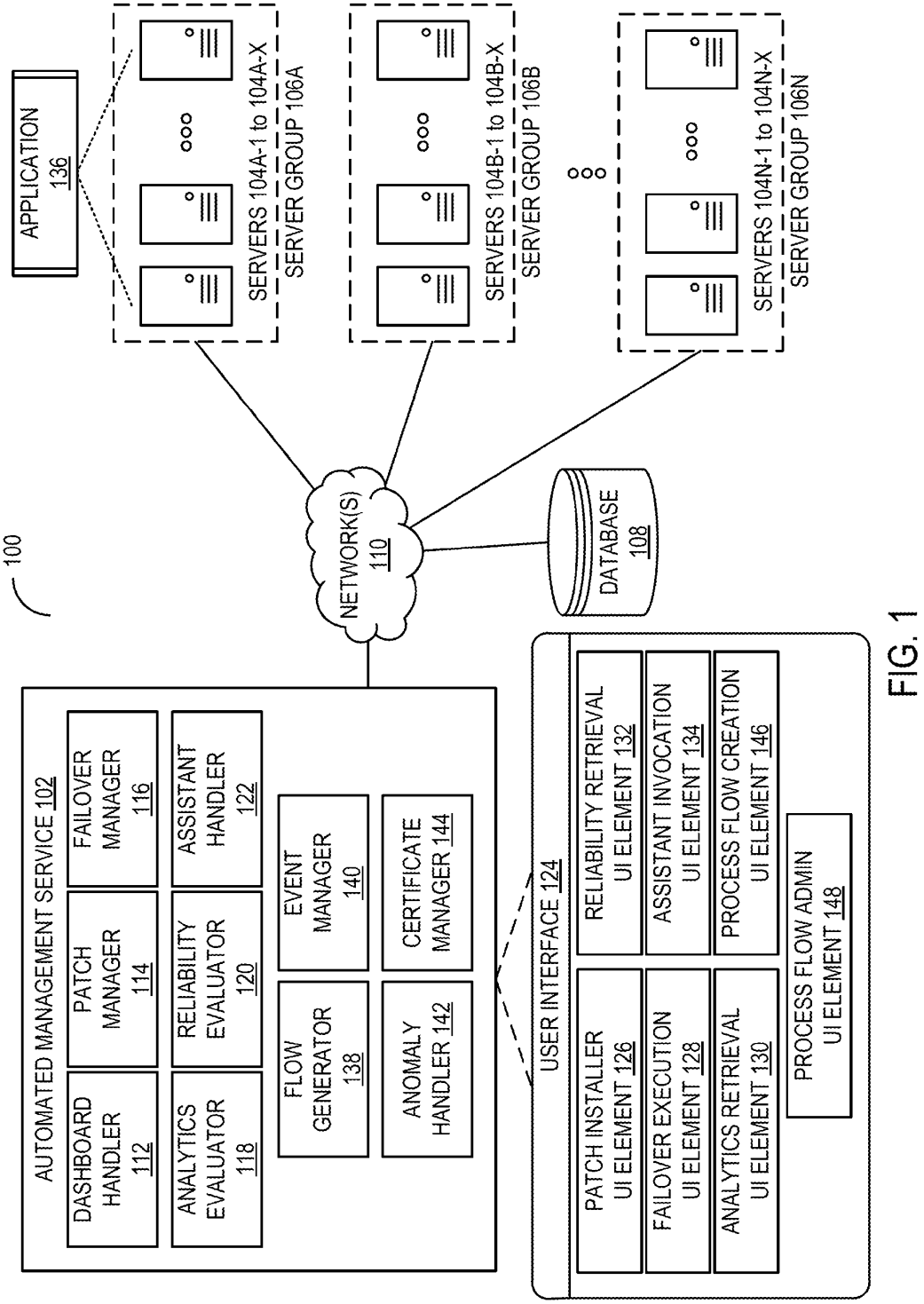

100
APPLICATION 136
SERVERS 104A-1 to 104A-X SERVER GROUP 106A
SERVERS 104B-1 to 104B-X SERVER GROUP 106B
SERVERS 104N-1 to 104N-X SERVER GROUP 106N
NETWORK(S) 110
DATABASE 108
AUTOMATED MANAGEMENT SERVICE 102
DASHBOARD HANDLER 112
PATCH MANAGER 114
FAILOVER MANAGER 116
ANALYTICS EVALUATOR 118
RELIABILITY EVALUATOR 120
ASSISTANT HANDLER 122
FLOW GENERATOR 138
EVENT MANAGER 140
ANOMALY HANDLER 142
CERTIFICATE MANAGER 144
USER INTERFACE 124
PATCH INSTALLER UI ELEMENT 126
FAILOVER EXECUTION UI ELEMENT 128
ANALYTICS RETRIEVAL UI ELEMENT 130
RELIABILITY RETRIEVAL UI ELEMENT 132
ASSISTANT INVOCATION UI ELEMENT 134
PROCESS FLOW CREATION UI ELEMENT 146
PROCESS FLOW ADMIN UI ELEMENT 148

FIG. 1

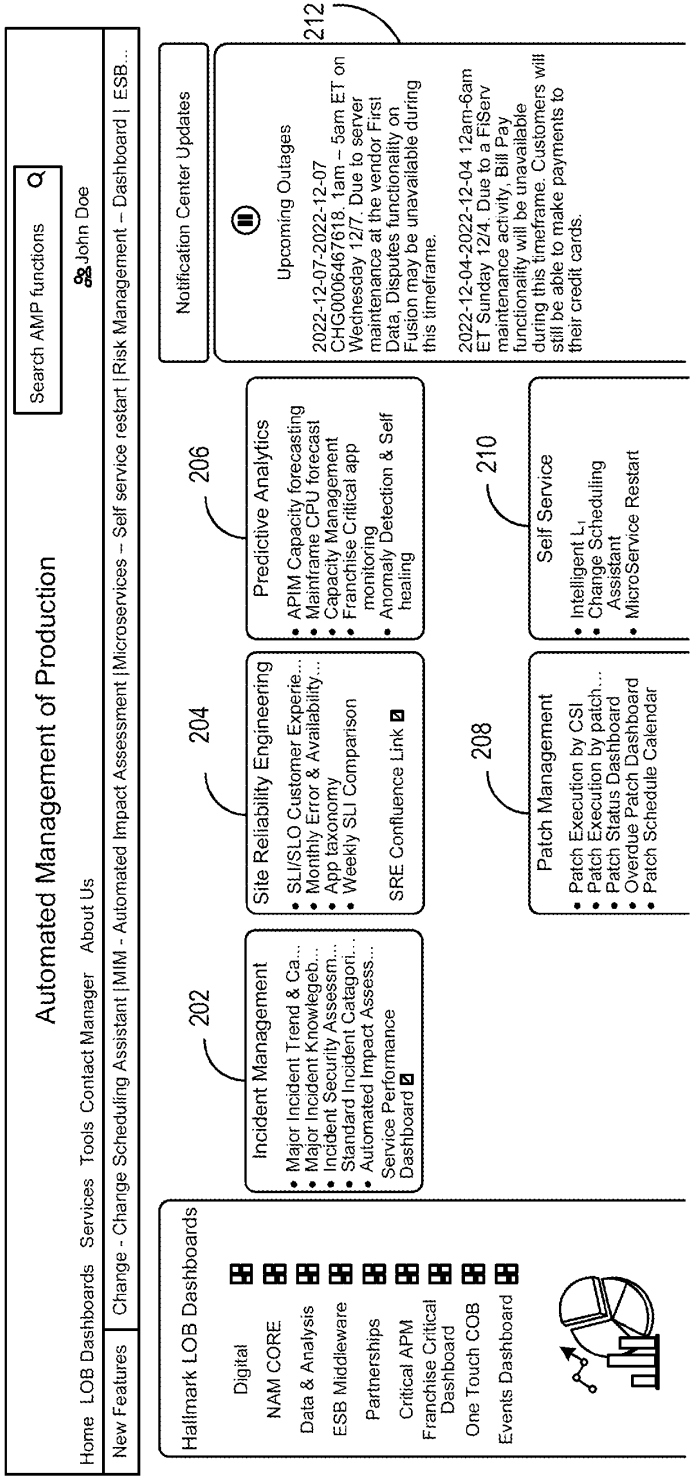

200
Automated Management of Production
Search AMP functions
John Doe
Home LOB Dashboards Services Tools Contact Manager About Us
New Features
Change - Change Scheduling Assistant | MIM - Automated Impact Assessment | Microservices – Self service restart | Risk Management – Dashboard | ESB...
Hallmark LOB Dashboards
Digital
NAM CORE
Data & Analysis
ESB Middleware
Partnerships
Critical APM
Franchise Critical Dashboard
One Touch COB
Events Dashboard
202
Incident Management
Major Incident Trend & Ca...
Major Incident Knowlegeb...
Incident Security Assessm...
Standard Incident Categori...
Automated Impact Assess...
Service Performance Dashboard
204
Site Reliability Engineering
SLI/SLO Customer Experie...
Monthly Error & Availability...
App taxonomy
Weekly SLI Comparison
SRE Confluence Link
206
Predictive Analytics
APIM Capacity forecasting
Mainframe CPU forecast
Capacity Management
Franchise Critical app monitoring
Anomaly Detection & Self healing
208
Patch Management
Patch Execution by CSI
Patch Execution by patch...
Patch Status Dashboard
Overdue Patch Dashboard
Patch Schedule Calendar
210
Self Service
Intelligent Li
Change Scheduling Assistant
MicroService Restart
Notification Center Updates
Upcoming Outages
212
2022-12-07-2022-12-07 CHG0006467618. 1am – 5am ET on Wednesday 12/7. Due to server maintenance at the vendor First Data. Disputes functionality on Fusion may be unavailable during this timeframe.
2022-12-04-2022-12-04 12am-6am ET Sunday 12/4. Due to a FiServ maintenance activity, Bill Pay functionality will be unavailable during this timeframe. Customers will still be able to make payments to their credit cards.

FIG. 2

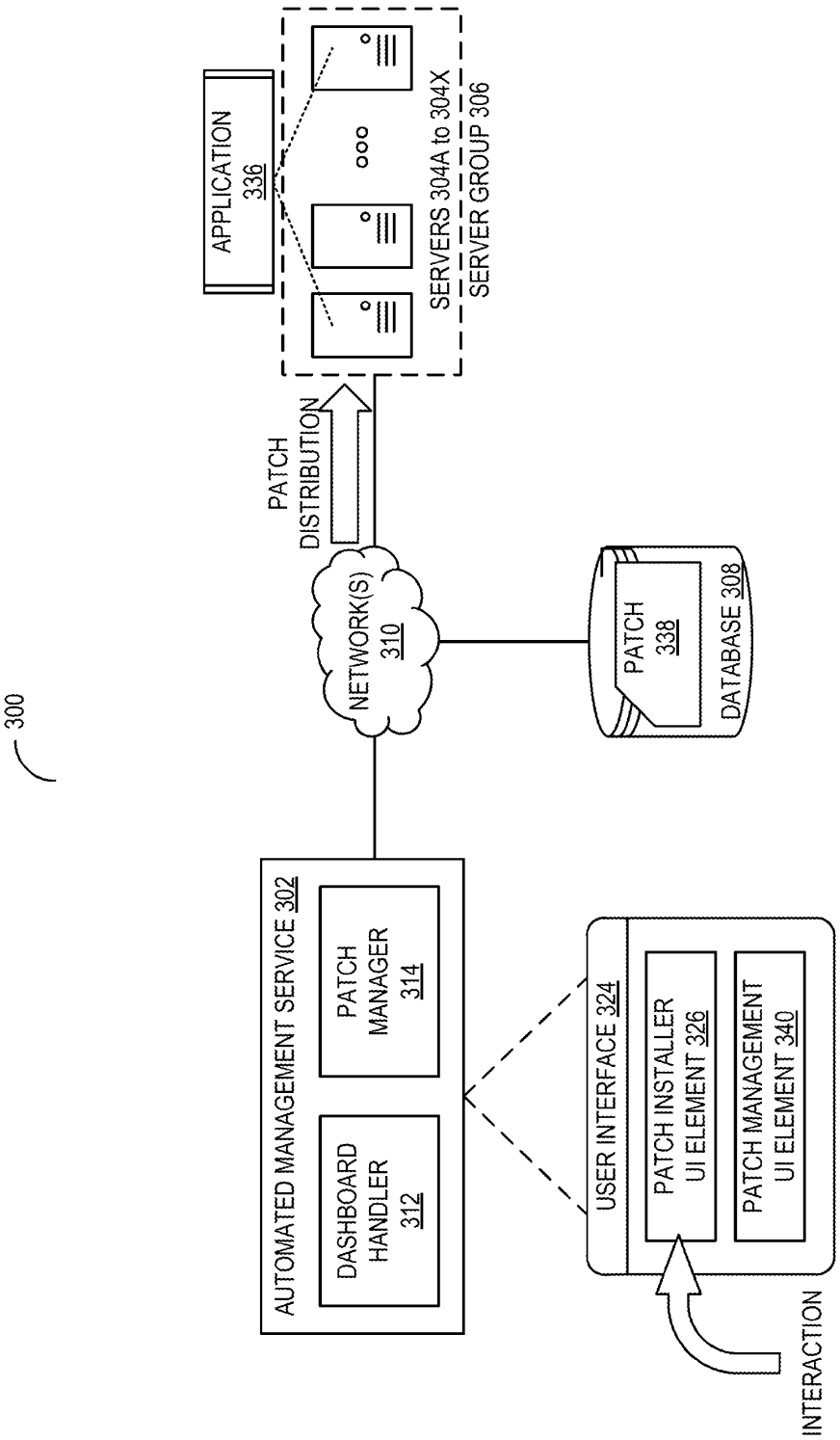

300
AUTOMATED MANAGEMENT SERVICE 302
DASHBOARD HANDLER 312
PATCH MANAGER 314
NETWORK(S) 310
PATCH DISTRIBUTION
APPLICATION 336
SERVERS 304A to 304X
SERVER GROUP 306
DATABASE 308
PATCH 338
USER INTERFACE 324
PATCH INSTALLER UI ELEMENT 326
PATCH MANAGEMENT UI ELEMENT 340
INTERACTION

FIG. 3

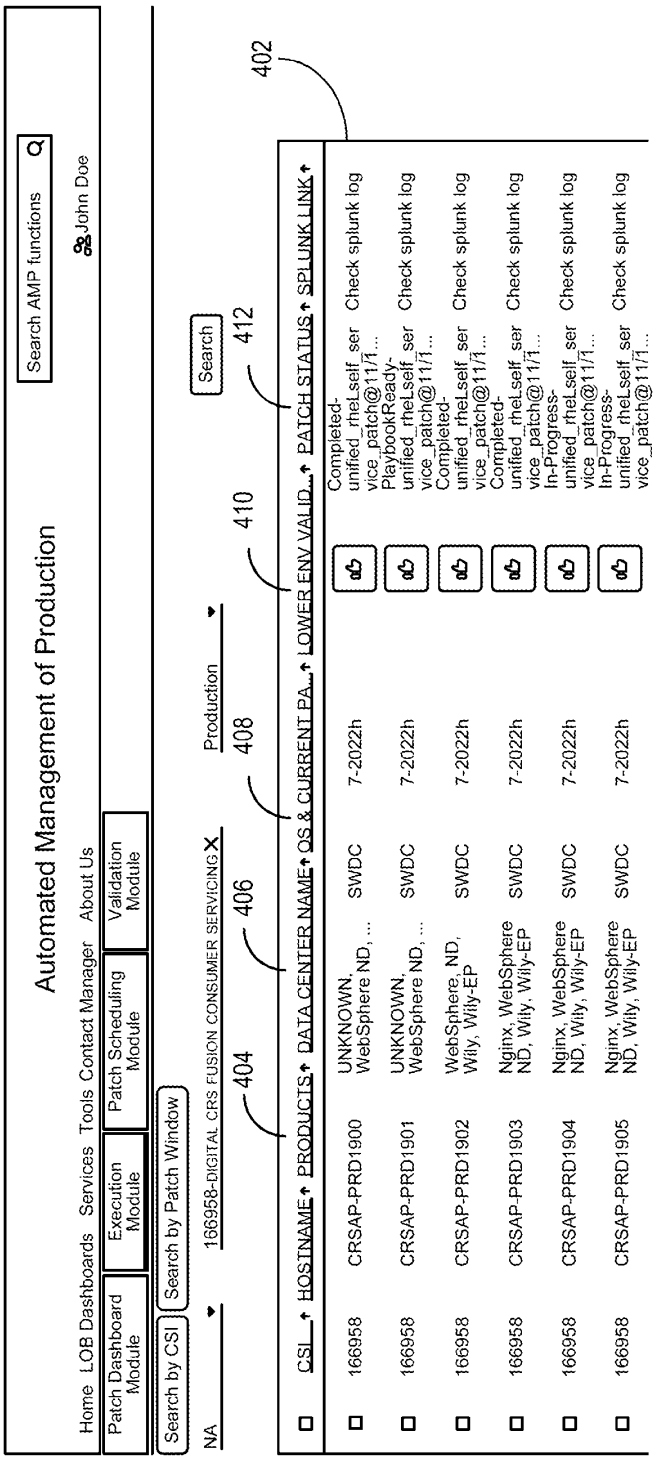

400
Automated Management of Production
Search AMP functions
John Doe
Home LOB Dashboards Services Tools Contact Manager About Us
Patch Dashboard Module
Execution Module
Patch Scheduling Module
Validation Module
Search by CSI
Search by Patch Window
NA
166958-DIGITAL CRS FUSION CONSUMER SERVICING
Production
Search
404
406
408
410
412
402
CSI
HOSTNAME
PRODUCTS
DATA CENTER NAME
OS & CURRENT PA...
LOWER ENV VALID...
PATCH STATUS
SPLUNK LINK
166958 CRSAP-PRD1900 UNKNOWN, WebSphere ND, ... SWDC 7-2022h Completed-unified_rheLself_service_patch@11/1... Check splunk log
166958 CRSAP-PRD1901 UNKNOWN, WebSphere ND, ... SWDC 7-2022h PlaybookReady-unified_rheLself_service_patch@11/1... Check splunk log
166958 CRSAP-PRD1902 WebSphere, ND, Wily, Wily-EP SWDC 7-2022h Completed-unified_rheLself_service_patch@11/1... Check splunk log
166958 CRSAP-PRD1903 Nginx, WebSphere ND, Wily, Wily-EP SWDC 7-2022h Completed-unified_rheLself_service_patch@11/1... Check splunk log
166958 CRSAP-PRD1904 Nginx, WebSphere ND, Wily, Wily-EP SWDC 7-2022h In-Progress-unified_rheLself_service_patch@11/1... Check splunk log
166958 CRSAP-PRD1905 Nginx, WebSphere ND, Wily, Wily-EP SWDC 7-2022h In-Progress-unified_rheLself_service_patch@11/1... Check splunk log

FIG. 4

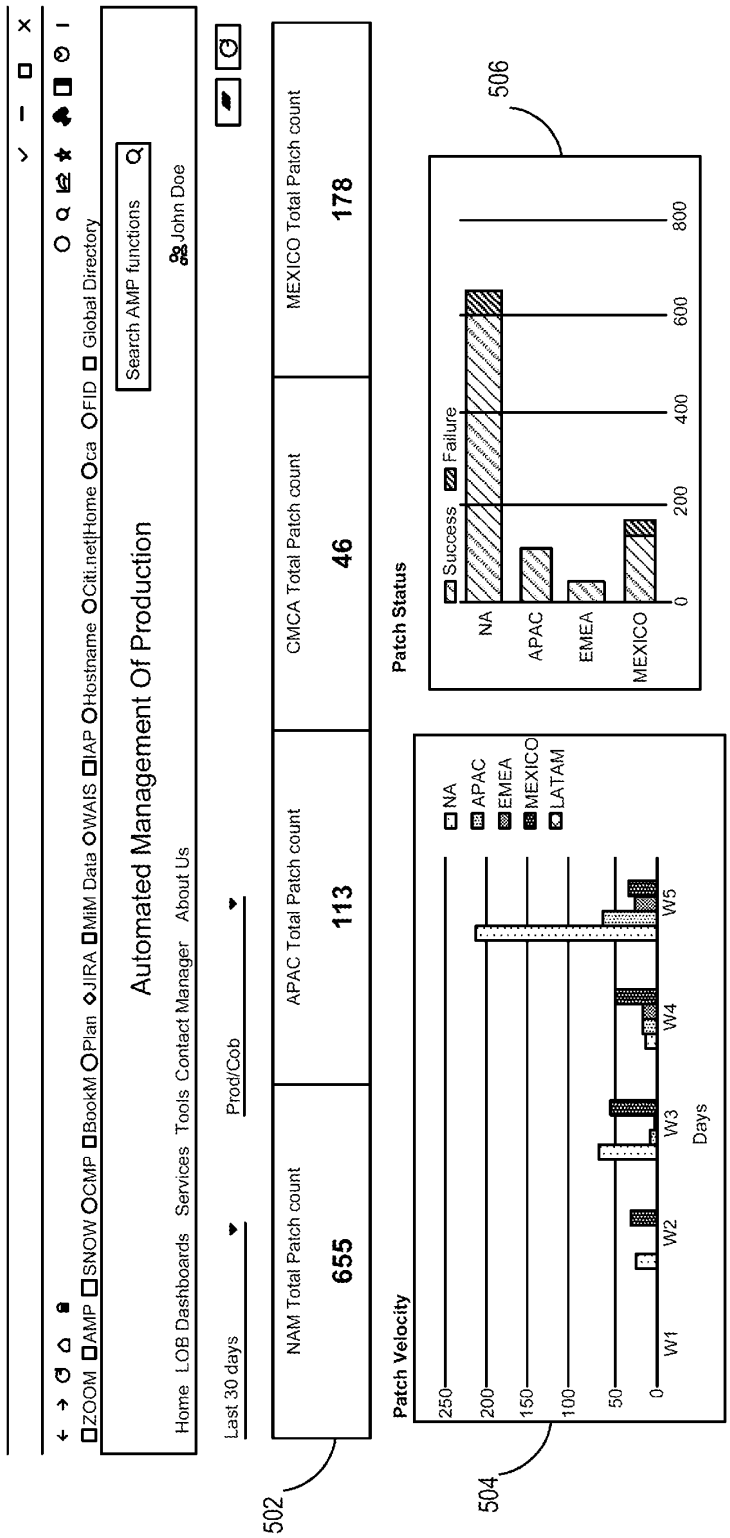

500
ZOOM AMP SNOW CMP BookM Plan JIRA MiM Data WAIS IAP Hostname Citi.net|Home Oca FID Global Directory
Automated Management Of Production
Search AMP functions
John Doe
Home LOB Dashboards Services Tools Contact Manager About Us
Last 30 days
Prod/Cob
NAM Total Patch count
655
APAC Total Patch count
113
CMCA Total Patch count
46
MEXICO Total Patch count
178
502
Patch Velocity
NA
APAC
EMEA
MEXICO
LATAM
250
200
150
100
50
0
W1
W2
W3
W4
W5
Days
504
Patch Status
Success
Failure
NA
APAC
EMEA
MEXICO
0
200
400
600
800
506

FIG. 5

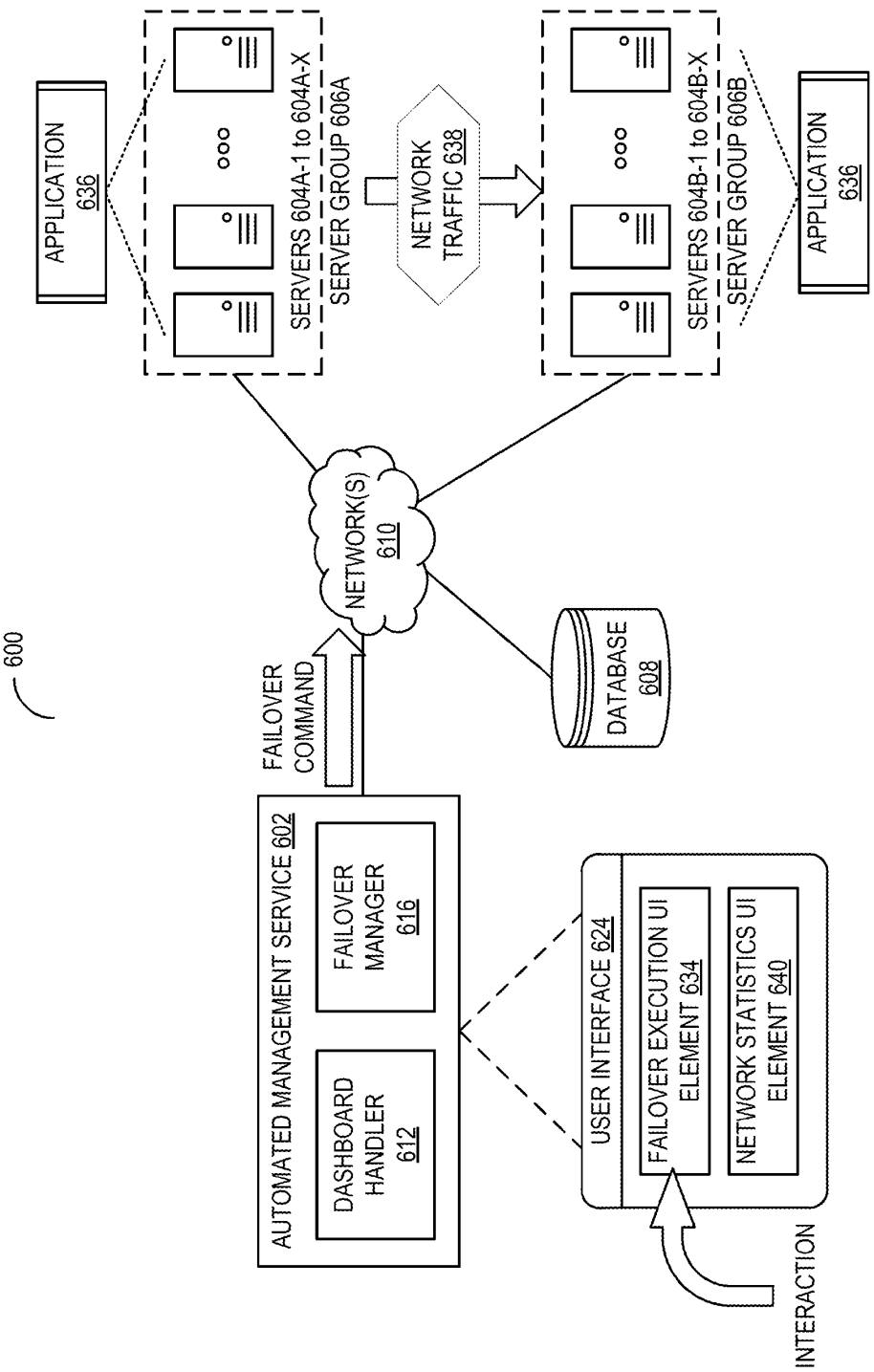

600
APPLICATION 636
SERVERS 604A-1 to 604A-X
SERVER GROUP 606A
NETWORK TRAFFIC 638
SERVERS 604B-1 to 604B-X
SERVER GROUP 606B
APPLICATION 636
NETWORK(S) 610
DATABASE 608
FAILOVER COMMAND
AUTOMATED MANAGEMENT SERVICE 602
FAILOVER MANAGER 616
DASHBOARD HANDLER 612
USER INTERFACE 624
FAILOVER EXECUTION UI ELEMENT 634
NETWORK STATISTICS UI ELEMENT 640
INTERACTION

FIG. 6

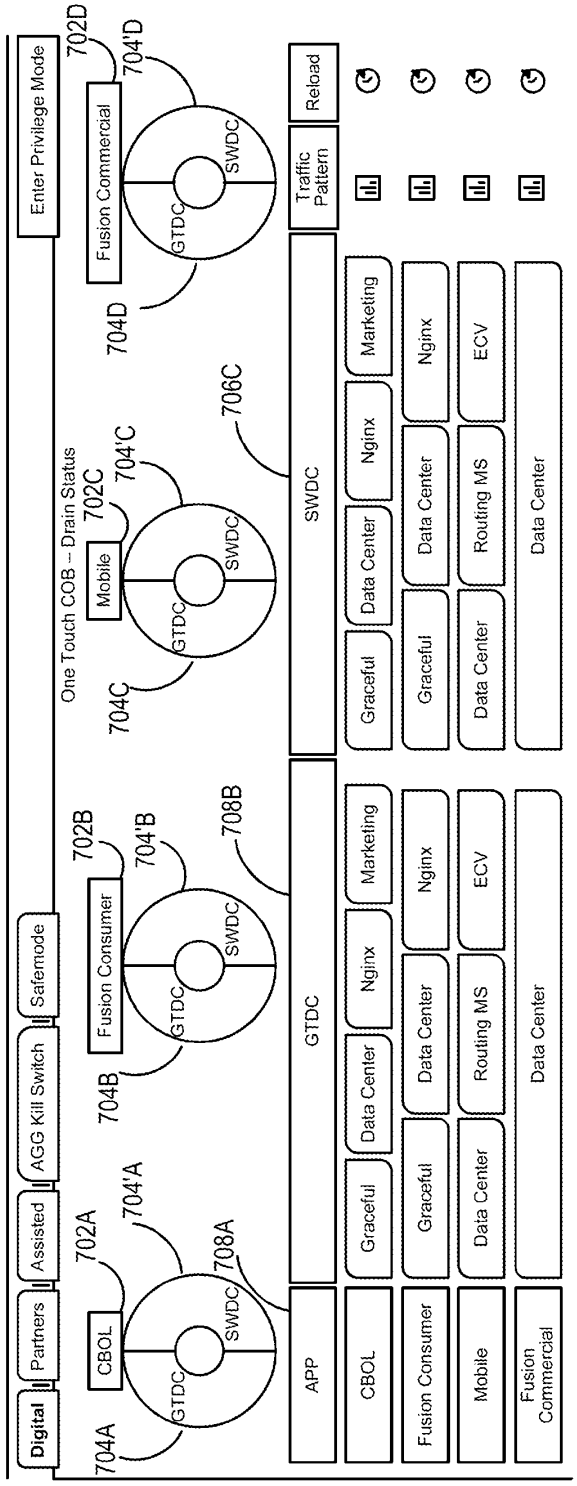

700
Digital
Partners
Assisted
AGG Kill Switch
Safemode
Enter Privilege Mode
One Touch COB – Drain Status
CBOL
Fusion Consumer
Mobile
Fusion Commercial
702A
702B
702C
702D
704A
704'A
704B
704'B
704C
704'C
704D
704'D
GTDC
SWDC
708A
708B
706C
APP
Graceful
Data Center
Nginx
Marketing
Routing MS
ECV
Traffic Pattern
Reload

FIG. 7

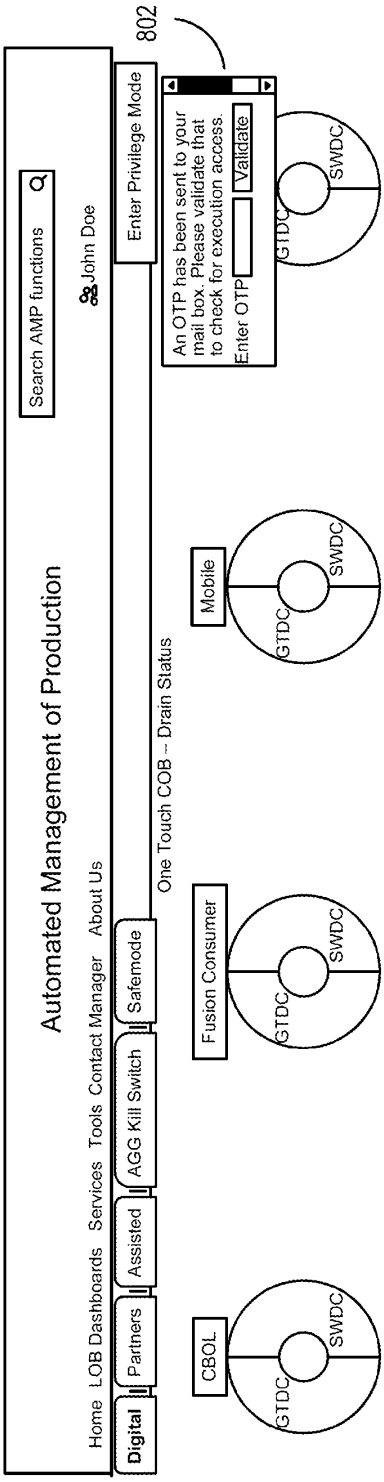

800
802
Automated Management of Production
Search AMP functions
John Doe
Enter Privilege Mode
An OTP has been sent to your mail box. Please validate that to check for execution access.
Enter OTP
Validate
Home
LOB Dashboards
Services
Tools
Contact Manager
About Us
Digital
Partners
Assisted
AGG Kill Switch
Safemode
One Touch COB – Drain Status
CBOL
Fusion Consumer
Mobile
GTDC
SWDC

FIG. 8A

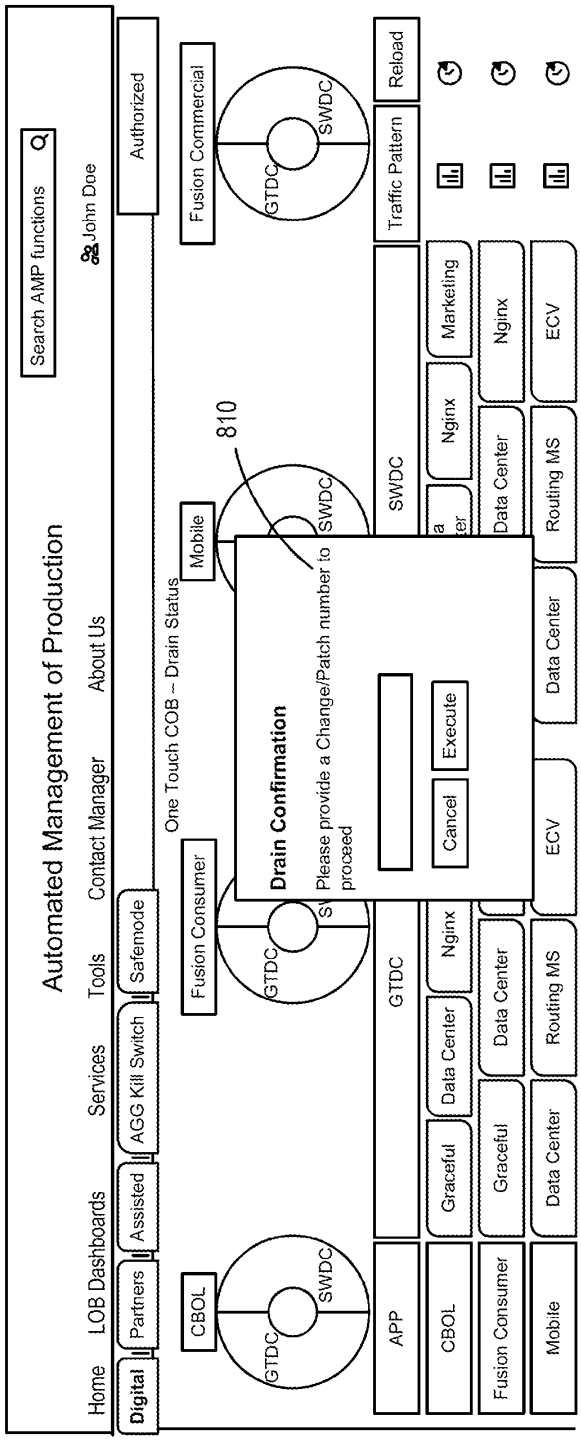

800
Automated Management of Production
Search AMP functions
John Doe
Home
LOB Dashboards
Services
Tools
Contact Manager
About Us
Digital
Partners
Assisted
AGG Kill Switch
Safemode
Authorized
One Touch COB – Drain Status
CBOL
Fusion Consumer
Mobile
Fusion Commercial
GTDC
SWDC
810
Drain Confirmation
Please provide a Change/Patch number to proceed
Cancel
Execute
APP
CBOL
Fusion Consumer
Mobile
Graceful
Data Center
Nginx
Routing MS
ECV
Traffic Pattern
Reload
Marketing

FIG. 8B

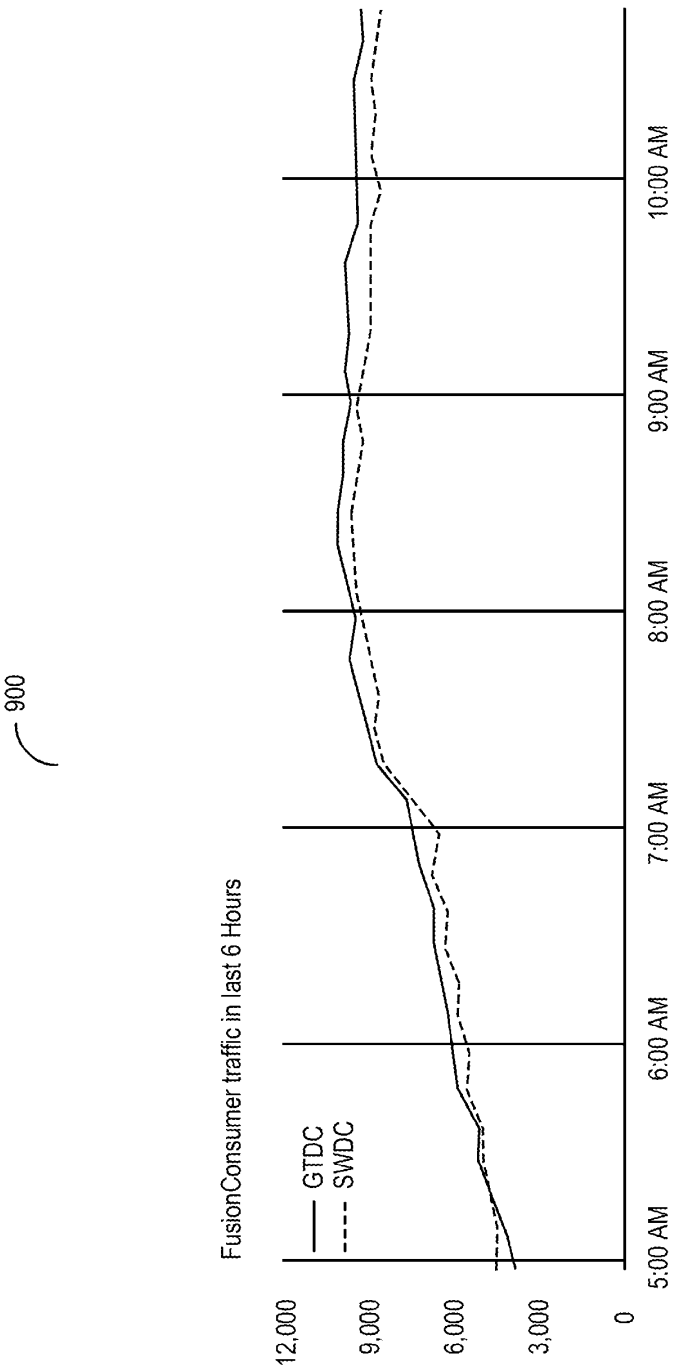

900
FusionConsumer traffic in last 6 Hours
GTDC
SWDC
12,000
9,000
6,000
3,000
0
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM

FIG. 9

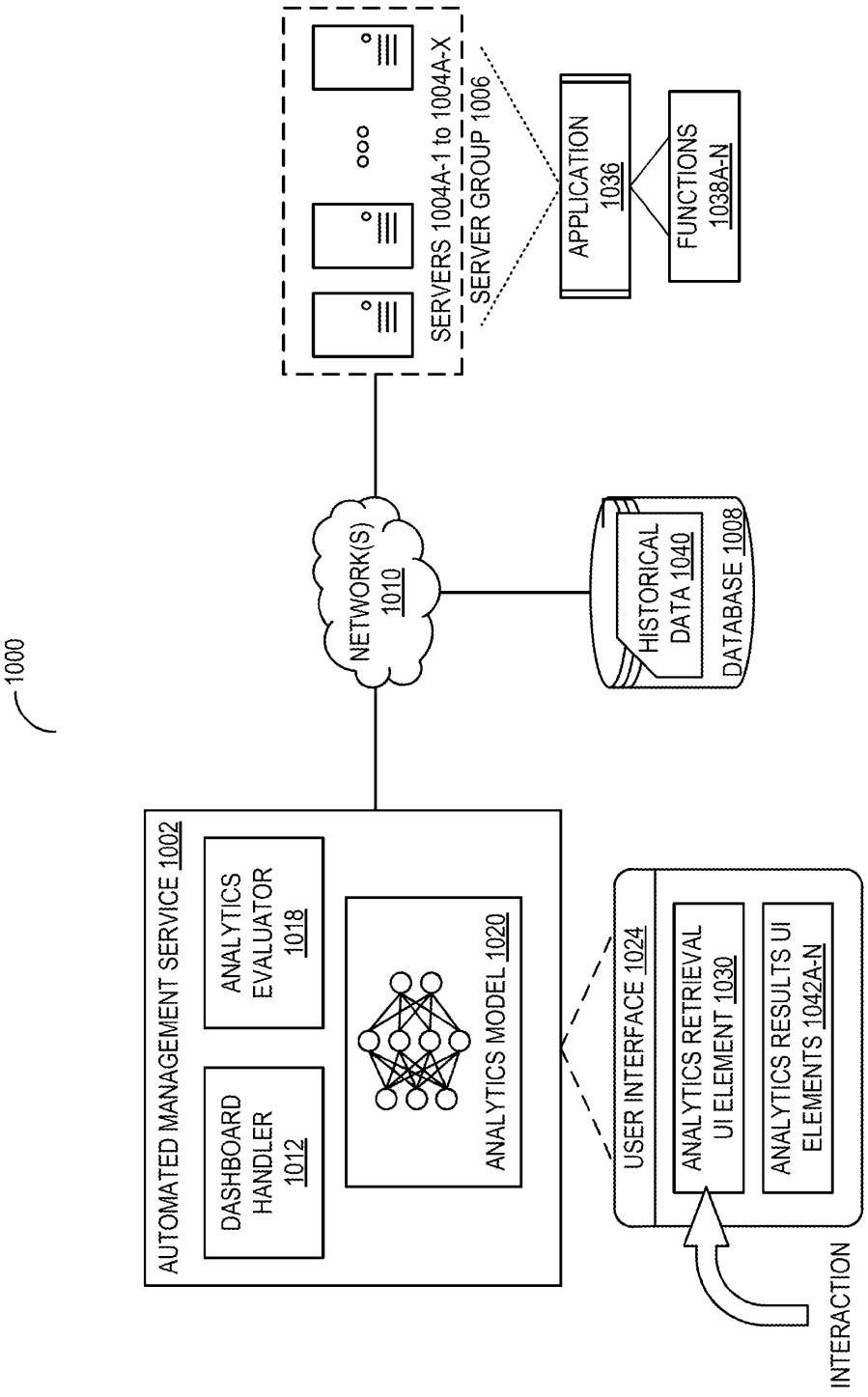

1000
AUTOMATED MANAGEMENT SERVICE 1002
DASHBOARD HANDLER 1012
ANALYTICS EVALUATOR 1018
ANALYTICS MODEL 1020
NETWORK(S) 1010
HISTORICAL DATA 1040
DATABASE 1008
SERVERS 1004A-1 to 1004A-X
SERVER GROUP 1006
APPLICATION 1036
FUNCTIONS 1038A-N
USER INTERFACE 1024
ANALYTICS RETRIEVAL UI ELEMENT 1030
ANALYTICS RESULTS UI ELEMENTS 1042A-N
INTERACTION

FIG. 10

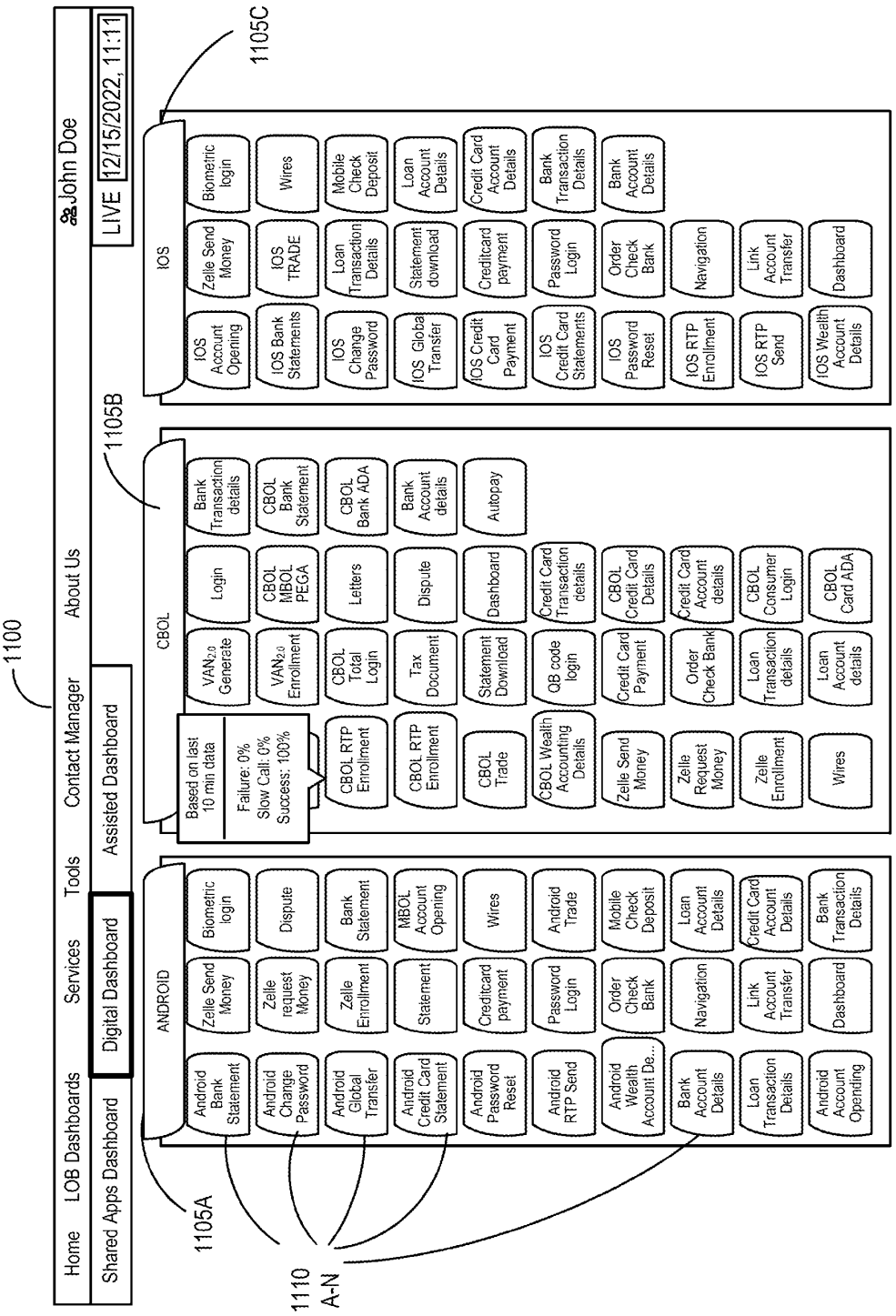

1100
Home
LOB Dashboards
Services
Tools
Contact Manager
About Us
John Doe
Shared Apps Dashboard
Digital Dashboard
Assisted Dashboard
LIVE 12/15/2022, 11:11
1105A
1105B
1105C
1110 A-N
ANDROID
Android Bank Statement
Android Change Password
Android Global Transfer
Android Credit Card Statement
Android Password Reset
Android RTP Send
Android Wealth Account De...
Bank Account Details
Loan Transaction Details
Android Account Opending
Zelle Send Money
Zelle request Money
Zelle Enrollment
Statement
Creditcard payment
Password Login
Order Check Bank
Navigation
Link Account Transfer
Dashboard
Biometric login
Dispute
Bank Statement
MBOL Account Opening
Wires
Android Trade
Mobile Check Deposit
Loan Account Details
Credit Card Account Details
Bank Transaction Details
CBOL
Based on last 10 min data
Failure: 0%
Slow Call: 0%
Success: 100%
VAN2.0 Generate
VAN2.0 Enrollment
CBOL Total Login
Tax Document
Statement Download
QB code login
Credit Card Payment
Order Check Bank
Loan Transaction details
Loan Account details
Login
CBOL MBOL PEGA
Letters
Dispute
Dashboard
Credit Card Transaction details
CBOL Credit Card Details
Credit Card Account details
CBOL Consumer Login
CBOL Card ADA
Bank Transaction details
CBOL Bank Statement
CBOL Bank ADA
Bank Account details
Autopay
CBOL RTP Enrollment
CBOL RTP Enrollment
CBOL Trade
CBOL Wealth Accounting Details
Zelle Send Money
Zelle Request Money
Zelle Enrollment
Wires
IOS
IOS Account Opening
IOS Bank Statements
IOS Change Password
IOS Global Transfer
IOS Credit Card Payment
IOS Credit Card Statements
IOS Password Reset
IOS RTP Enrollment
IOS RTP Send
IOS Wealth Account Details
Zelle Send Money
IOS TRADE
Loan Transaction Details
Statement download
Creditcard payment
Password Login
Order Check Bank
Navigation
Link Account Transfer
Dashboard
Biometric login
Wires
Mobile Check Deposit
Loan Account Details
Credit Card Account Details
Bank Transaction Details
Bank Account Details

FIG. 11

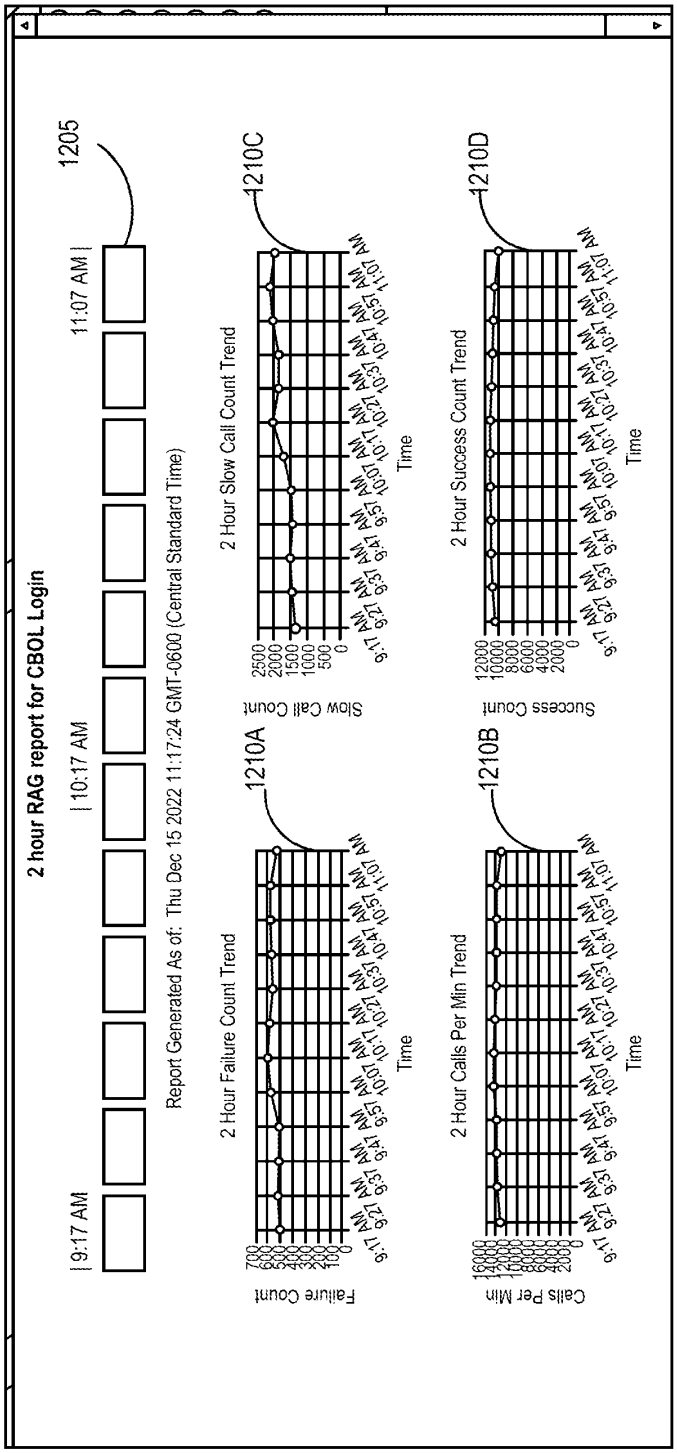

1200
2 hour RAG report for CBOL Login
9:17 AM
10:17 AM
11:07 AM
1205
Report Generated As of: Thu Dec 15 2022 11:17:24 GMT-0600 (Central Standard Time)
1210A
2 Hour Failure Count Trend
Failure Count
Time
1210B
2 Hour Calls Per Min Trend
Calls Per Min
Time
1210C
2 Hour Slow Call Count Trend
Slow Call Count
Time
1210D
2 Hour Success Count Trend
Success Count
Time

FIG. 12

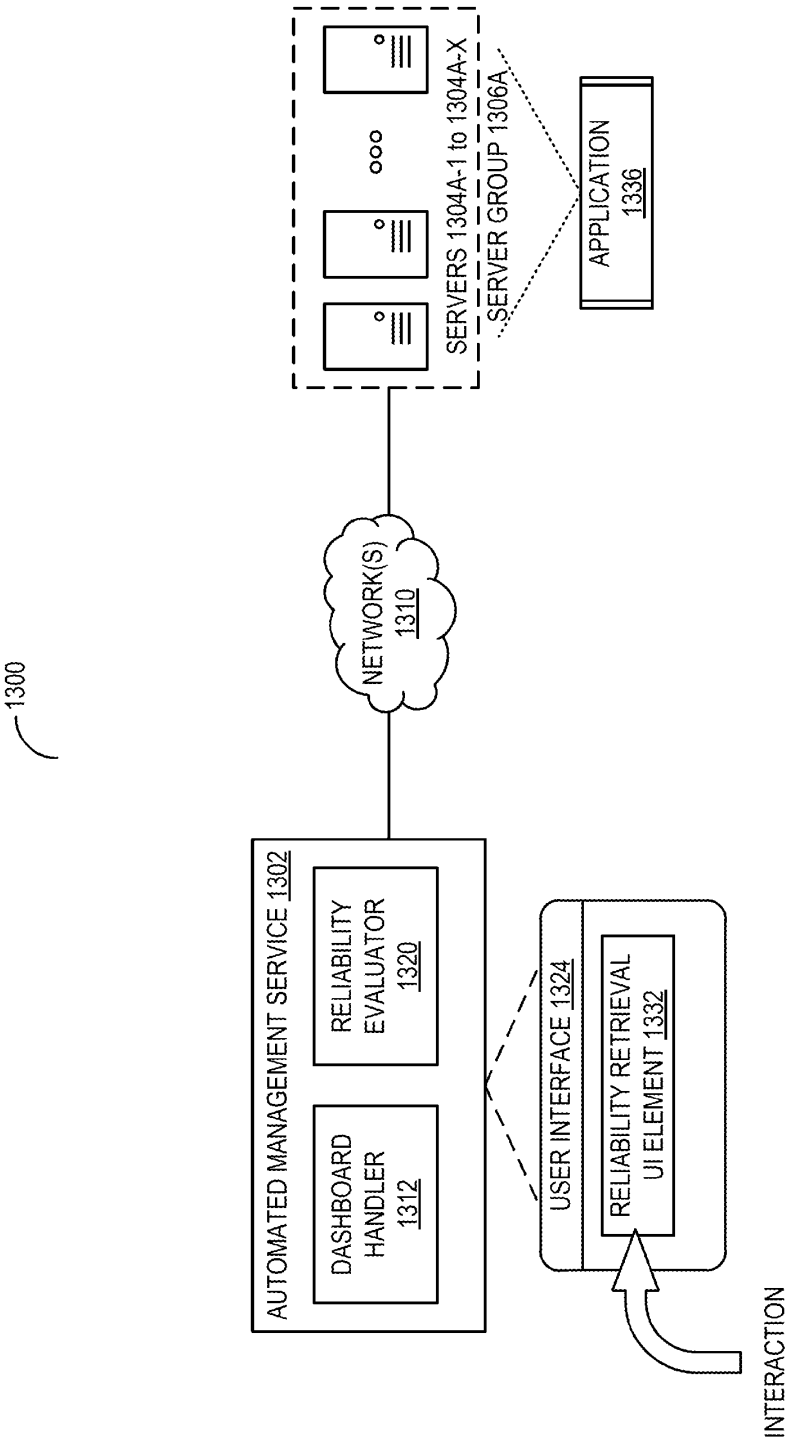

1300
SERVERS 1304A-1 to 1304A-X
SERVER GROUP 1306A
APPLICATION 1336
NETWORK(S) 1310
AUTOMATED MANAGEMENT SERVICE 1302
DASHBOARD HANDLER 1312
RELIABILITY EVALUATOR 1320
USER INTERFACE 1324
RELIABILITY RETRIEVAL UI ELEMENT 1332
INTERACTION

FIG. 13

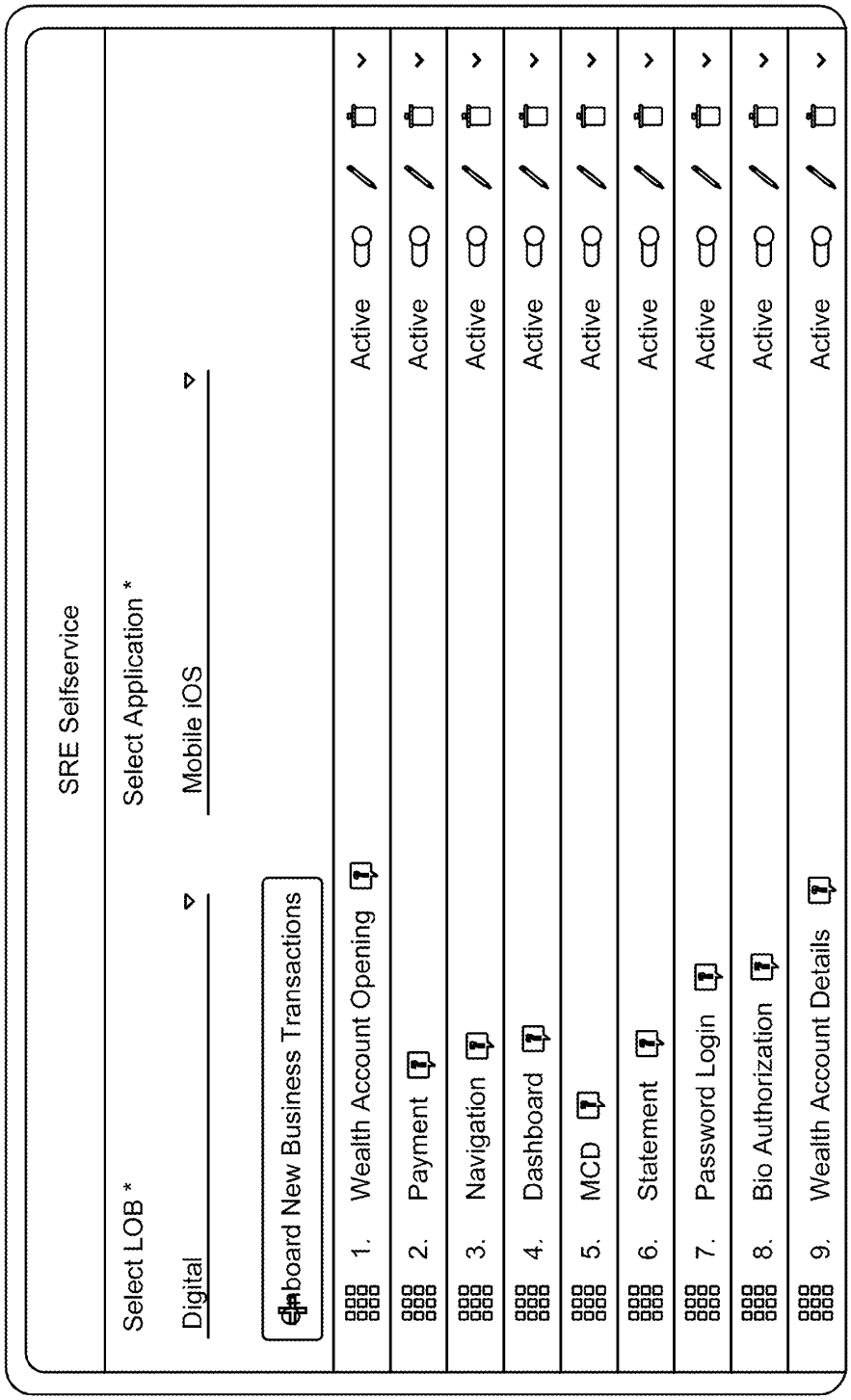
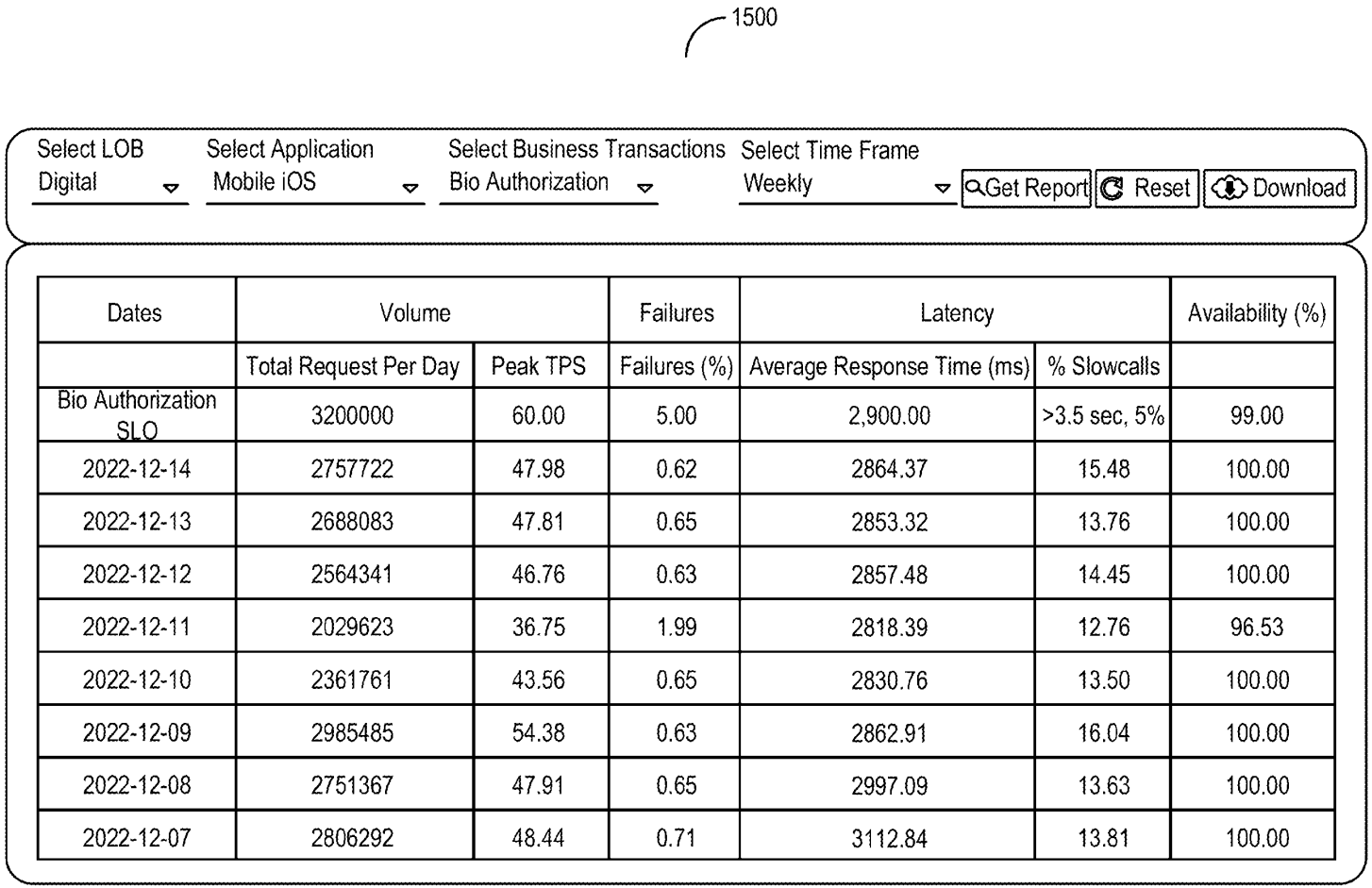
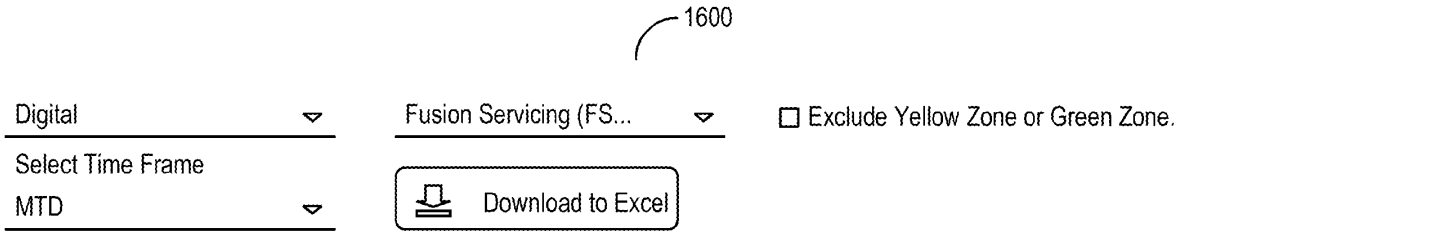

1400
SRE Selfservice
Select LOB *
Digital
Select Application *
Mobile iOS
Onboard New Business Transactions
1. Wealth Account Opening
Active
2. Payment
Active
3. Navigation
Active
4. Dashboard
Active
5. MCD
Active
6. Statement
Active
7. Password Login
Active
8. Bio Authorization
Active
9. Wealth Account Details
Active

FIG. 14



Dates	Volume		Failures	Latency		Availability (%)
	Total Request Per Day	Peak TPS	Failures (%)	Average Response Time (ms)	% Slowcalls	
Bio Authorization SLO	3200000	60.00	5.00	2,900.00	>3.5 sec, 5%	99.00
2022-12-14	2757722	47.98	0.62	2864.37	15.48	100.00
2022-12-13	2688083	47.81	0.65	2853.32	13.76	100.00
2022-12-12	2564341	46.76	0.63	2857.48	14.45	100.00
2022-12-11	2029623	36.75	1.99	2818.39	12.76	96.53
2022-12-10	2361761	43.56	0.65	2830.76	13.50	100.00
2022-12-09	2985485	54.38	0.63	2862.91	16.04	100.00
2022-12-08	2751367	47.91	0.65	2997.09	13.63	100.00
2022-12-07	2806292	48.44	0.71	3112.84	13.81	100.00

FIG. 15



Journey	Failures			Availability			% Slowcalls		
Policy	Monthly Slo	Current Runrate	Failure Budget	Monthly Slo	Current Runrate	Availability Budget	Monthly Slo	Current Runrate	Slowcalls Budget
Login	1%	0.02%	0.98% Δ	99%	100%	1% Δ	>1.3 secs, 3%	0.83%	2.17% Δ
Payment	0.75%	0.17%	0.58% Δ	99%	100%	1% Δ	>1.4 secs, 3%	2.67%	0.33% Δ
Statement	1%	0.05%	0.95% Δ	99%	100%	1% Δ	>10 secs, 5%	0.21%	4.79% Δ
Registration	2%	0.7%	1.3% Δ	99%	100%	1% Δ	>3.6 secs, 4%	8.06%	-4.06% ▽
SSO Login	1%	0.45%	0.55% Δ	99%	100%	1% Δ	>1.3 secs, 3%	0.72%	2.28% Δ

FIG. 16

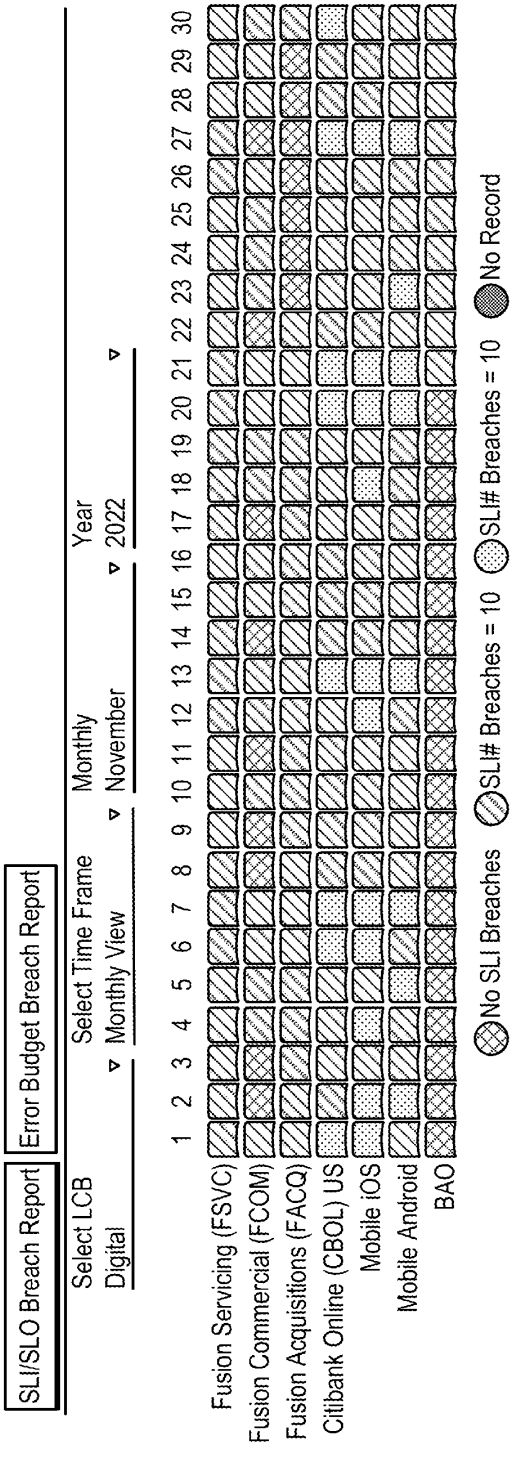

1700
SLI/SLO Breach Report
Error Budget Breach Report
Select LCB
Digital
Select Time Frame
Monthly View
Monthly
November
Year
2022
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Fusion Servicing (FSVC)
Fusion Commercial (FCOM)
Fusion Acquisitions (FACQ)
Citibank Online (CBOL) US
Mobile iOS
Mobile Android
BAO
No SLI Breaches
SLI# Breaches = 10
SLI# Breaches = 10
No Record

FIG. 17

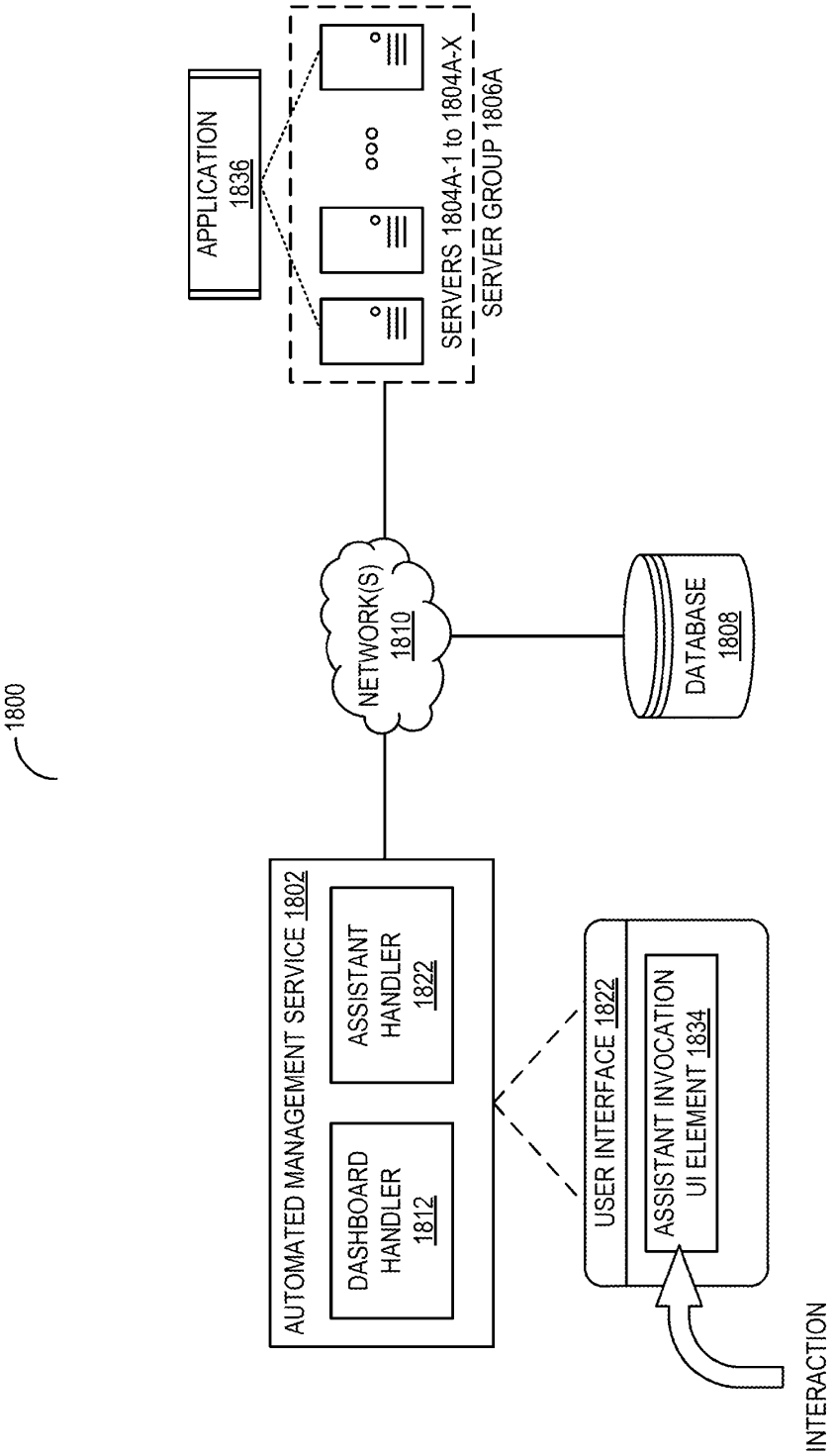

1800
APPLICATION 1836
SERVERS 1804A-1 to 1804A-X
SERVER GROUP 1806A
NETWORK(S) 1810
DATABASE 1808
AUTOMATED MANAGEMENT SERVICE 1802
ASSISTANT HANDLER 1822
DASHBOARD HANDLER 1812
USER INTERFACE 1822
ASSISTANT INVOCATION UI ELEMENT 1834
INTERACTION

FIG. 18

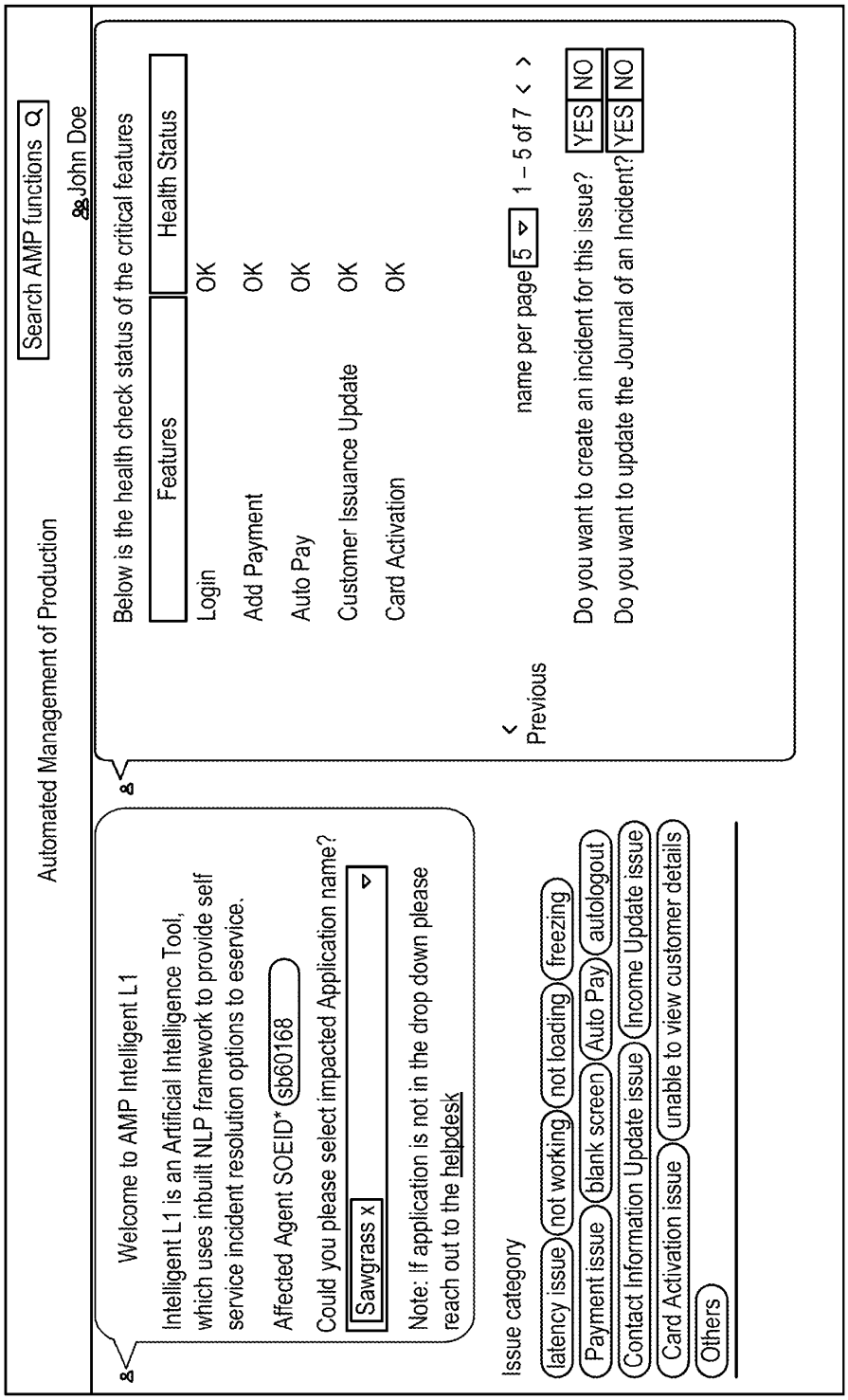

1900
Automated Management of Production
Search AMP functions
John Doe
Welcome to AMP Intelligent L1
Intelligent L1 is an Artificial Intelligence Tool, which uses inbuilt NLP framework to provide self service incident resolution options to eservice.
Affected Agent SOEID* sb60168
Could you please select impacted Application name?
Sawgrass x
Note: If application is not in the drop down please reach out to the helpdesk
Issue category
latency issue
not working
not loading
freezing
Payment issue
blank screen
Auto Pay
autologout
Contact Information Update issue
Income Update issue
Card Activation issue
unable to view customer details
Others
Below is the health check status of the critical features
Features
Health Status
Login
OK
Add Payment
OK
Auto Pay
OK
Customer Issuance Update
OK
Card Activation
OK
Previous
name per page 5
1 – 5 of 7
Do you want to create an incident for this issue?
YES
NO
Do you want to update the Journal of an Incident?
YES
NO

FIG. 19

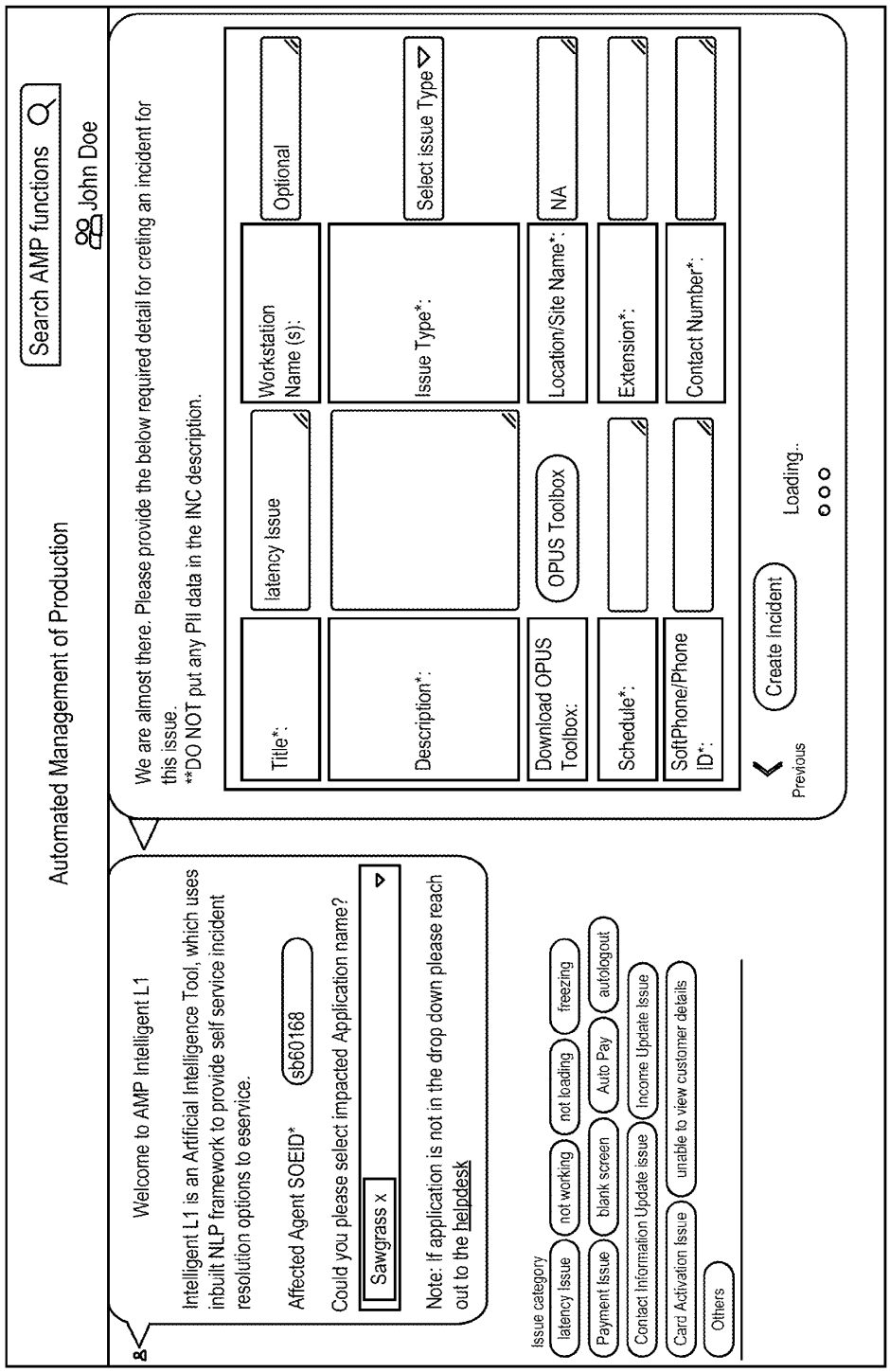

2000
Automated Management of Production
Search AMP functions
John Doe
Welcome to AMP Intelligent L1
Intelligent L1 is an Artificial Intelligence Tool, which uses inbuilt NLP framework to provide self service incident resolution options to eservice.
Affected Agent SOEID*
sb60168
Could you please select impacted Application name?
Sawgrass x
Note: If application is not in the drop down please reach out to the helpdesk
Issue category
latency Issue
not working
not loading
freezing
Payment Issue
blank screen
Auto Pay
autologout
Contact Information Update issue
Income Update Issue
Card Activation Issue
unable to view customer details
Others
We are almost there. Please provide the below required detail for creting an incident for this issue.
**DO NOT put any PII data in the INC description.
Title*:
latency Issue
Workstation Name (s):
Optional
Description*:
Issue Type*:
Select issue Type
Download OPUS Toolbox:
OPUS Toolbox
Location/Site Name*:
NA
Schedule*:
Extension*:
SoftPhone/Phone ID*:
Contact Number*:
Previous
Create Incident
Loading..

FIG. 20

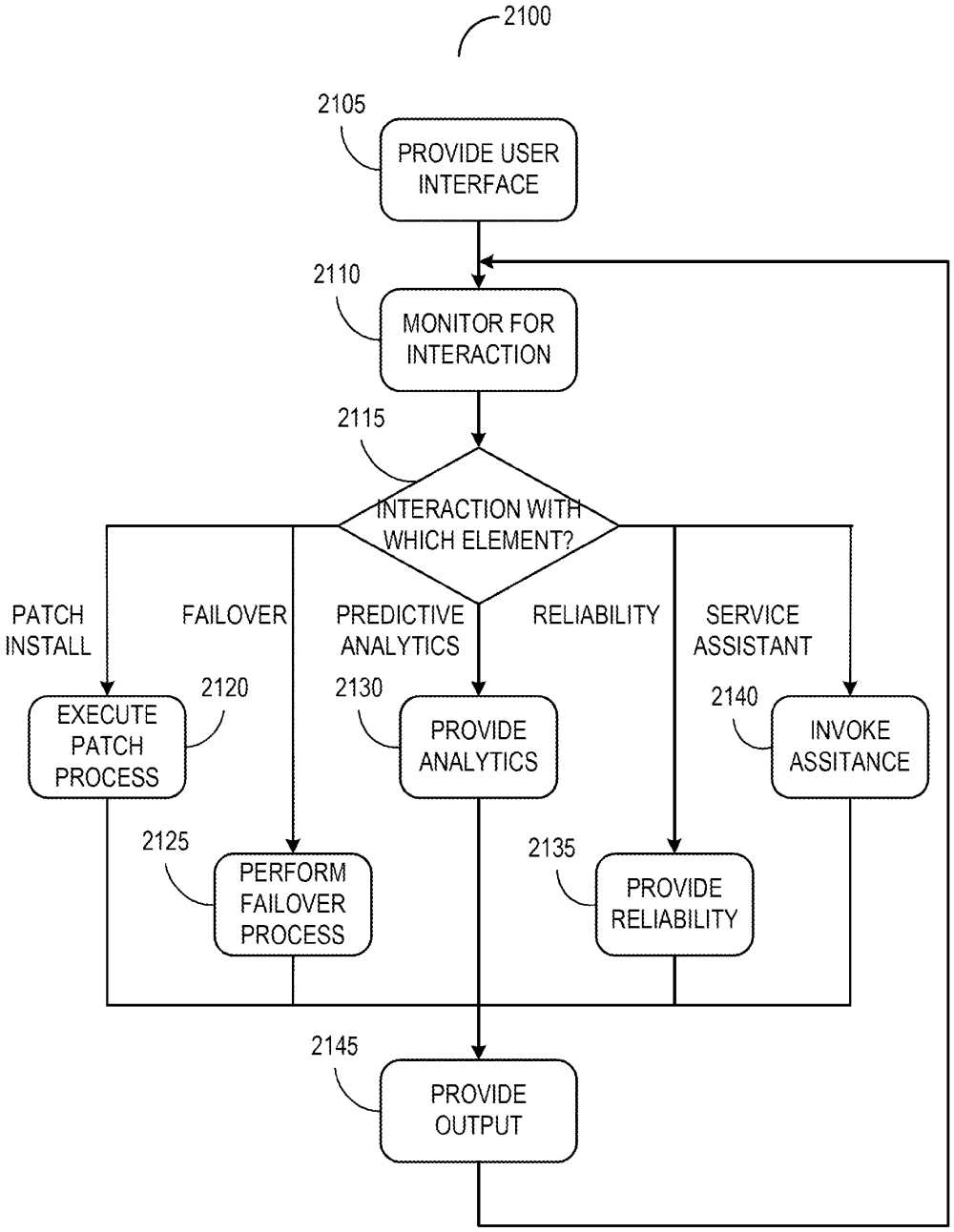

2100
2105
PROVIDE USER INTERFACE
2110
MONITOR FOR INTERACTION
2115
INTERACTION WITH WHICH ELEMENT?
PATCH INSTALL
FAILOVER
PREDICTIVE ANALYTICS
RELIABILITY
SERVICE ASSISTANT
2120
EXECUTE PATCH PROCESS
2125
PERFORM FAILOVER PROCESS
2130
PROVIDE ANALYTICS
2135
PROVIDE RELIABILITY
2140
INVOKE ASSITANCE
2145
PROVIDE OUTPUT

FIG. 21

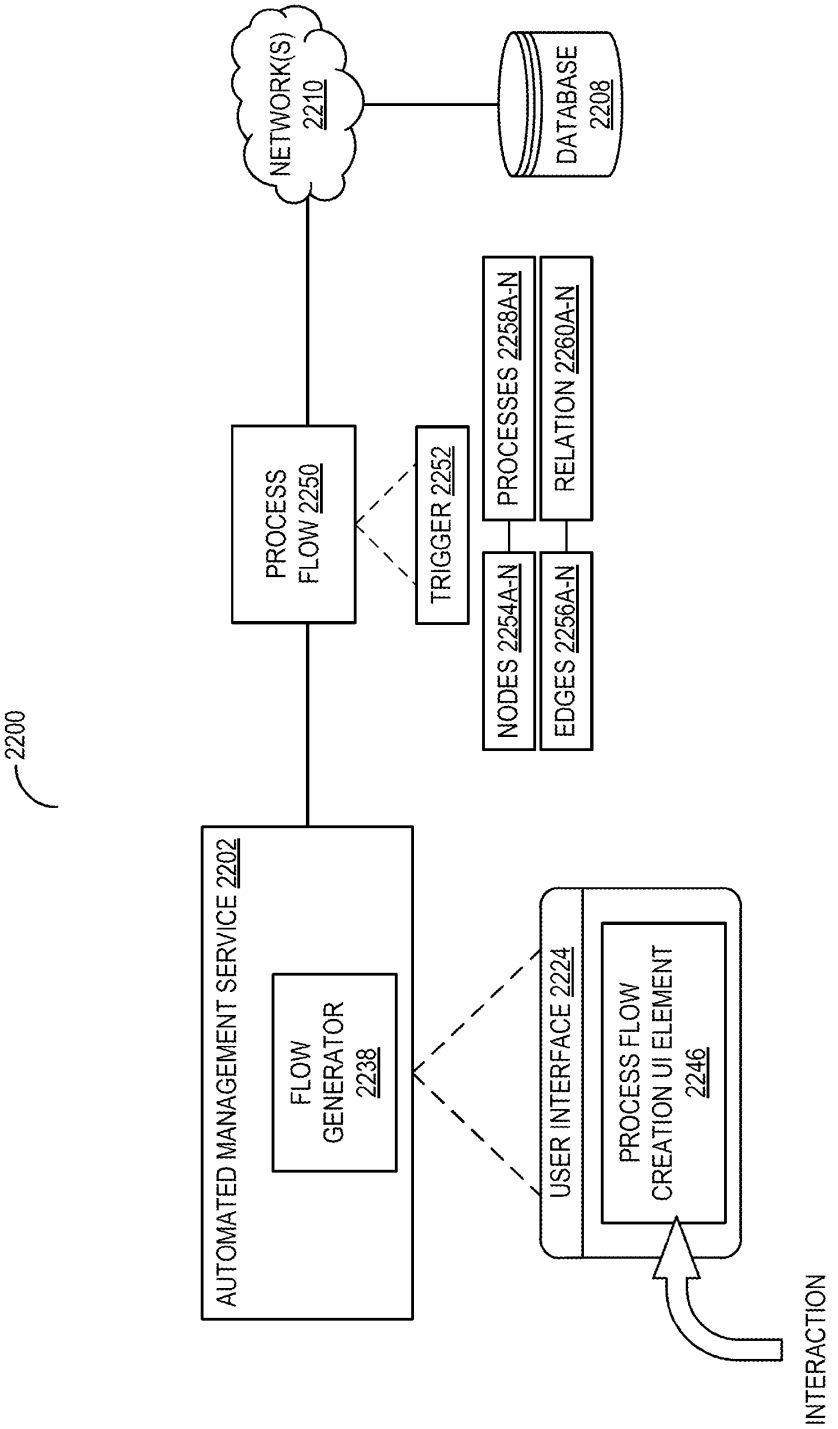

2200
NETWORK(S) 2210
DATABASE 2208
PROCESS FLOW 2250
TRIGGER 2252
PROCESSES 2258A-N
RELATION 2260A-N
NODES 2254A-N
EDGES 2256A-N
AUTOMATED MANAGEMENT SERVICE 2202
FLOW GENERATOR 2238
USER INTERFACE 2224
PROCESS FLOW CREATION UI ELEMENT 2246
INTERACTION

FIG. 22

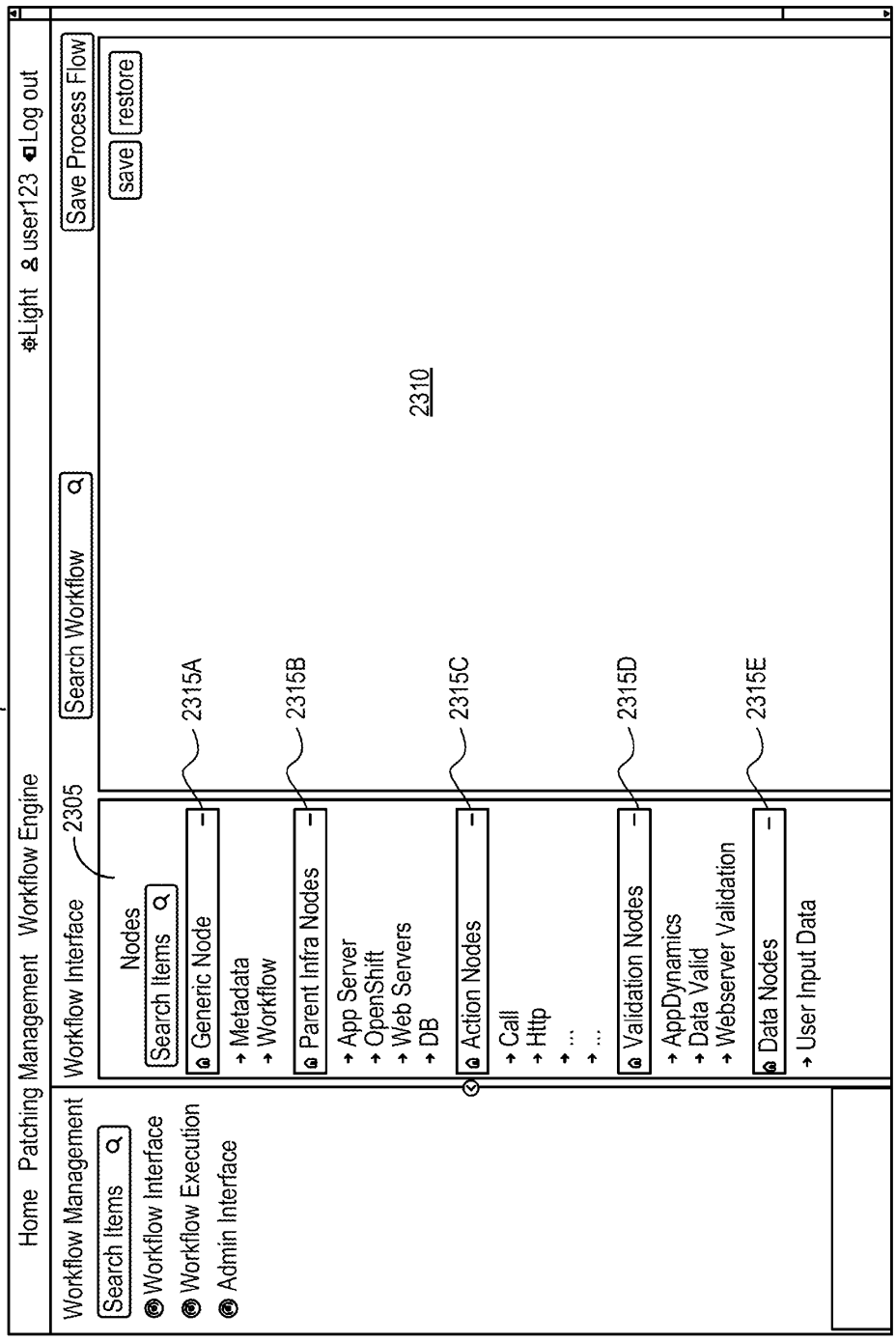

2300A
Home Patching Management Workflow Engine
Light user123 Log out
Workflow Management
Search Items
Workflow Interface
Workflow Execution
Admin Interface
Workflow Interface
2305
Search Workflow
Save Process Flow
save
restore
Nodes
Search Items
Generic Node
Metadata
Workflow
Parent Infra Nodes
App Server
OpenShift
Web Servers
DB
Action Nodes
Call
Http
...
...
Validation Nodes
AppDynamics
Data Valid
Webserver Validation
Data Nodes
User Input Data
2315A
2315B
2315C
2315D
2315E
2310

FIG. 23A

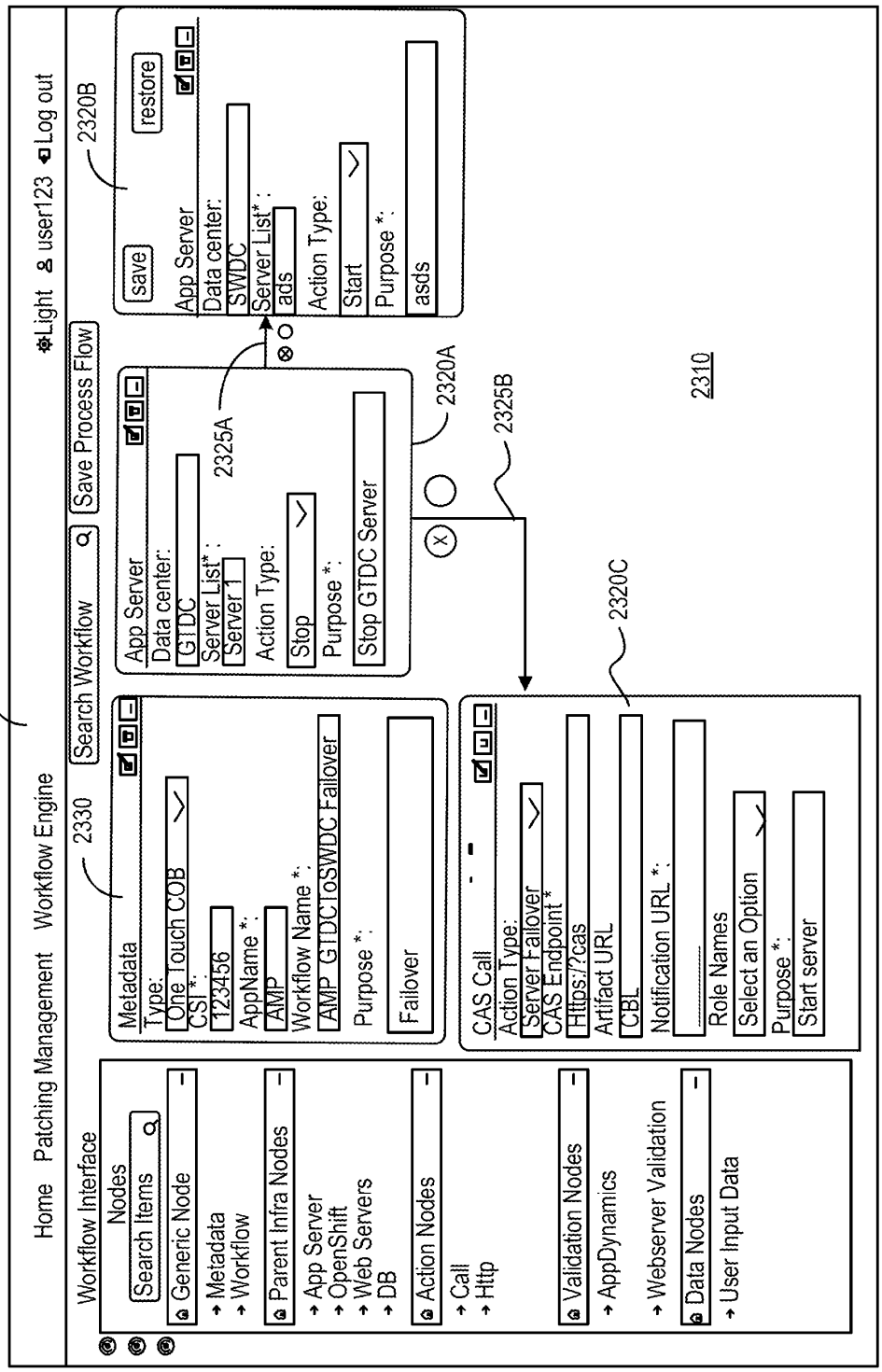

2300
Home Patching Management Workflow Engine
Light user123 Log out
Workflow Interface
Nodes
Search Items
Generic Node
Metadata
Workflow
Parent Infra Nodes
App Server
OpenShift
Web Servers
DB
Action Nodes
Call
Http
Validation Nodes
AppDynamics
Webserver Validation
Data Nodes
User Input Data
Search Workflow
Save Process Flow
2330
Metadata
Type:
One Touch COB
CSI *:
123456
AppName *:
AMP
Workflow Name *:
AMP_GTDCToSWDC Failover
Purpose *:
Failover
App Server
Data center:
GTDC
Server List* :
Server 1
Action Type:
Stop
Purpose *:
Stop GTDC Server
2325A
2320A
2325B
2320B
save
restore
App Server
Data center:
SWDC
Server List* :
ads
Action Type:
Start
Purpose *:
asds
CAS Call
Action Type:
Server Failover
CAS Endpoint *
Https://?cas
Artifact URL
CBL
Notification URL *:
Role Names
Select an Option
Purpose *:
Start server
2320C
2310

FIG. 23B

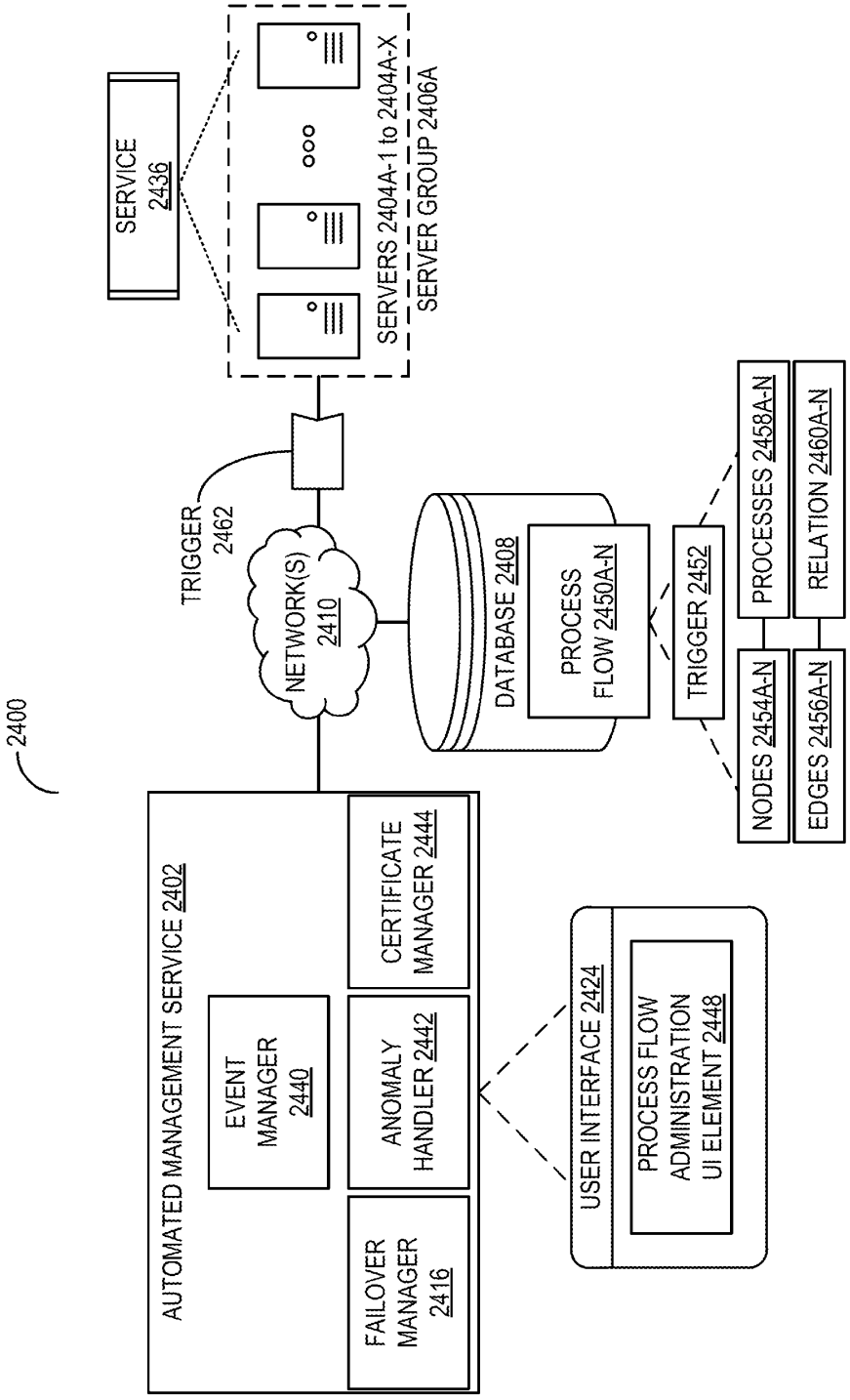

2400
SERVICE 2436
SERVERS 2404A-1 to 2404A-X
SERVER GROUP 2406A
TRIGGER 2462
NETWORK(S) 2410
DATABASE 2408
PROCESS FLOW 2450A-N
TRIGGER 2452
PROCESSES 2458A-N
RELATION 2460A-N
NODES 2454A-N
EDGES 2456A-N
AUTOMATED MANAGEMENT SERVICE 2402
EVENT MANAGER 2440
ANOMALY HANDLER 2442
CERTIFICATE MANAGER 2444
FAILOVER MANAGER 2416
USER INTERFACE 2424
PROCESS FLOW ADMINISTRATION UI ELEMENT 2448

FIG. 24

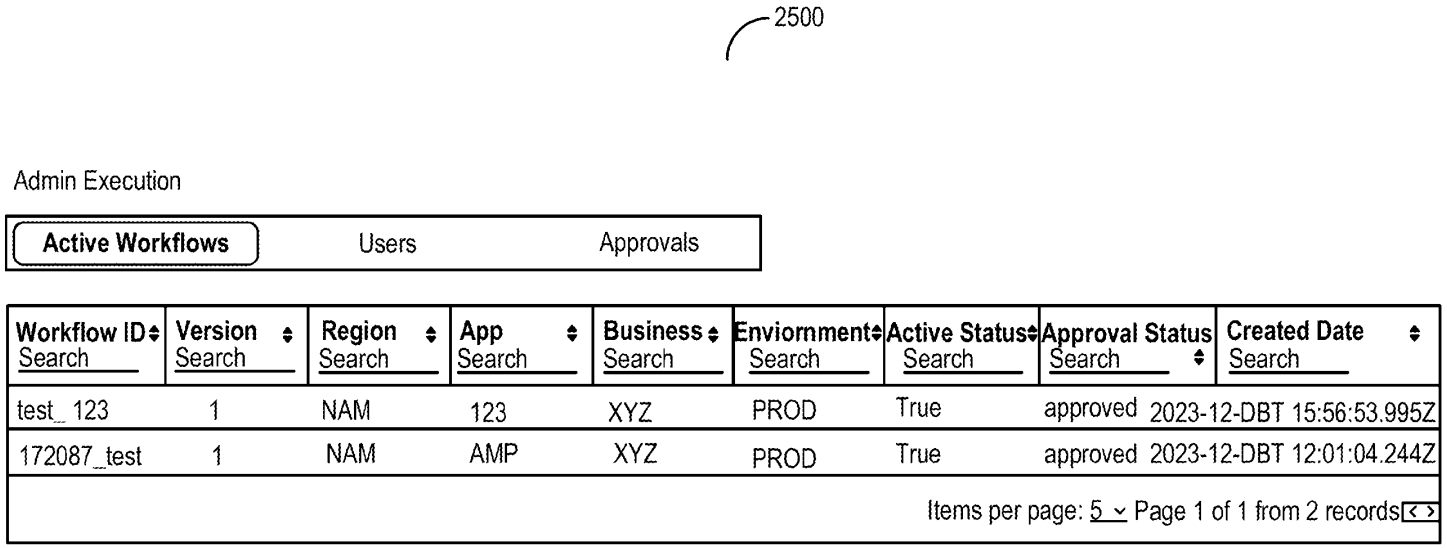

2500
Admin Execution
Active Workflows
Users
Approvals
Workflow ID
Search
Version
Search
Region
Search
App
Search
Business
Search
Enviornment
Search
Active Status
Search
Approval Status
Search
Created Date
Search
test_ 123
1
NAM
123
XYZ
PROD
True
approved
2023-12-DBT 15:56:53.995Z
172087_test
1
NAM
AMP
XYZ
PROD
True
approved
2023-12-DBT 12:01:04.244Z
Items per page: 5
Page 1 of 1 from 2 records

FIG. 25A

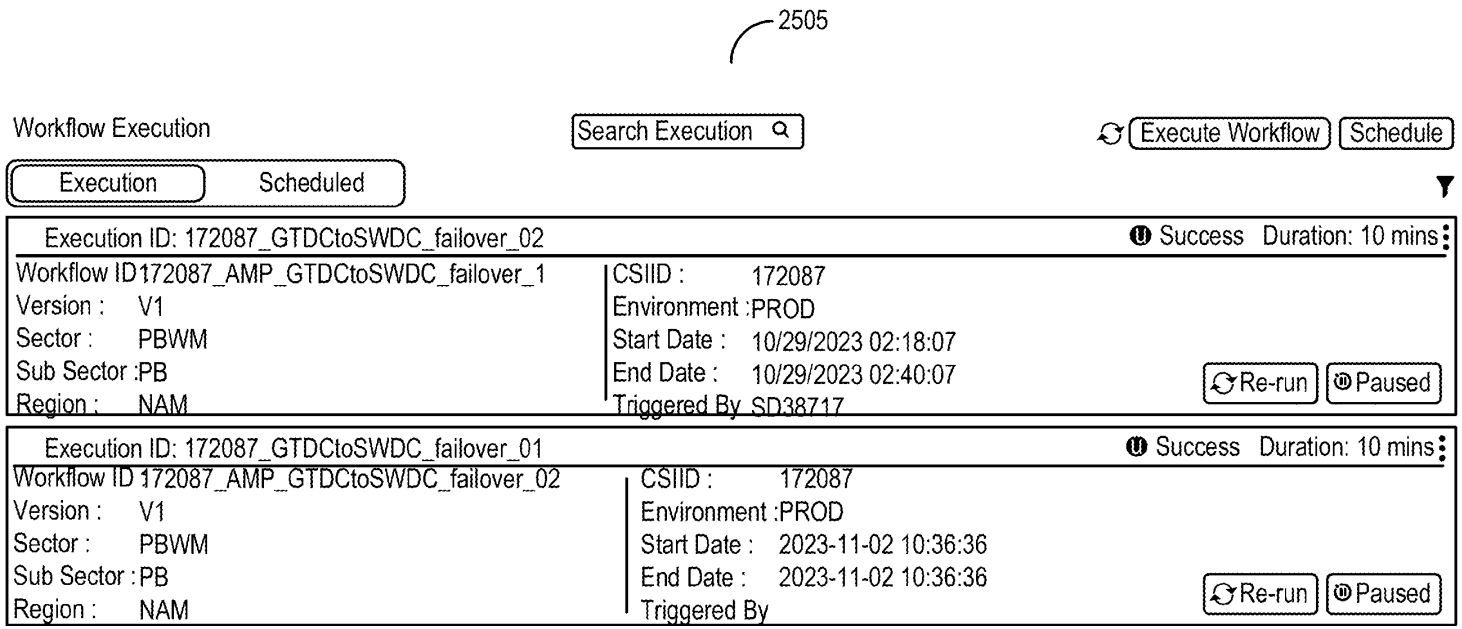

2505
Workflow Execution
Search Execution
Execute Workflow
Schedule
Execution
Scheduled
Execution ID: 172087_GTDCtoSWDC_failover_02
Success
Duration: 10 mins
Workflow ID 172087_AMP_GTDCtoSWDC_failover_1
Version : V1
Sector : PBWM
Sub Sector : PB
Region : NAM
CSIID : 172087
Environment : PROD
Start Date : 10/29/2023 02:18:07
End Date : 10/29/2023 02:40:07
Triggered By SD38717
Re-run
Paused
Execution ID: 172087_GTDCtoSWDC_failover_01
Success
Duration: 10 mins
Workflow ID 172087_AMP_GTDCtoSWDC_failover_02
Version : V1
Sector : PBWM
Sub Sector : PB
Region : NAM
CSIID : 172087
Environment : PROD
Start Date : 2023-11-02 10:36:36
End Date : 2023-11-02 10:36:36
Triggered By
Re-run
Paused

FIG. 25B

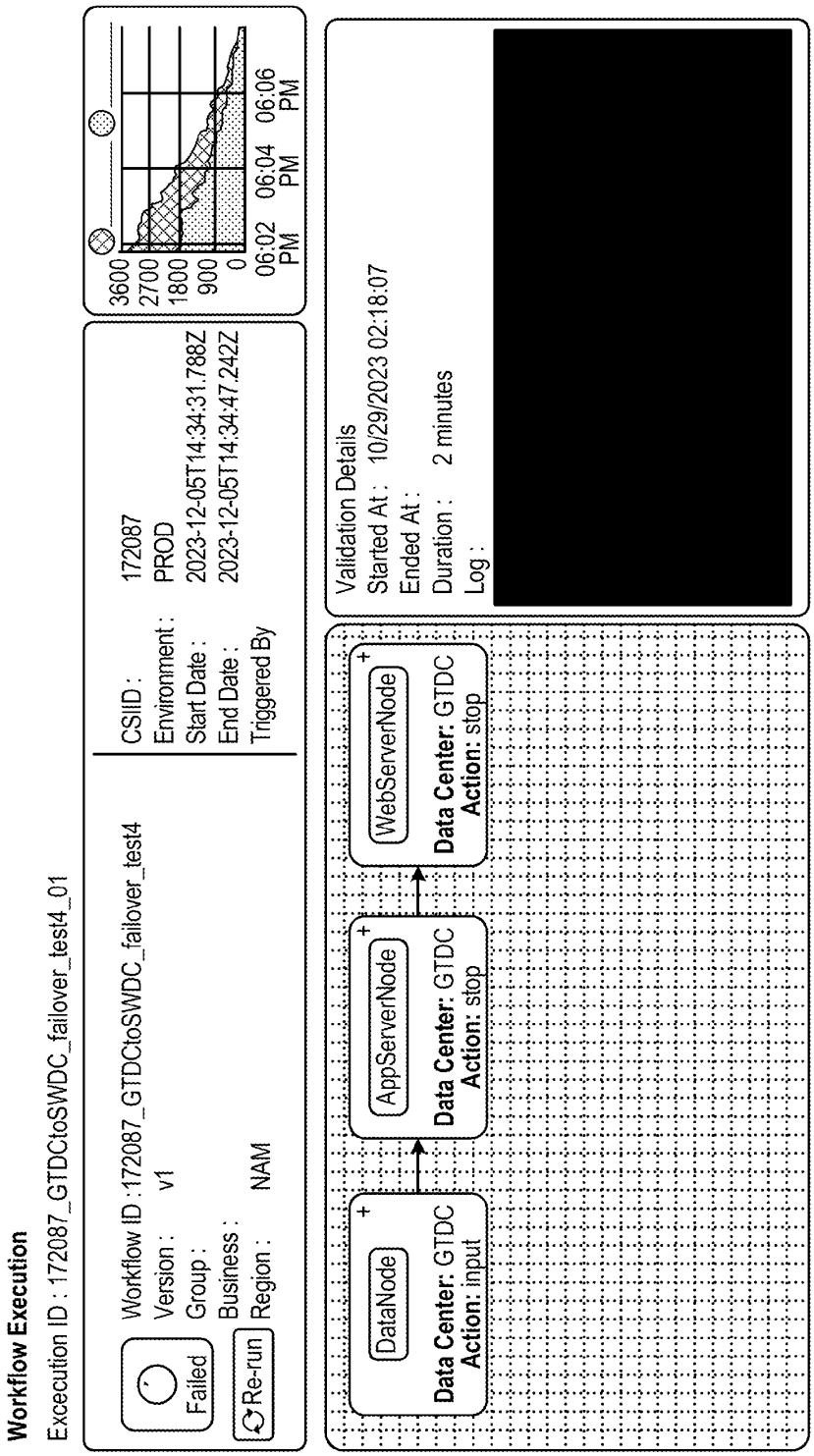

2605
Workflow Execution
Execution ID : 172087_GTDCtoSWDC_failover_test4_01
Failed
Re-run
Workflow ID :172087_GTDCtoSWDC_failover_test4
Version : v1
Group :
Business :
Region : NAM
CSIID : 172087
Environment : PROD
Start Date : 2023-12-05T14:34:31.788Z
End Date : 2023-12-05T14:34:47.242Z
Triggered By
3600
2700
1800
900
0
06:02 PM
06:04 PM
06:06 PM
DataNode
Data Center: GTDC
Action: input
AppServerNode
Data Center: GTDC
Action: stop
WebServerNode
Data Center: GTDC
Action: stop
Validation Details
Started At : 10/29/2023 02:18:07
Ended At :
Duration : 2 minutes
Log :

FIG. 26A

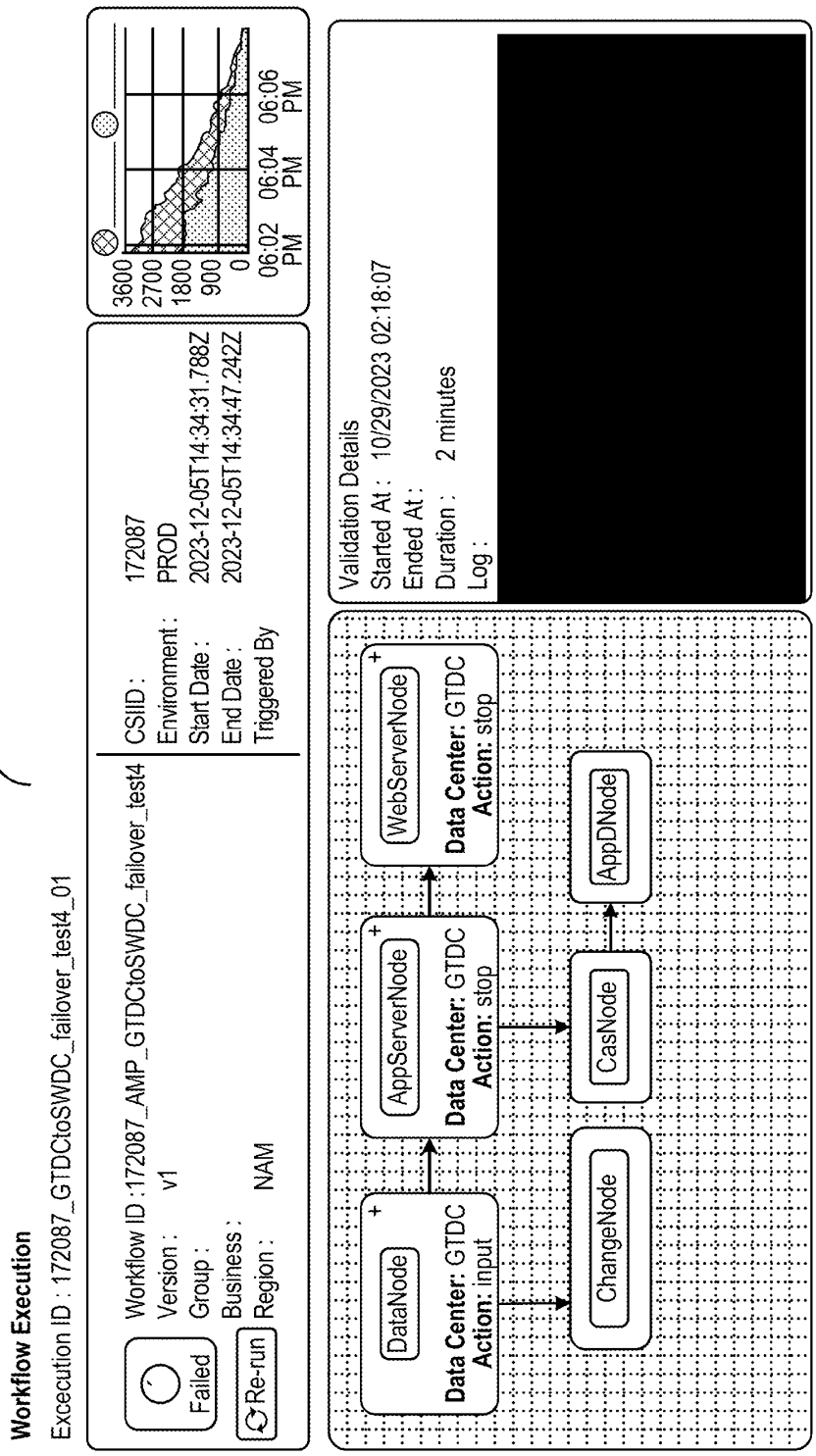

2610
Workflow Execution
Excecution ID : 172087_GTDCtoSWDC_failover_test4_01
Failed
Re-run
Workflow ID :172087_AMP_GTDCtoSWDC_failover_test4
Version : v1
Group :
Business :
Region : NAM
CSIID : 172087
Environment : PROD
Start Date : 2023-12-05T14:34:31.788Z
End Date : 2023-12-05T14:34:47.242Z
Triggered By
3600
2700
1800
900
0
06:02 PM
06:04 PM
06:06 PM
DataNode
Data Center: GTDC
Action: input
AppServerNode
Data Center: GTDC
Action: stop
WebServerNode
Data Center: GTDC
Action: stop
ChangeNode
CasNode
AppDNode
Validation Details
Started At : 10/29/2023 02:18:07
Ended At :
Duration : 2 minutes
Log :

FIG. 26B

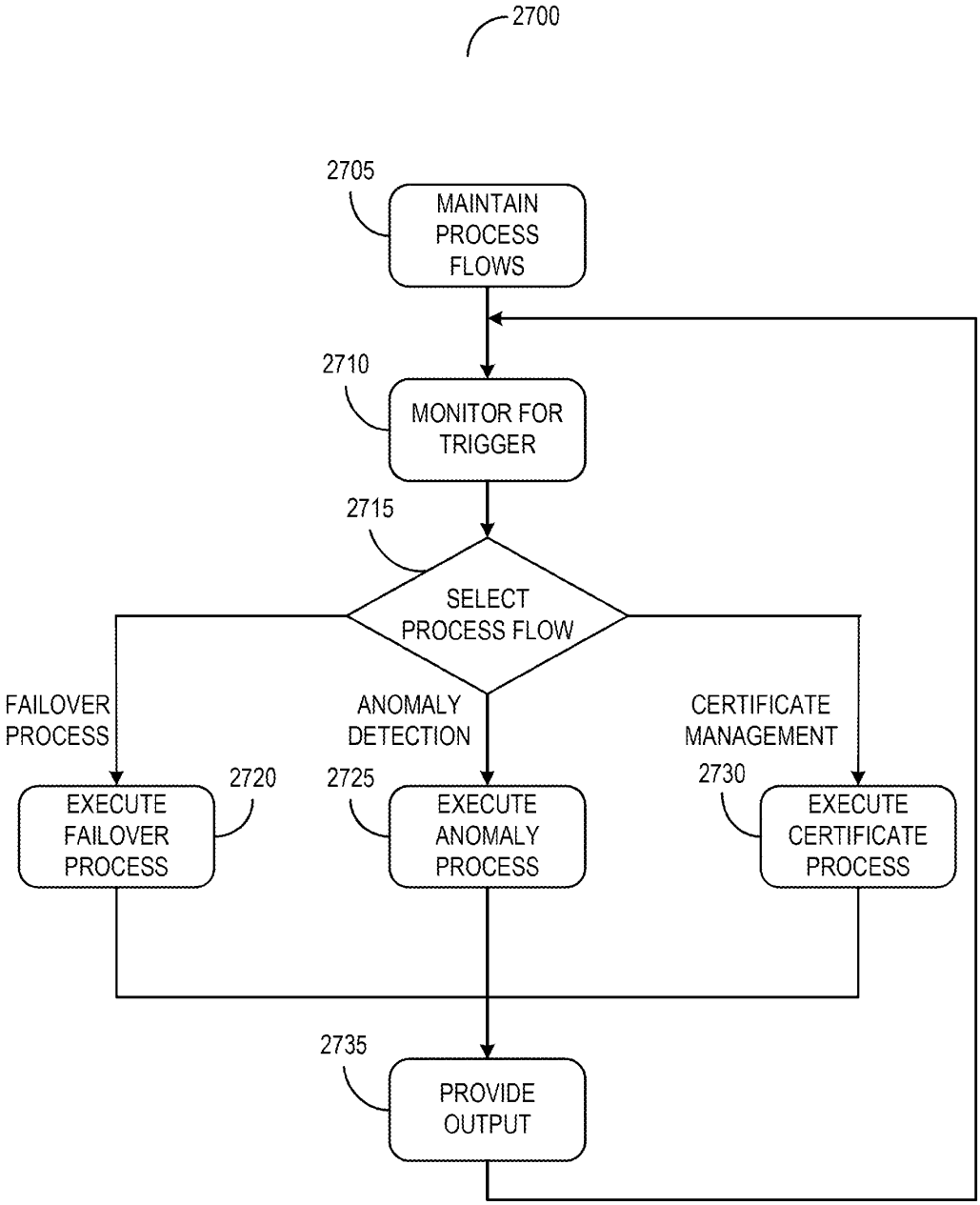

2700
2705
MAINTAIN PROCESS FLOWS
2710
MONITOR FOR TRIGGER
2715
SELECT PROCESS FLOW
FAILOVER PROCESS
ANOMALY DETECTION
CERTIFICATE MANAGEMENT
2720
EXECUTE FAILOVER PROCESS
2725
EXECUTE ANOMALY PROCESS
2730
EXECUTE CERTIFICATE PROCESS
2735
PROVIDE OUTPUT

FIG. 27