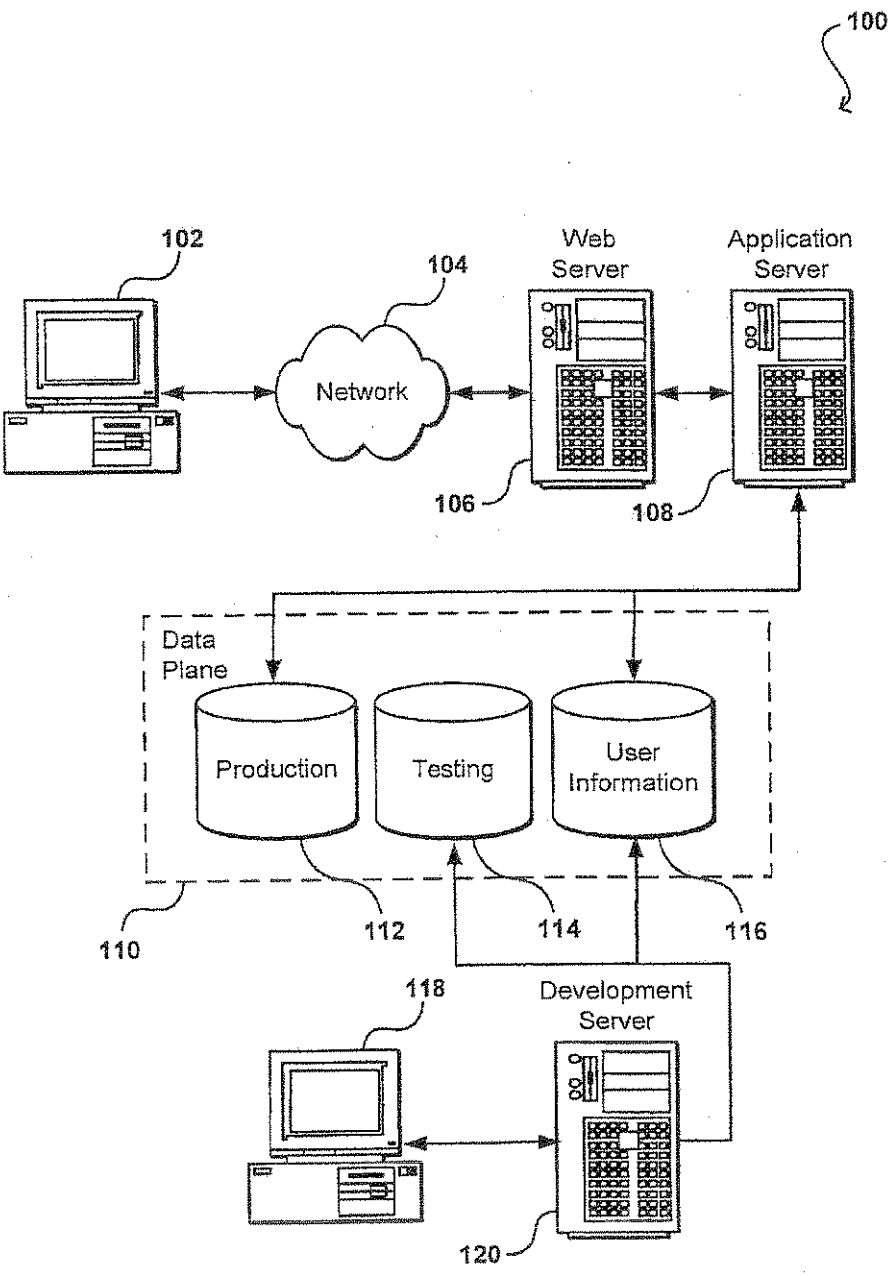
100
102
104
Web Server
Application Server
Network
106
108
Data Plane
Production
Testing
User Information
110
112
114
116
118
Development Server
120

FIG. 1

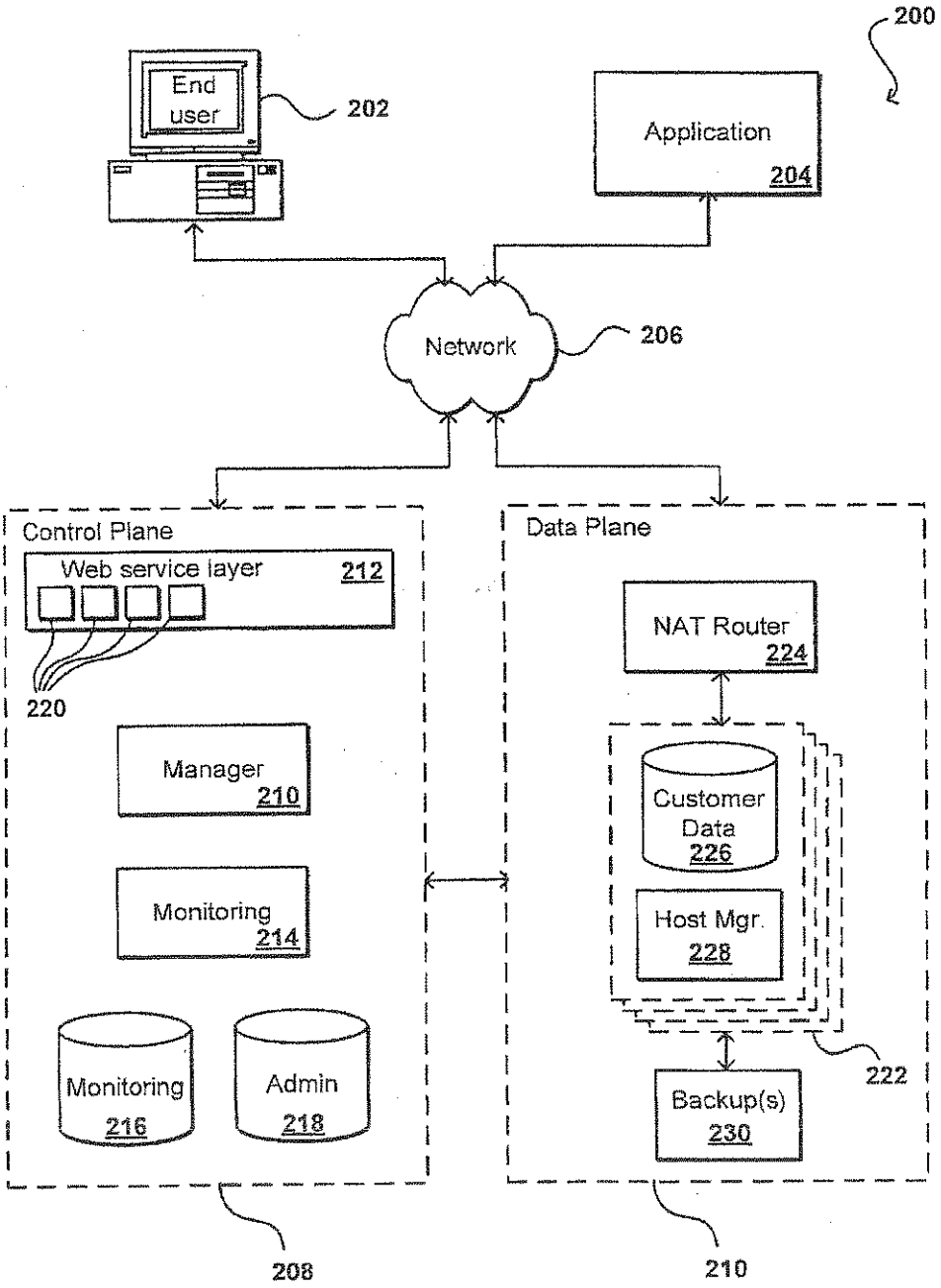
200
End user
202
Application
204
Network
206
Control Plane
Web service layer
212
220
Manager
210
Monitoring
214
Monitoring
216
Admin
218
208
Data Plane
NAT Router
224
Customer Data
226
Host Mgr.
228
222
Backup(s)
230
210

FIG. 2

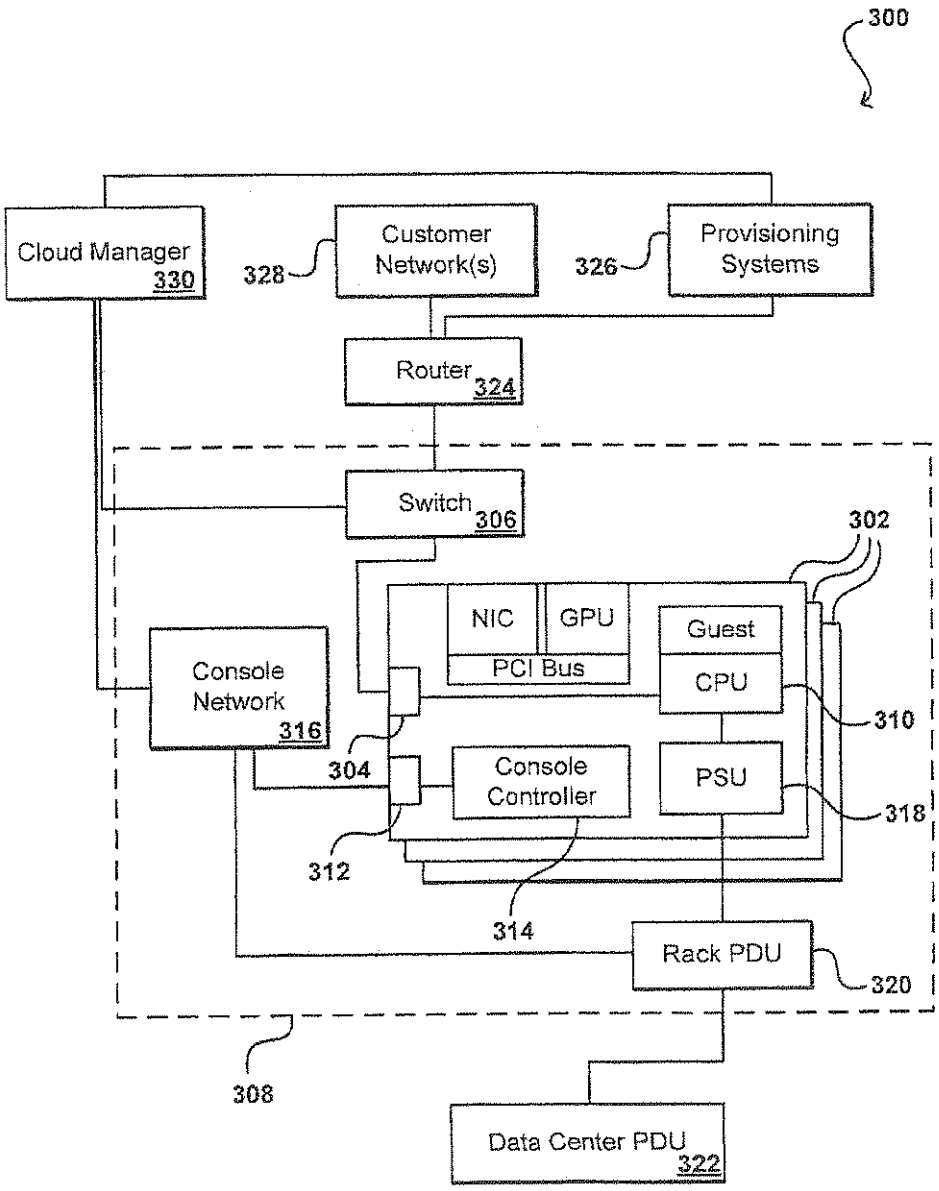
300
Cloud Manager 330
328
Customer Network(s)
326
Provisioning Systems
Router 324
Switch 306
302
NIC
GPU
PCI Bus
Guest
CPU
310
Console Network 316
304
Console Controller
PSU
318
312
314
Rack PDU
320
308
Data Center PDU 322

FIG. 3

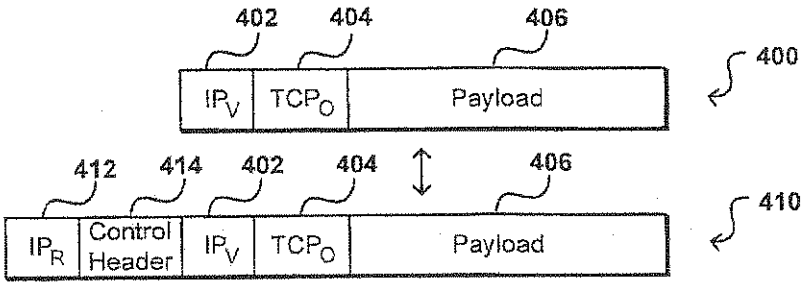
402
404
406
400
IPV
TCPO
Payload
412
414
402
404
406
410
IPR
Control Header
IPV
TCPO
Payload

FIG. 4

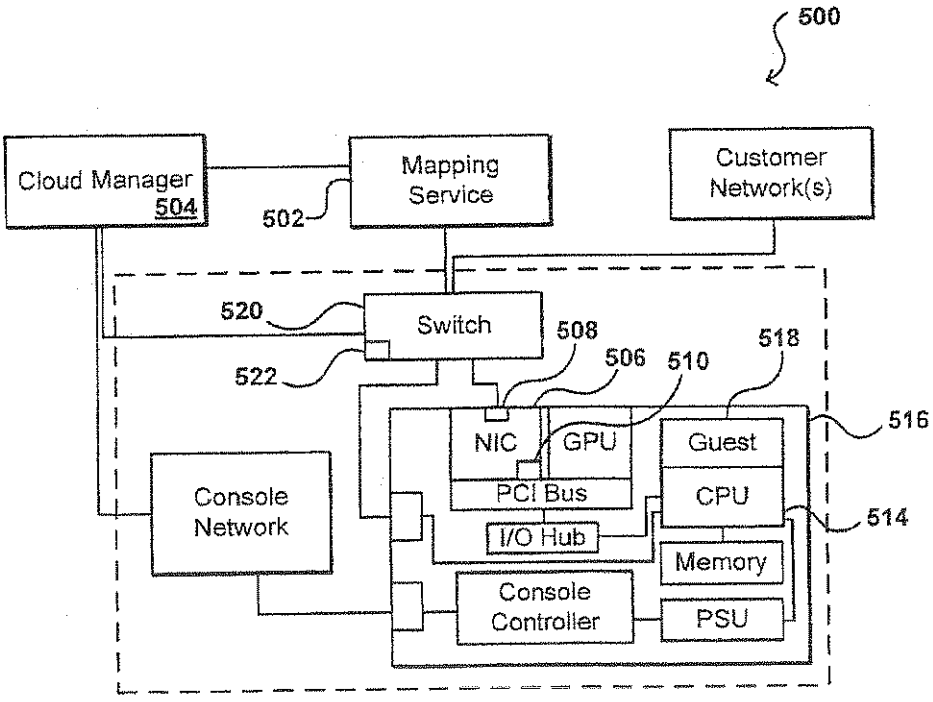
500
Cloud Manager 504
502
Mapping Service
Customer Network(s)
520
Switch
508
506
510
518
522
516
NIC
GPU
Guest
Console Network
PCI Bus
CPU
514
I/O Hub
Memory
Console Controller
PSU

FIG. 5

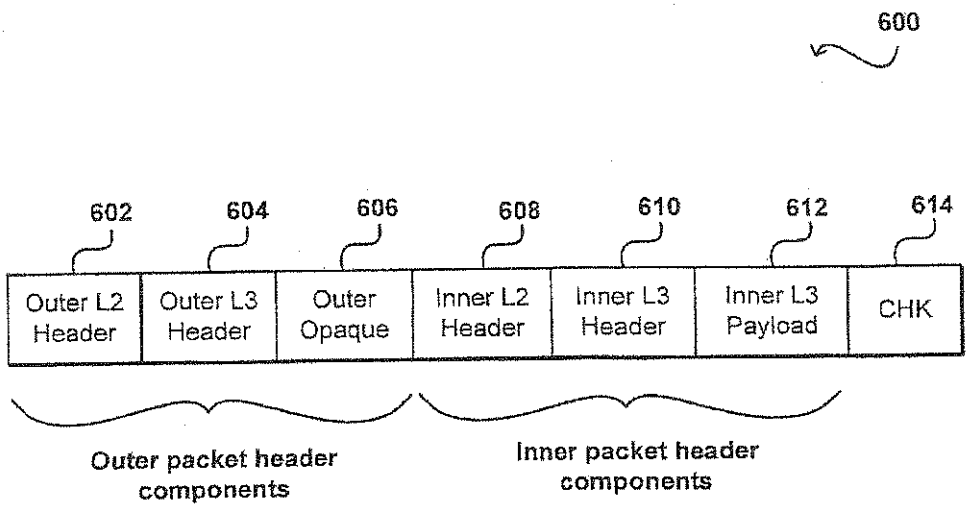
600
602
604
606
608
610
612
614
Outer L2 Header
Outer L3 Header
Outer Opaque
Inner L2 Header
Inner L3 Header
Inner L3 Payload
CHK
Outer packet header components
Inner packet header components

FIG. 6

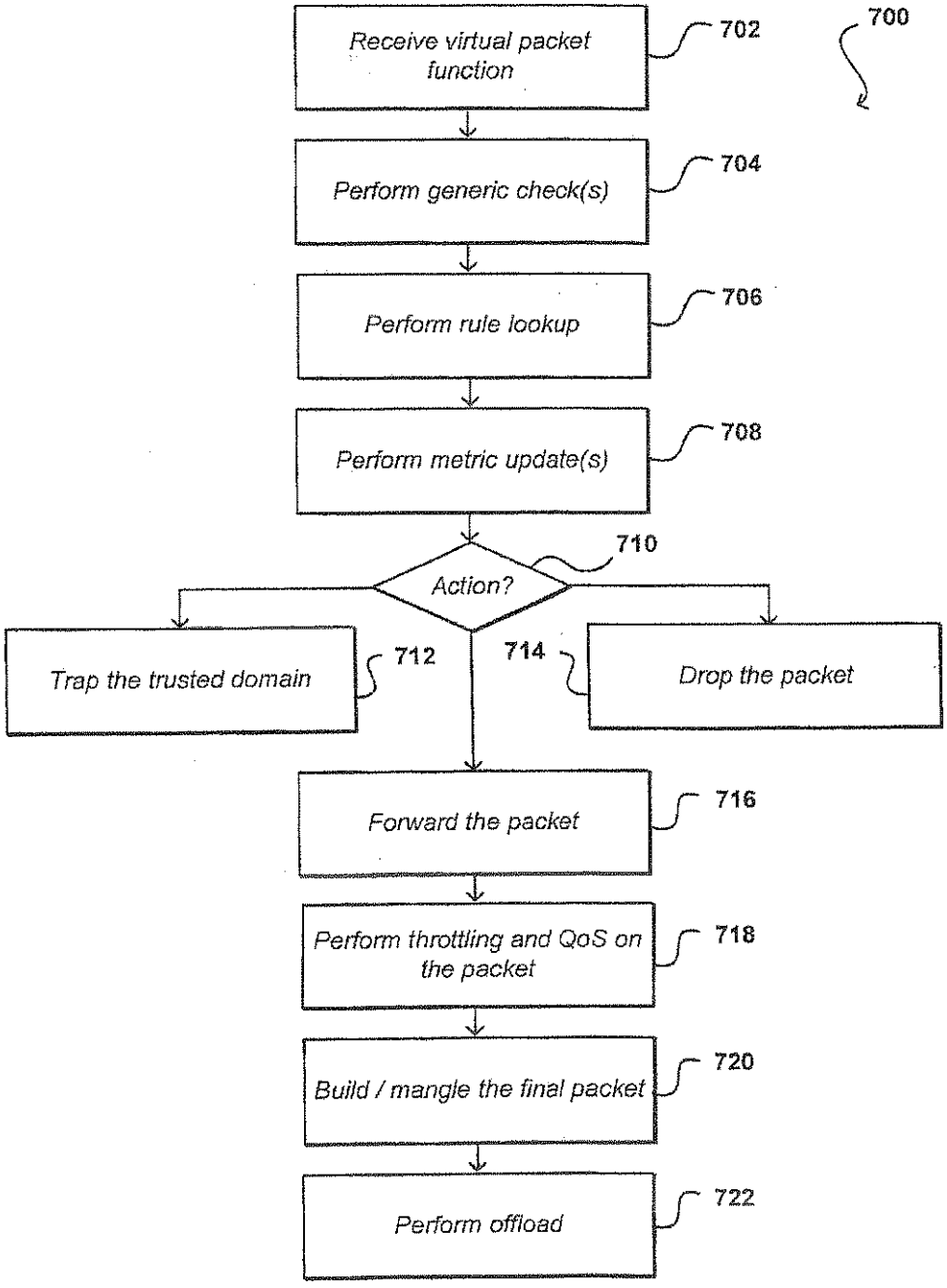
Receive virtual packet function
702
700
Perform generic check(s)
704
Perform rule lookup
706
Perform metric update(s)
708
Action?
710
Trap the trusted domain
712
714
Drop the packet
Forward the packet
716
Perform throttling and QoS on the packet
718
Build / mangle the final packet
720
Perform offload
722

FIG. 7

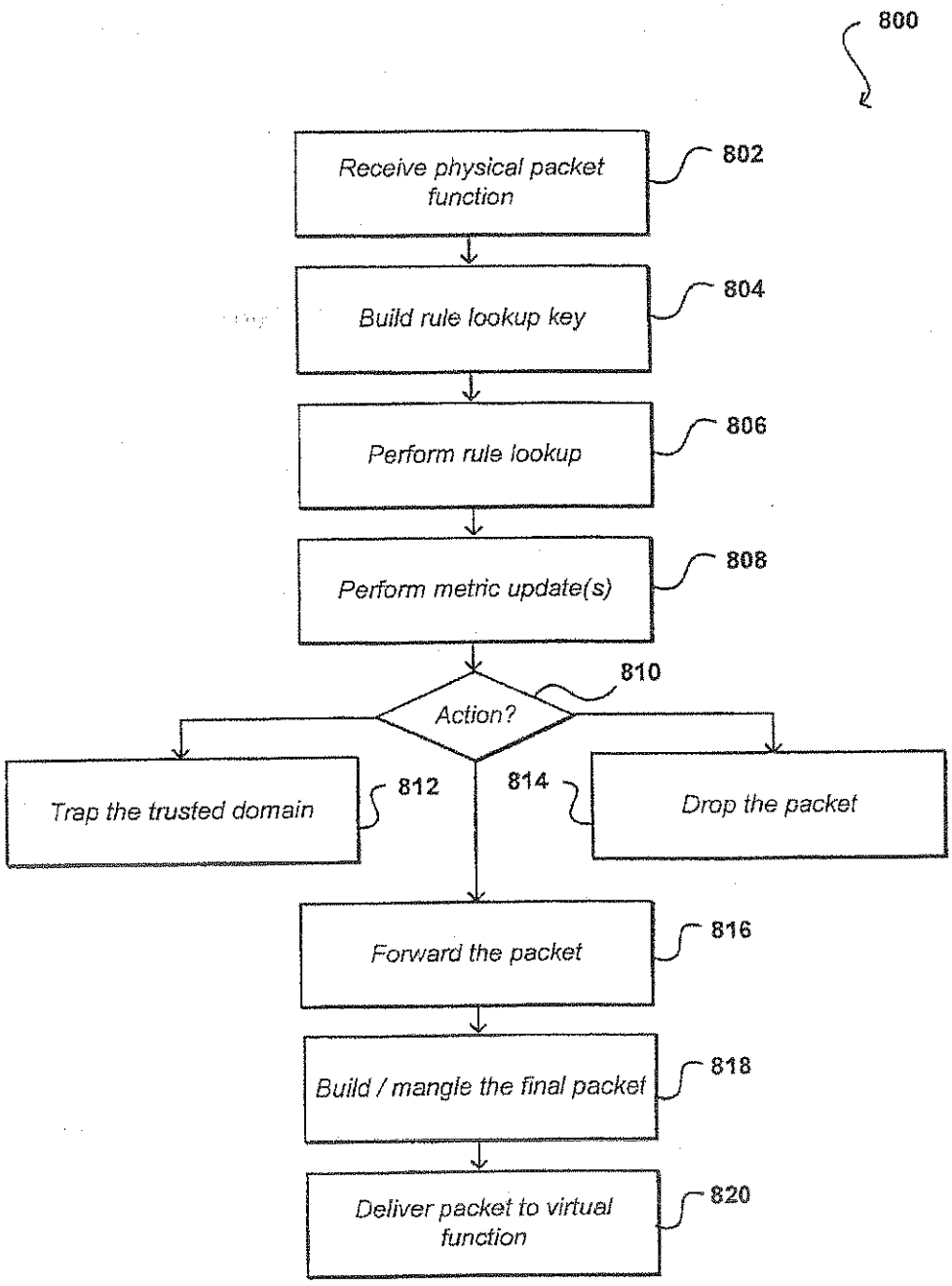
800
Receive physical packet function
802
Build rule lookup key
804
Perform rule lookup
806
Perform metric update(s)
808
Action?
810
Trap the trusted domain
812
814
Drop the packet
Forward the packet
816
Build / mangle the final packet
818
Deliver packet to virtual function
820

FIG. 8

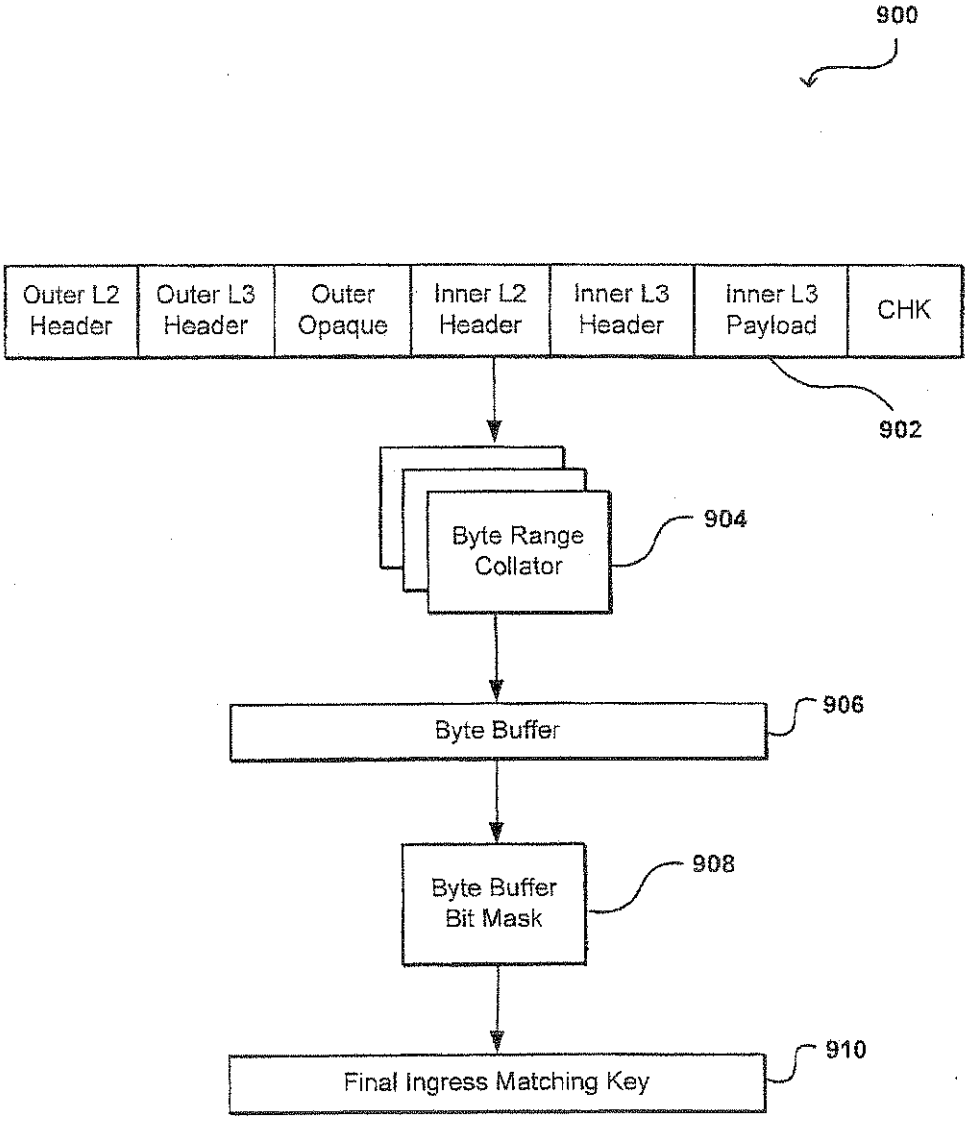
900
Outer L2 Header
Outer L3 Header
Outer Opaque
Inner L2 Header
Inner L3 Header
Inner L3 Payload
CHK
902
Byte Range Collator
904
Byte Buffer
906
Byte Buffer Bit Mask
908
Final Ingress Matching Key
910

FIG. 9