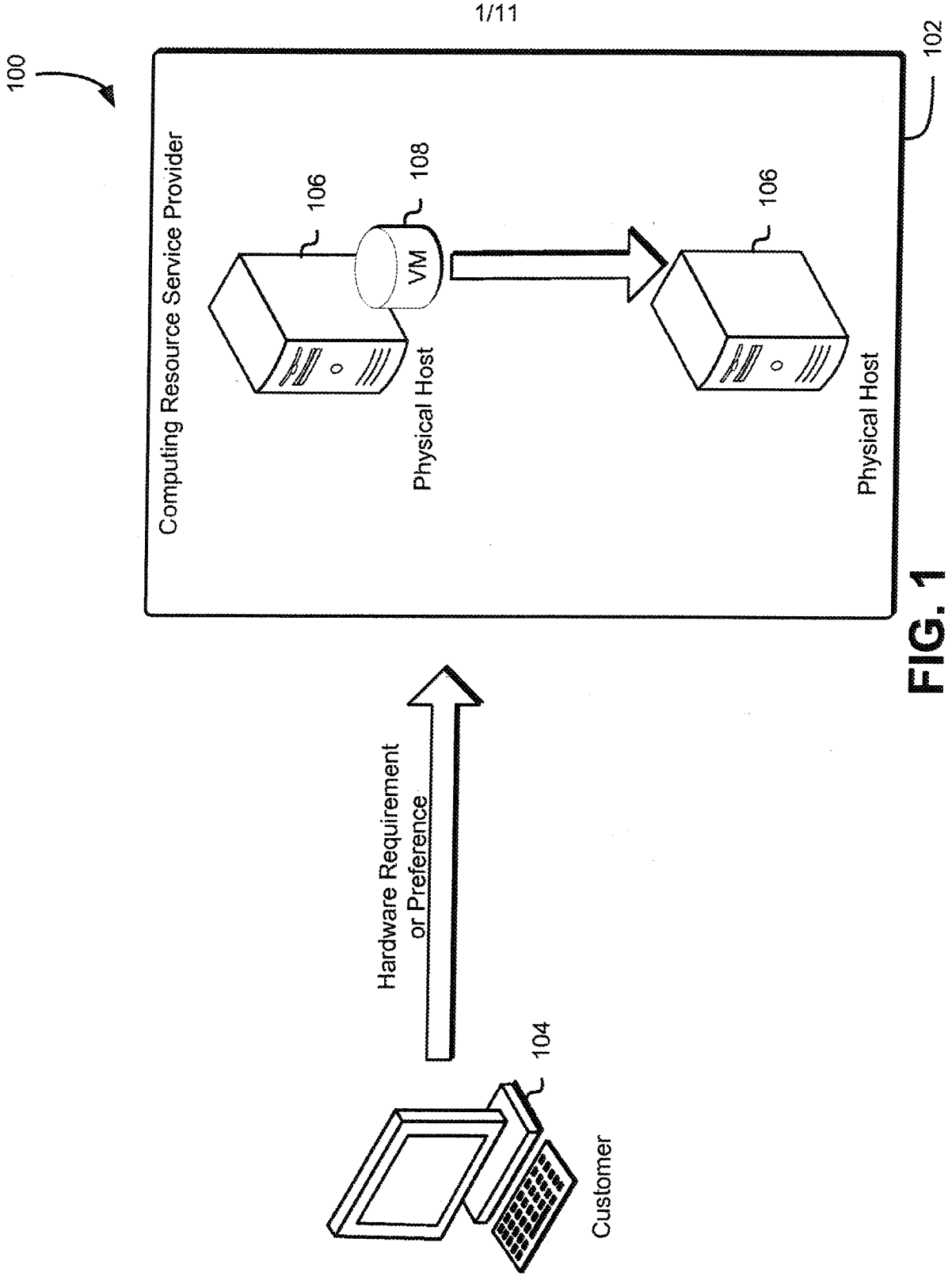
100
102
Computing Resource Service Provider
106
108
VM
Physical Host
106
Physical Host
Hardware Requirement or Preference
104
Customer

FIG. 1

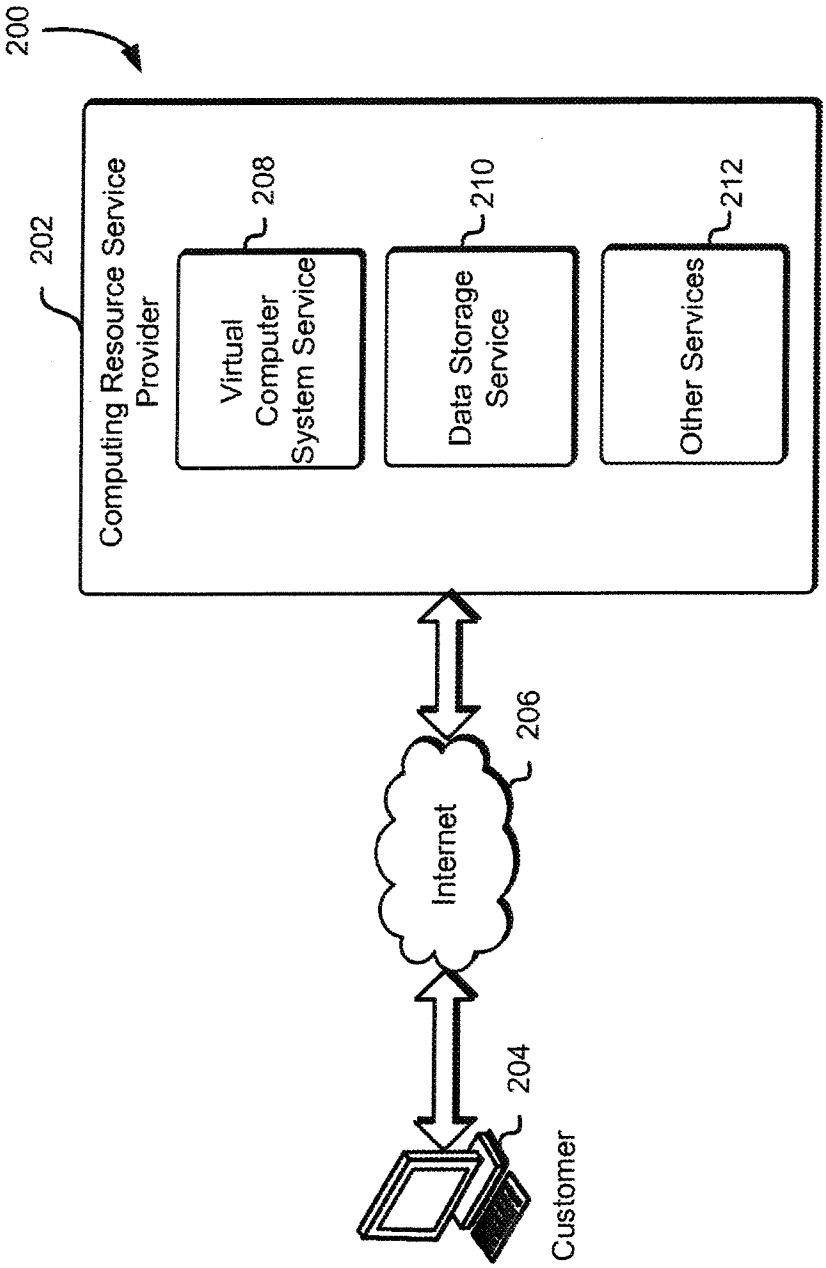
200
202
Computing Resource Service Provider
208
Virtual Computer System Service
210
Data Storage Service
212
Other Services
206
Internet
204
Customer

FIG. 2

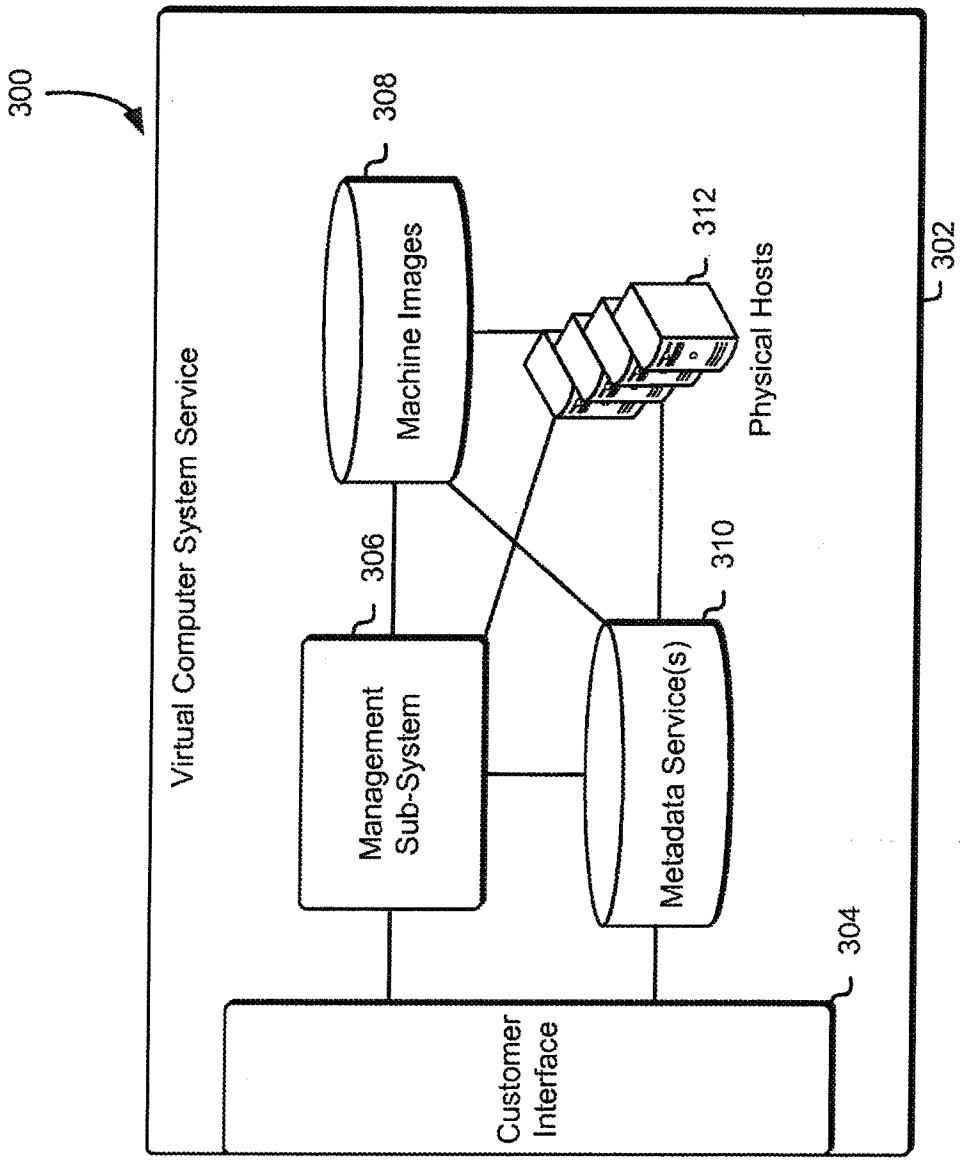
300
Virtual Computer System Service
302
308
Machine Images
312
Physical Hosts
306
Management Sub-System
310
Metadata Service(s)
304
Customer Interface

FIG. 3

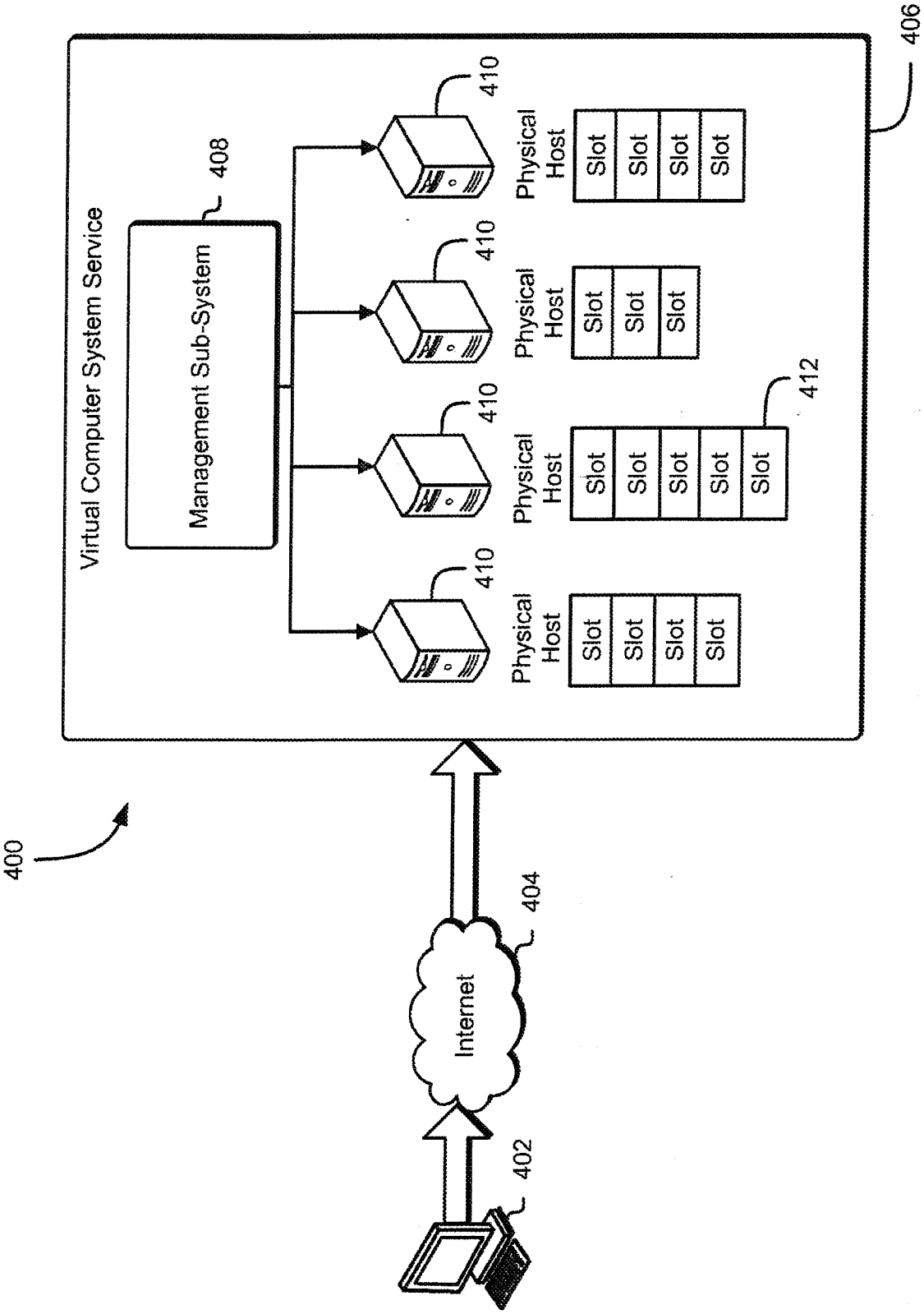
400
402
404
Internet
406
Virtual Computer System Service
408
Management Sub-System
410
Physical Host
Slot
412

FIG. 4

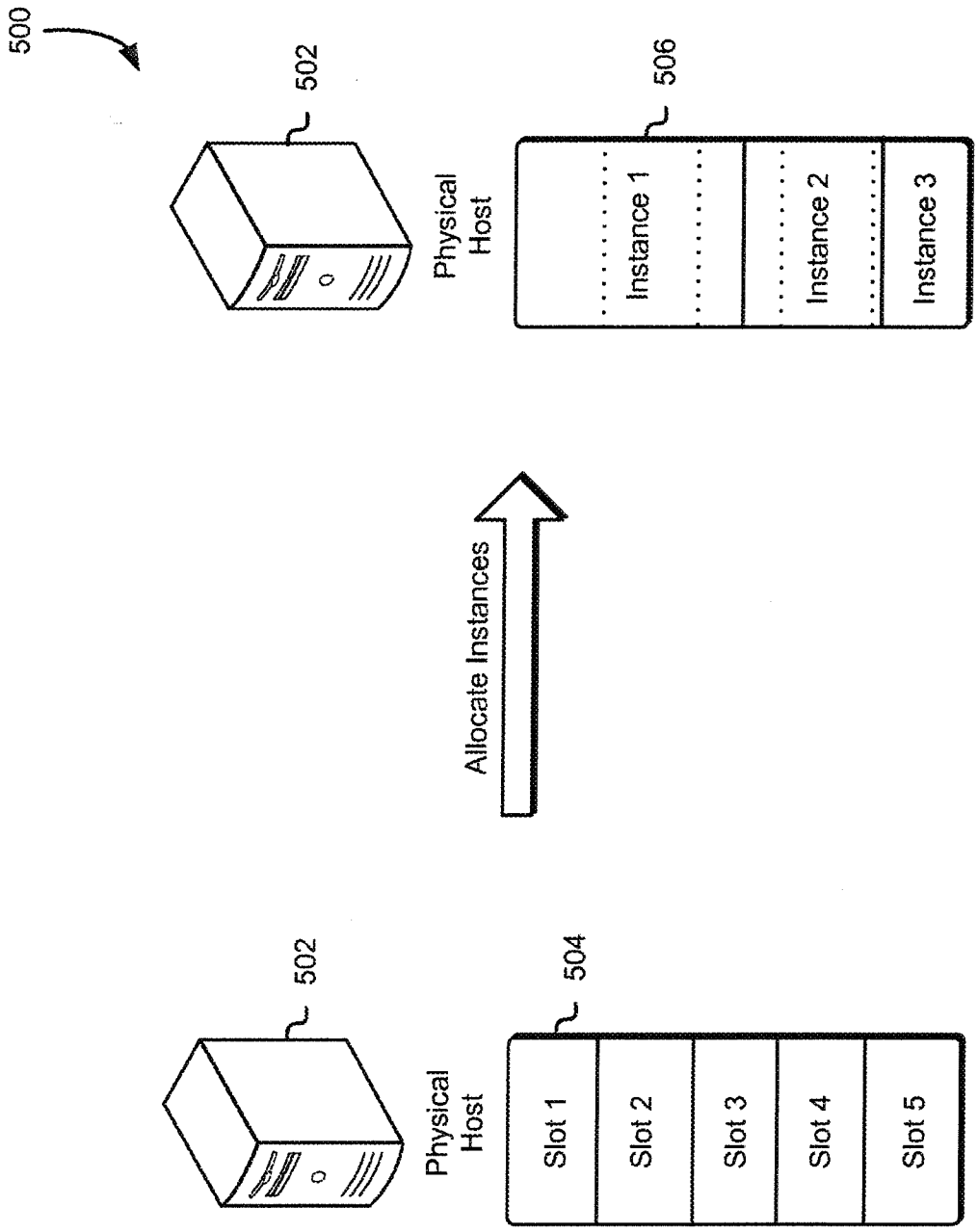
500
502
Physical Host
506
Instance 1
Instance 2
Instance 3
Allocate Instances
502
Physical Host
504
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5

FIG. 5

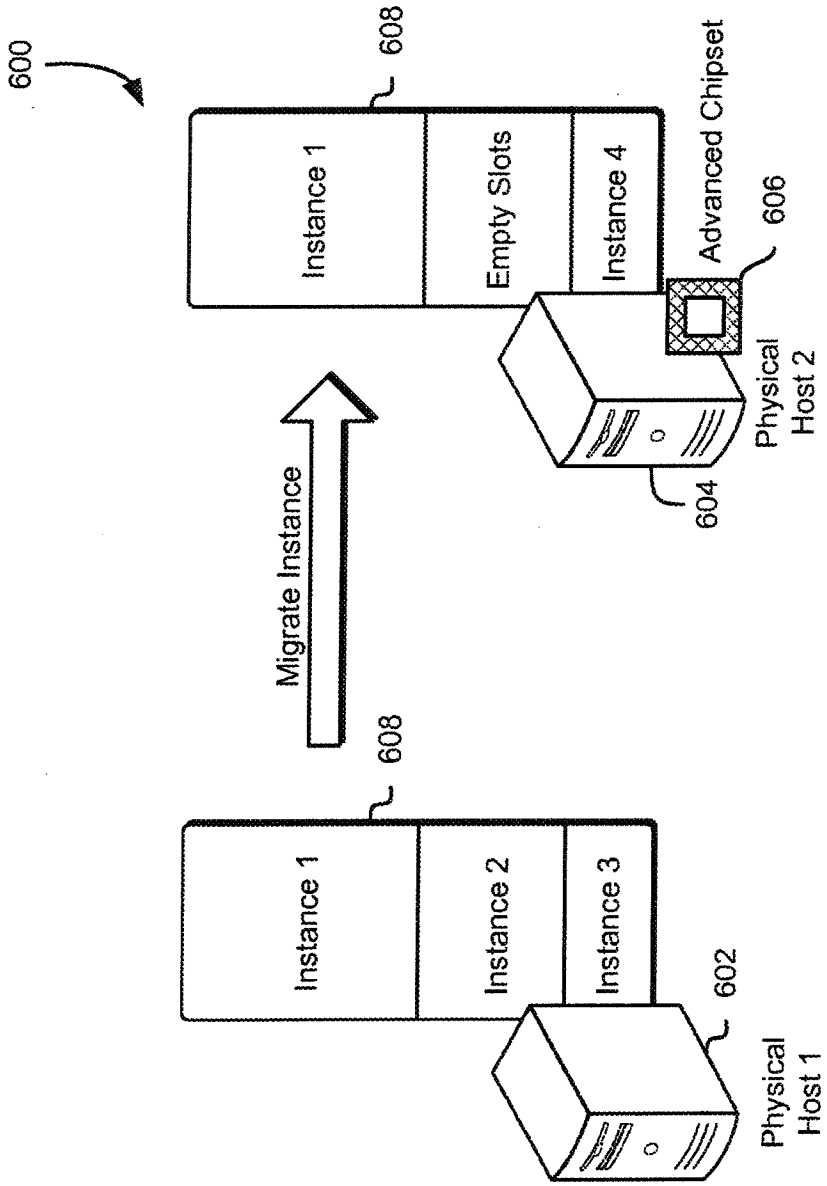
600
608
Instance 1
Empty Slots
Instance 4
Advanced Chipset
606
Physical Host 2
604
Migrate Instance
608
Instance 1
Instance 2
Instance 3
602
Physical Host 1

FIG. 6

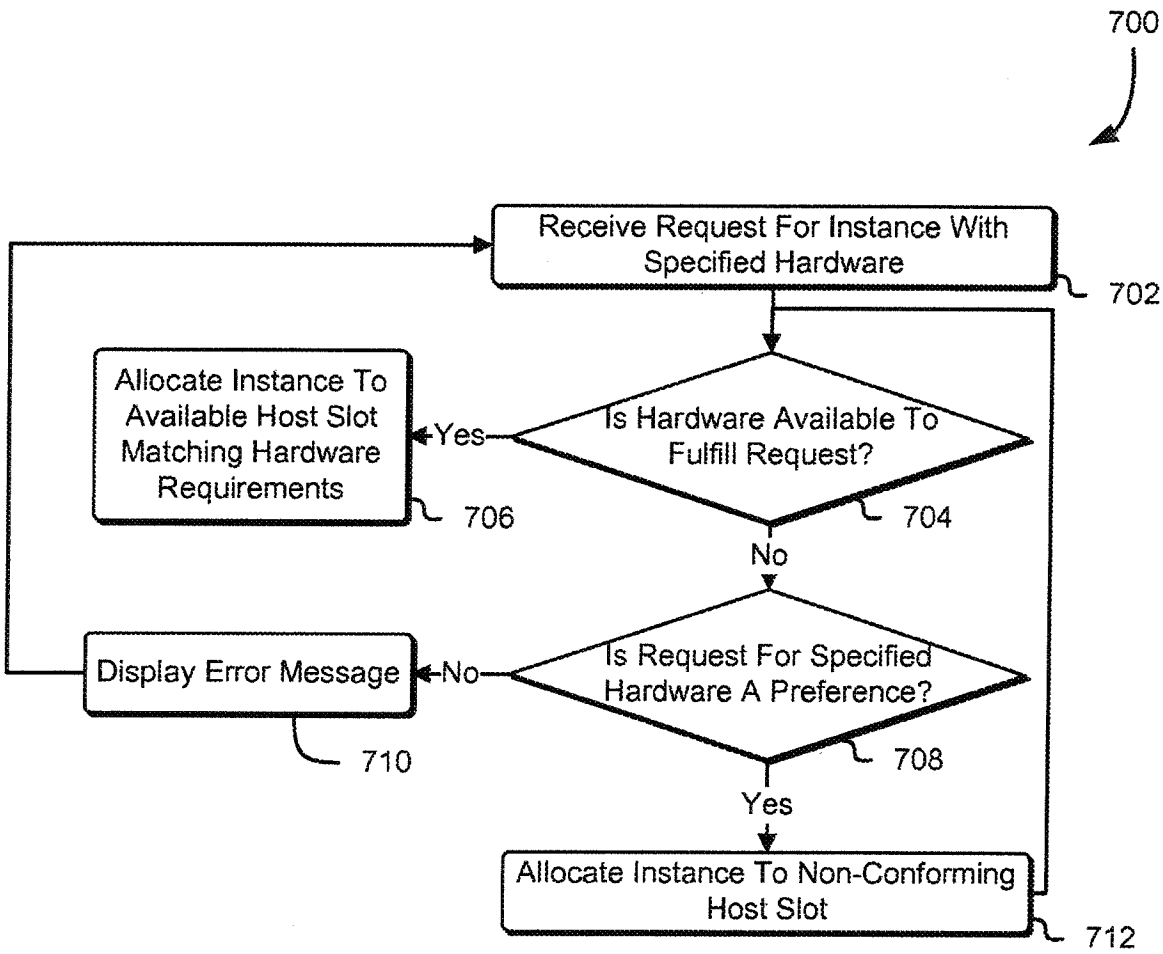
700
Receive Request For Instance With Specified Hardware
702
Is Hardware Available To Fulfill Request?
704
Yes
Allocate Instance To Available Host Slot Matching Hardware Requirements
706
No
Is Request For Specified Hardware A Preference?
708
No
Display Error Message
710
Yes
Allocate Instance To Non-Conforming Host Slot
712

FIG. 7

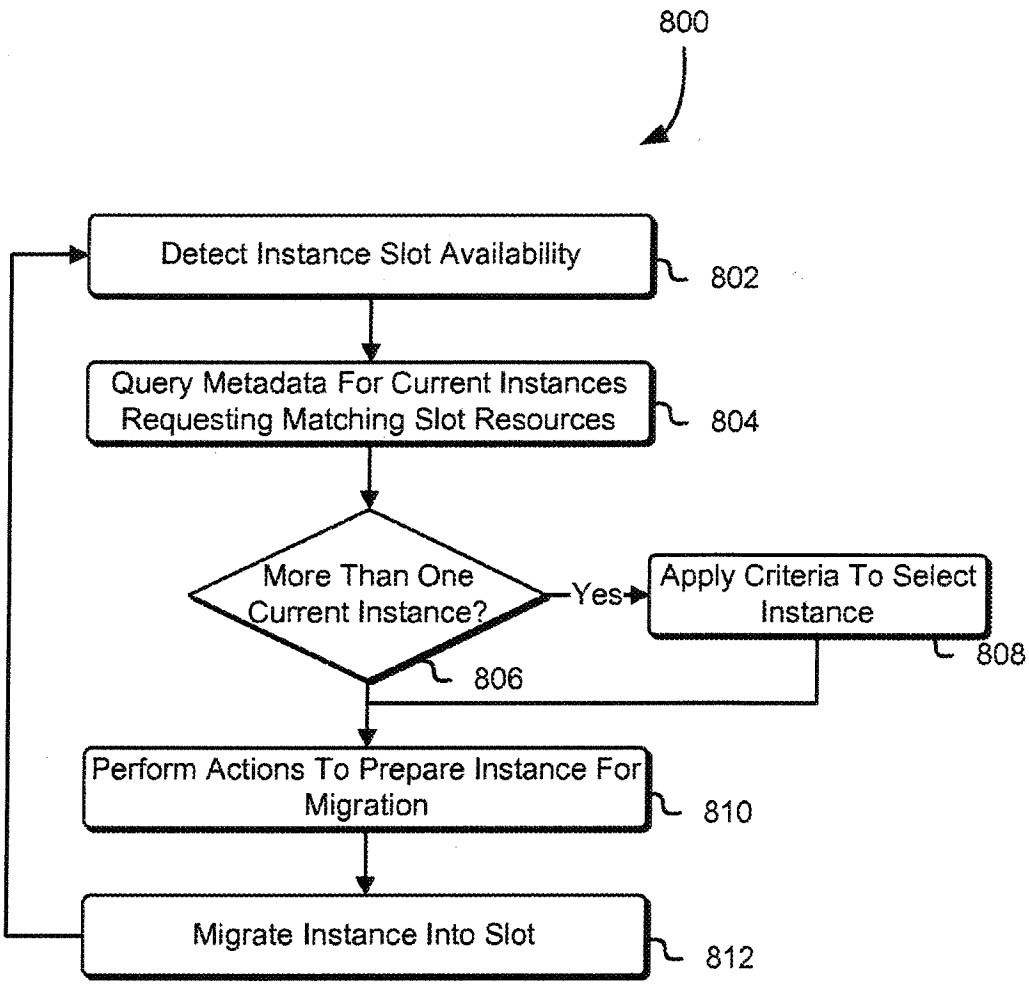
800
Detect Instance Slot Availability
802
Query Metadata For Current Instances Requesting Matching Slot Resources
804
More Than One Current Instance?
Yes
Apply Criteria To Select Instance
808
806
Perform Actions To Prepare Instance For Migration
810
Migrate Instance Into Slot
812

FIG. 8

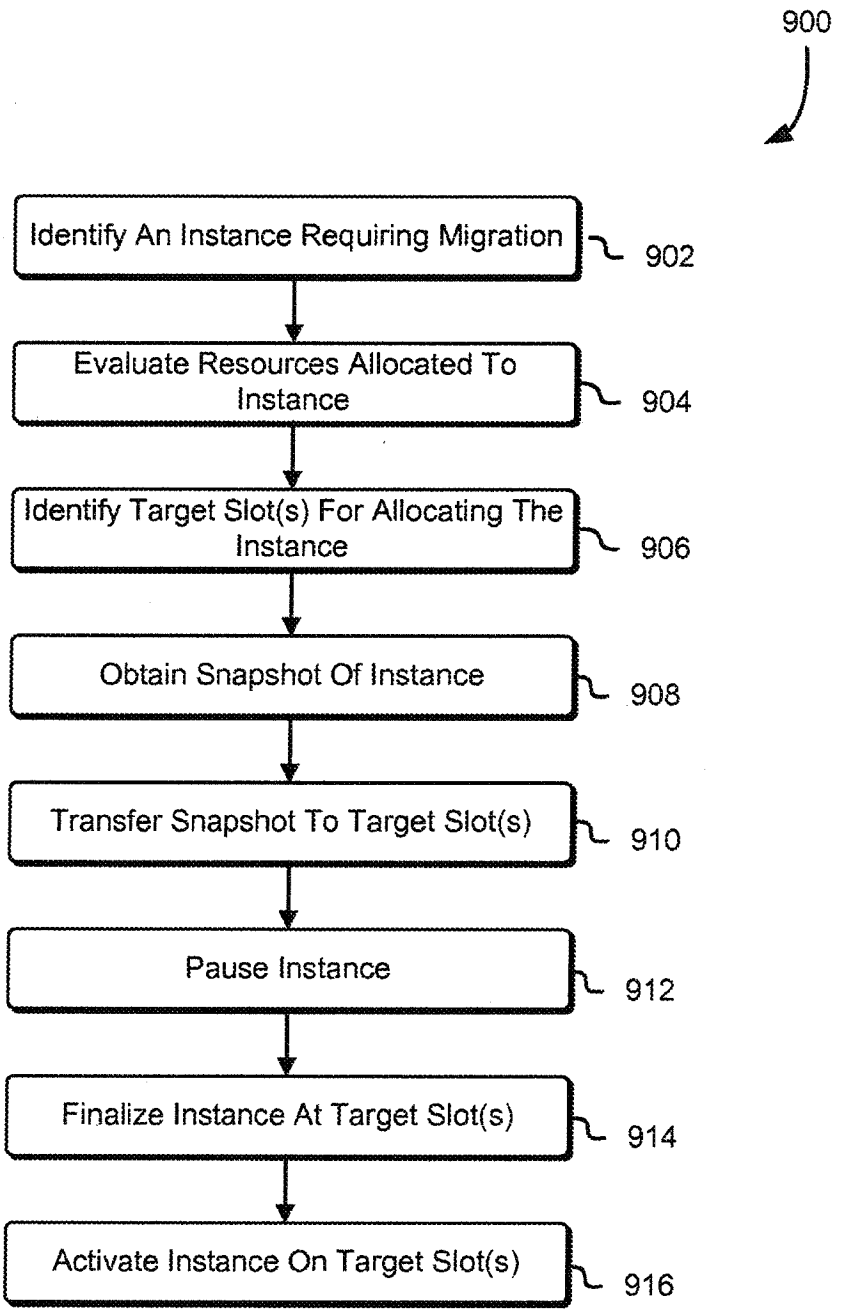
900
Identify An Instance Requiring Migration
902
Evaluate Resources Allocated To Instance
904
Identify Target Slot(s) For Allocating The Instance
906
Obtain Snapshot Of Instance
908
Transfer Snapshot To Target Slot(s)
910
Pause Instance
912
Finalize Instance At Target Slot(s)
914
Activate Instance On Target Slot(s)
916

FIG. 9

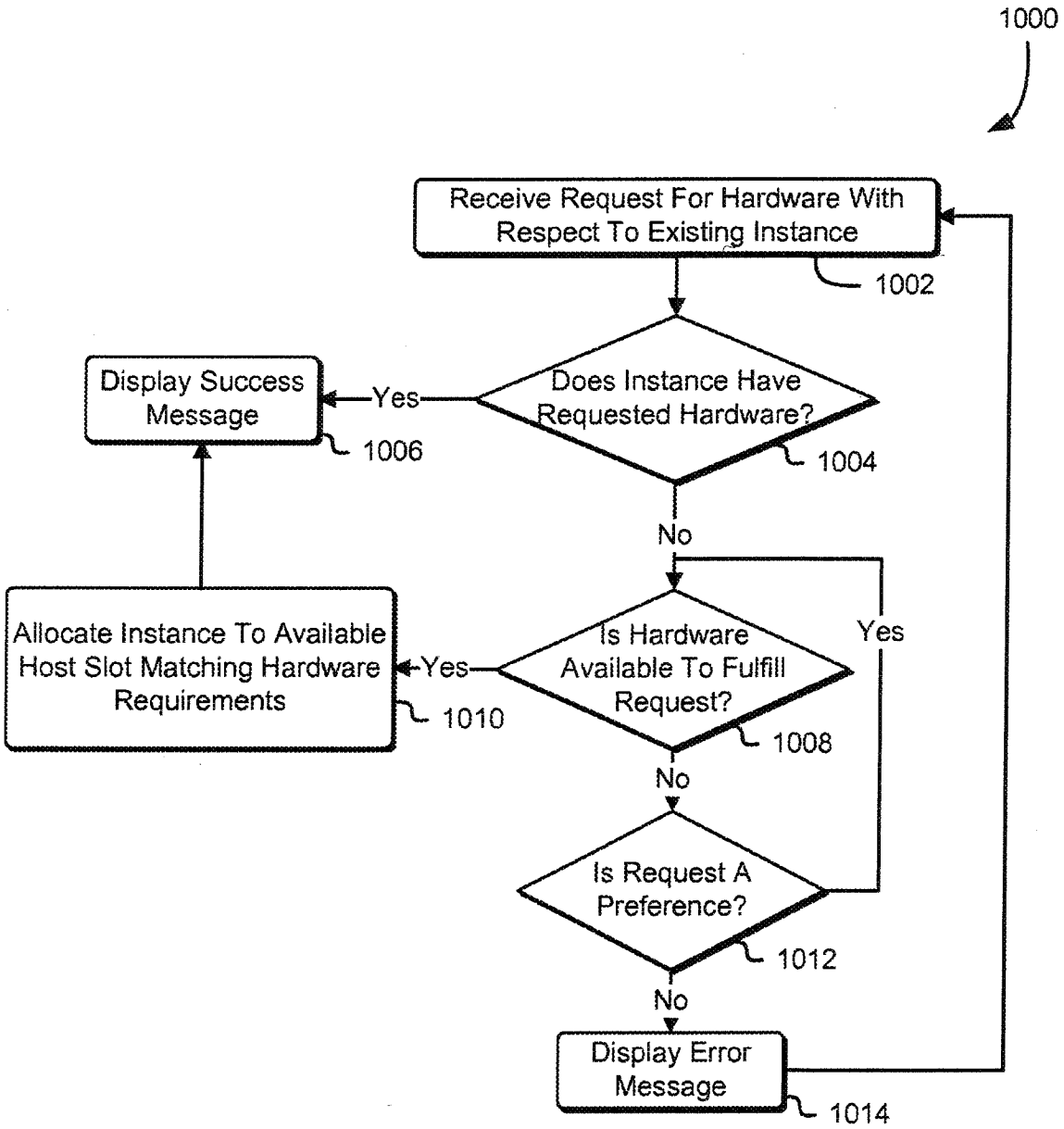
1000
Receive Request For Hardware With Respect To Existing Instance
1002
Does Instance Have Requested Hardware?
1004
Yes
Display Success Message
1006
No
Is Hardware Available To Fulfill Request?
1008
Yes
Yes
Allocate Instance To Available Host Slot Matching Hardware Requirements
1010
No
Is Request A Preference?
1012
No
Display Error Message
1014

FIG. 10

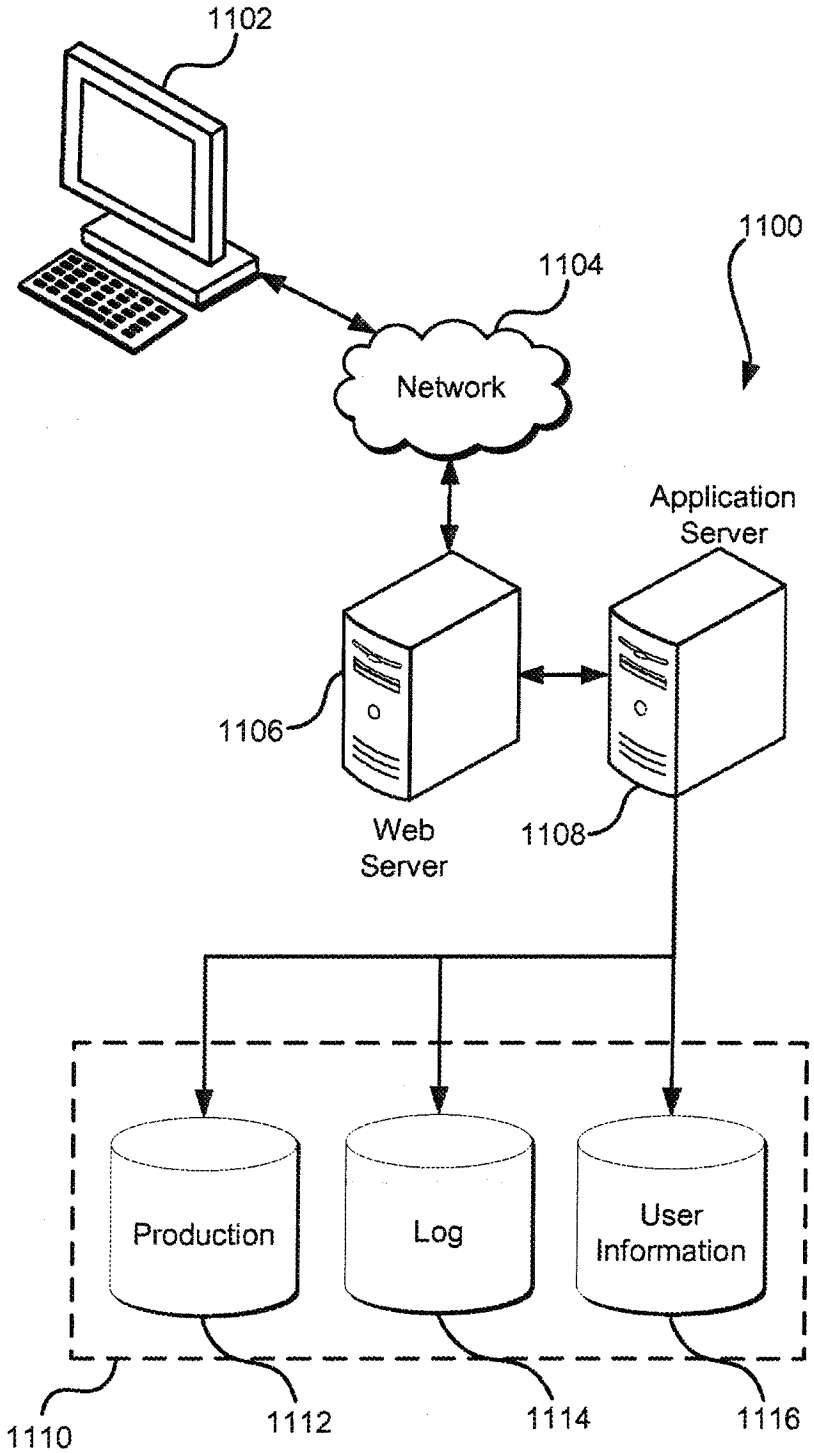
1102
1100
1104
Network
Application
Server
1106
Web
Server
1108
Production
Log
User
Information
1110
1112
1114
1116

FIG. 11