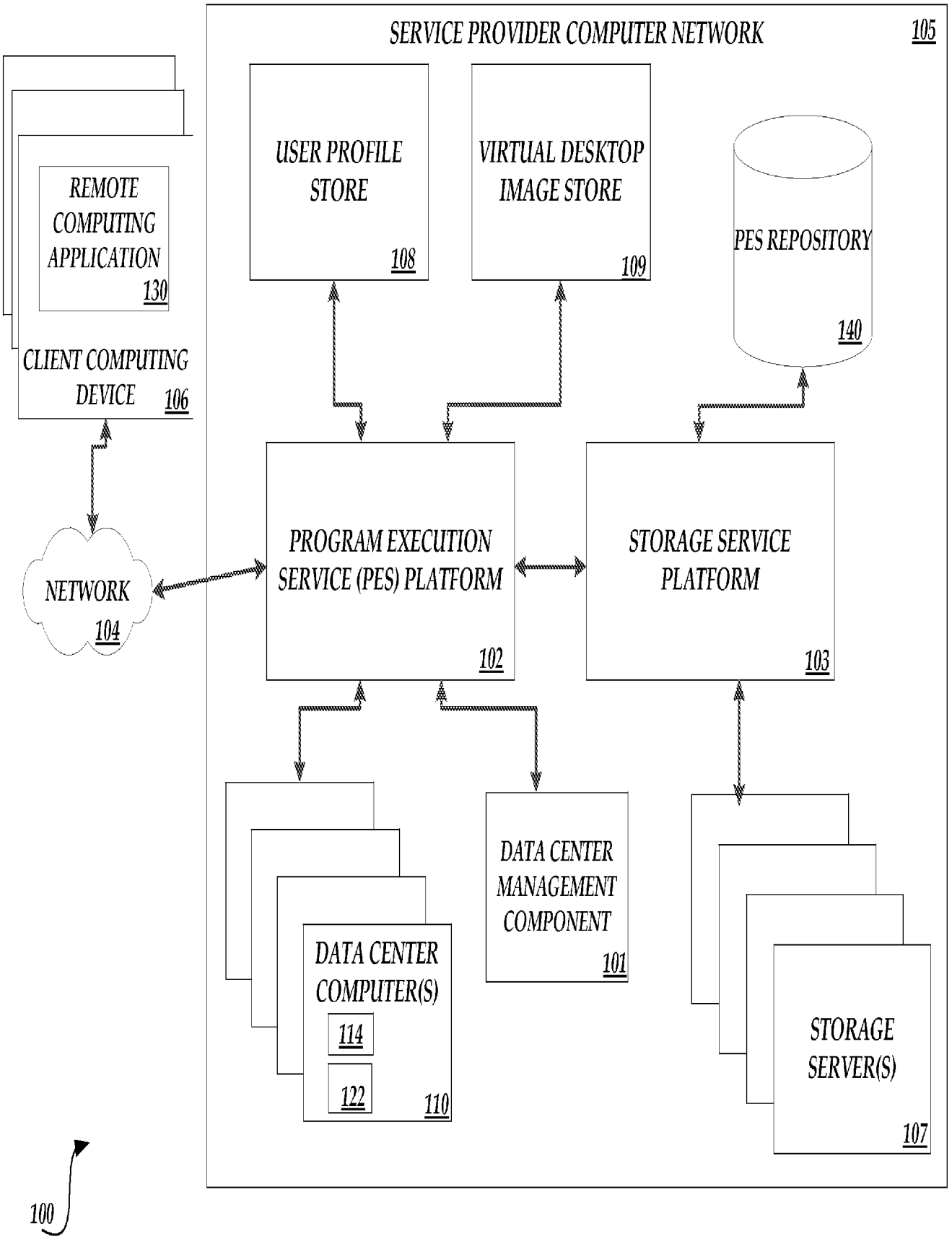
SERVICE PROVIDER COMPUTER NETWORK
105
USER PROFILE STORE
108
VIRTUAL DESKTOP IMAGE STORE
109
PES REPOSITORY
140
REMOTE COMPUTING APPLICATION
130
CLIENT COMPUTING DEVICE
106
NETWORK
104
PROGRAM EXECUTION SERVICE (PES) PLATFORM
102
STORAGE SERVICE PLATFORM
103
DATA CENTER MANAGEMENT COMPONENT
101
DATA CENTER COMPUTER(S)
114
122
110
STORAGE SERVER(S)
107
100

Fig.1

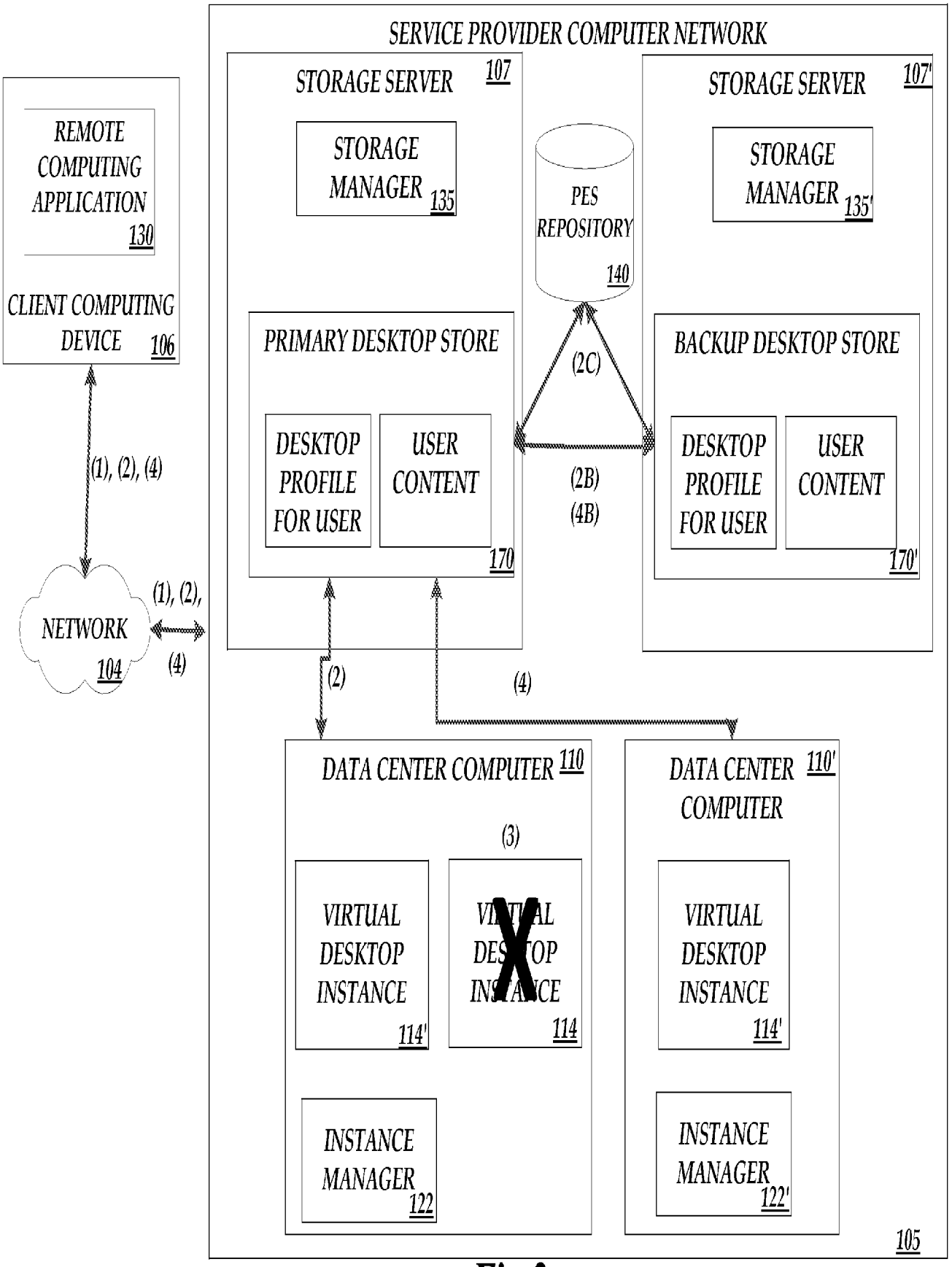
SERVICE PROVIDER COMPUTER NETWORK
STORAGE SERVER 107
STORAGE MANAGER 135
PES REPOSITORY 140
STORAGE SERVER 107'
STORAGE MANAGER 135'
PRIMARY DESKTOP STORE
DESKTOP PROFILE FOR USER
USER CONTENT
170
BACKUP DESKTOP STORE
DESKTOP PROFILE FOR USER
USER CONTENT
170'
(2C)
(2B)
(4B)
REMOTE COMPUTING APPLICATION 130
CLIENT COMPUTING DEVICE 106
(1), (2), (4)
NETWORK 104
(1), (2), (4)
(2)
(4)
DATA CENTER COMPUTER 110
(3)
VIRTUAL DESKTOP INSTANCE 114'
VIRTUAL DESKTOP INSTANCE 114
INSTANCE MANAGER 122
DATA CENTER COMPUTER 110'
VIRTUAL DESKTOP INSTANCE 114'
INSTANCE MANAGER 122'
105

Fig.2

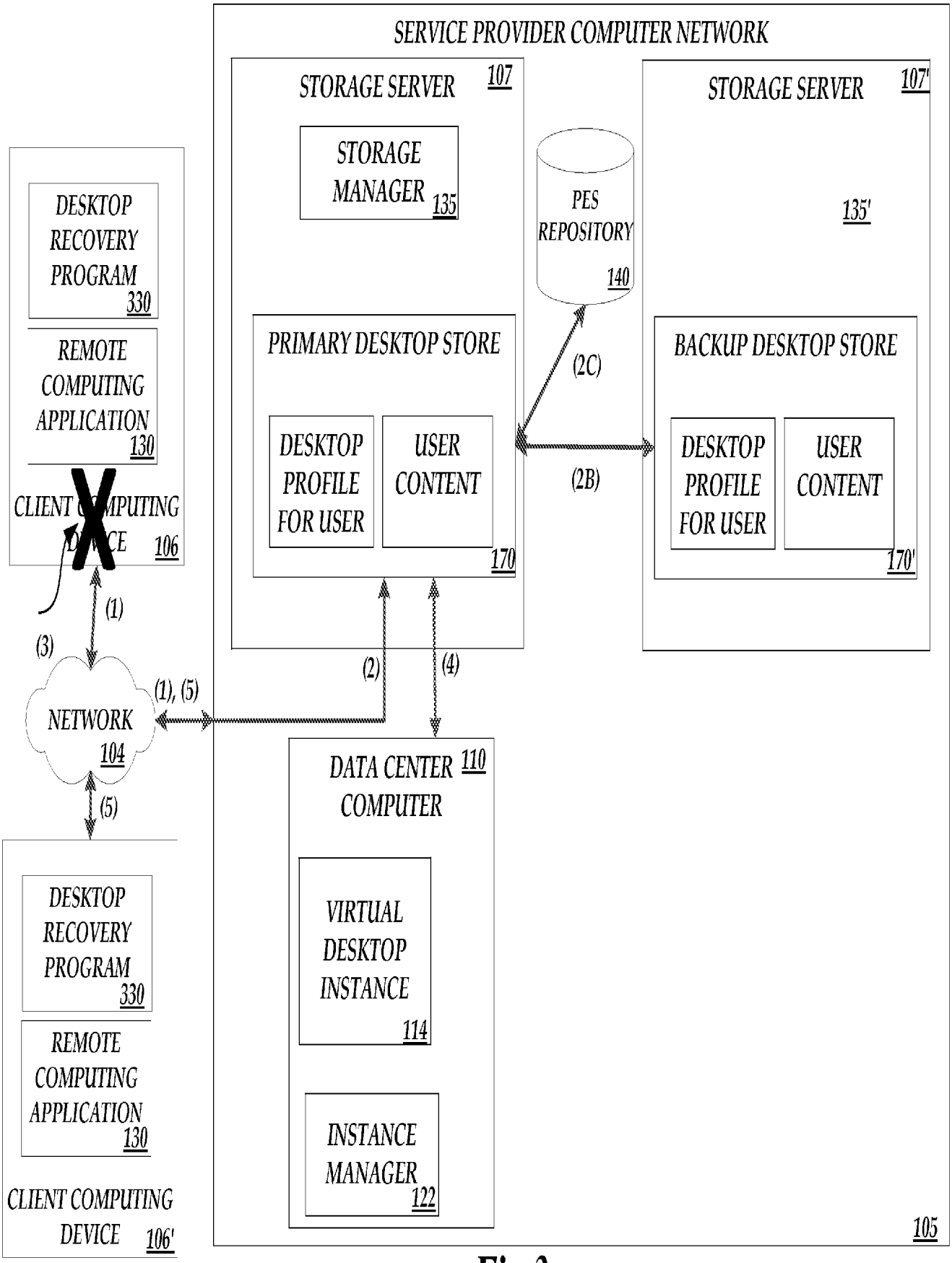
SERVICE PROVIDER COMPUTER NETWORK
STORAGE SERVER 107
STORAGE MANAGER 135
PES REPOSITORY 140
STORAGE SERVER 107'
135'
PRIMARY DESKTOP STORE
DESKTOP PROFILE FOR USER
USER CONTENT
170
BACKUP DESKTOP STORE
DESKTOP PROFILE FOR USER
USER CONTENT
170'
(2C)
(2B)
DESKTOP RECOVERY PROGRAM 330
REMOTE COMPUTING APPLICATION 130
CLIENT COMPUTING DEVICE 106
(1)
(3)
NETWORK 104
(1), (5)
(2)
(4)
(5)
DATA CENTER COMPUTER 110
VIRTUAL DESKTOP INSTANCE 114
INSTANCE MANAGER 122
105
DESKTOP RECOVERY PROGRAM 330
REMOTE COMPUTING APPLICATION 130
CLIENT COMPUTING DEVICE 106'

Fig.3

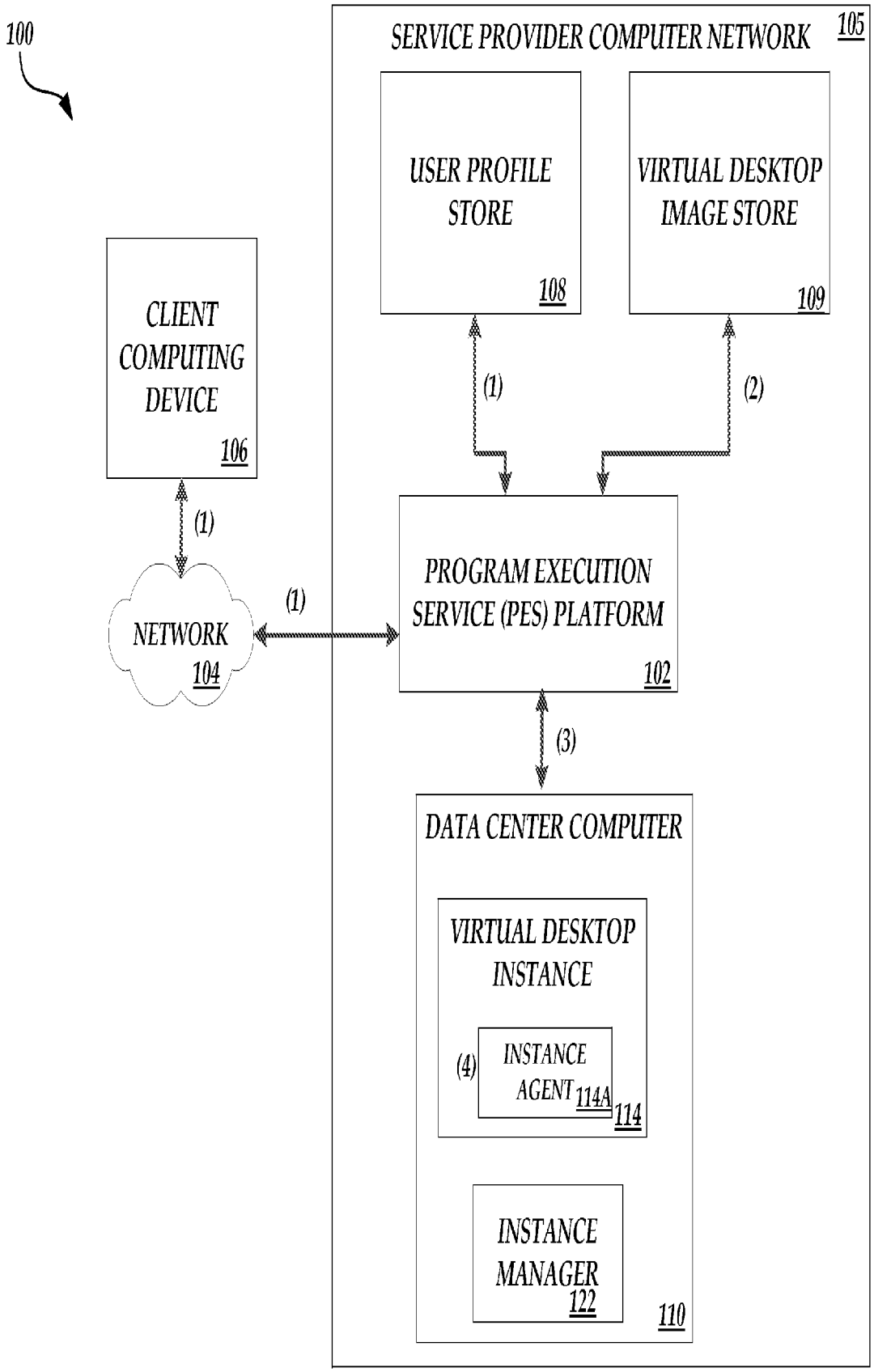
100
SERVICE PROVIDER COMPUTER NETWORK
105
USER PROFILE STORE
108
VIRTUAL DESKTOP IMAGE STORE
109
CLIENT COMPUTING DEVICE
106
(1)
(2)
(1)
NETWORK
104
(1)
PROGRAM EXECUTION SERVICE (PES) PLATFORM
102
(3)
DATA CENTER COMPUTER
VIRTUAL DESKTOP INSTANCE
(4)
INSTANCE AGENT
114A
114
INSTANCE MANAGER
122
110

Fig.4

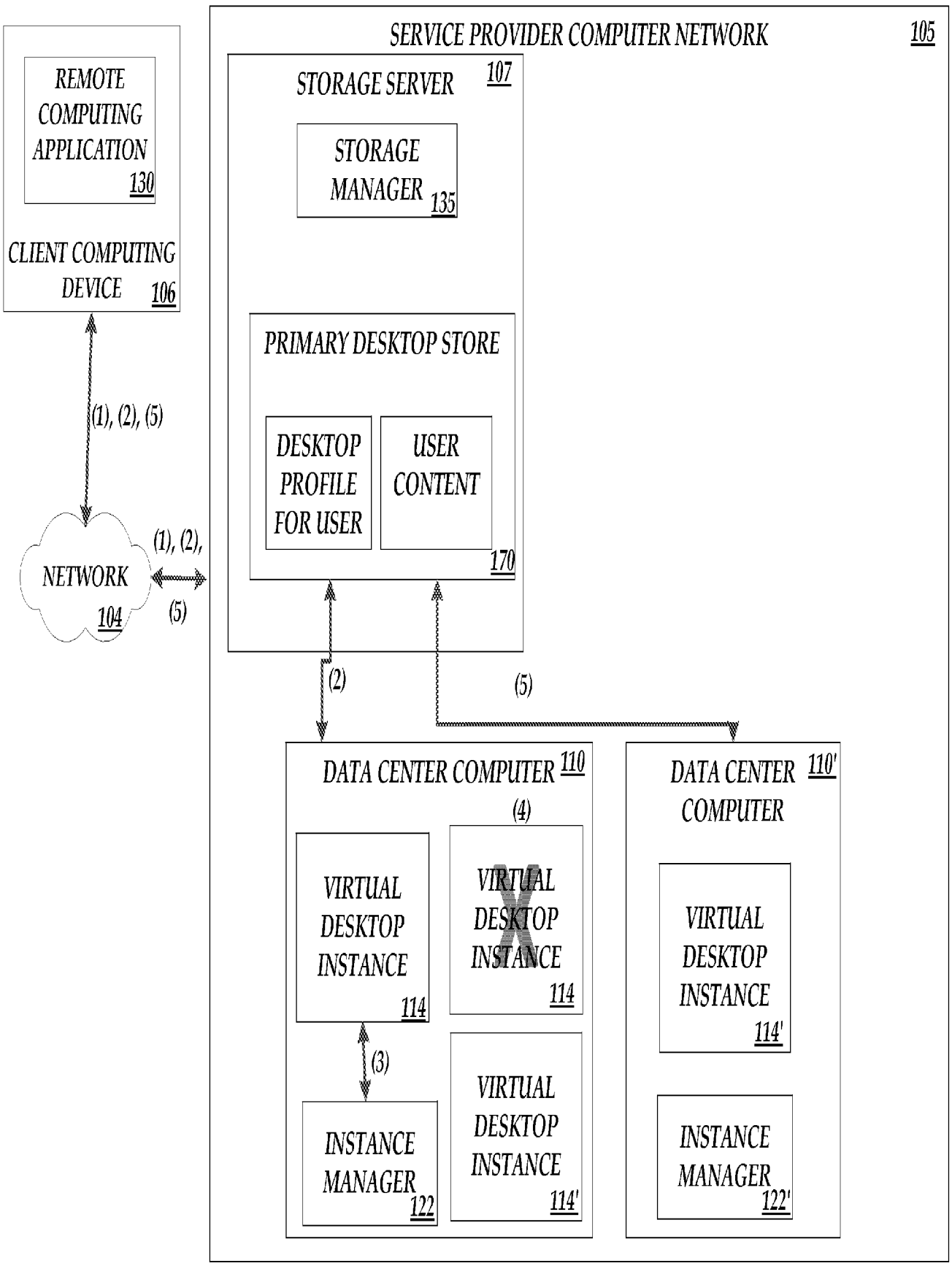
SERVICE PROVIDER COMPUTER NETWORK
105
REMOTE COMPUTING APPLICATION 130
CLIENT COMPUTING DEVICE 106
STORAGE SERVER 107
STORAGE MANAGER 135
PRIMARY DESKTOP STORE
DESKTOP PROFILE FOR USER
USER CONTENT
170
(1), (2), (5)
NETWORK 104
(1), (2), (5)
(2)
(5)
DATA CENTER COMPUTER 110
(4)
VIRTUAL DESKTOP INSTANCE 114
VIRTUAL DESKTOP INSTANCE 114
(3)
INSTANCE MANAGER 122
VIRTUAL DESKTOP INSTANCE 114'
DATA CENTER COMPUTER 110'
VIRTUAL DESKTOP INSTANCE 114'
INSTANCE MANAGER 122'

Fig.5

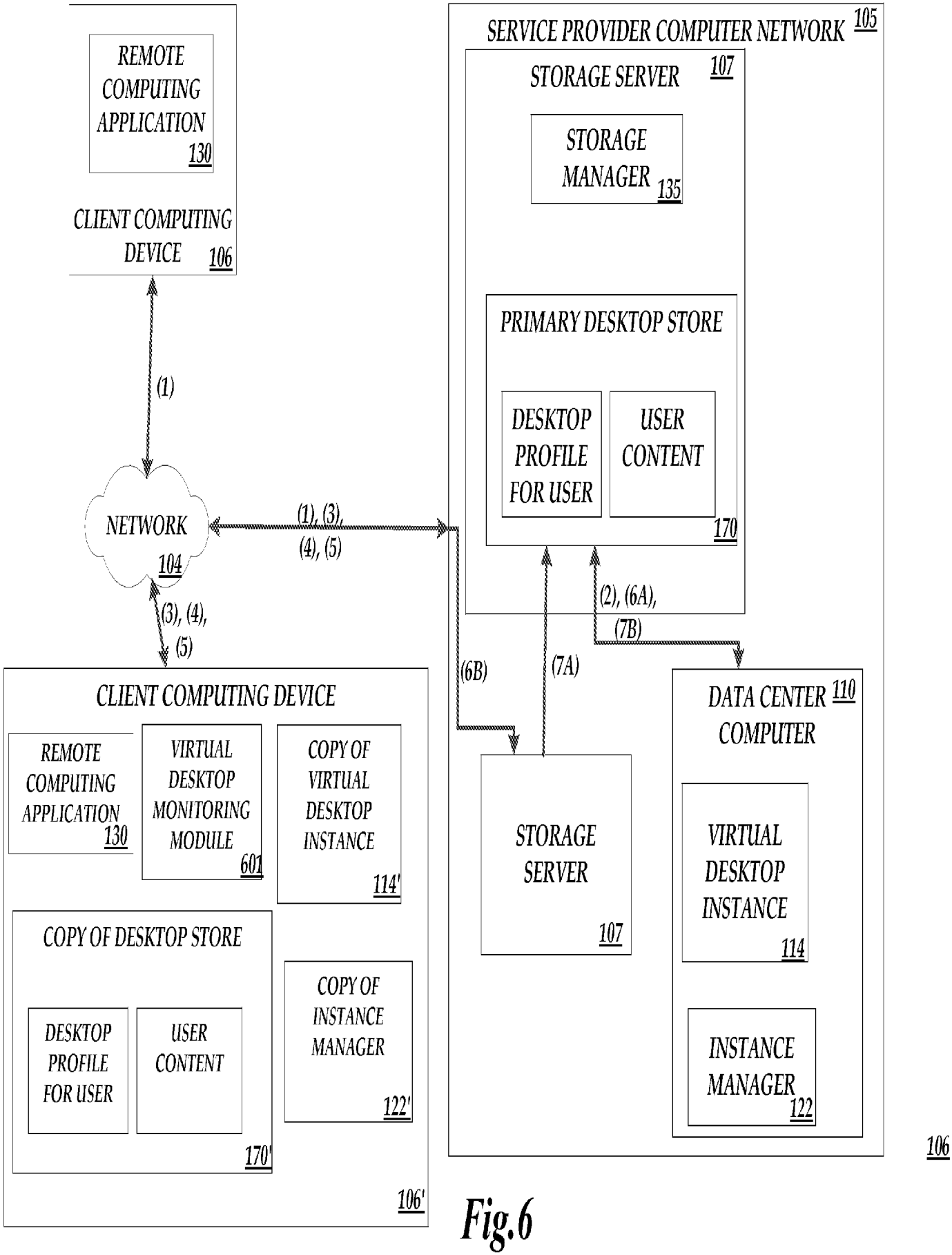
REMOTE COMPUTING APPLICATION 130
CLIENT COMPUTING DEVICE 106
(1)
NETWORK 104
(1), (3), (4), (5)
(3), (4), (5)
SERVICE PROVIDER COMPUTER NETWORK 105
STORAGE SERVER 107
STORAGE MANAGER 135
PRIMARY DESKTOP STORE
DESKTOP PROFILE FOR USER
USER CONTENT
170
(2), (6A), (7B)
(6B)
(7A)
DATA CENTER COMPUTER 110
STORAGE SERVER 107
VIRTUAL DESKTOP INSTANCE 114
INSTANCE MANAGER 122
106
CLIENT COMPUTING DEVICE
REMOTE COMPUTING APPLICATION 130
VIRTUAL DESKTOP MONITORING MODULE 601
COPY OF VIRTUAL DESKTOP INSTANCE 114'
COPY OF DESKTOP STORE
DESKTOP PROFILE FOR USER
USER CONTENT
170'
COPY OF INSTANCE MANAGER 122'
106'

Fig.6

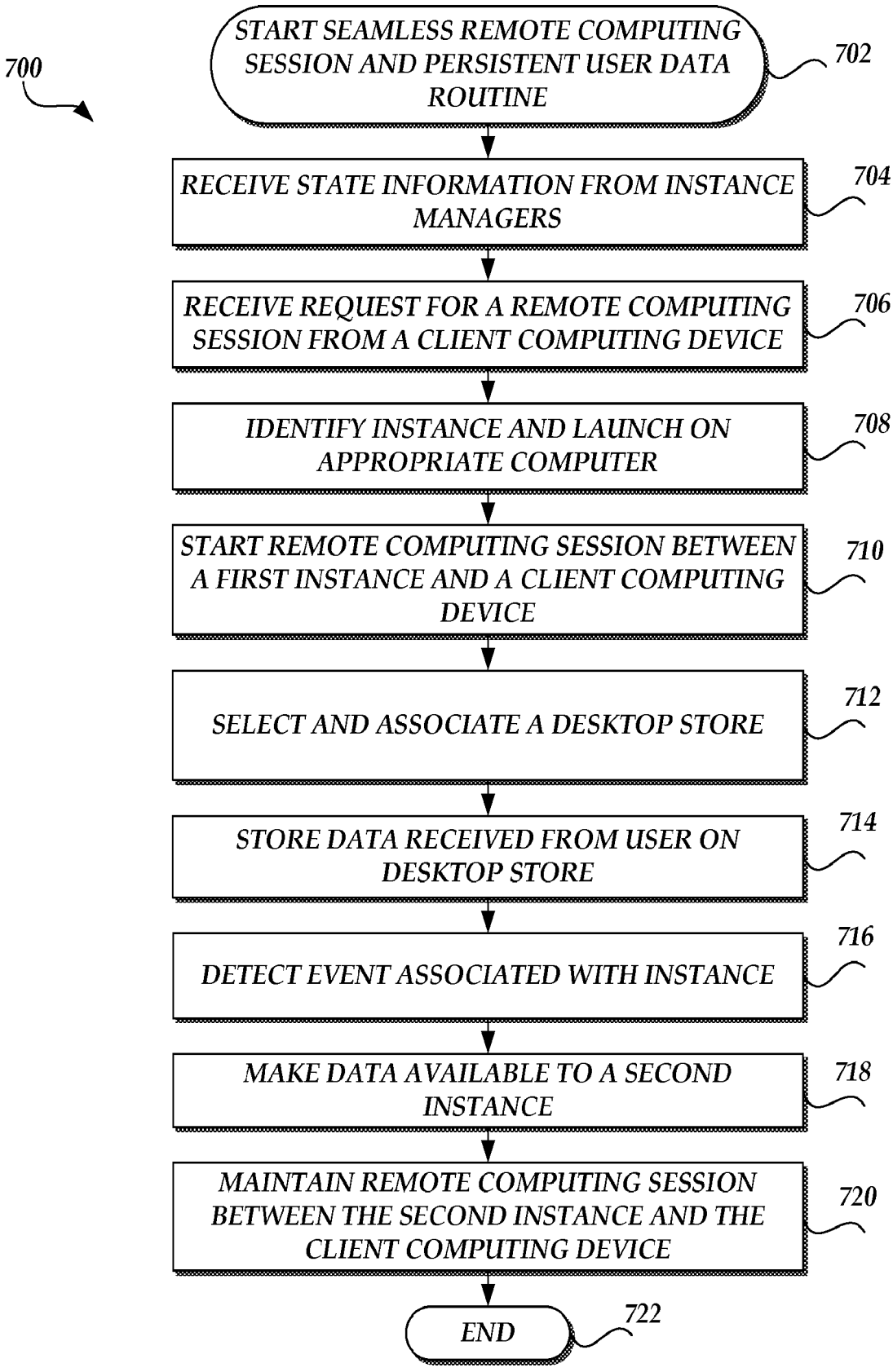
700
START SEAMLESS REMOTE COMPUTING SESSION AND PERSISTENT USER DATA ROUTINE
702
RECEIVE STATE INFORMATION FROM INSTANCE MANAGERS
704
RECEIVE REQUEST FOR A REMOTE COMPUTING SESSION FROM A CLIENT COMPUTING DEVICE
706
IDENTIFY INSTANCE AND LAUNCH ON APPROPRIATE COMPUTER
708
START REMOTE COMPUTING SESSION BETWEEN A FIRST INSTANCE AND A CLIENT COMPUTING DEVICE
710
SELECT AND ASSOCIATE A DESKTOP STORE
712
STORE DATA RECEIVED FROM USER ON DESKTOP STORE
714
DETECT EVENT ASSOCIATED WITH INSTANCE
716
MAKE DATA AVAILABLE TO A SECOND INSTANCE
718
MAINTAIN REMOTE COMPUTING SESSION BETWEEN THE SECOND INSTANCE AND THE CLIENT COMPUTING DEVICE
720
END
722

Fig. 7

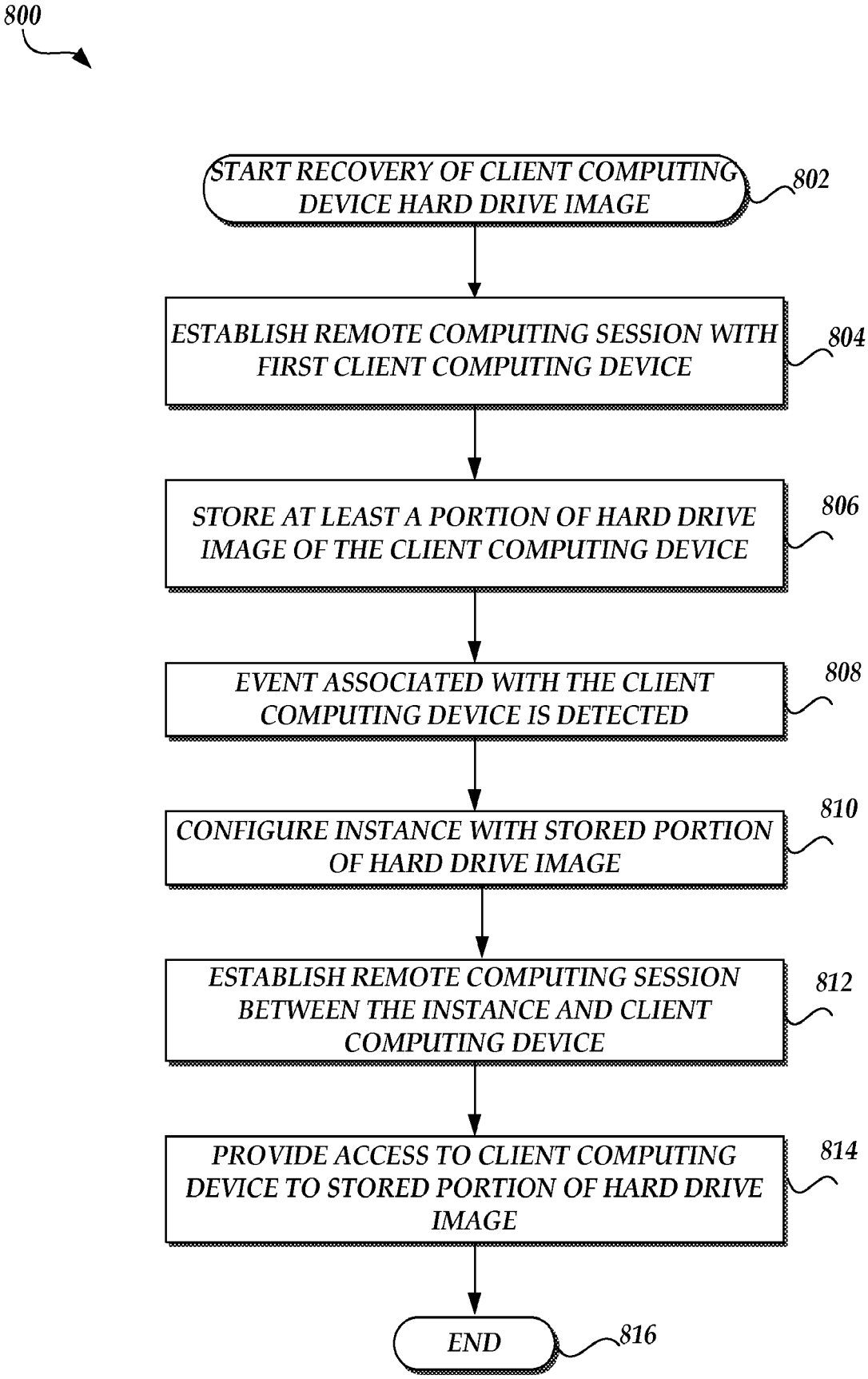
800
START RECOVERY OF CLIENT COMPUTING DEVICE HARD DRIVE IMAGE
802
ESTABLISH REMOTE COMPUTING SESSION WITH FIRST CLIENT COMPUTING DEVICE
804
STORE AT LEAST A PORTION OF HARD DRIVE IMAGE OF THE CLIENT COMPUTING DEVICE
806
EVENT ASSOCIATED WITH THE CLIENT COMPUTING DEVICE IS DETECTED
808
CONFIGURE INSTANCE WITH STORED PORTION OF HARD DRIVE IMAGE
810
ESTABLISH REMOTE COMPUTING SESSION BETWEEN THE INSTANCE AND CLIENT COMPUTING DEVICE
812
PROVIDE ACCESS TO CLIENT COMPUTING DEVICE TO STORED PORTION OF HARD DRIVE IMAGE
814
END
816

Fig.8

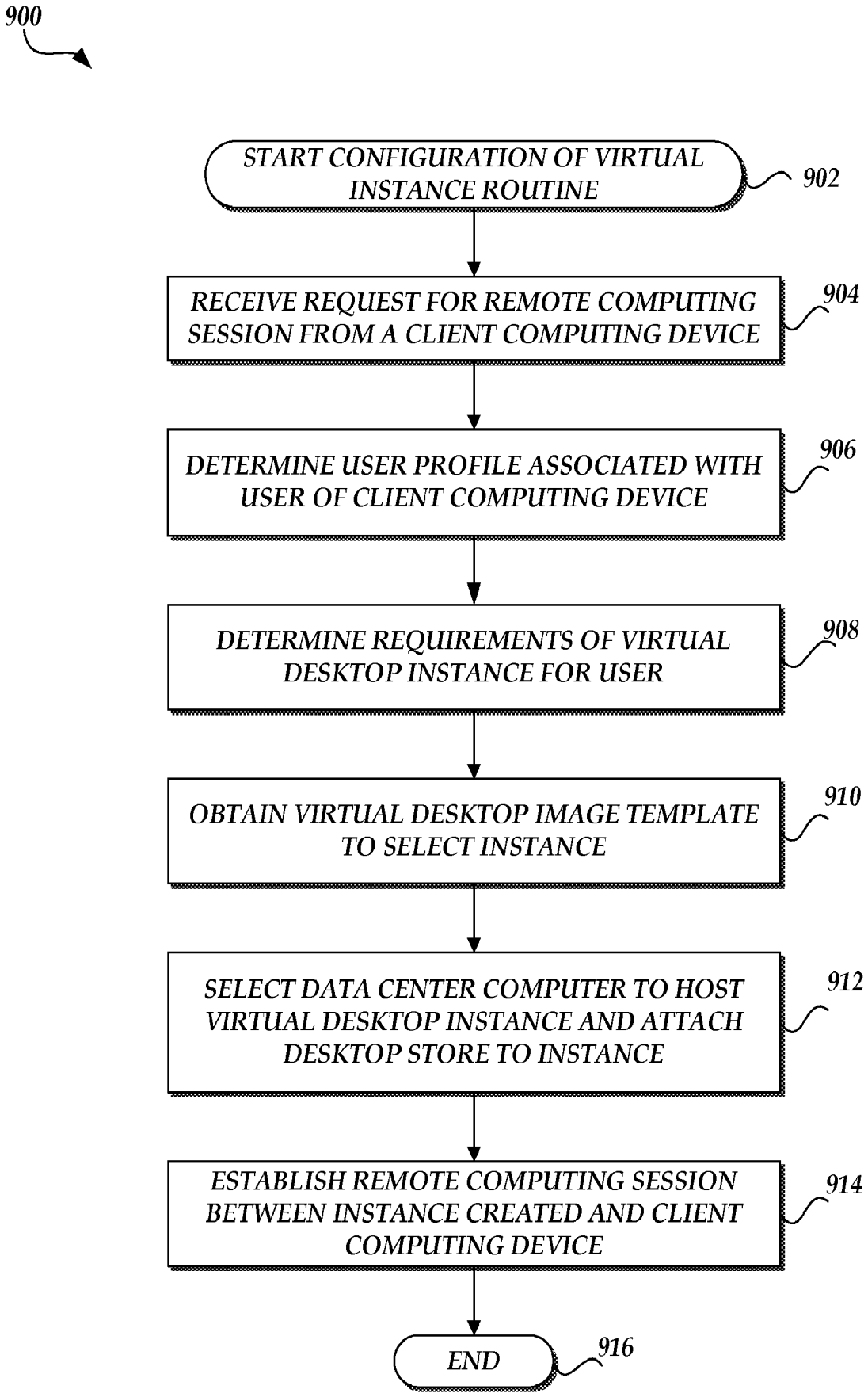
900
START CONFIGURATION OF VIRTUAL INSTANCE ROUTINE
902
RECEIVE REQUEST FOR REMOTE COMPUTING SESSION FROM A CLIENT COMPUTING DEVICE
904
DETERMINE USER PROFILE ASSOCIATED WITH USER OF CLIENT COMPUTING DEVICE
906
DETERMINE REQUIREMENTS OF VIRTUAL DESKTOP INSTANCE FOR USER
908
OBTAIN VIRTUAL DESKTOP IMAGE TEMPLATE TO SELECT INSTANCE
910
SELECT DATA CENTER COMPUTER TO HOST VIRTUAL DESKTOP INSTANCE AND ATTACH DESKTOP STORE TO INSTANCE
912
ESTABLISH REMOTE COMPUTING SESSION BETWEEN INSTANCE CREATED AND CLIENT COMPUTING DEVICE
914
END
916

Fig. 9

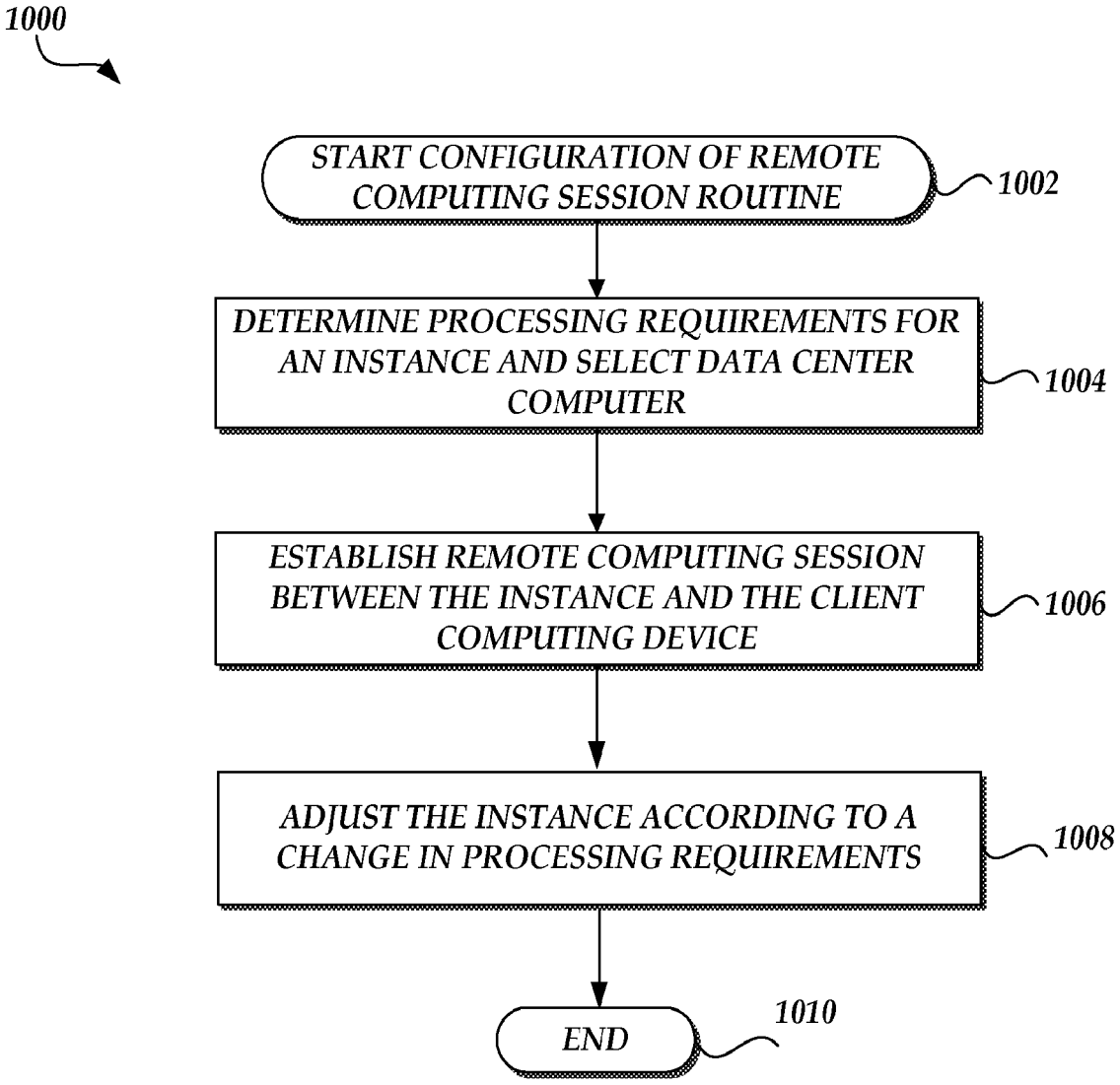
1000
START CONFIGURATION OF REMOTE COMPUTING SESSION ROUTINE
1002
DETERMINE PROCESSING REQUIREMENTS FOR AN INSTANCE AND SELECT DATA CENTER COMPUTER
1004
ESTABLISH REMOTE COMPUTING SESSION BETWEEN THE INSTANCE AND THE CLIENT COMPUTING DEVICE
1006
ADJUST THE INSTANCE ACCORDING TO A CHANGE IN PROCESSING REQUIREMENTS
1008
END
1010

Fig. 10

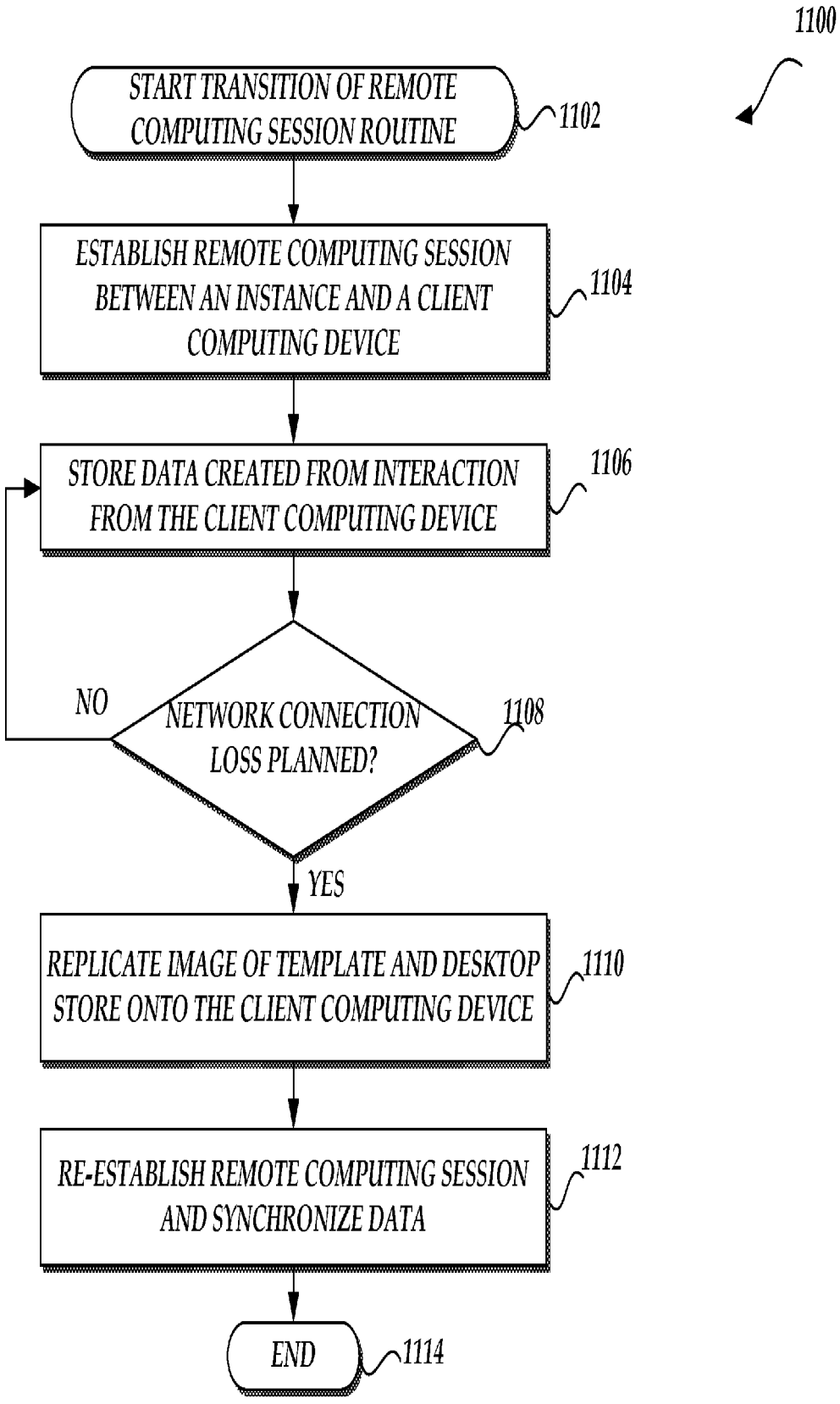
1100
START TRANSITION OF REMOTE COMPUTING SESSION ROUTINE
1102
ESTABLISH REMOTE COMPUTING SESSION BETWEEN AN INSTANCE AND A CLIENT COMPUTING DEVICE
1104
STORE DATA CREATED FROM INTERACTION FROM THE CLIENT COMPUTING DEVICE
1106
NETWORK CONNECTION LOSS PLANNED?
1108
NO
YES
REPLICATE IMAGE OF TEMPLATE AND DESKTOP STORE ONTO THE CLIENT COMPUTING DEVICE
1110
RE-ESTABLISH REMOTE COMPUTING SESSION AND SYNCHRONIZE DATA
1112
END
1114

Fig. 11