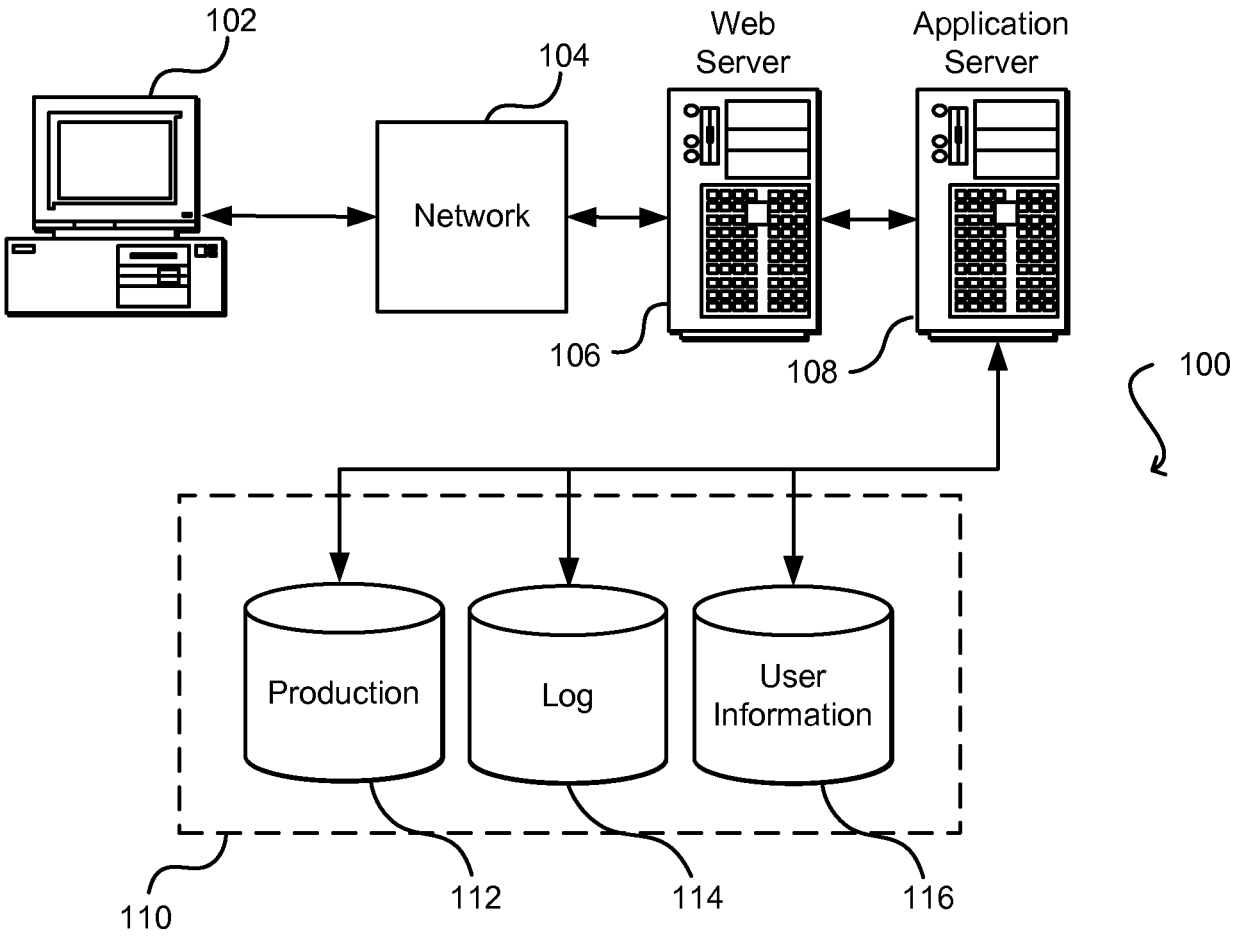
102
104
Web Server
Application Server
Network
106
108
100
Production
Log
User Information
110
112
114
116

FIG. 1

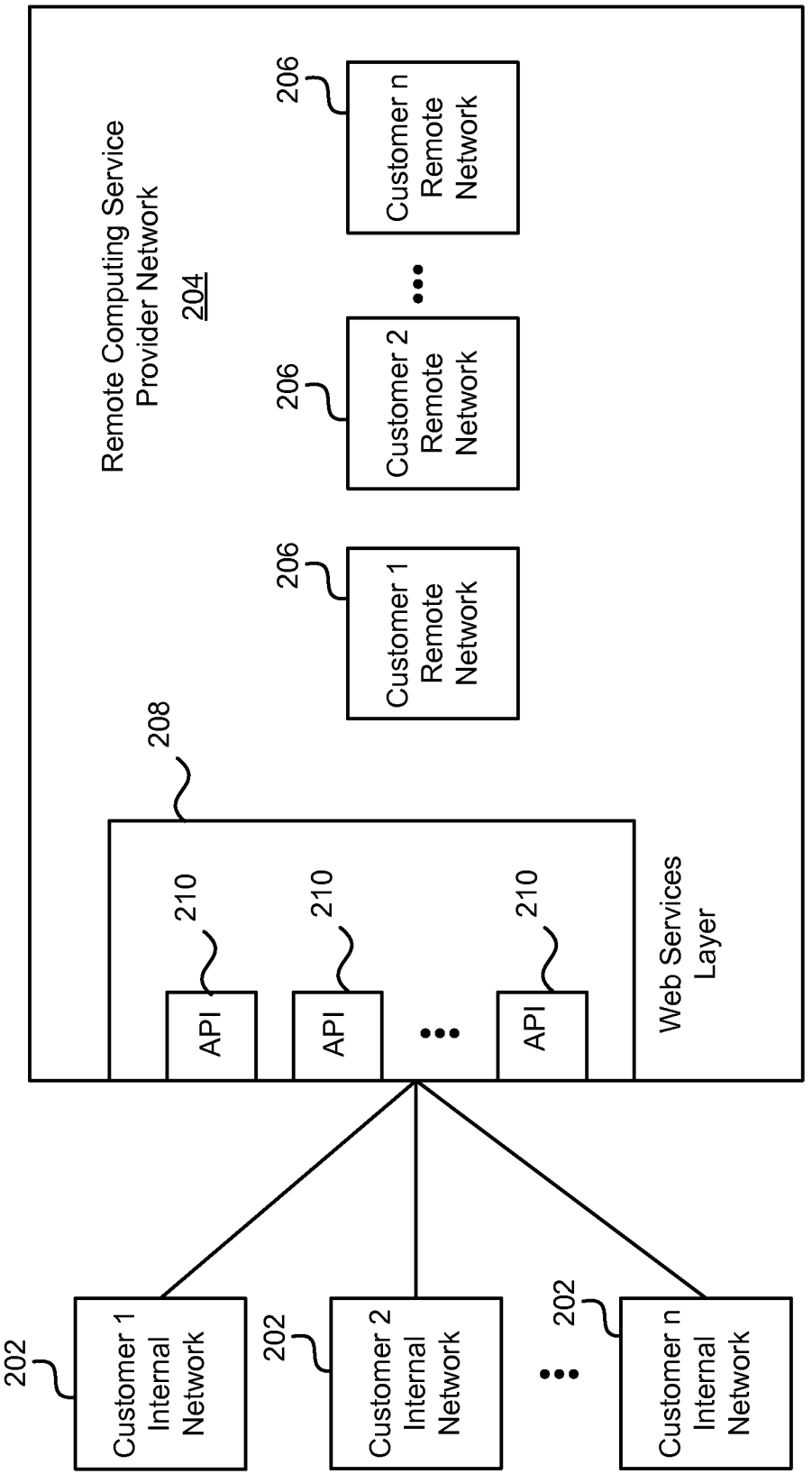
Remote Computing Service Provider Network
204
206
Customer n Remote Network
206
Customer 2 Remote Network
206
Customer 1 Remote Network
208
210
API
210
API
210
API
Web Services Layer
200
202
Customer 1 Internal Network
202
Customer 2 Internal Network
202
Customer n Internal Network

FIG. 2

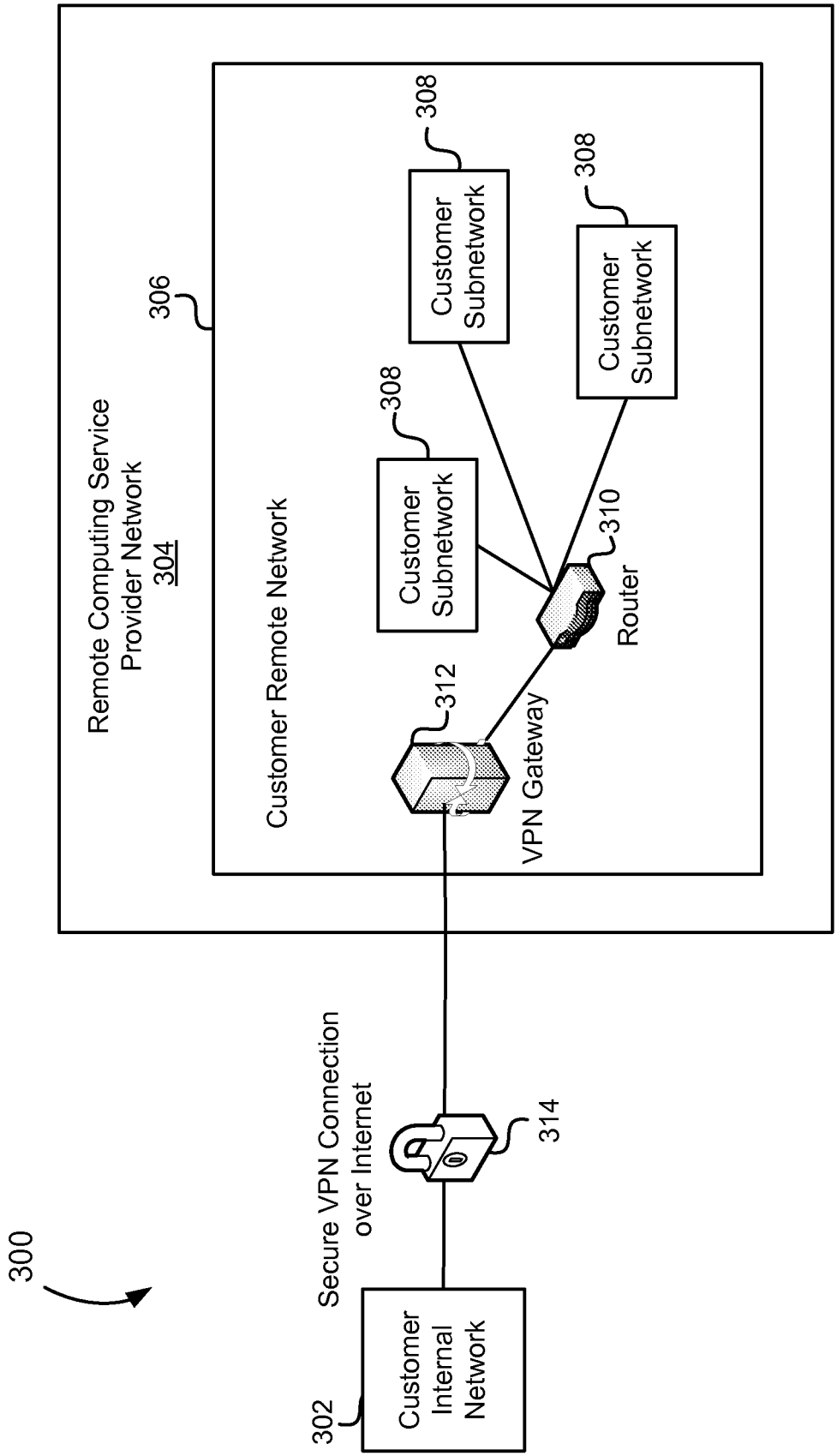
300
Remote Computing Service Provider Network
304
306
Customer Remote Network
308
Customer Subnetwork
308
Customer Subnetwork
308
Customer Subnetwork
310
Router
312
VPN Gateway
Secure VPN Connection over Internet
314
302
Customer Internal Network

FIG. 3

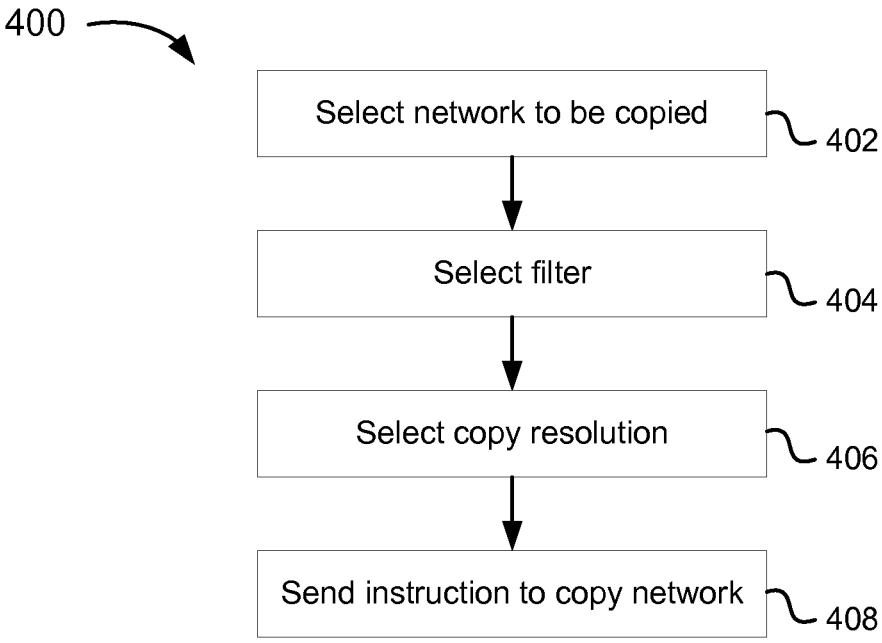
400
Select network to be copied
402
Select filter
404
Select copy resolution
406
Send instruction to copy network
408

FIG. 4

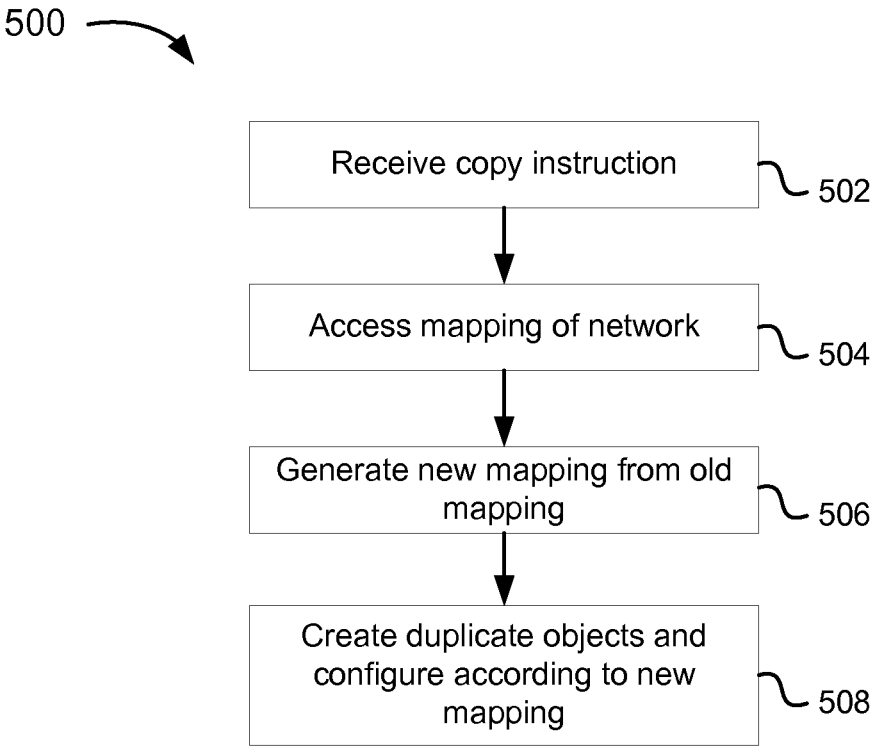
500
Receive copy instruction
502
Access mapping of network
504
Generate new mapping from old mapping
506
Create duplicate objects and configure according to new mapping
508

FIG. 5

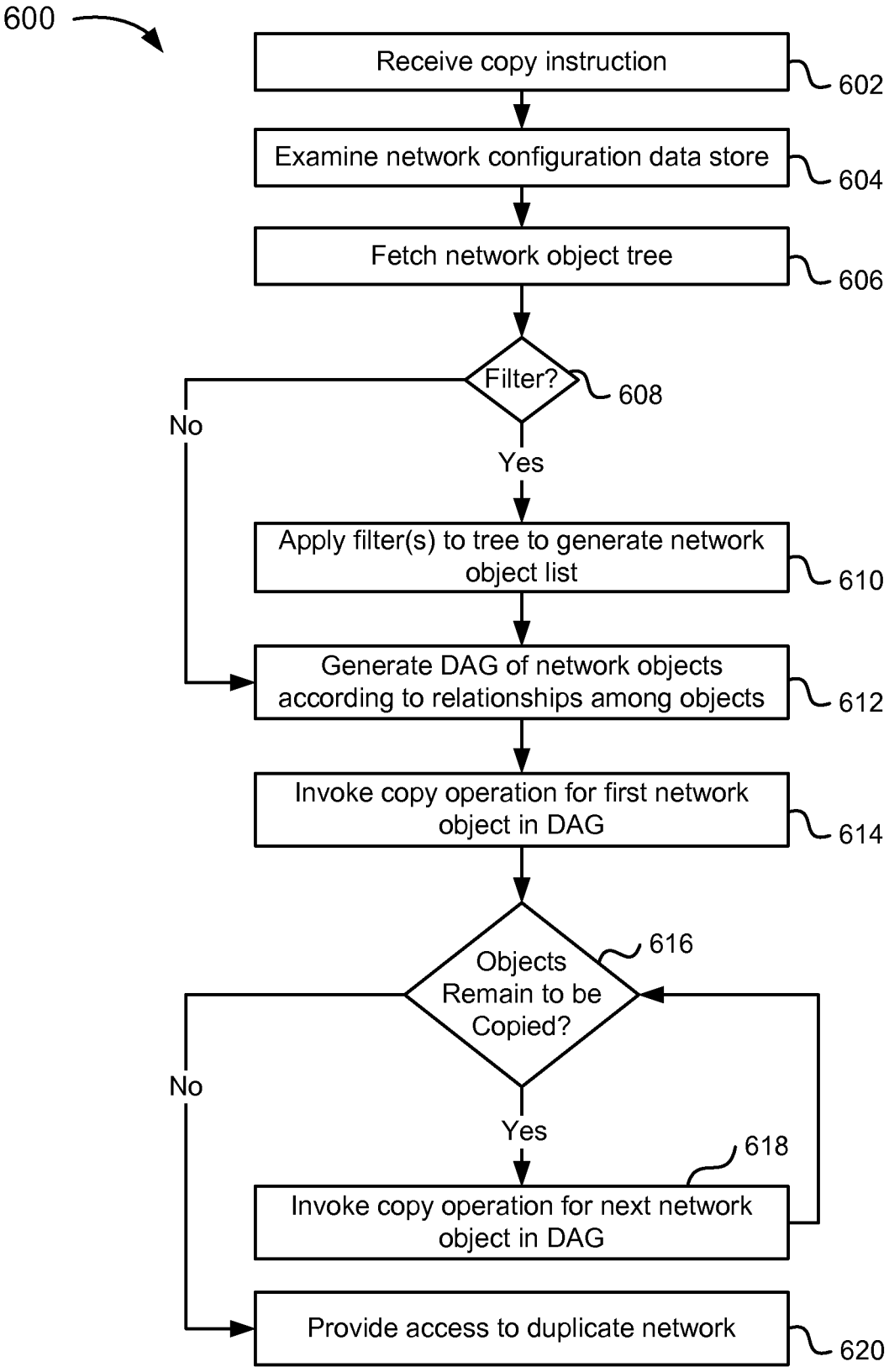
600
Receive copy instruction
602
Examine network configuration data store
604
Fetch network object tree
606
Filter?
608
No
Yes
Apply filter(s) to tree to generate network object list
610
Generate DAG of network objects according to relationships among objects
612
Invoke copy operation for first network object in DAG
614
Objects Remain to be Copied?
616
No
Yes
618
Invoke copy operation for next network object in DAG
Provide access to duplicate network
620

FIG. 6

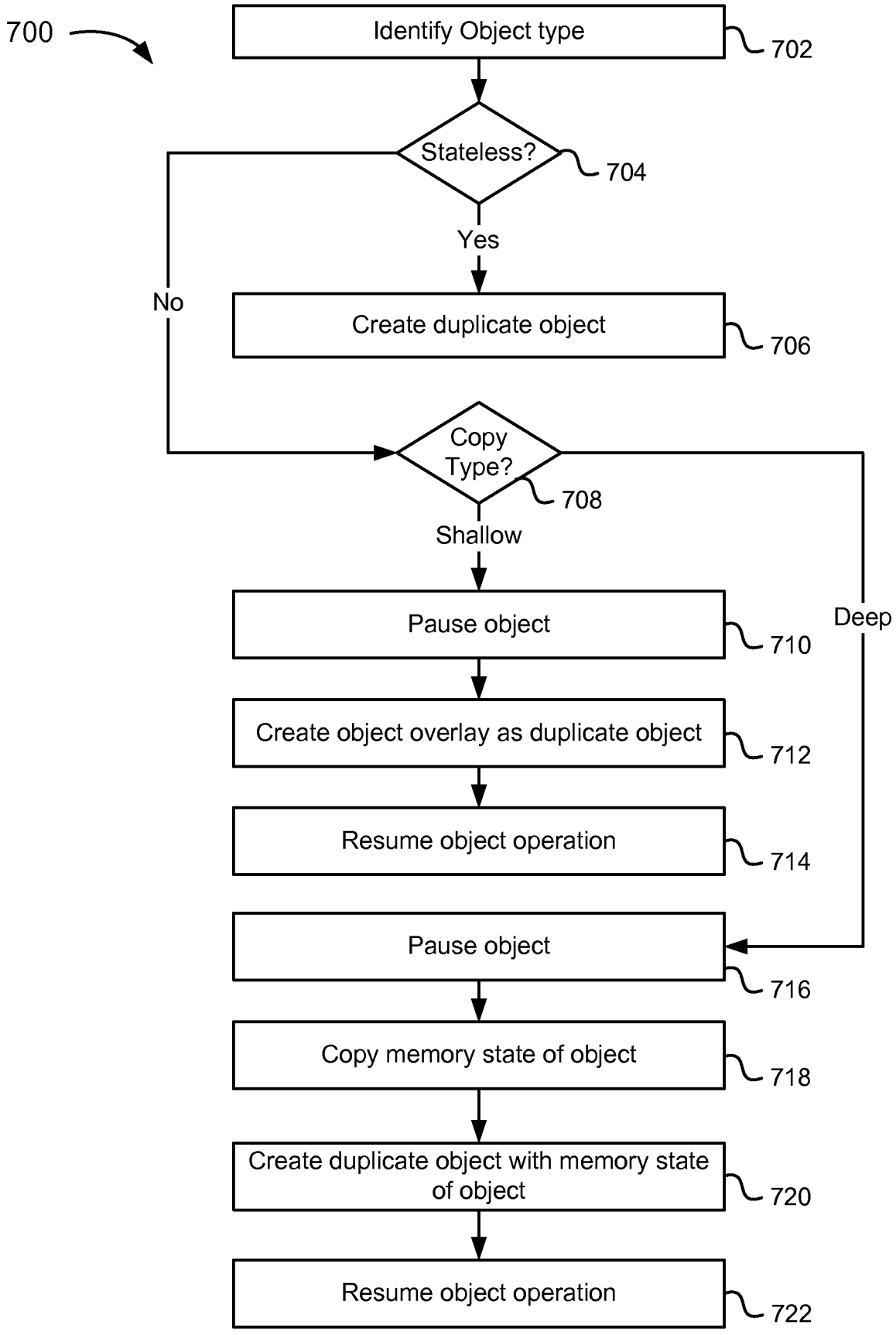
700
Identify Object type
702
Stateless?
704
Yes
No
Create duplicate object
706
Copy Type?
708
Shallow
Deep
Pause object
710
Create object overlay as duplicate object
712
Resume object operation
714
Pause object
716
Copy memory state of object
718
Create duplicate object with memory state of object
720
Resume object operation
722

FIG. 7

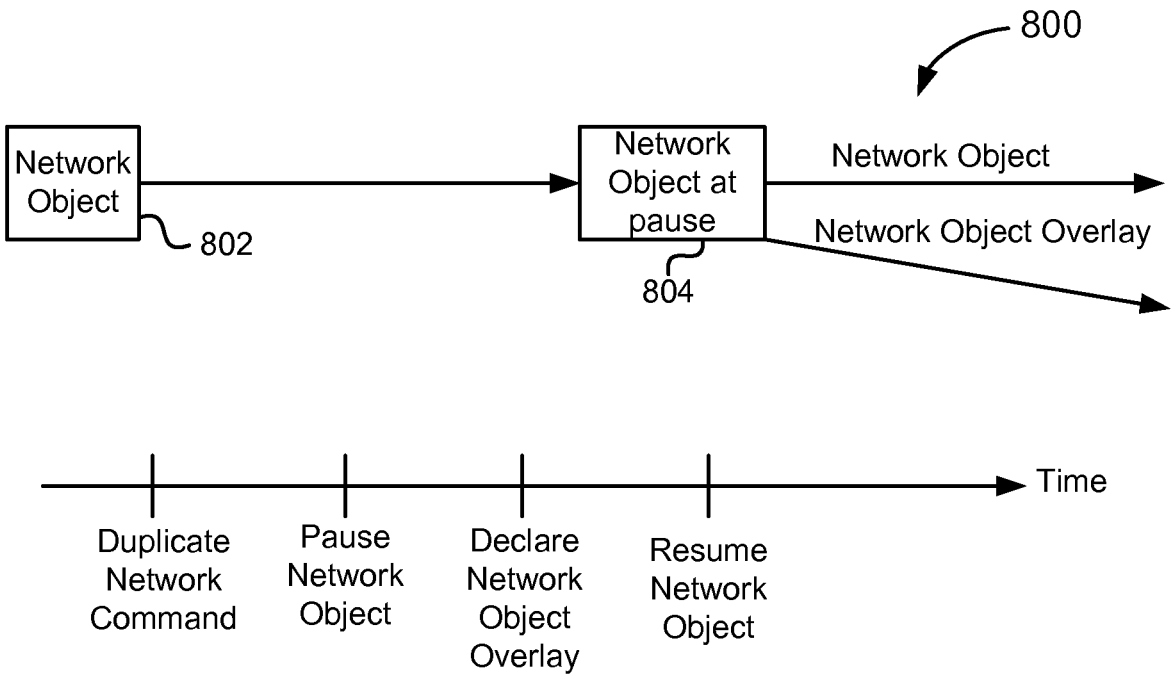
800
Network Object
802
Network Object at pause
804
Network Object
Network Object Overlay
Time
Duplicate Network Command
Pause Network Object
Declare Network Object Overlay
Resume Network Object

FIG. 8

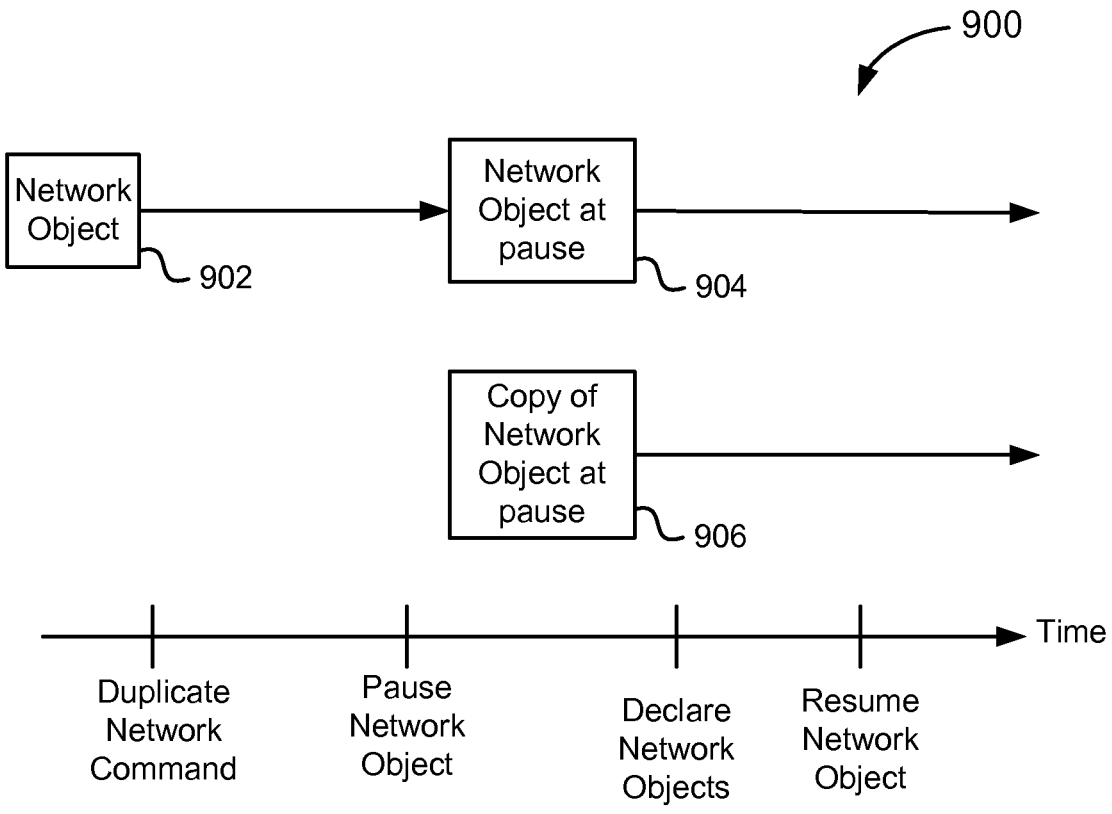
900
Network Object
902
Network Object at pause
904
Copy of Network Object at pause
906
Time
Duplicate Network Command
Pause Network Object
Declare Network Objects
Resume Network Object

FIG. 9

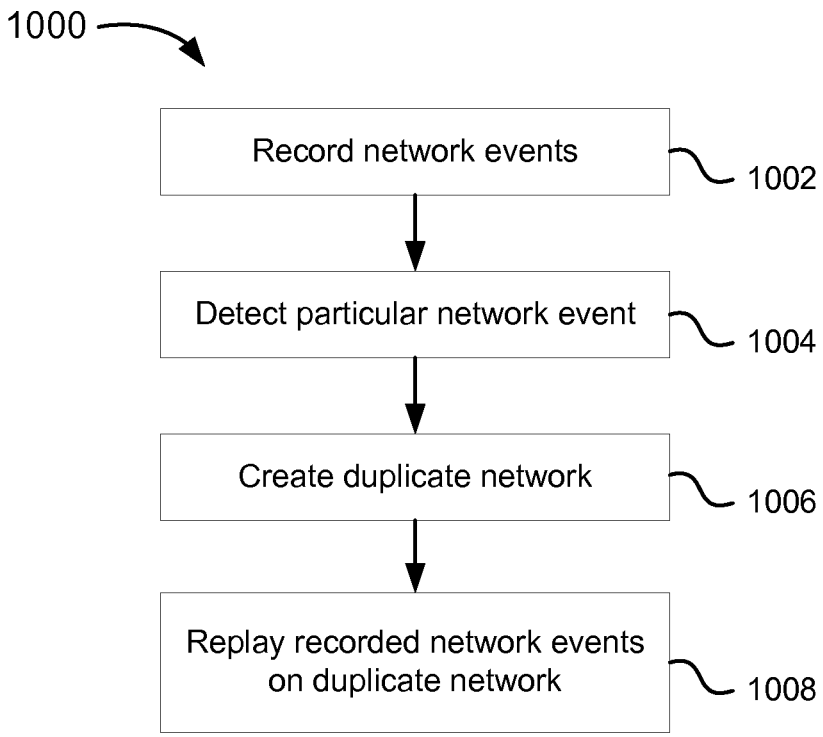
1000
Record network events
1002
Detect particular network event
1004
Create duplicate network
1006
Replay recorded network events on duplicate network
1008

FIG. 10

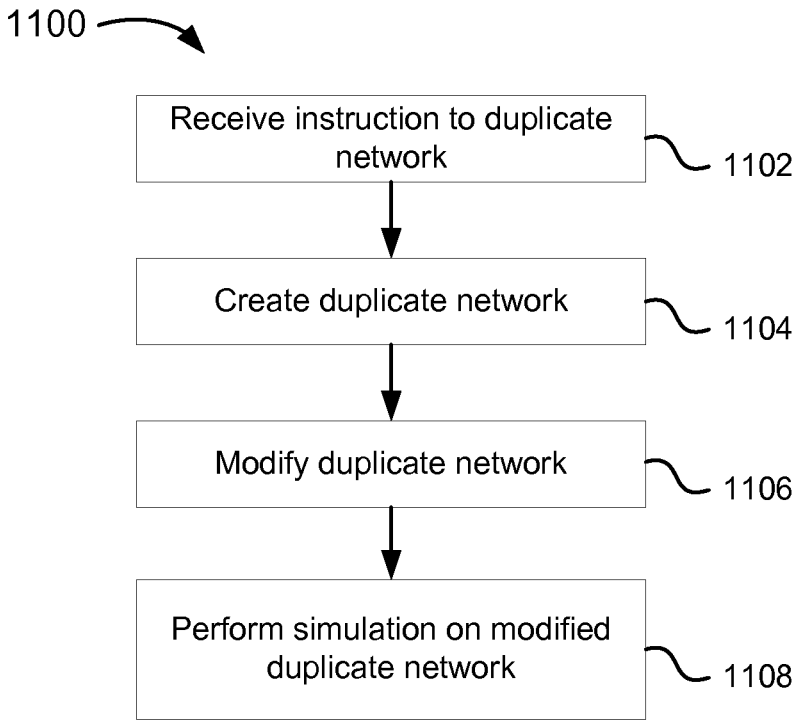
1100
Receive instruction to duplicate network
1102
Create duplicate network
1104
Modify duplicate network
1106
Perform simulation on modified duplicate network
1108

FIG. 11