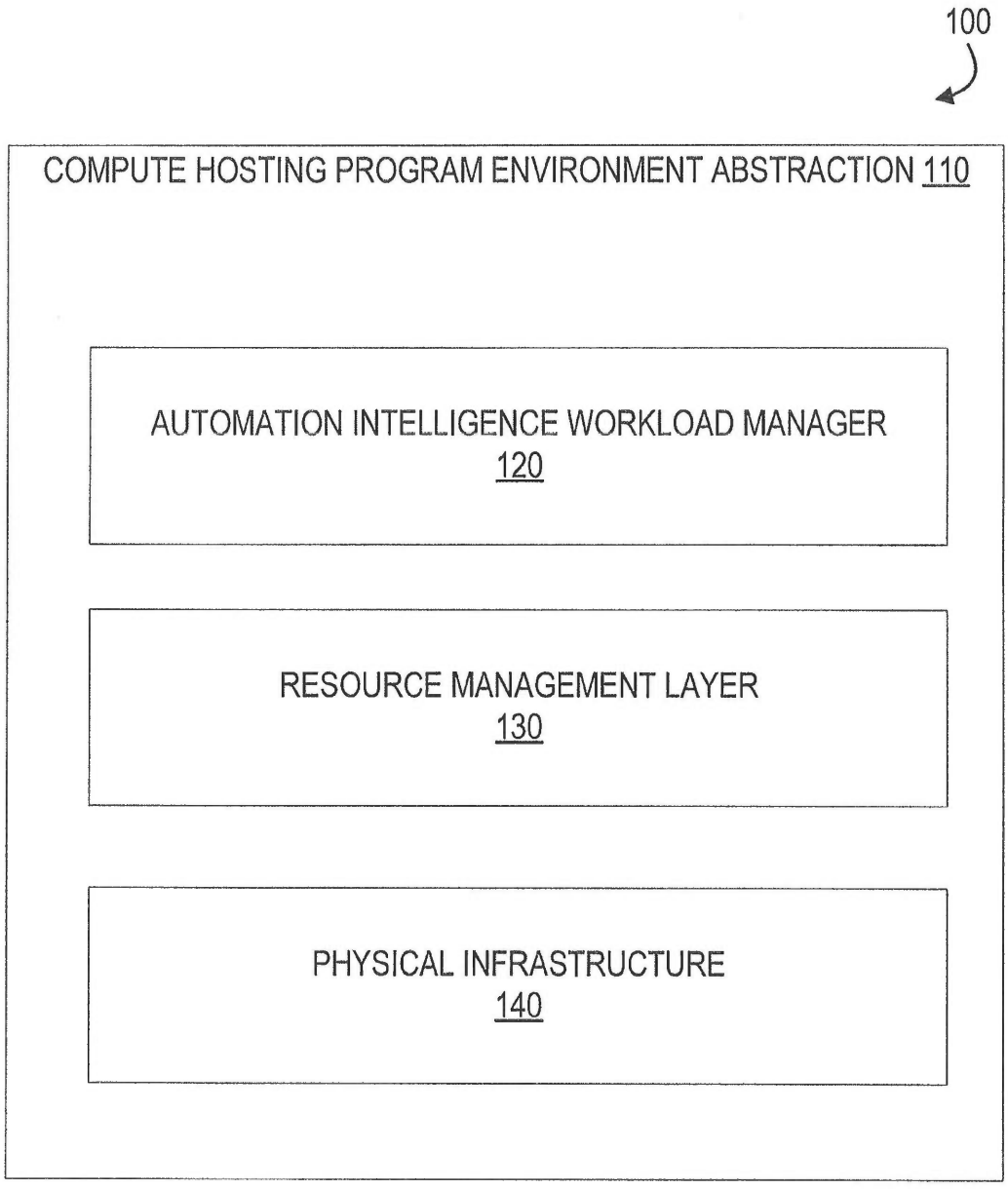
100
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AUTOMATION INTELLIGENCE WORKLOAD MANAGER
120
RESOURCE MANAGEMENT LAYER
130
PHYSICAL INFRASTRUCTURE
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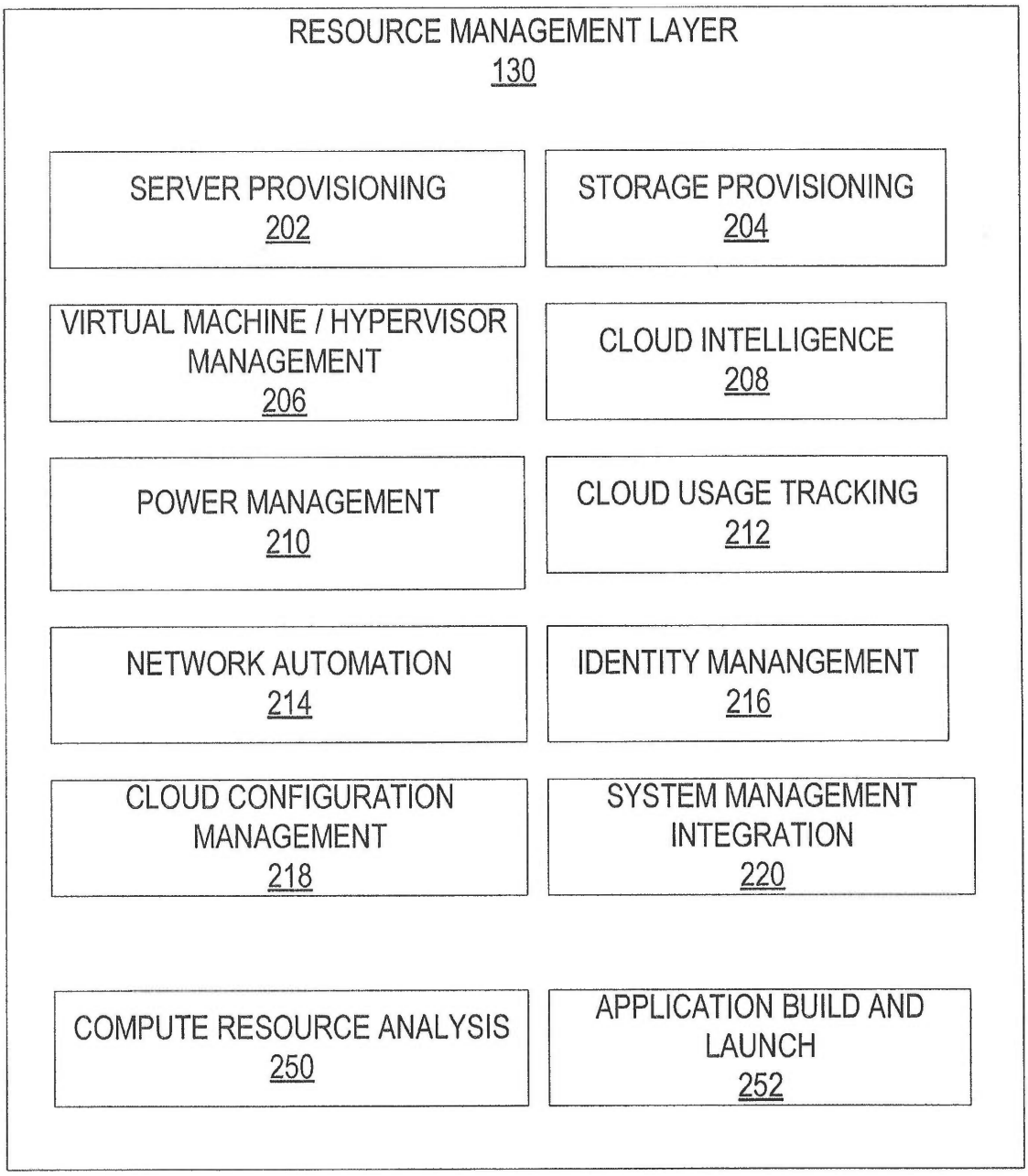
Figure 1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130
SERVER PROVISIONING
202
STORAGE PROVISIONING
204
VIRTUAL MACHINE / HYPERVISOR MANAGEMENT
206
CLOUD INTELLIGENCE
208
POWER MANAGEMENT
210
CLOUD USAGE TRACKING
212
NETWORK AUTOMATION
214
IDENTITY MANANGEMENT
216
CLOUD CONFIGURATION MANAGEMENT
218
SYSTEM MANAGEMENT INTEGRATION
220
COMPUTE RESOURCE ANALYSIS
250
APPLICATION BUILD AND LAUNCH
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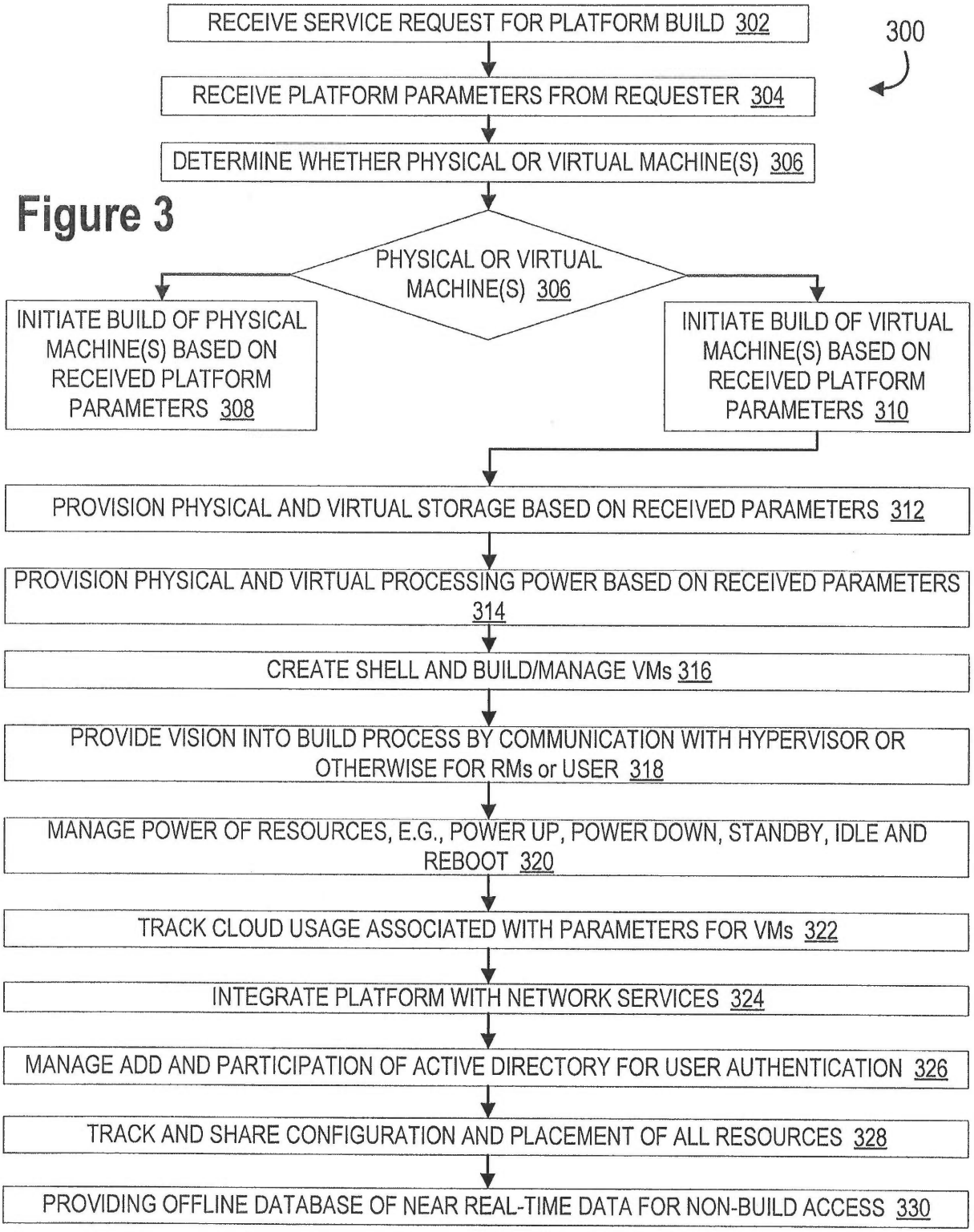
Figure 2


RECEIVE SERVICE REQUEST FOR PLATFORM BUILD 302
300
RECEIVE PLATFORM PARAMETERS FROM REQUESTER 304
DETERMINE WHETHER PHYSICAL OR VIRTUAL MACHINE(S) 306
PHYSICAL OR VIRTUAL MACHINE(S) 306
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CREATE SHELL AND BUILD/MANAGE VMs 316
PROVIDE VISION INTO BUILD PROCESS BY COMMUNICATION WITH HYPERVISOR OR OTHERWISE FOR RMs or USER 318
MANAGE POWER OF RESOURCES, E.G., POWER UP, POWER DOWN, STANDBY, IDLE AND REBOOT 320
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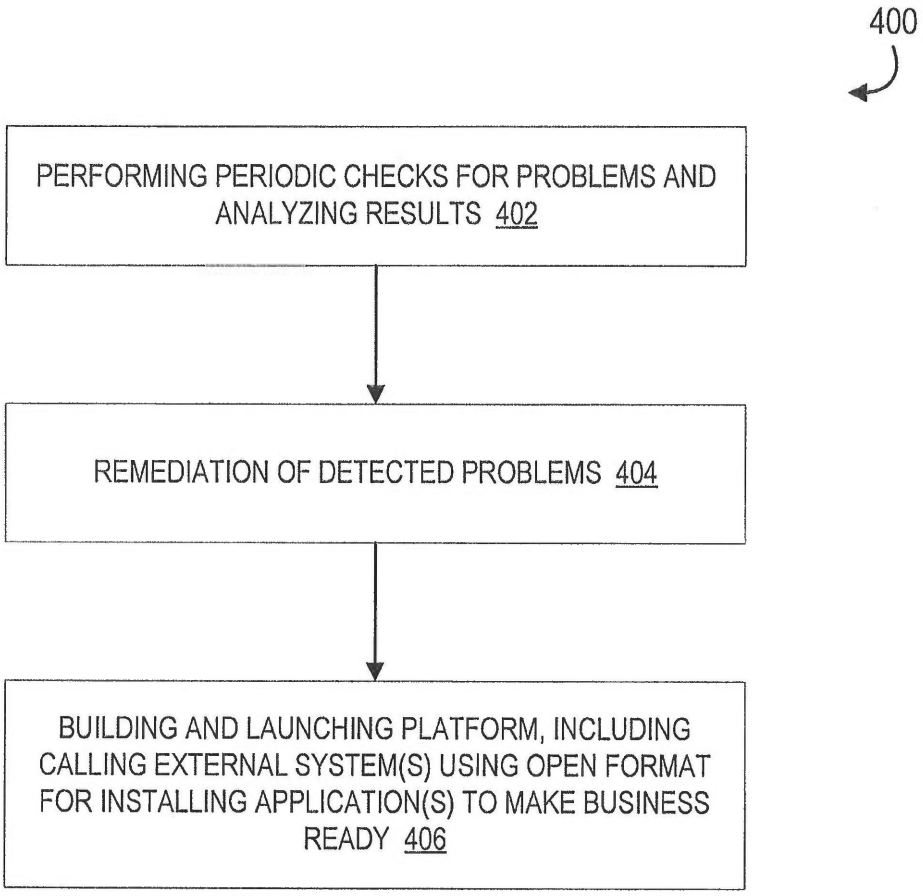
400
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Figure 4

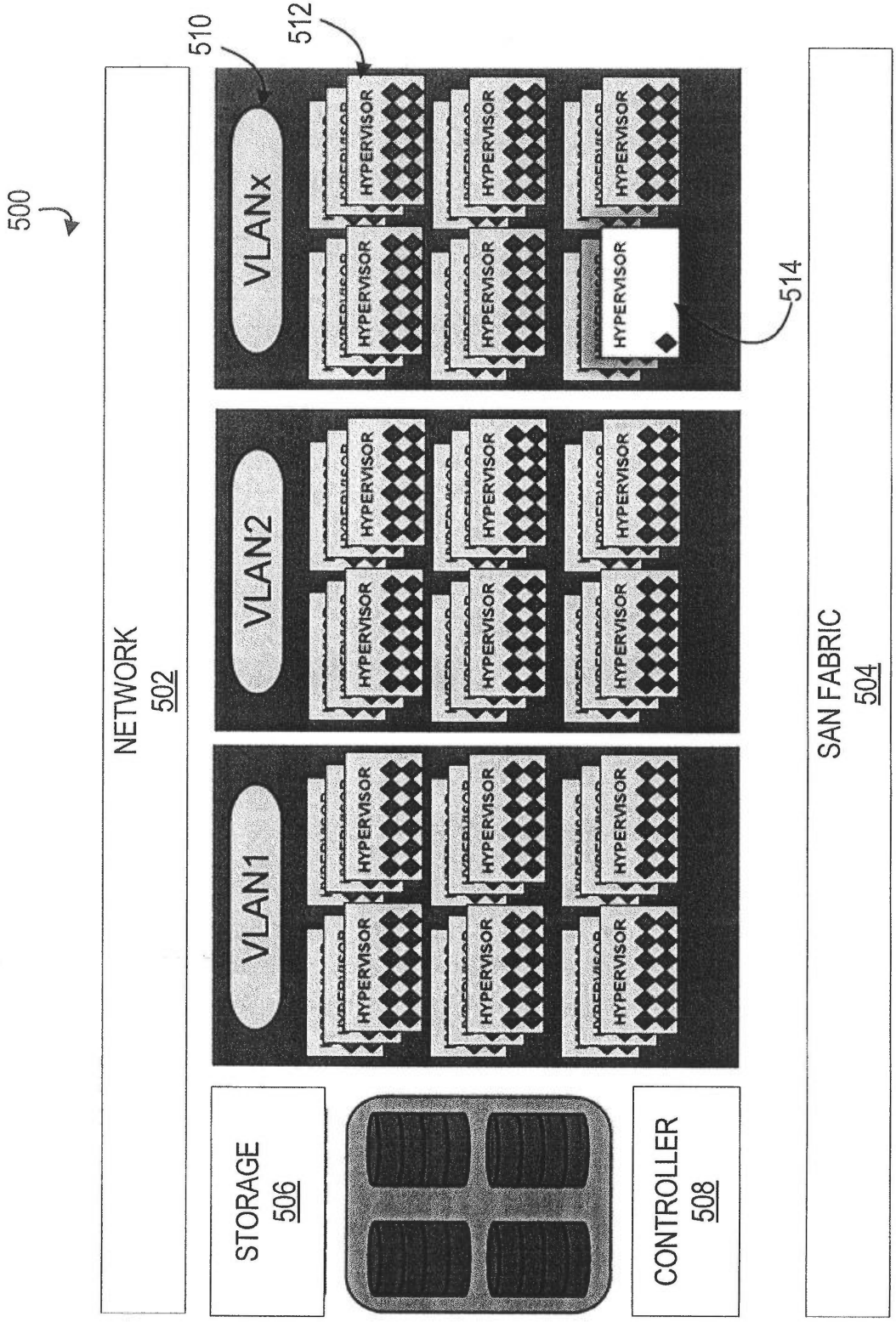
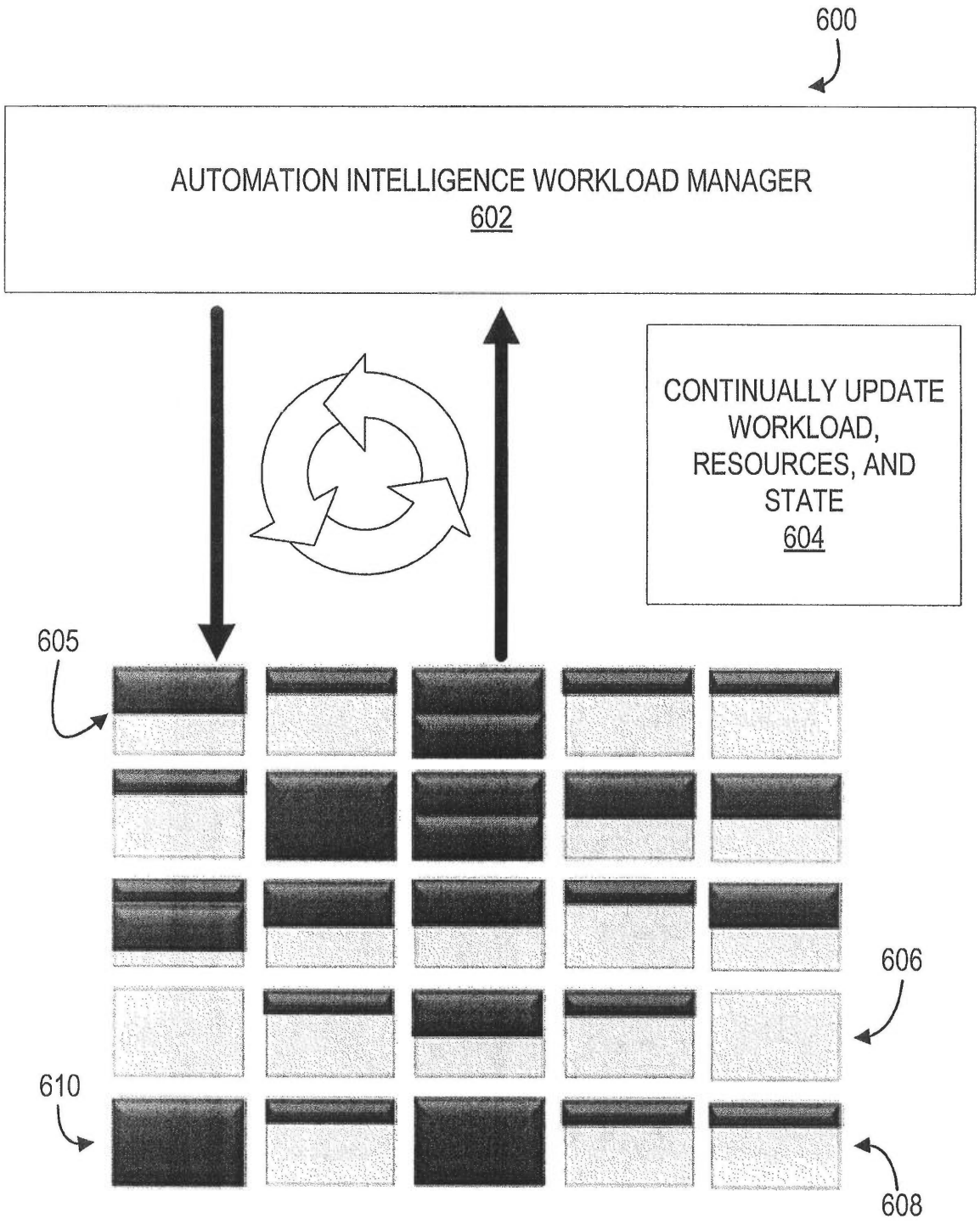

500
NETWORK
502
510
512
VLAN1
VLAN2
VLANx
HYPERVISOR
514
SAN FABRIC
504
STORAGE
506
CONTROLLER
508

Figure 5


600
AUTOMATION INTELLIGENCE WORKLOAD MANAGER
602
CONTINUALLY UPDATE WORKLOAD, RESOURCES, AND STATE
604
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606
610
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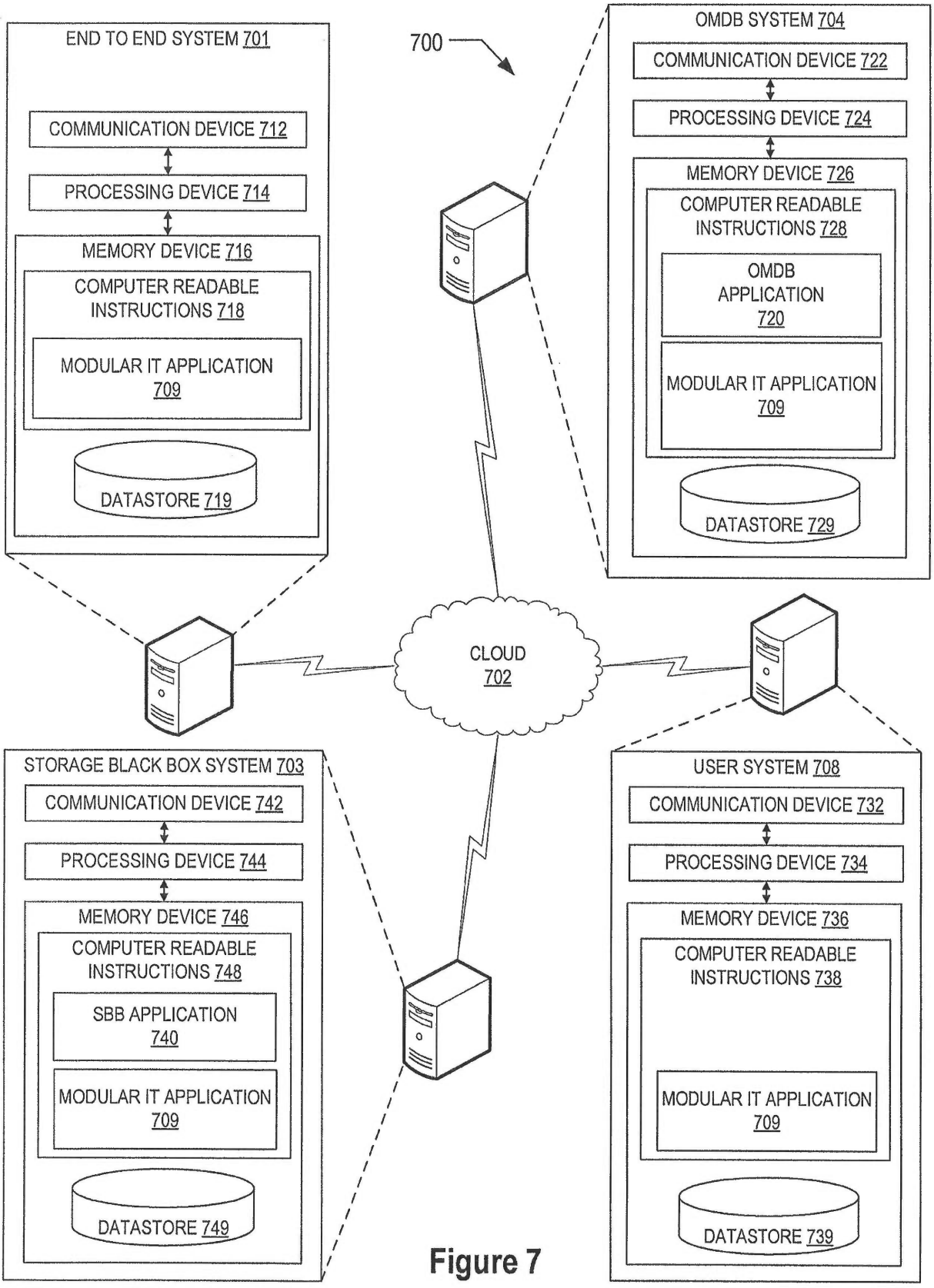
Figure 6


700
END TO END SYSTEM 701
COMMUNICATION DEVICE 712
PROCESSING DEVICE 714
MEMORY DEVICE 716
COMPUTER READABLE INSTRUCTIONS 718
MODULAR IT APPLICATION 709
DATASTORE 719
OMDB SYSTEM 704
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MEMORY DEVICE 726
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COMMUNICATION DEVICE 732
PROCESSING DEVICE 734
MEMORY DEVICE 736
COMPUTER READABLE INSTRUCTIONS 738
MODULAR IT APPLICATION 709
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Figure 7

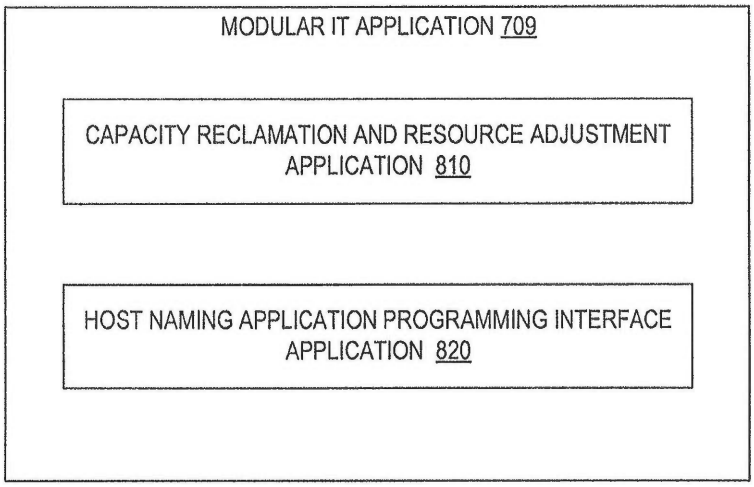
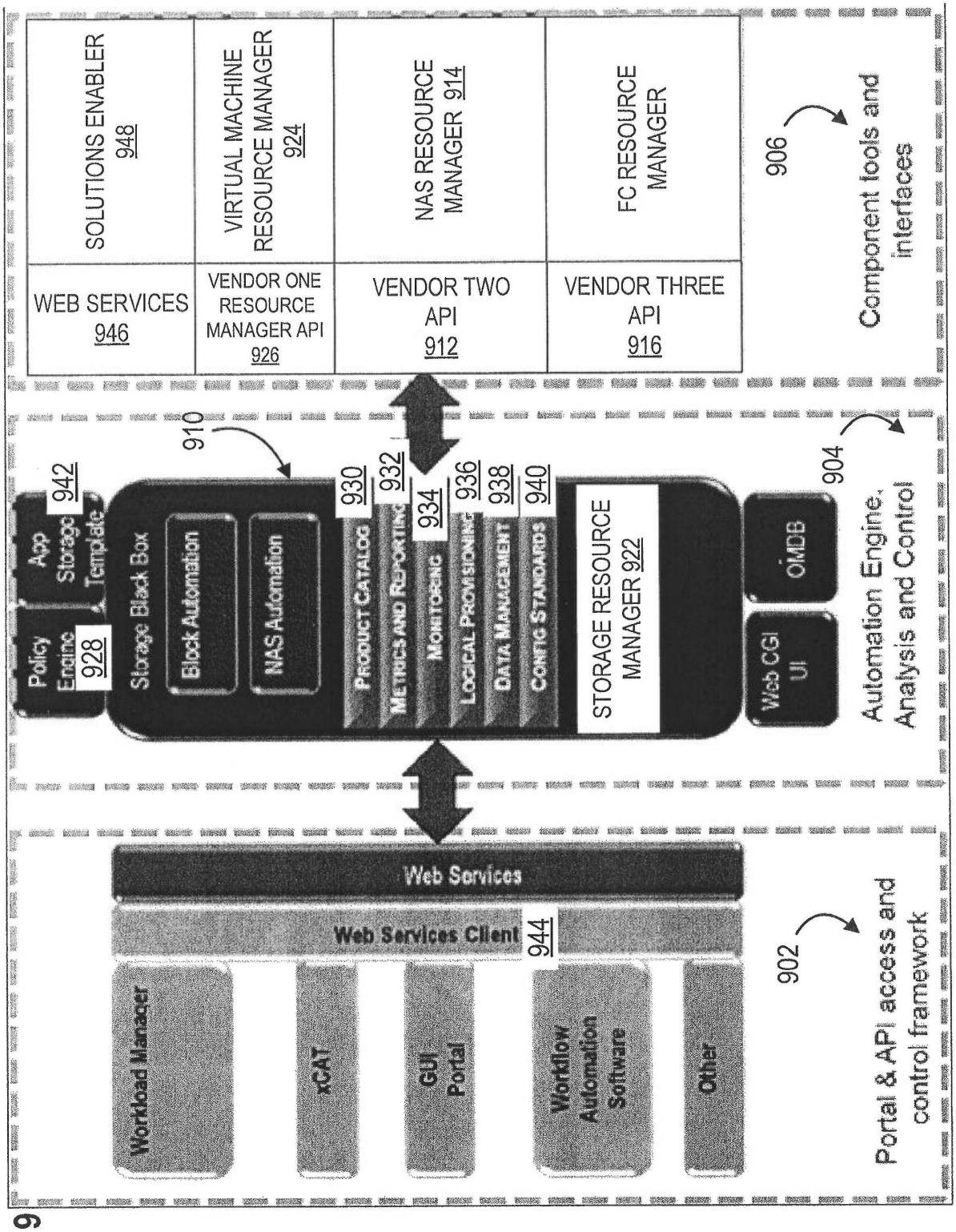

MODULAR IT APPLICATION 709
CAPACITY RECLAMATION AND RESOURCE ADJUSTMENT APPLICATION 810
HOST NAMING APPLICATION PROGRAMMING INTERFACE APPLICATION 820

Figure 8


900
902
Portal & API access and control framework
Workload Manager
xCAT
GUI Portal
Workflow Automation Software
Other
Web Services Client
944
Web Services
904
Automation Engine, Analysis and Control
Web CGI UI
OMDB
STORAGE RESOURCE MANAGER 922
910
Storage Black Box
Block Automation
NAS Automation
Policy Engine 928
App Storage Template 942
930 Product Catalog
932 Metrics and Reporting
934 Monitoring
936 Logical Provisioning
938 Data Management
940 Config Standards
906
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VENDOR THREE API 916
SOLUTIONS ENABLER 948
VIRTUAL MACHINE RESOURCE MANAGER 924
NAS RESOURCE MANAGER 914
FC RESOURCE MANAGER

Figure 9

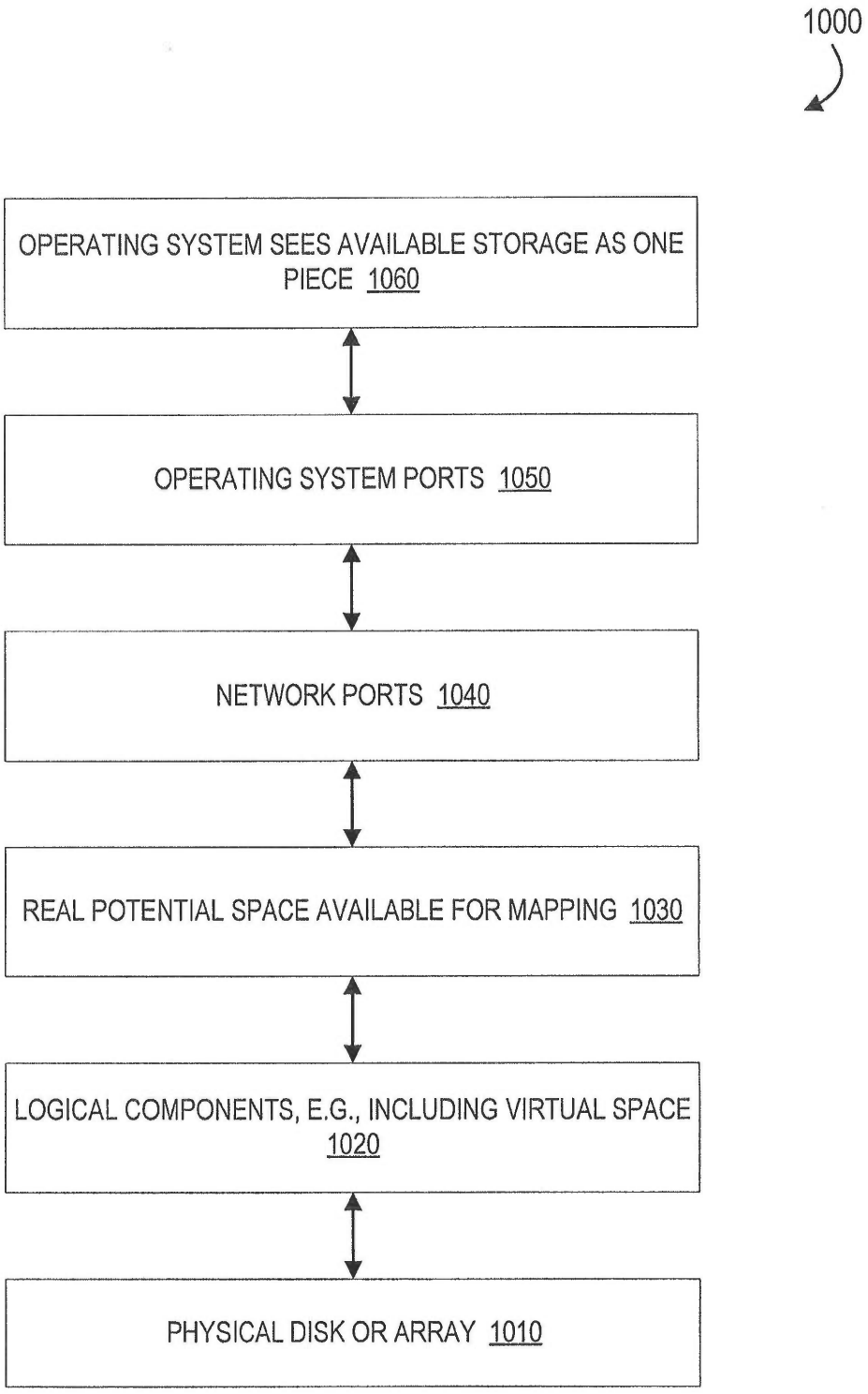
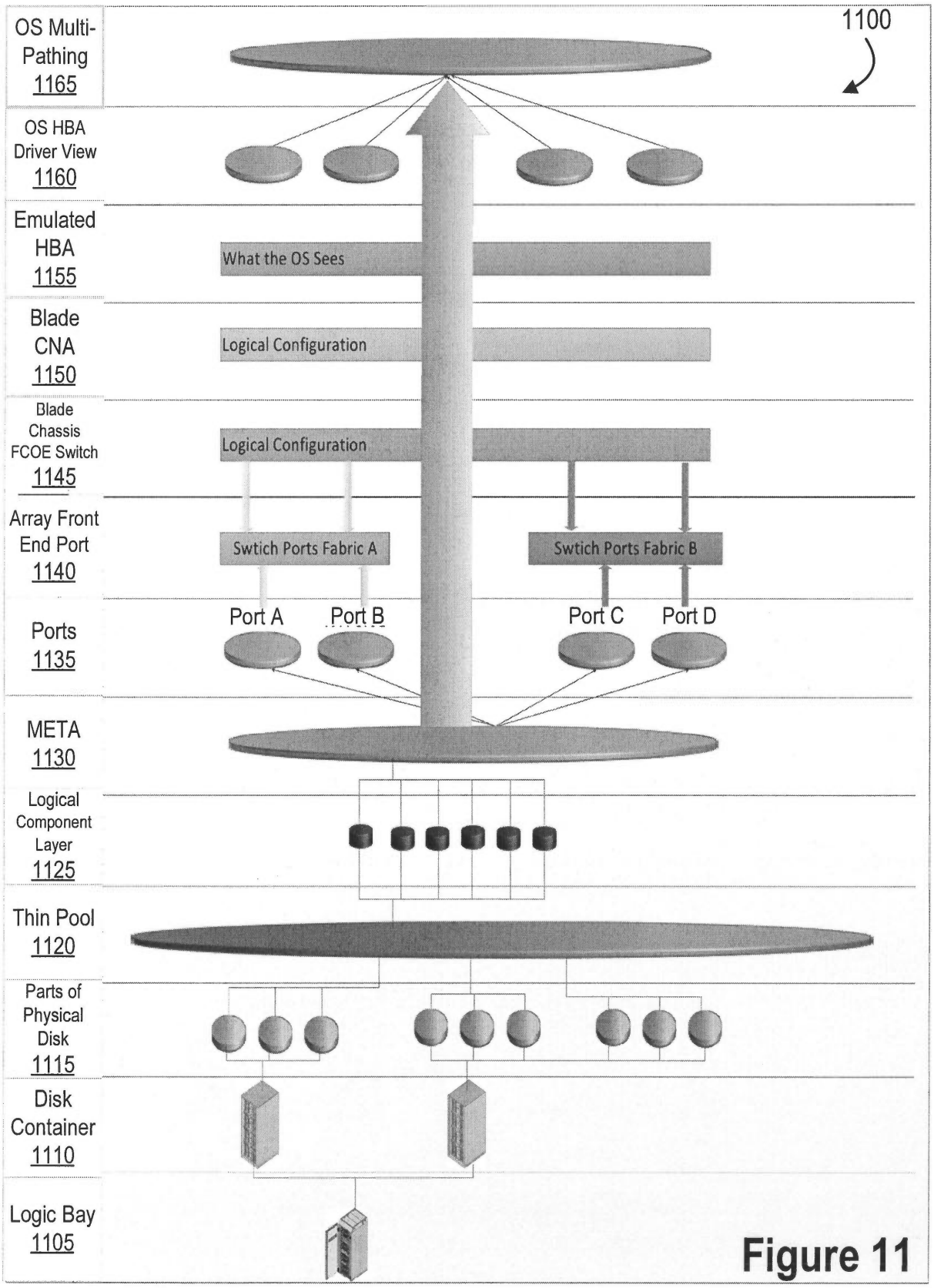

1000
OPERATING SYSTEM SEES AVAILABLE STORAGE AS ONE PIECE 1060
OPERATING SYSTEM PORTS 1050
NETWORK PORTS 1040
REAL POTENTIAL SPACE AVAILABLE FOR MAPPING 1030
LOGICAL COMPONENTS, E.G., INCLUDING VIRTUAL SPACE 1020
PHYSICAL DISK OR ARRAY 1010

Figure 10


1100
OS Multi-Pathing 1165
OS HBA Driver View 1160
Emulated HBA 1155
What the OS Sees
Blade CNA 1150
Logical Configuration
Blade Chassis FCOE Switch 1145
Logical Configuration
Array Front End Port 1140
Swtich Ports Fabric A
Swtich Ports Fabric B
Ports 1135
Port A
Port B
Port C
Port D
META 1130
Logical Component Layer 1125
Thin Pool 1120
Parts of Physical Disk 1115
Disk Container 1110
Logic Bay 1105

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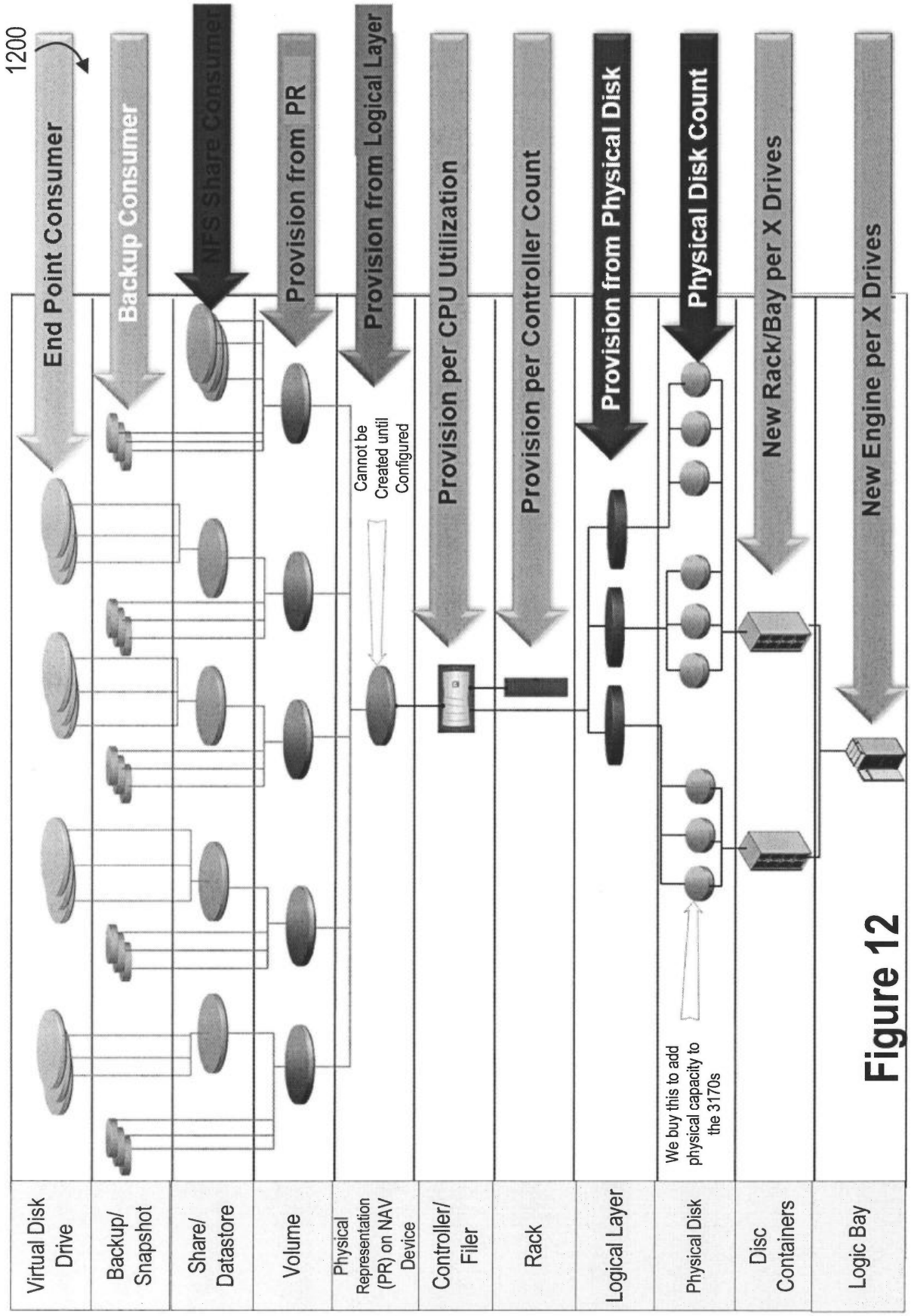
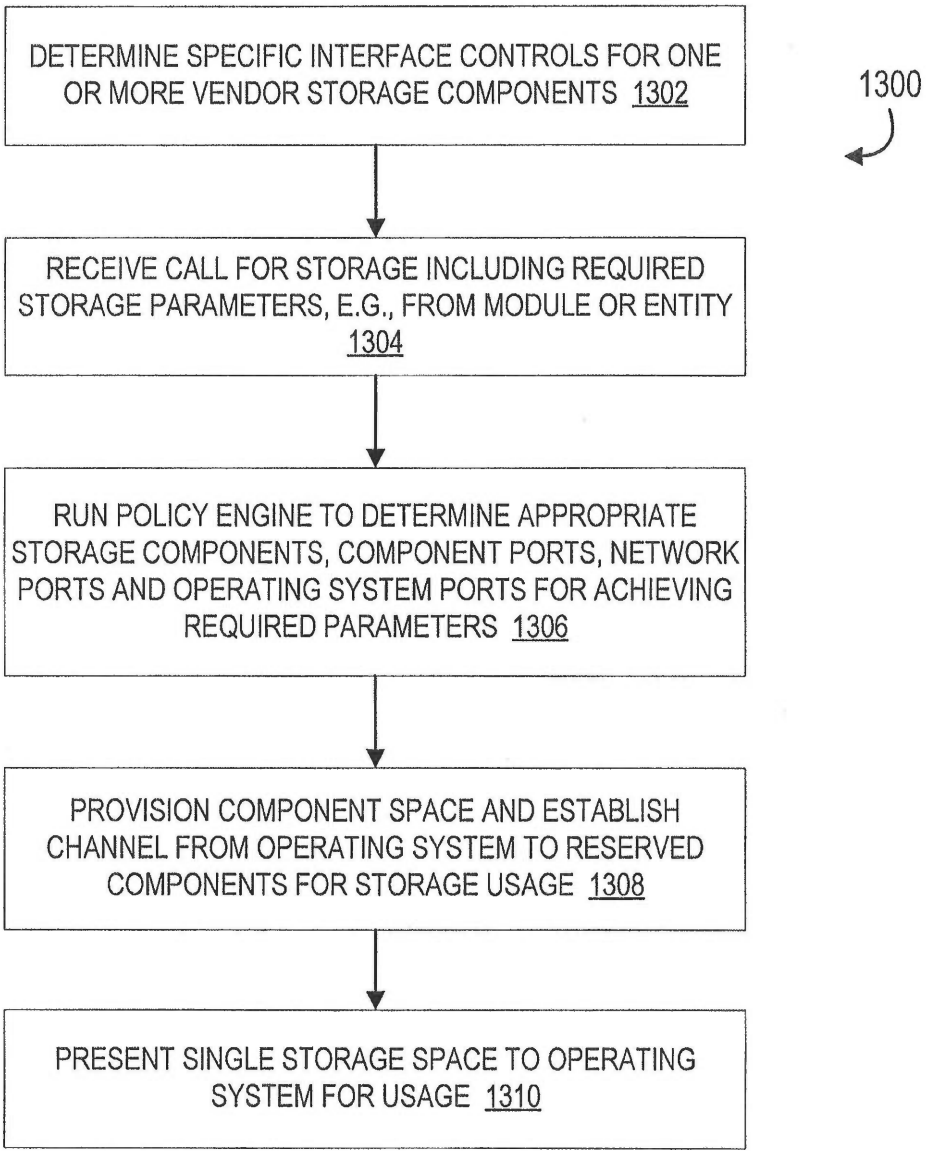

1200
End Point Consumer
Backup Consumer
NFS Share Consumer
Provision from PR
Provision from Logical Layer
Provision per CPU Utilization
Provision per Controller Count
Provision from Physical Disk
Physical Disk Count
New Rack/Bay per X Drives
New Engine per X Drives
Cannot be Created until Configured
We buy this to add physical capacity to the 3170s
Virtual Disk Drive
Backup/ Snapshot
Share/ Datastore
Volume
Physical Representation (PR) on NAV Device
Controller/ Filer
Rack
Logical Layer
Physical Disk
Disc Containers
Logic Bay

Figure 12


DETERMINE SPECIFIC INTERFACE CONTROLS FOR ONE OR MORE VENDOR STORAGE COMPONENTS 1302
1300
RECEIVE CALL FOR STORAGE INCLUDING REQUIRED STORAGE PARAMETERS, E.G., FROM MODULE OR ENTITY 1304
RUN POLICY ENGINE TO DETERMINE APPROPRIATE STORAGE COMPONENTS, COMPONENT PORTS, NETWORK PORTS AND OPERATING SYSTEM PORTS FOR ACHIEVING REQUIRED PARAMETERS 1306
PROVISION COMPONENT SPACE AND ESTABLISH CHANNEL FROM OPERATING SYSTEM TO RESERVED COMPONENTS FOR STORAGE USAGE 1308
PRESENT SINGLE STORAGE SPACE TO OPERATING SYSTEM FOR USAGE 1310

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