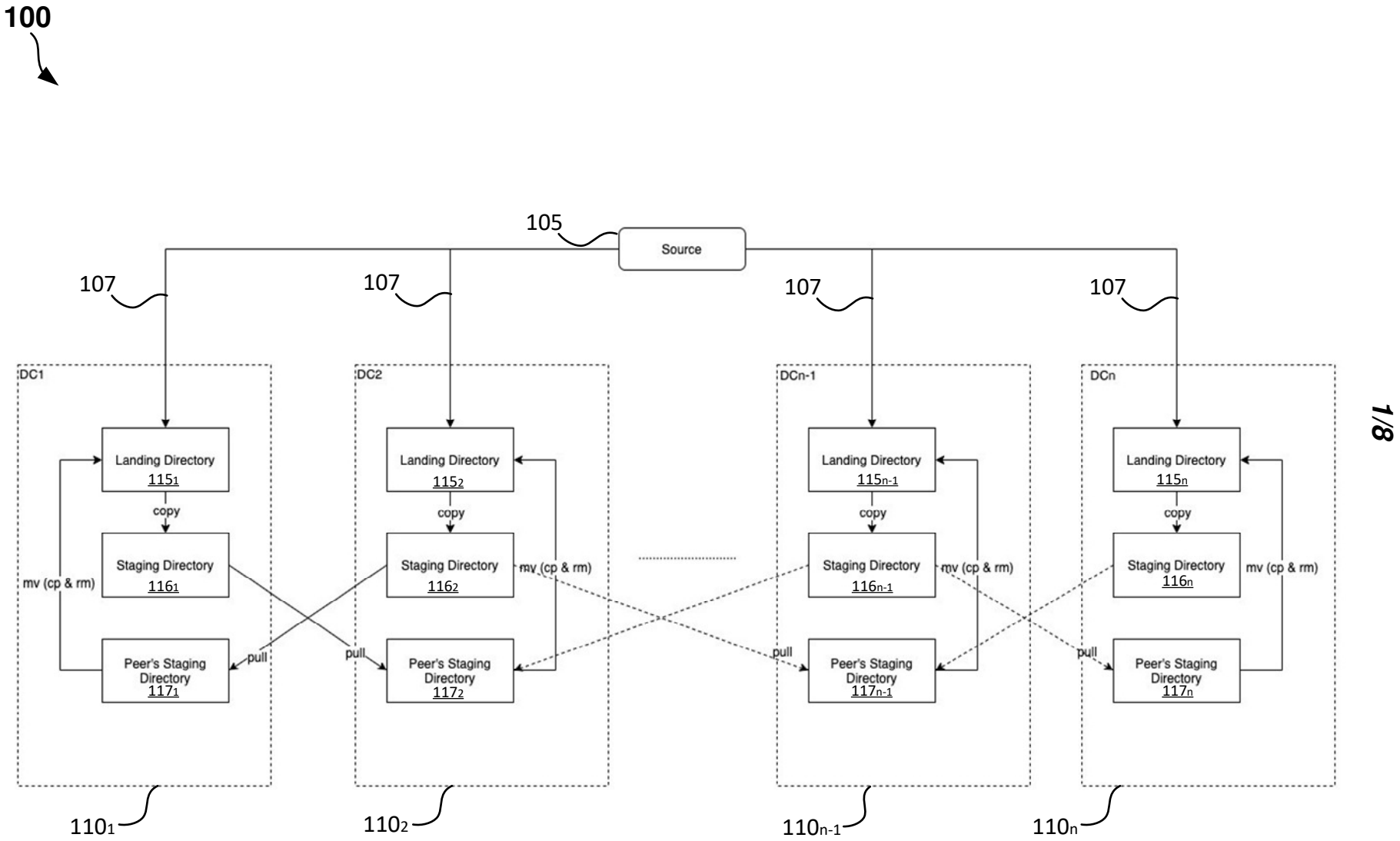

100
105
Source
107
107
107
107
DC1
DC2
DCn-1
DCn
Landing Directory
115_1
Landing Directory
115_2
Landing Directory
115_{n-1}
Landing Directory
115_n
copy
copy
copy
copy
Staging Directory
116_1
Staging Directory
116_2
Staging Directory
116_{n-1}
Staging Directory
116_n
mv (cp & rm)
mv (cp & rm)
mv (cp & rm)
mv (cp & rm)
pull
pull
pull
pull
Peer's Staging Directory
117_1
Peer's Staging Directory
117_2
Peer's Staging Directory
117_{n-1}
Peer's Staging Directory
117_n
110_1
110_2
110_{n-1}
110_n

FIG. 1

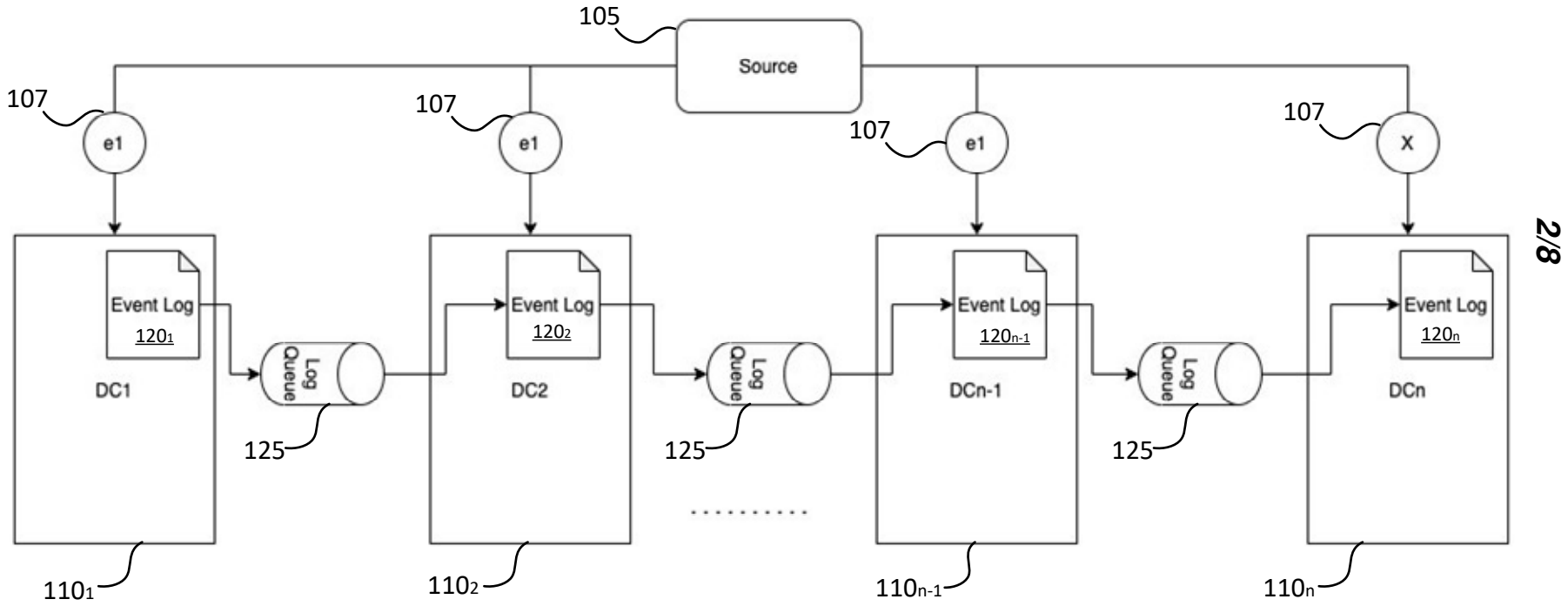

200
105
Source
107
e1
107
e1
107
e1
107
X
Event Log
120₁
Event Log
120₂
Event Log
120n-1
Event Log
120n
Log Queue
125
Log Queue
125
Log Queue
125
DC1
DC2
DCn-1
DCn
110₁
110₂
110n-1
110n

FIG. 2

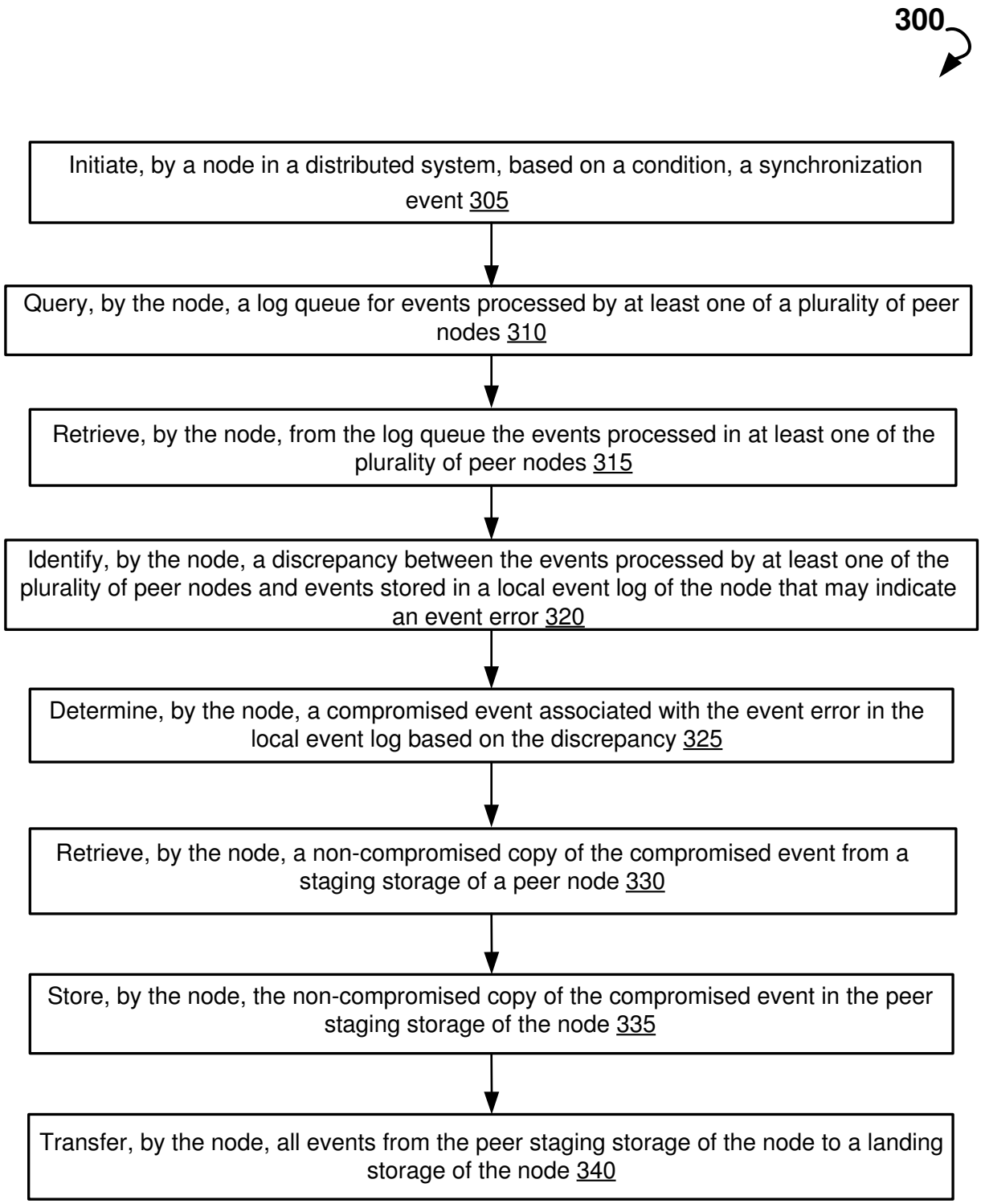

300
Initiate, by a node in a distributed system, based on a condition, a synchronization event 305
Query, by the node, a log queue for events processed by at least one of a plurality of peer nodes 310
Retrieve, by the node, from the log queue the events processed in at least one of the plurality of peer nodes 315
Identify, by the node, a discrepancy between the events processed by at least one of the plurality of peer nodes and events stored in a local event log of the node that may indicate an event error 320
Determine, by the node, a compromised event associated with the event error in the local event log based on the discrepancy 325
Retrieve, by the node, a non-compromised copy of the compromised event from a staging storage of a peer node 330
Store, by the node, the non-compromised copy of the compromised event in the peer staging storage of the node 335
Transfer, by the node, all events from the peer staging storage of the node to a landing storage of the node 340

FIG. 3

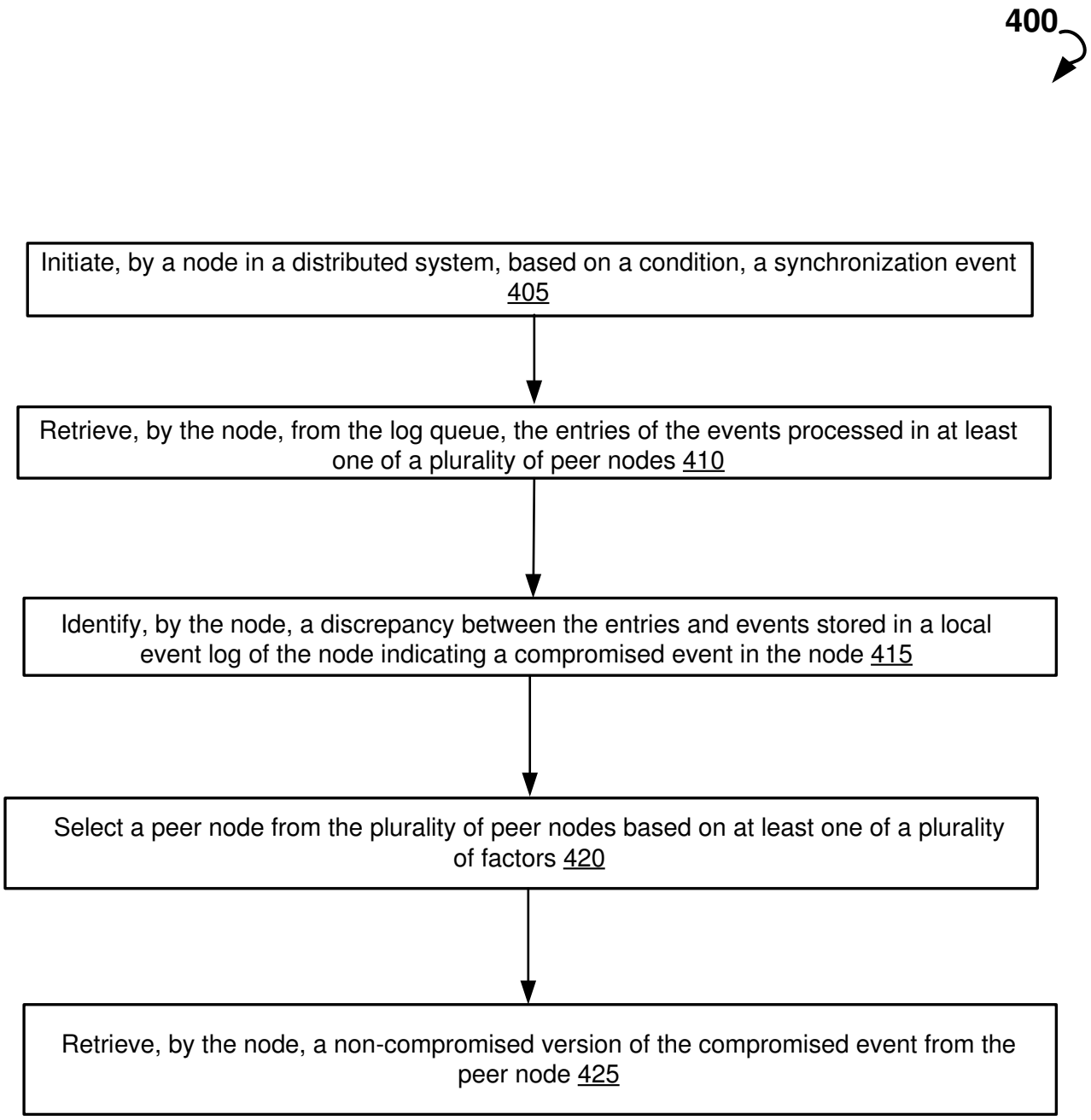

400
Initiate, by a node in a distributed system, based on a condition, a synchronization event 405
Retrieve, by the node, from the log queue, the entries of the events processed in at least one of a plurality of peer nodes 410
Identify, by the node, a discrepancy between the entries and events stored in a local event log of the node indicating a compromised event in the node 415
Select a peer node from the plurality of peer nodes based on at least one of a plurality of factors 420
Retrieve, by the node, a non-compromised version of the compromised event from the peer node 425

FIG. 4

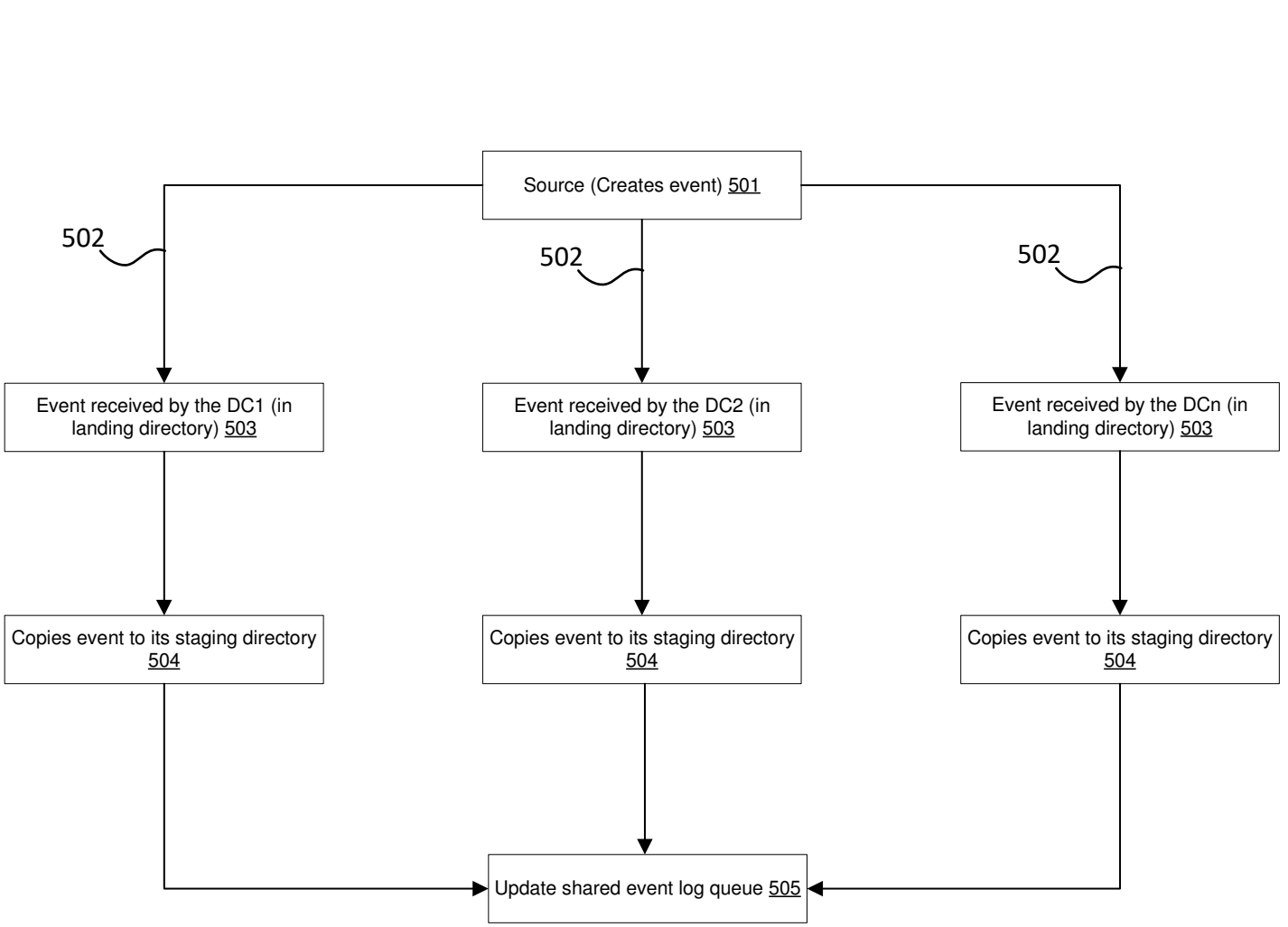

500
Source (Creates event) 501
502
502
502
Event received by the DC1 (in landing directory) 503
Event received by the DC2 (in landing directory) 503
Event received by the DCn (in landing directory) 503
Copies event to its staging directory 504
Copies event to its staging directory 504
Copies event to its staging directory 504
Update shared event log queue 505

FIG. 5

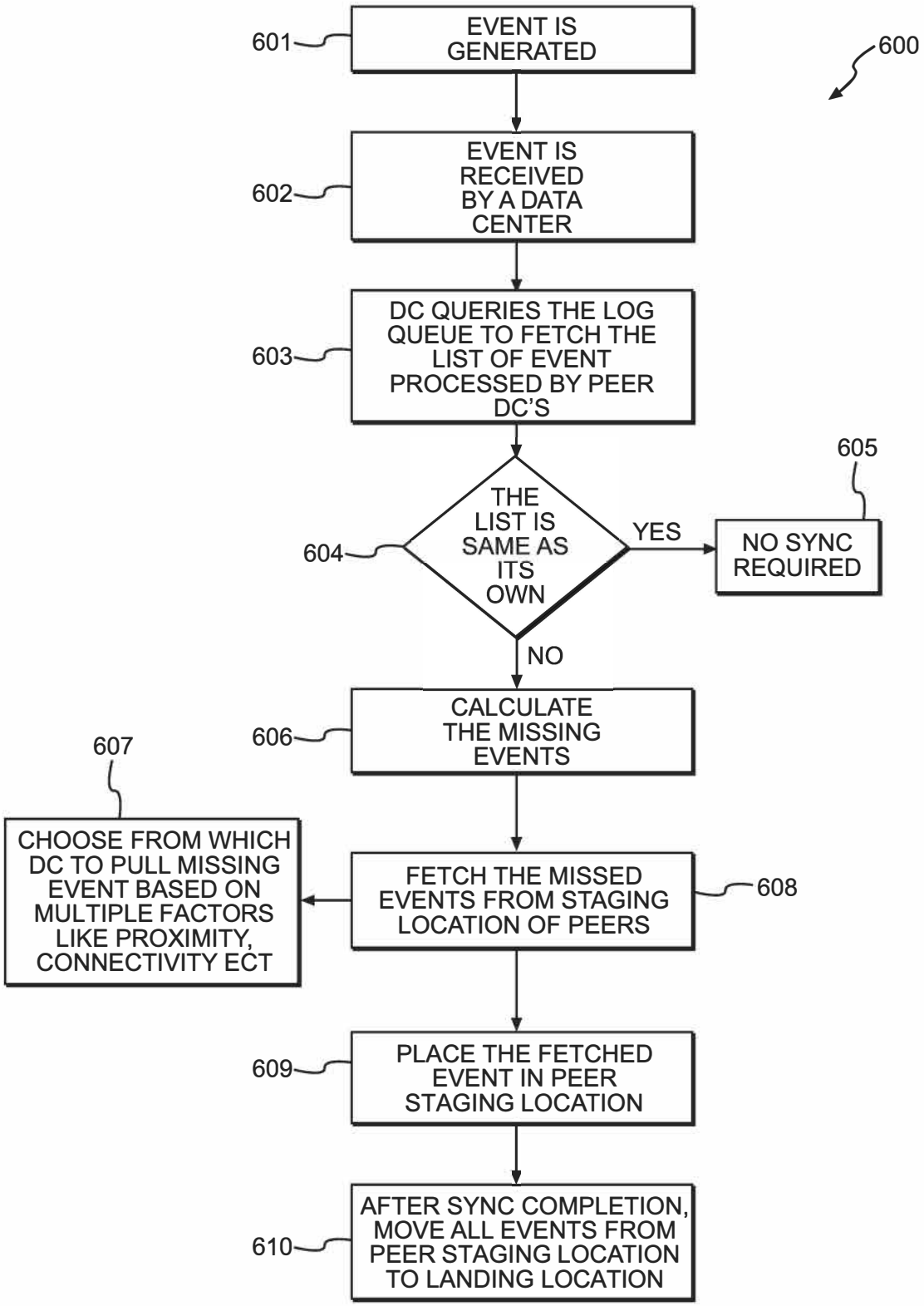

601
EVENT IS GENERATED
600
602
EVENT IS RECEIVED BY A DATA CENTER
603
DC QUERIES THE LOG QUEUE TO FETCH THE LIST OF EVENT PROCESSED BY PEER DC'S
605
604
THE LIST IS SAME AS ITS OWN
YES
NO SYNC REQUIRED
NO
606
CALCULATE THE MISSING EVENTS
607
CHOOSE FROM WHICH DC TO PULL MISSING EVENT BASED ON MULTIPLE FACTORS LIKE PROXIMITY, CONNECTIVITY ECT
FETCH THE MISSED EVENTS FROM STAGING LOCATION OF PEERS
608
609
PLACE THE FETCHED EVENT IN PEER STAGING LOCATION
610
AFTER SYNC COMPLETION, MOVE ALL EVENTS FROM PEER STAGING LOCATION TO LANDING LOCATION

FIG. 6

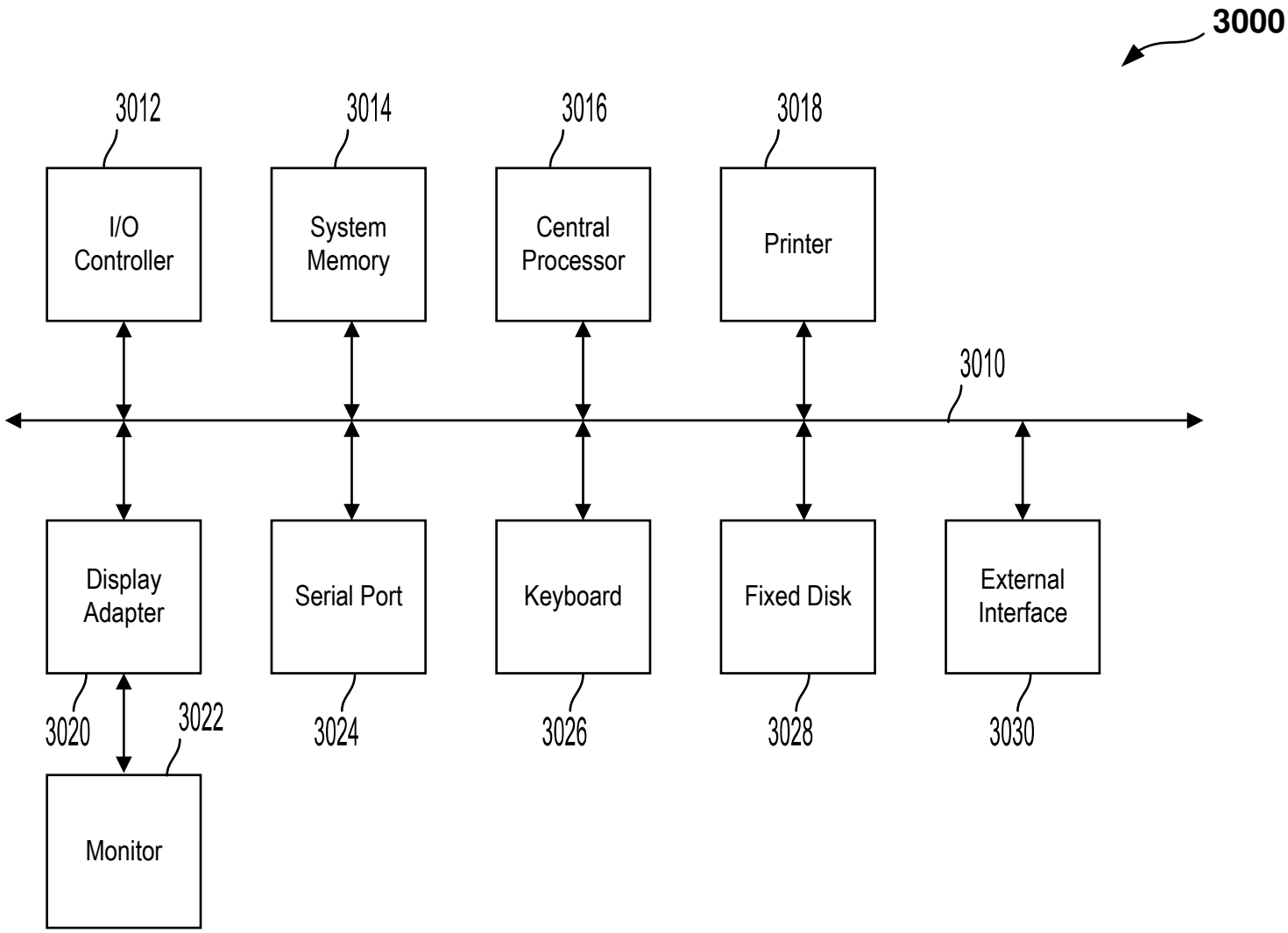

3000
3012
3014
3016
3018
I/O Controller
System Memory
Central Processor
Printer
3010
Display Adapter
Serial Port
Keyboard
Fixed Disk
External Interface
3020
3022
3024
3026
3028
3030
Monitor

FIG. 7

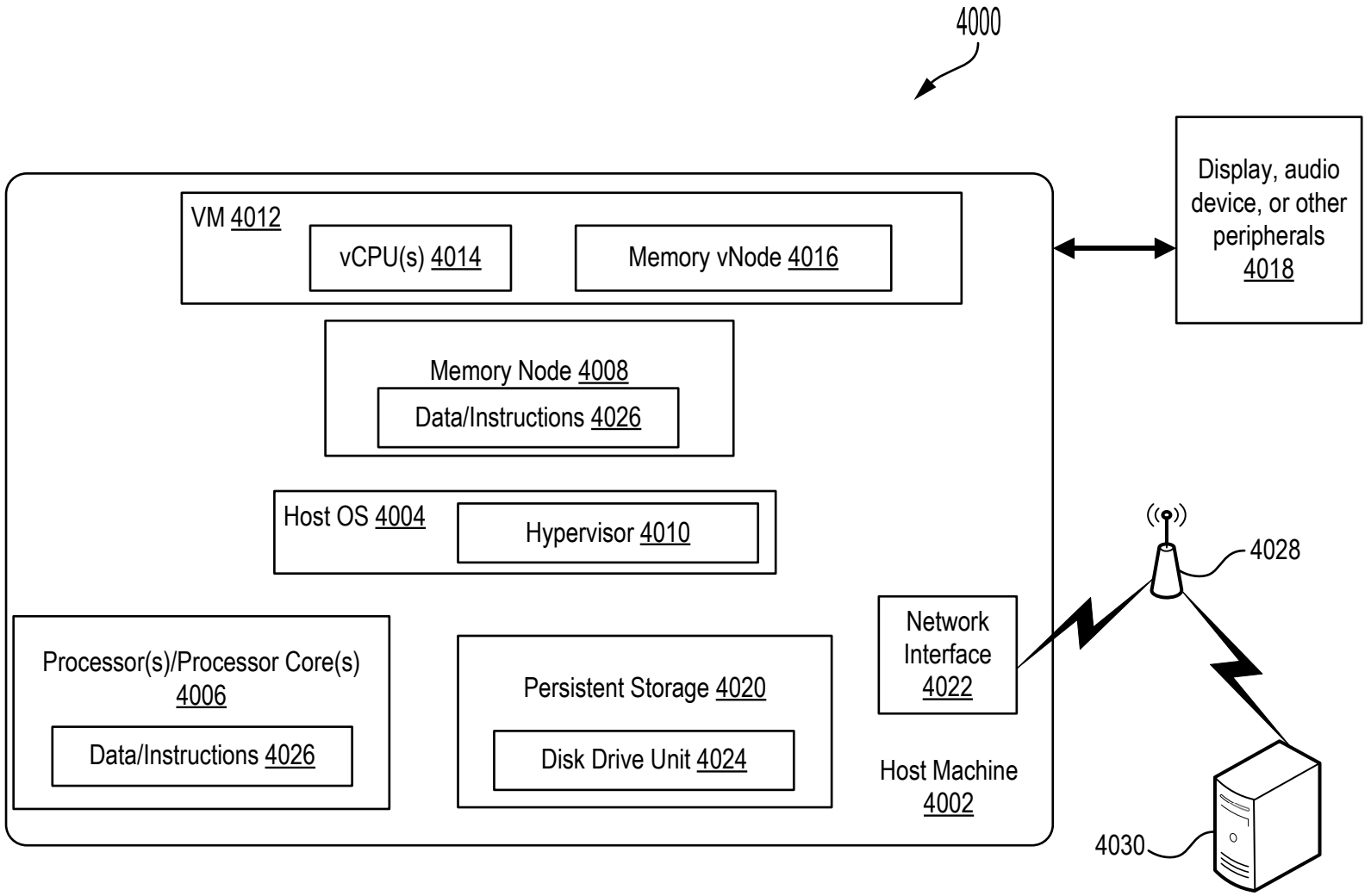

4000
VM 4012
vCPU(s) 4014
Memory vNode 4016
Display, audio device, or other peripherals 4018
Memory Node 4008
Data/Instructions 4026
Host OS 4004
Hypervisor 4010
Processor(s)/Processor Core(s) 4006
Data/Instructions 4026
Persistent Storage 4020
Disk Drive Unit 4024
Network Interface 4022
Host Machine 4002
4028
4030

FIG. 8