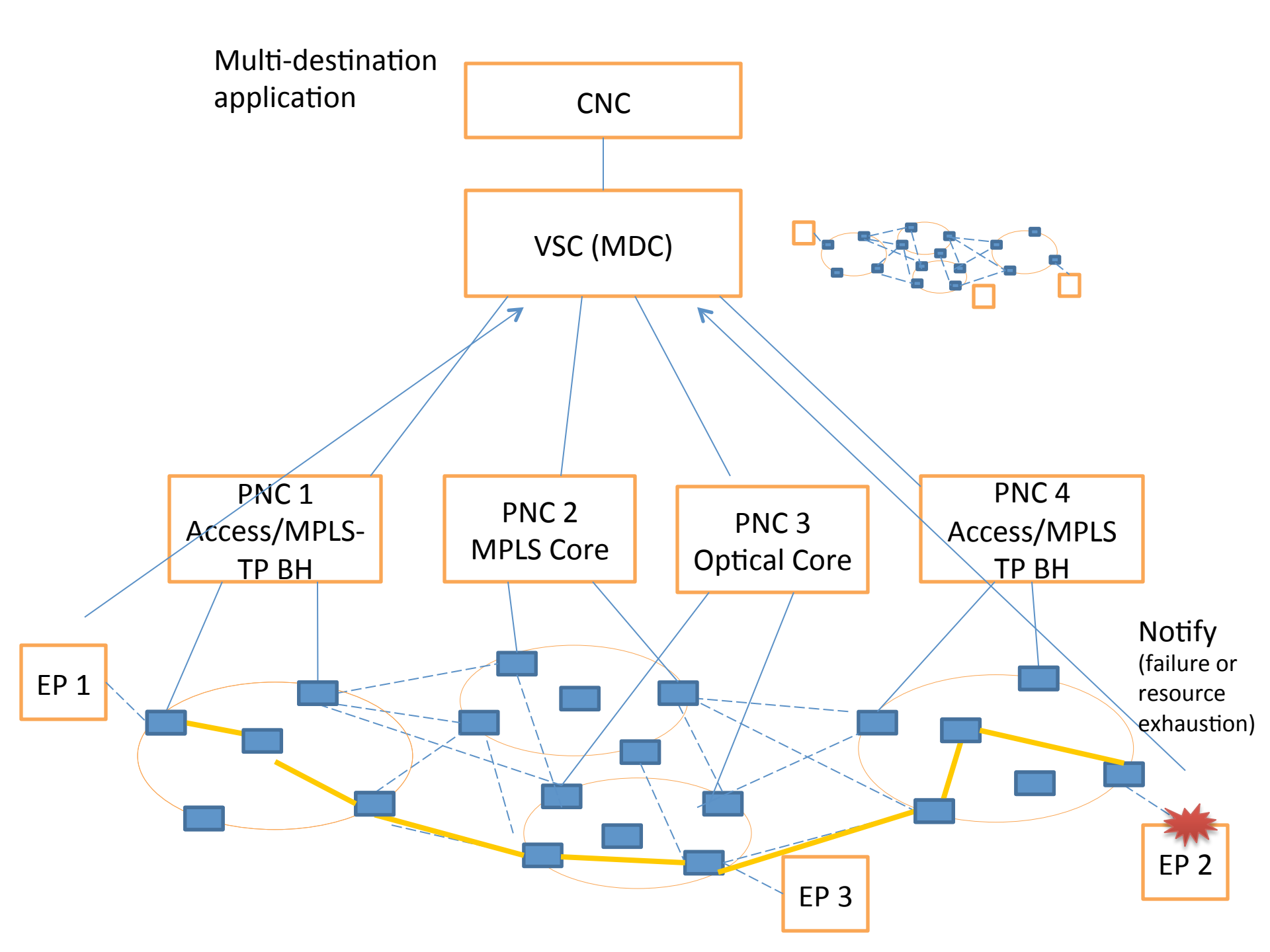

CNC
VNC (MDC)
PNC 1
Access/MPLS-
TP BH
PNC 2
MPLS Core
PNC 3
Optical Core
PNC 4
Access/MPLS
TP BH
Local Fix
EP 1
EP 2
EP 3

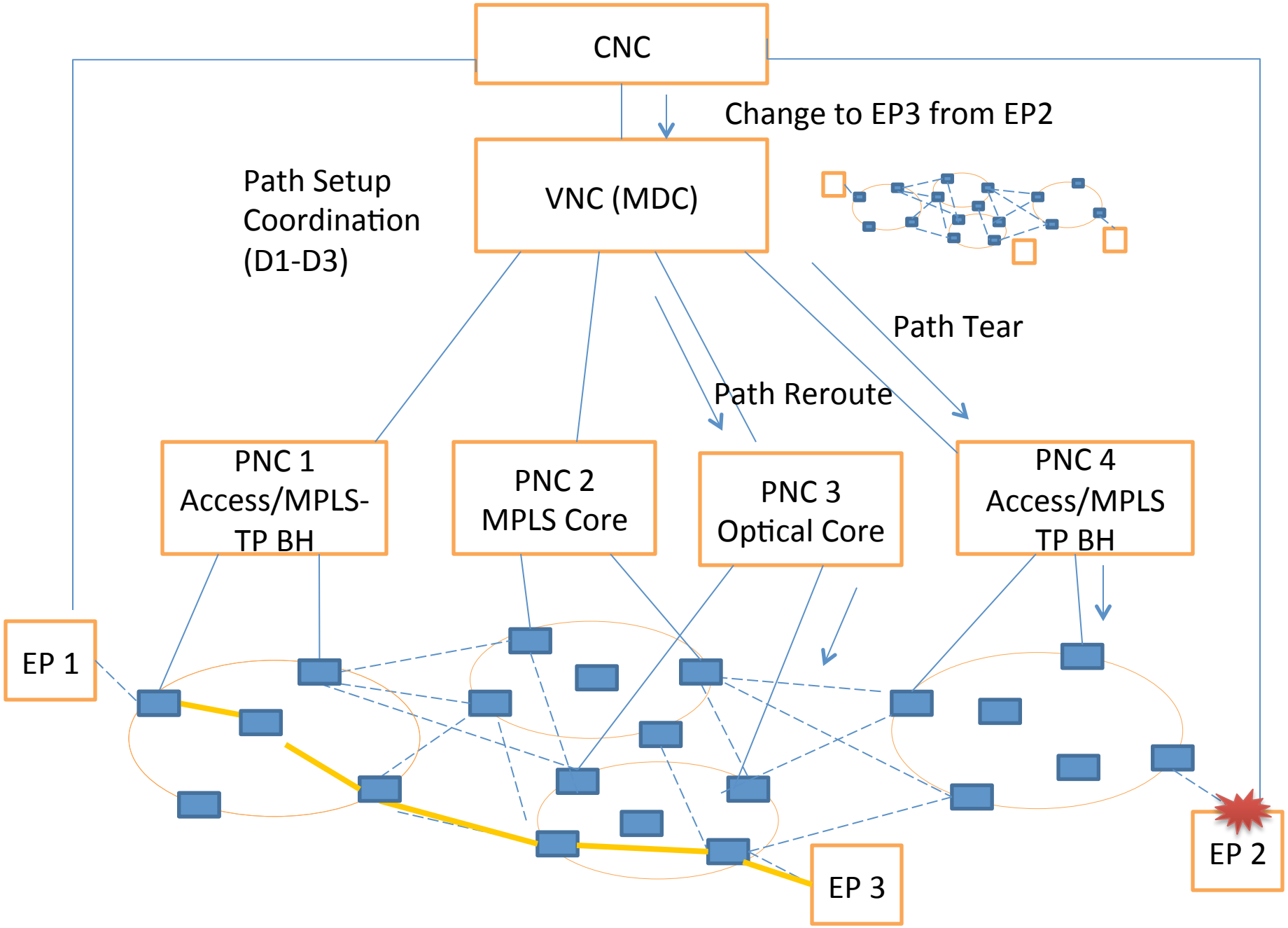

CNC
VNC (MDC)
Notify
PNC 1
Access/MPLS-
TP BH
PNC 2
MPLS Core
PNC 3
Optical Core
PNC 4
Access/MPLS
TP BH
Failure Report
EP 1
EP 2
EP 3


CNC
VNC (MDC)
Path Setup Coordination (D1-D3-D4)
Path Reroute
Path Tear
Path Setup
Path Reroute
PNC 1 Access/MPLS-TP BH
PNC 2 MPLS Core
PNC 3 Optical Core
PNC 4 Access/MPLS TP BH
EP 1
EP 2
EP 3


CNC
VNC (MDC)
Confirm
Confirm
Confirm
Confirm
PNC 1
Access/MPLS-
TP BH
PNC 2
MPLS Core
PNC 3
Optical Core
PNC 4
Access/MPLS
TP BH
EP 1
EP 2
EP 3


Multi-destination application
CNC
VNC (MDC)
PNC 1 Access/MPLS-TP BH
PNC 2 MPLS Core
PNC 3 Optical Core
PNC 4 Access/MPLS TP BH
EP 1
EP 2
EP 3
Notify (failure or resource exhaustion)


Multi-destination application
CNC
VSC (MDC)
PNC 1 Access/MPLS-TP BH
PNC 2 MPLS Core
PNC 3 Optical Core
PNC 4 Access/MPLS TP BH
EP 1
Notify (failure or resource exhaustion)
EP 2
EP 3


CNC
Change to EP3 from EP2
Path Setup
Coordination
(D1-D3)
VNC (MDC)
Path Tear
Path Reroute
PNC 1
Access/MPLS-
TP BH
PNC 2
MPLS Core
PNC 3
Optical Core
PNC 4
Access/MPLS
TP BH
EP 1
EP 2
EP 3