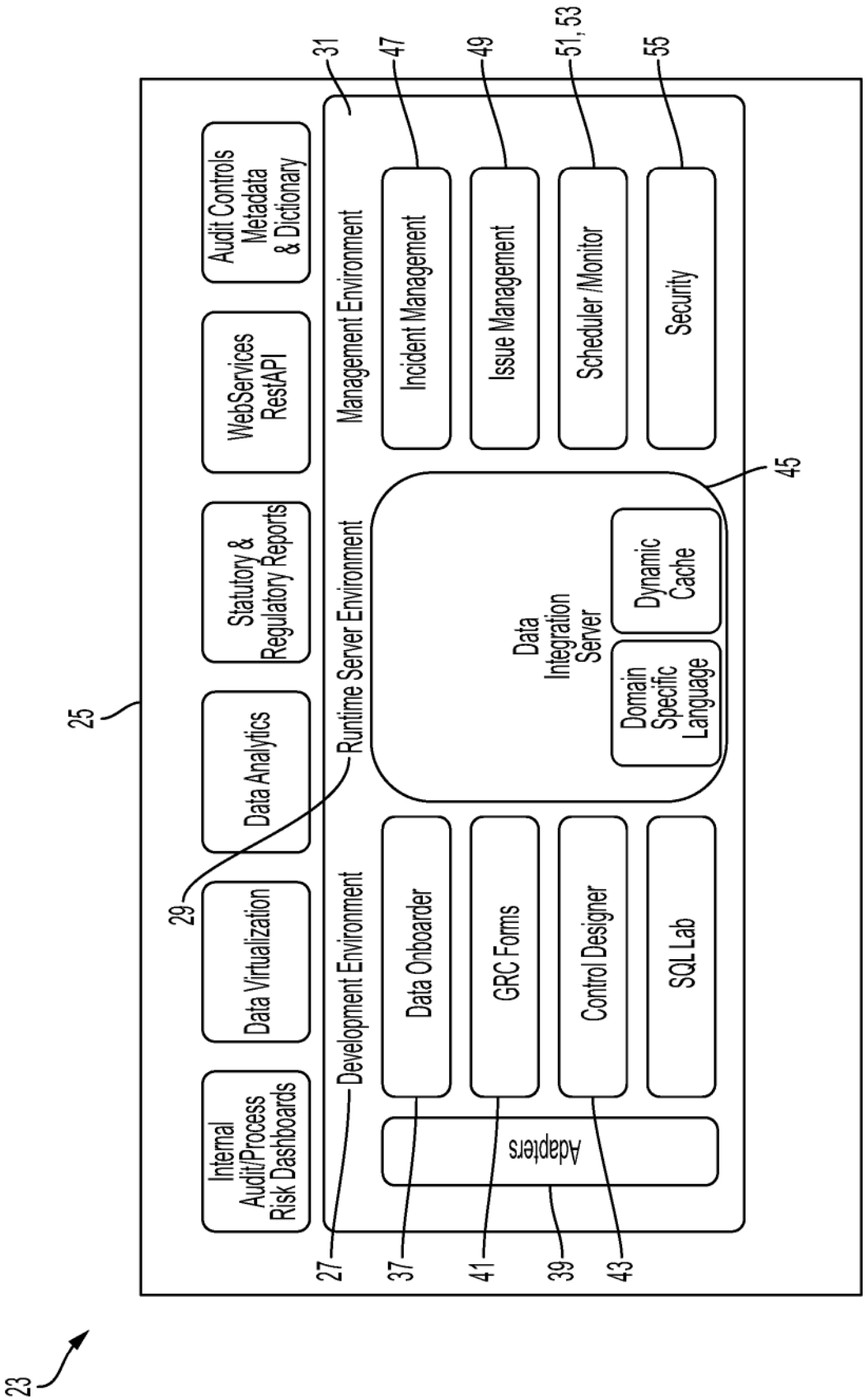

23
25
Internal Audit/Process Risk Dashboards
Data Virtualization
Data Analytics
Statutory & Regulatory Reports
WebServices RestAPI
Audit Controls Metadata & Dictionary
29
Runtime Server Environment
31
Management Environment
Incident Management
Issue Management
Scheduler /Monitor
Security
47
49
51, 53
55
45
Data Integration Server
Dynamic Cache
Domain Specific Language
Development Environment
Data Onboarder
GRC Forms
Control Designer
SQL Lab
Adapters
27
37
41
39
43

FIG. 1

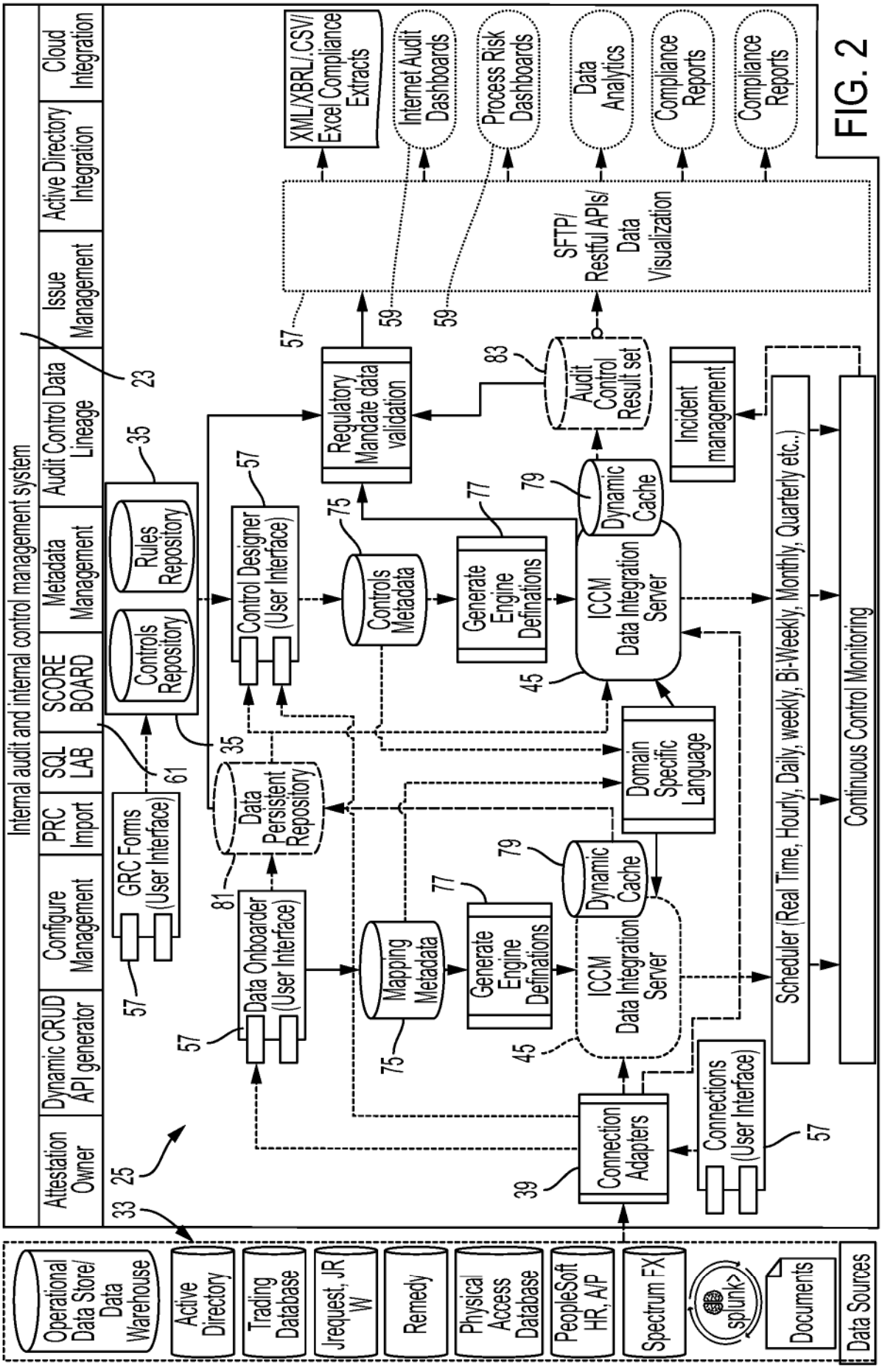

Internal audit and internal control management system
Attestation Owner
Dynamic CRUD API generator
Configure Management
PRC Import
SQL LAB
SCORE BOARD
Metadata Management
Audit Control Data Lineage
Issue Management
Active Directory Integration
Cloud Integration
Data Sources
Operational Data Store/ Data Warehouse
Active Directory
Trading Database
Jrequest, JR W
Remedy
Physical Access Database
PeopleSoft HR, A/P
Spectrum FX
splunk>
Documents
GRC Forms (User Interface)
Data Onboarder (User Interface)
Data Persistent Repository
Mapping Metadata
Generate Engine Definations
Dynamic Cache
ICCM Data Integration Server
Connection Adapters
Connections (User Interface)
Controls Repository
Rules Repository
Control Designer (User Interface)
Controls Metadata
Generate Engine Definations
Dynamic Cache
ICCM Data Integration Server
Domain Specific Language
Regulatory Mandate data validation
Audit Control Result set
Incident management
Scheduler (Real Time, Hourly, Daily, weekly, Bi-Weekly, Monthly, Quarterly etc..)
Continuous Control Monitoring
SFTP/ Restful APIs/ Data Visualization
XML/XBRL/.CSV/ Excel Compliance Extracts
Internet Audit Dashboards
Process Risk Dashboards
Data Analytics
Compliance Reports
Compliance Reports

FIG. 2

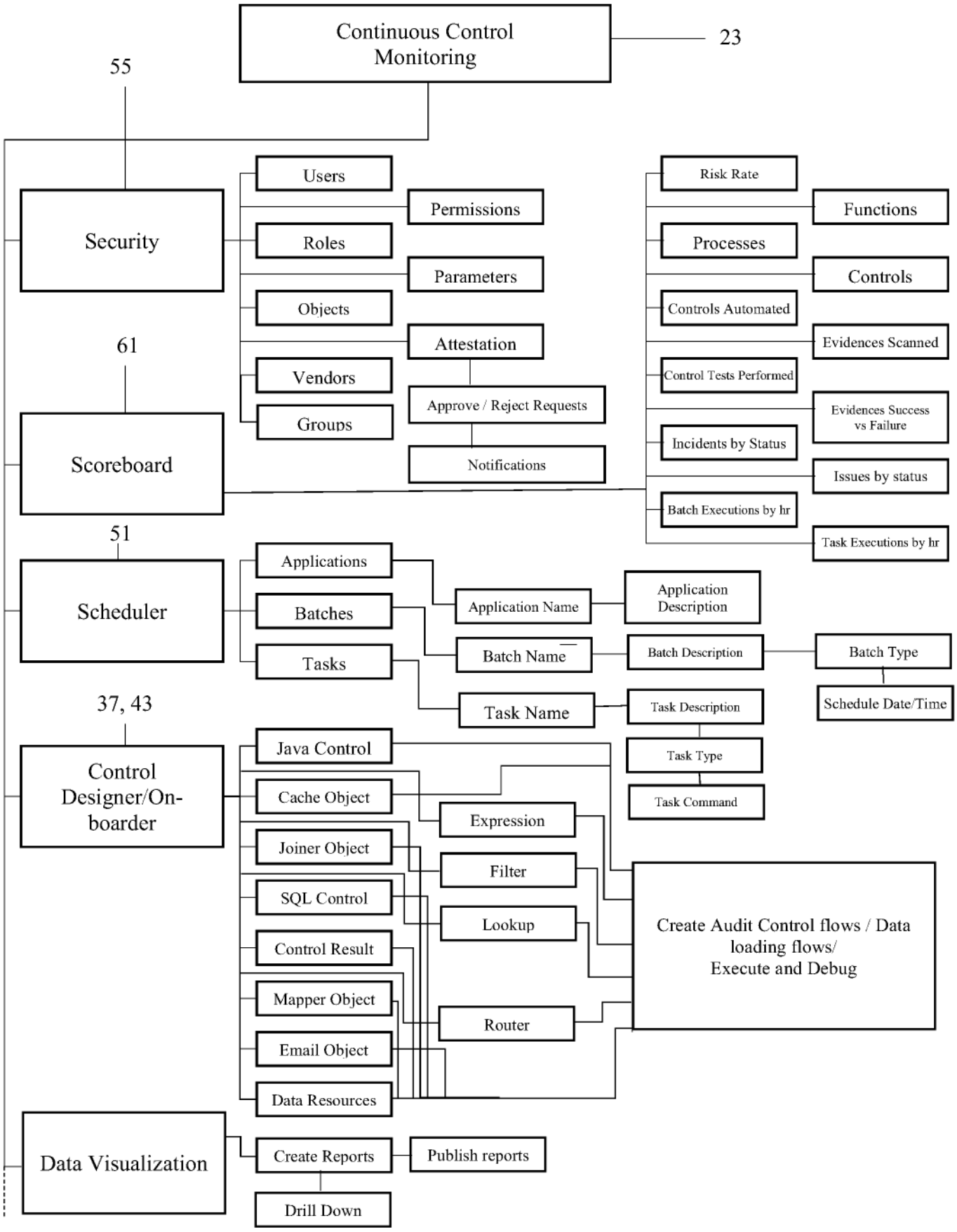

Continuous Control Monitoring
23
55
Security
Users
Permissions
Roles
Parameters
Objects
Attestation
Vendors
Approve / Reject Requests
Groups
Notifications
61
Scoreboard
Risk Rate
Functions
Processes
Controls
Controls Automated
Evidences Scanned
Control Tests Performed
Evidences Success vs Failure
Incidents by Status
Issues by status
Batch Executions by hr
Task Executions by hr
51
Scheduler
Applications
Batches
Tasks
Application Name
Application Description
Batch Name
Batch Description
Batch Type
Schedule Date/Time
Task Name
Task Description
Task Type
Task Command
37, 43
Control Designer/On-boarder
Java Control
Cache Object
Joiner Object
SQL Control
Control Result
Mapper Object
Email Object
Data Resources
Expression
Filter
Lookup
Router
Create Audit Control flows / Data loading flows/ Execute and Debug
Data Visualization
Create Reports
Publish reports
Drill Down

FIG. 3

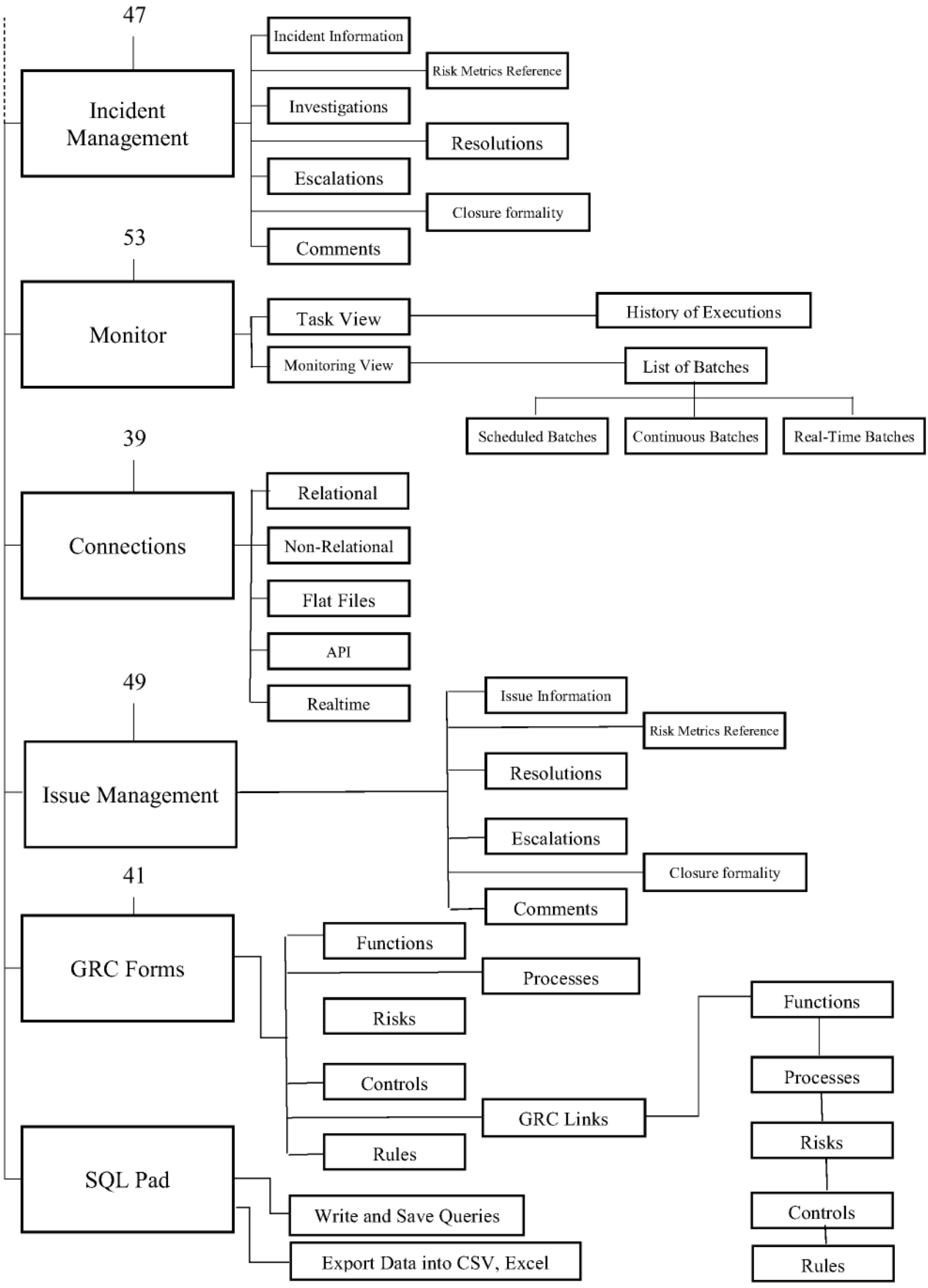

47
Incident Management
Incident Information
Risk Metrics Reference
Investigations
Resolutions
Escalations
Closure formality
Comments
53
Monitor
Task View
History of Executions
Monitoring View
List of Batches
Scheduled Batches
Continuous Batches
Real-Time Batches
39
Connections
Relational
Non-Relational
Flat Files
API
Realtime
49
Issue Management
Issue Information
Risk Metrics Reference
Resolutions
Escalations
Closure formality
Comments
41
GRC Forms
Functions
Processes
Risks
Controls
GRC Links
Rules
Functions
Processes
Risks
Controls
Rules
SQL Pad
Write and Save Queries
Export Data into CSV, Excel

FIG. 4

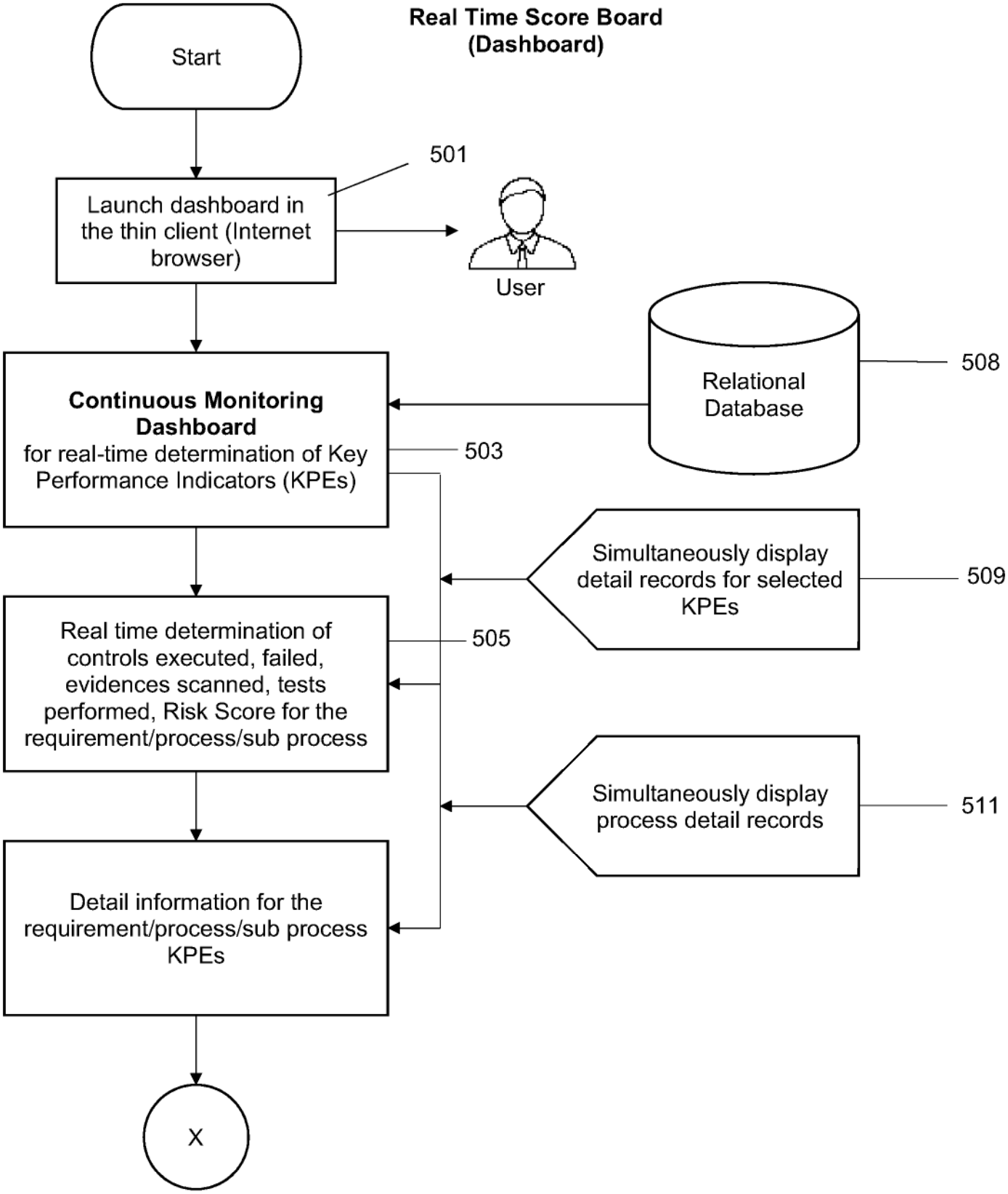

Real Time Score Board
(Dashboard)
Start
501
Launch dashboard in the thin client (Internet browser)
User
Relational Database
508
Continuous Monitoring Dashboard
for real-time determination of Key Performance Indicators (KPEs)
503
Simultaneously display detail records for selected KPEs
509
Real time determination of controls executed, failed, evidences scanned, tests performed, Risk Score for the requirement/process/sub process
505
Simultaneously display process detail records
511
Detail information for the requirement/process/sub process KPEs
X

FIG. 5

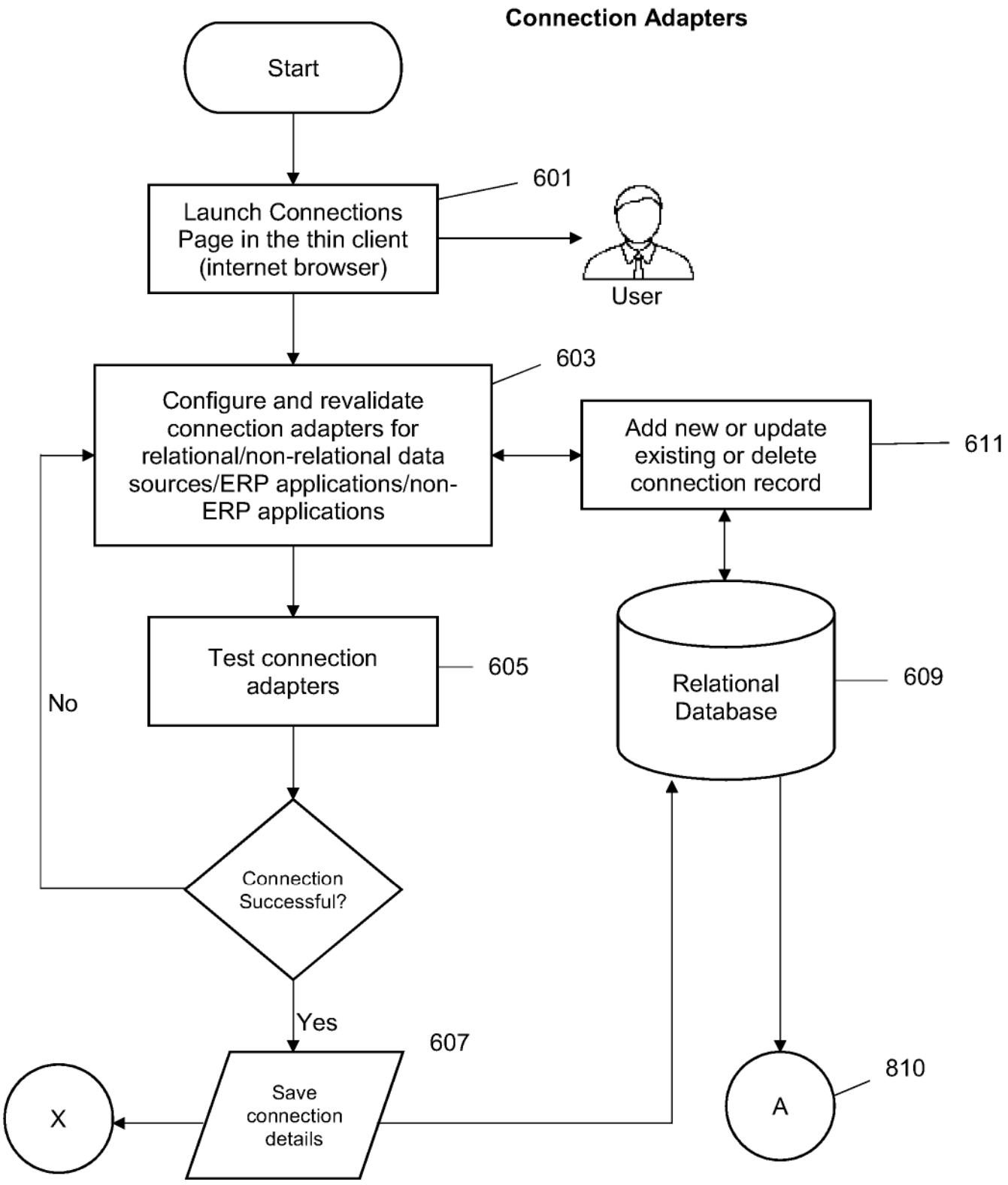

Connection Adapters
Start
Launch Connections Page in the thin client (internet browser)
601
User
Configure and revalidate connection adapters for relational/non-relational data sources/ERP applications/non-ERP applications
603
Add new or update existing or delete connection record
611
Test connection adapters
605
Relational Database
609
No
Connection Successful?
Yes
607
Save connection details
X
A
810

FIG. 6

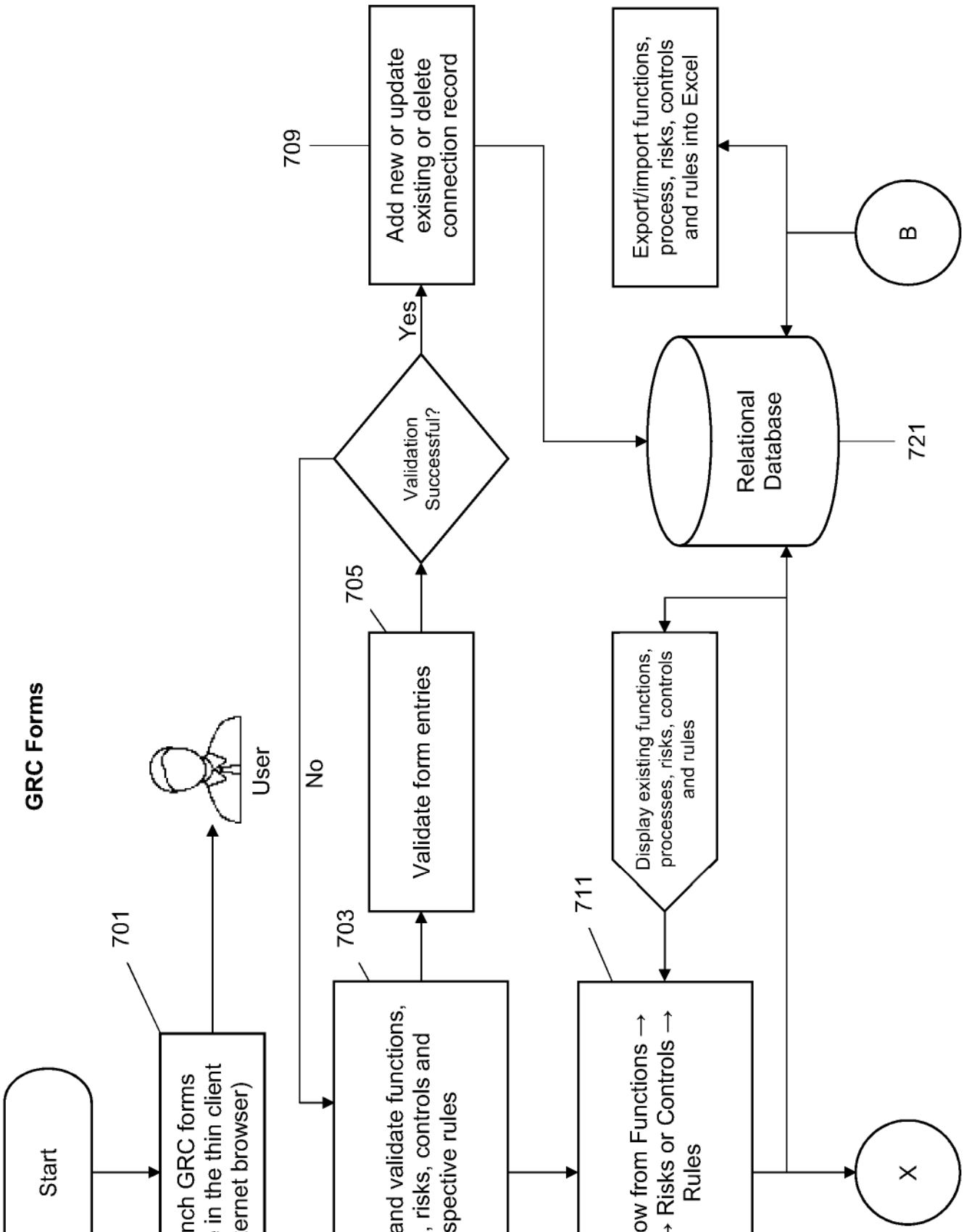

GRC Forms
Start
Launch GRC forms page in the thin client (internet browser)
701
User
Configure and validate functions, process, risks, controls and respective rules
703
Validate form entries
705
Validation Successful?
No
Yes
Add new or update existing or delete connection record
709
Link the flow from Functions → Process → Risks or Controls → Rules
711
Display existing functions, processes, risks, controls and rules
Relational Database
721
Export/import functions, process, risks, controls and rules into Excel
B
X

FIG. 7

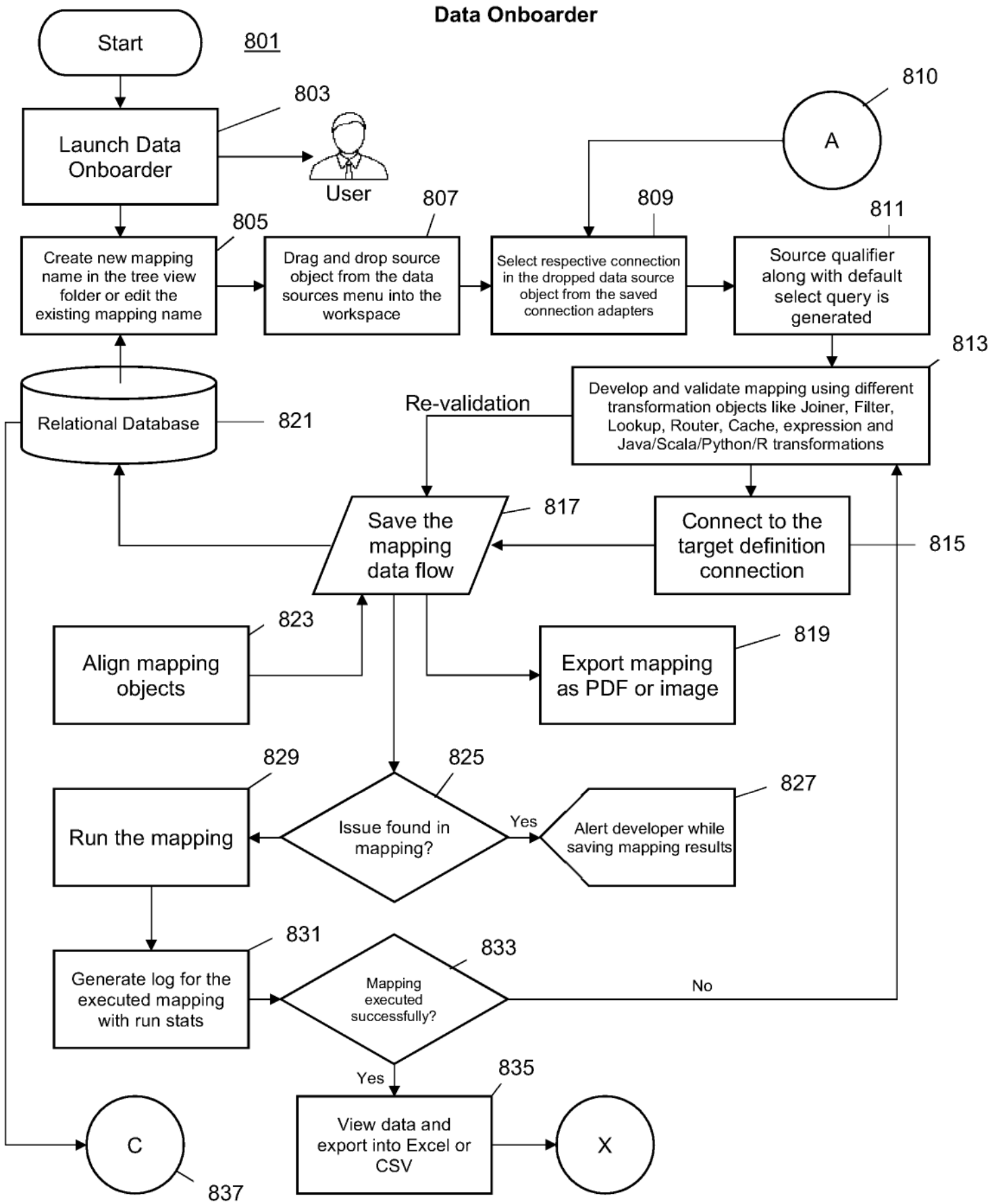

Data Onboarder
Start
801
Launch Data Onboarder
803
User
A
810
Create new mapping name in the tree view folder or edit the existing mapping name
805
Drag and drop source object from the data sources menu into the workspace
807
Select respective connection in the dropped data source object from the saved connection adapters
809
Source qualifier along with default select query is generated
811
Develop and validate mapping using different transformation objects like Joiner, Filter, Lookup, Router, Cache, expression and Java/Scala/Python/R transformations
813
Relational Database
821
Re-validation
Save the mapping data flow
817
Connect to the target definition connection
815
Align mapping objects
823
Export mapping as PDF or image
819
Run the mapping
829
Issue found in mapping?
825
Yes
Alert developer while saving mapping results
827
Generate log for the executed mapping with run stats
831
Mapping executed successfully?
833
No
Yes
View data and export into Excel or CSV
835
C
837
X

FIG. 8

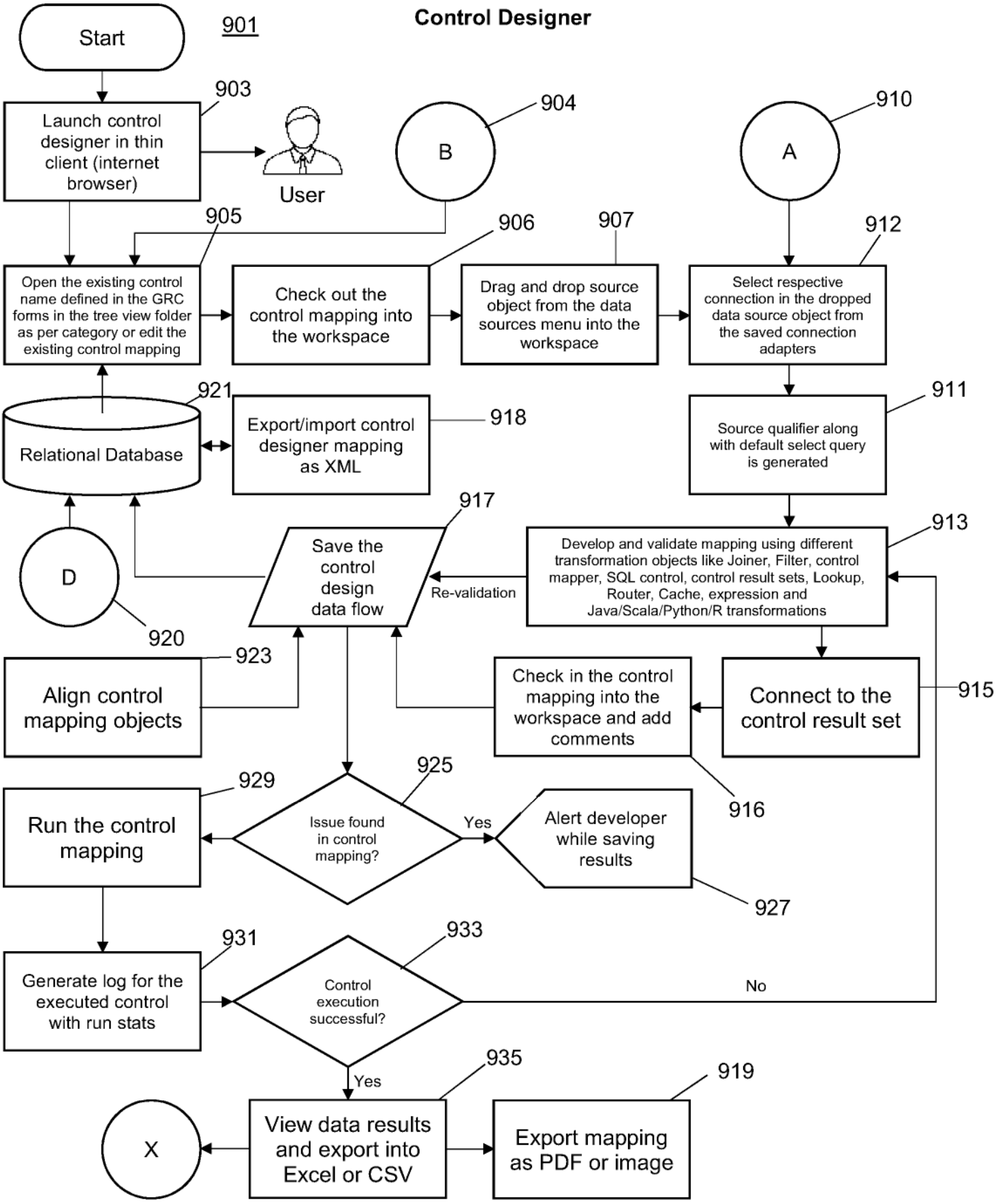

Control Designer
Start
901
Launch control designer in thin client (internet browser)
903
User
B
904
A
910
905
906
907
912
Open the existing control name defined in the GRC forms in the tree view folder as per category or edit the existing control mapping
Check out the control mapping into the workspace
Drag and drop source object from the data sources menu into the workspace
Select respective connection in the dropped data source object from the saved connection adapters
921
Relational Database
Export/import control designer mapping as XML
918
Source qualifier along with default select query is generated
911
917
913
D
Save the control design data flow
Re-validation
Develop and validate mapping using different transformation objects like Joiner, Filter, control mapper, SQL control, control result sets, Lookup, Router, Cache, expression and Java/Scala/Python/R transformations
920
923
Align control mapping objects
Check in the control mapping into the workspace and add comments
Connect to the control result set
915
916
925
929
Run the control mapping
Issue found in control mapping?
Yes
Alert developer while saving results
927
931
933
Generate log for the executed control with run stats
Control execution successful?
No
Yes
935
919
X
View data results and export into Excel or CSV
Export mapping as PDF or image

FIG. 9

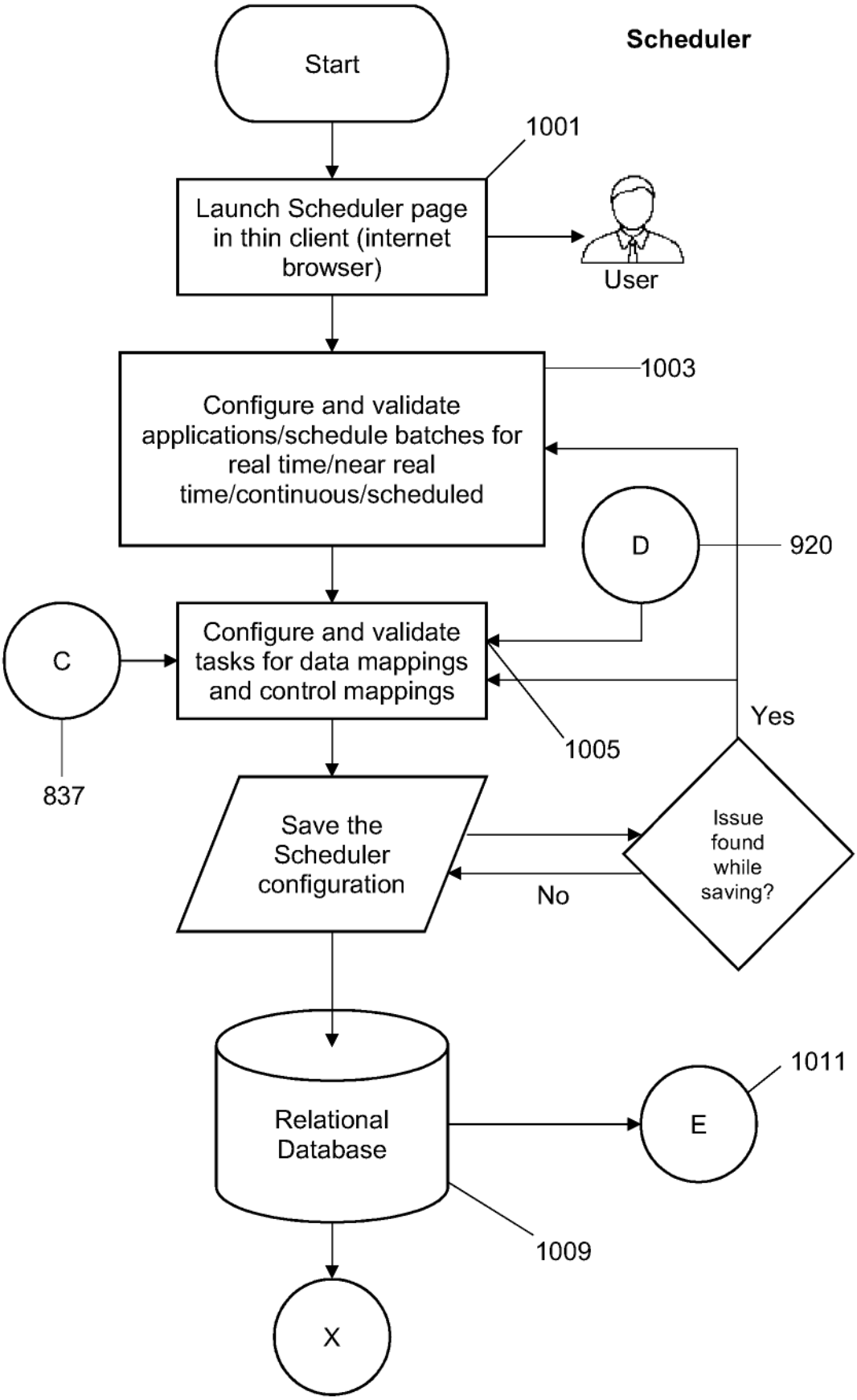

Scheduler
Start
1001
Launch Scheduler page in thin client (internet browser)
User
1003
Configure and validate applications/schedule batches for real time/near real time/continuous/scheduled
D
920
C
Configure and validate tasks for data mappings and control mappings
1005
Yes
837
Save the Scheduler configuration
Issue found while saving?
No
Relational Database
1011
E
1009
X

FIG. 10

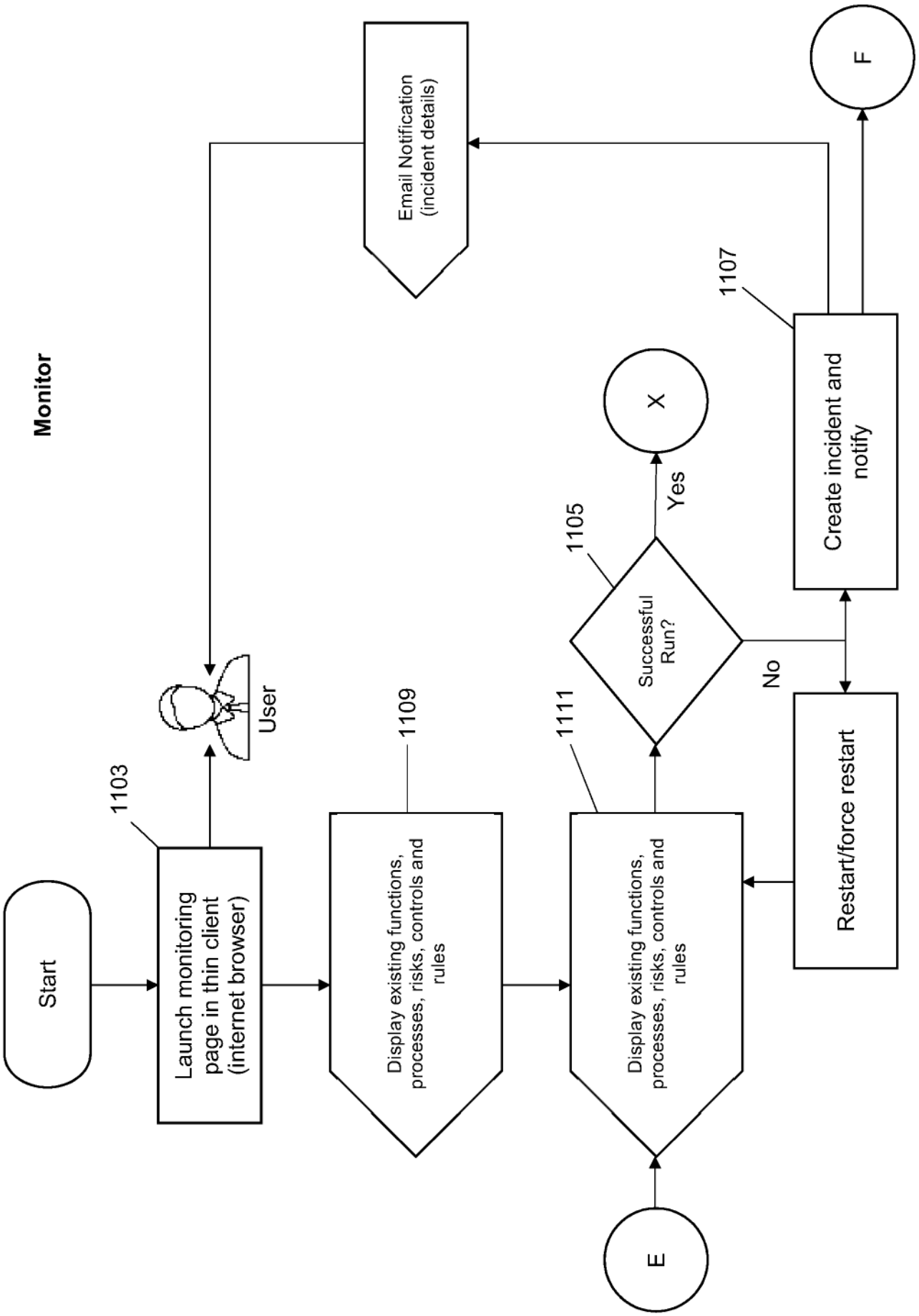

Monitor
Start
Launch monitoring page in thin client (internet browser)
1103
User
Email Notification (incident details)
Display existing functions, processes, risks, controls and rules
1109
Display existing functions, processes, risks, controls and rules
1111
Successful Run?
1105
Yes
X
No
Restart/force restart
Create incident and notify
1107
E
F

FIG. 11

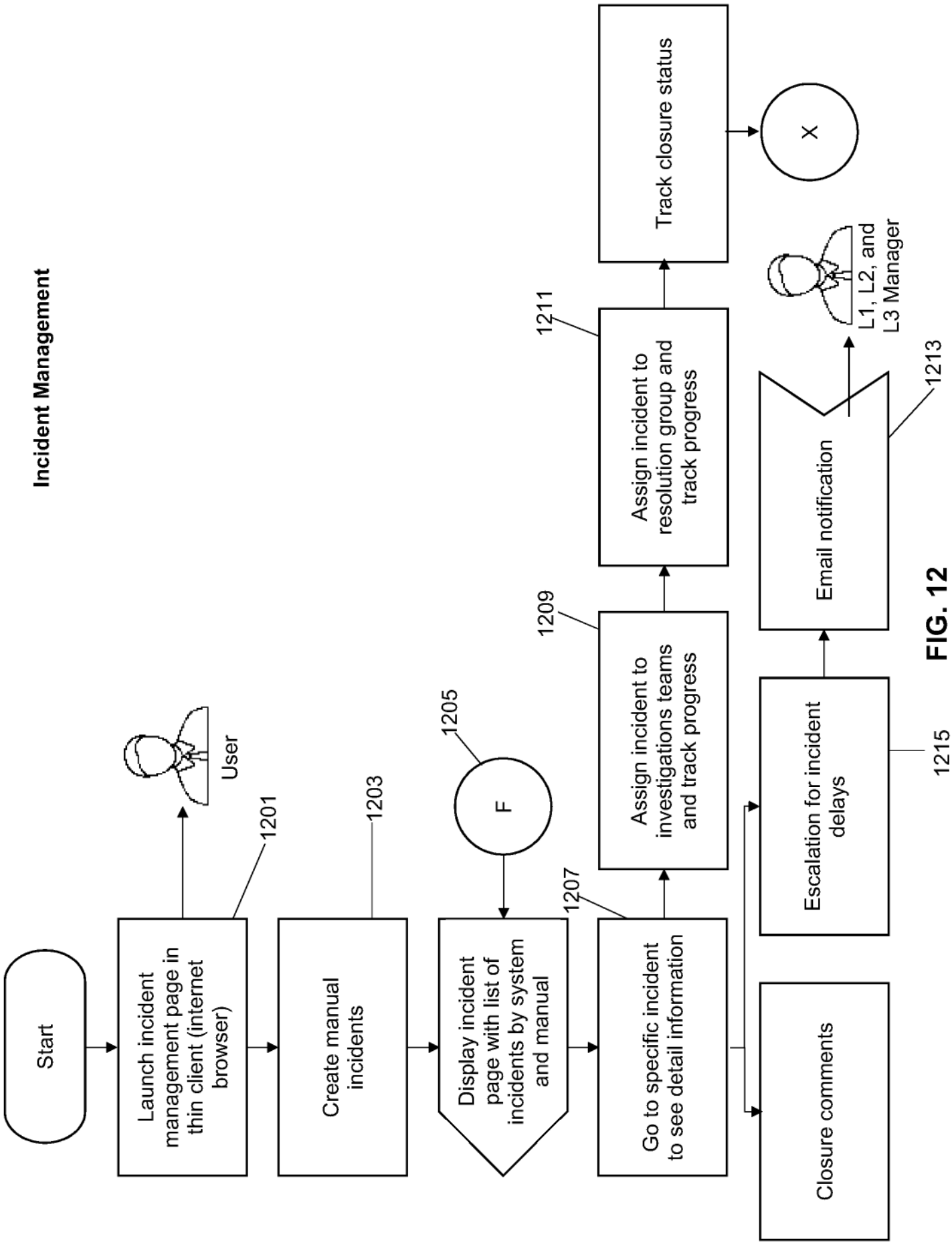

Incident Management
Start
Launch incident management page in thin client (internet browser)
User
1201
Create manual incidents
1203
Display incident page with list of incidents by system and manual
F
1205
Go to specific incident to see detail information
1207
Assign incident to investigations teams and track progress
1209
Assign incident to resolution group and track progress
1211
Track closure status
X
Email notification
L1, L2, and L3 Manager
1213
Escalation for incident delays
1215
Closure comments

FIG. 12

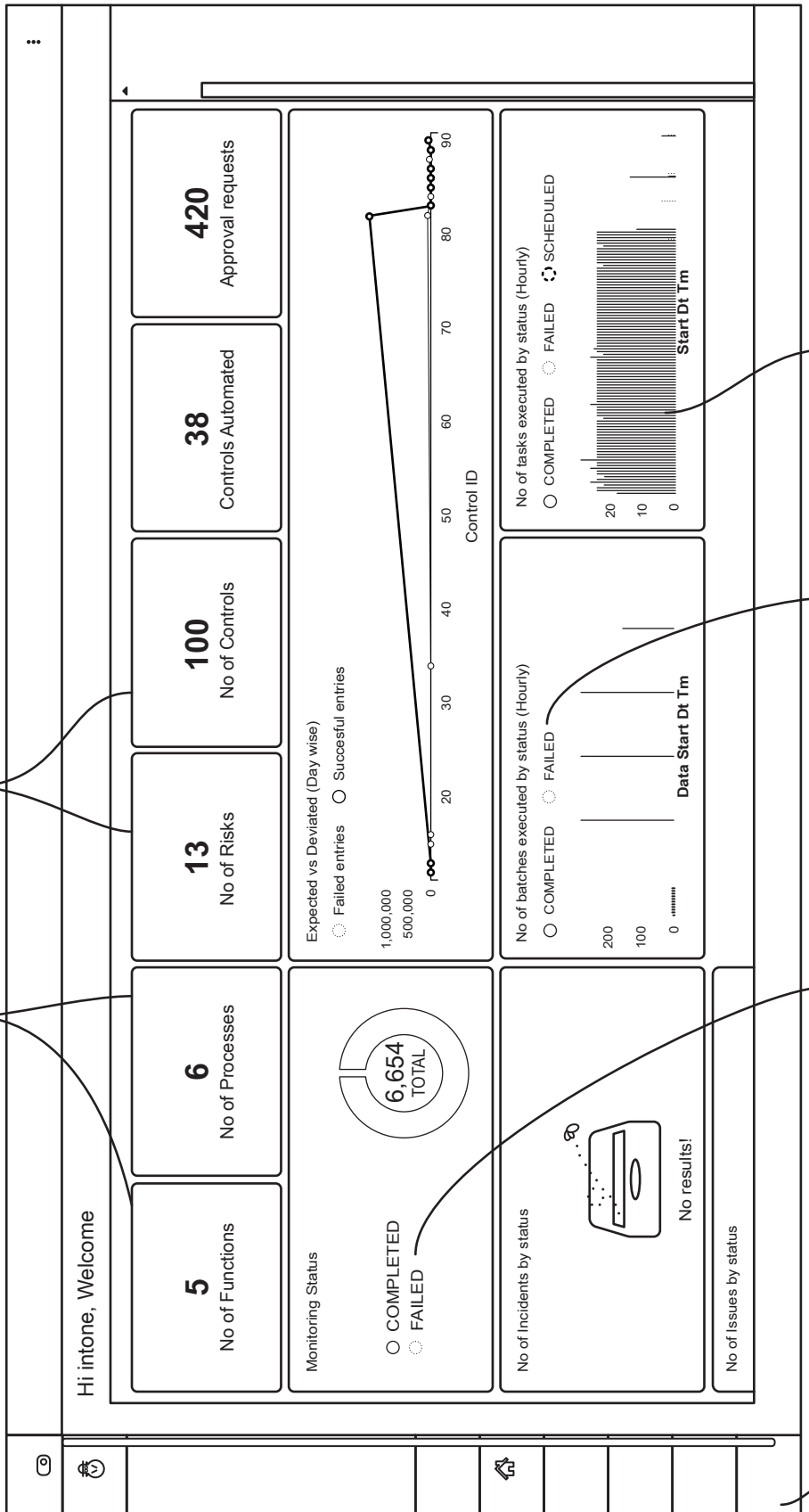
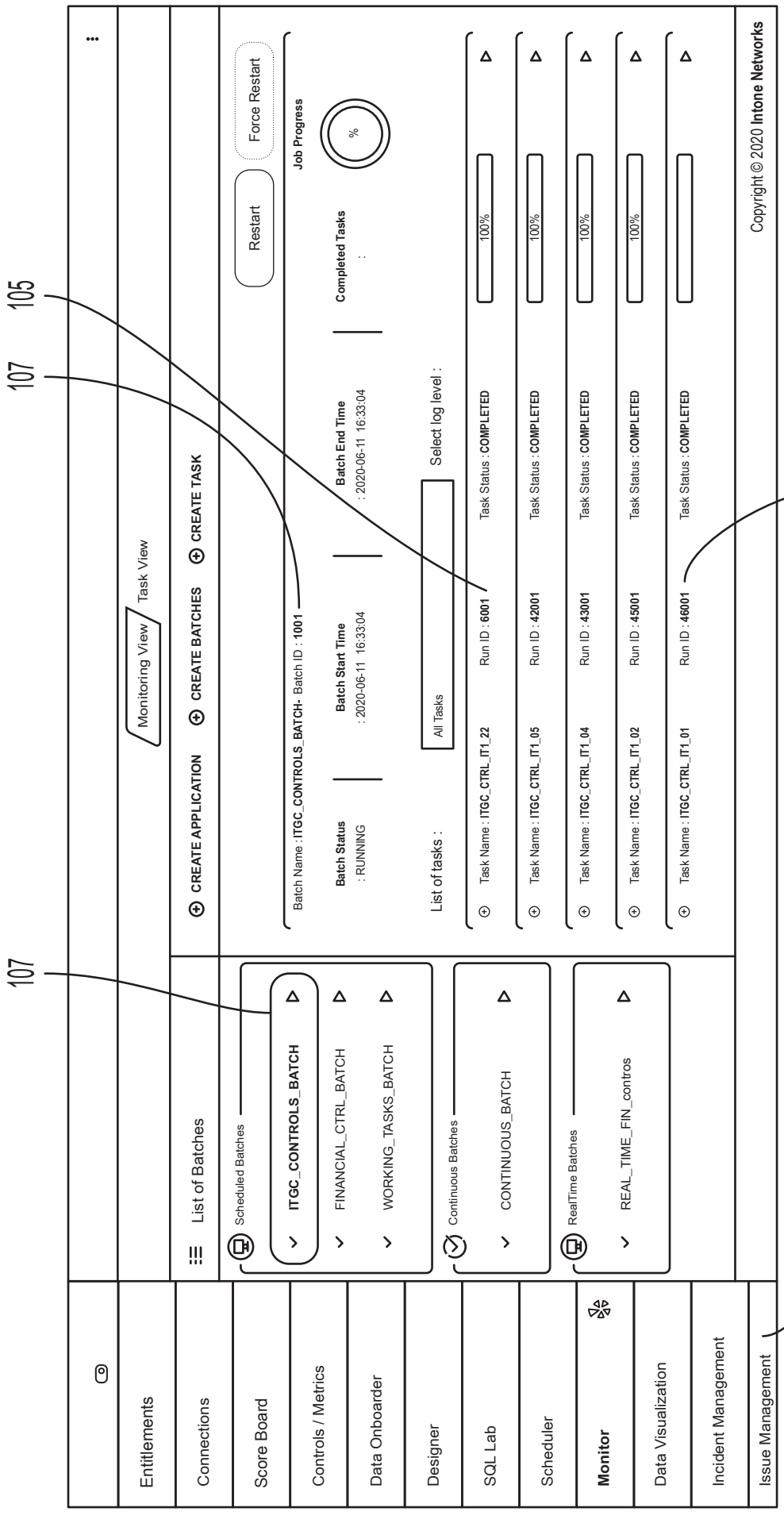

Entitlements
Users
Groups
Roles
Permissions
Objects
Parameters
Vendors
Admin Dashboard
Connections
Score Board
Controls / Metrics
Data Onboarder
Designer
SQL Lab
Hi intone, Welcome
5
No of Functions
6
No of Processes
13
No of Risks
100
No of Controls
38
Controls Automated
420
Approval requests
Monitoring Status
COMPLETED
FAILED
6,654
TOTAL
Expected vs Deviated (Day wise)
Failed entries
Succesful entries
1,000,000
500,000
0
20
30
40
50
60
70
80
90
Control ID
No of Incidents by status
No results!
No of batches executed by status (Hourly)
COMPLETED
FAILED
200
100
0
Data Start Dt Tm
No of tasks executed by status (Hourly)
COMPLETED
FAILED
SCHEDULED
20
10
0
Start Dt Tm
No of Issues by status
73
73
65
65
67
85

FIG. 13


Entitlements
Connections
Score Board
Controls / Metrics
Data Onboarder
Designer
SQL Lab
Scheduler
Monitor
Data Visualization
Incident Management
Issue Management
Monitoring View
Task View
List of Batches
CREATE APPLICATION
CREATE BATCHES
CREATE TASK
Scheduled Batches
ITGC_CONTROLS_BATCH
FINANCIAL_CTRL_BATCH
WORKING_TASKS_BATCH
Continuous Batches
CONTINUOUS_BATCH
RealTime Batches
REAL_TIME_FIN_contros
Restart
Force Restart
Batch Name :ITGC_CONTROLS_BATCH- Batch ID : 1001
Batch Status : RUNNING
Batch Start Time : 2020-06-11 16:33:04
Batch End Time : 2020-06-11 16:33:04
Completed Tasks :
Job Progress
%
List of tasks :
All Tasks
Select log level :
Task Name : ITGC_CTRL_IT1_22
Run ID : 6001
Task Status : COMPLETED
100%
Task Name : ITGC_CTRL_IT1_05
Run ID : 42001
Task Status : COMPLETED
100%
Task Name : ITGC_CTRL_IT1_04
Run ID : 43001
Task Status : COMPLETED
100%
Task Name : ITGC_CTRL_IT1_02
Run ID : 45001
Task Status : COMPLETED
100%
Task Name : ITGC_CTRL_IT1_01
Run ID : 46001
Task Status : COMPLETED
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107
105
107
105
85

FIG. 14

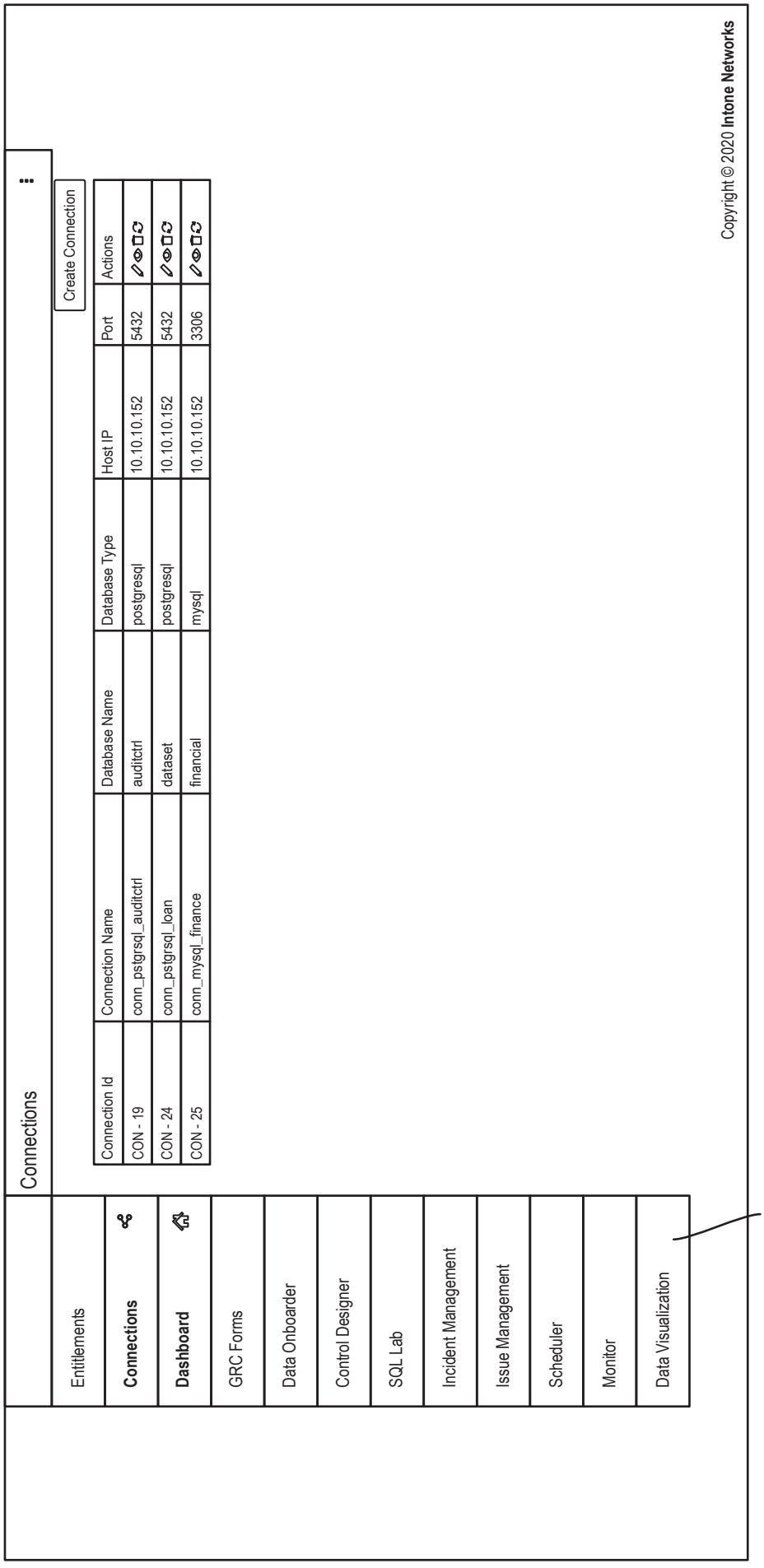
Connections
Entitlements
Connections
Dashboard
GRC Forms
Data Onboarder
Control Designer
SQL Lab
Incident Management
Issue Management
Scheduler
Monitor
Data Visualization
85
Create Connection
Connection Id
Connection Name
Database Name
Database Type
Host IP
Port
Actions
CON - 19
conn_pstgrsql_auditctrl
auditctrl
postgresql
10.10.10.152
5432
CON - 24
conn_pstgrsql_loan
dataset
postgresql
10.10.10.152
5432
CON - 25
conn_mysql_finance
financial
mysql
10.10.10.152
3306
Copyright © 2020 Intone Networks

FIG. 15

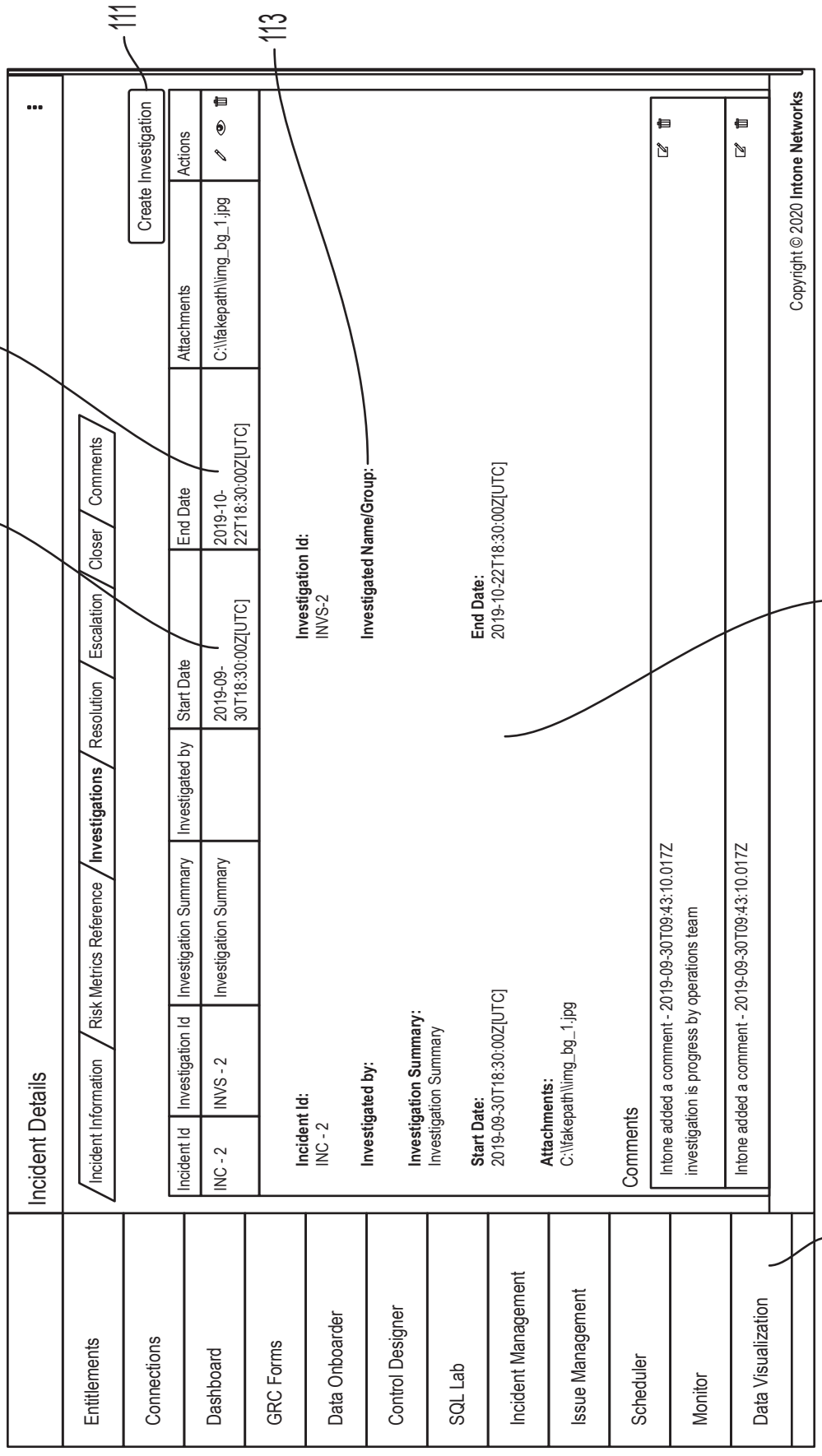
Incident Details
Entitlements
Connections
Dashboard
GRC Forms
Data Onboarder
Control Designer
SQL Lab
Incident Management
Issue Management
Scheduler
Monitor
Data Visualization
85
Incident Information
Risk Metrics Reference
Investigations
Resolution
Escalation
Closer
Comments
Create Investigation
111
113
115
115
Incident Id
Investigation Id
Investigation Summary
Investigated by
Start Date
End Date
Attachments
Actions
INC - 2
INVS - 2
Investigation Summary
2019-09-30T18:30:00Z[UTC]
2019-10-22T18:30:00Z[UTC]
C:\\fakepath\\img_bg_1.jpg
Incident Id:
INC - 2
Investigation Id:
INVS-2
Investigated by:
Investigated Name/Group:
Investigation Summary:
Investigation Summary
Start Date:
2019-09-30T18:30:00Z[UTC]
End Date:
2019-10-22T18:30:00Z[UTC]
Attachments:
C:\\fakepath\\img_bg_1.jpg
Comments
Intone added a comment - 2019-09-30T09:43:10.017Z
investigation is progress by operations team
Intone added a comment - 2019-09-30T09:43:10.017Z
109
Copyright © 2020 Intone Networks

FIG. 16

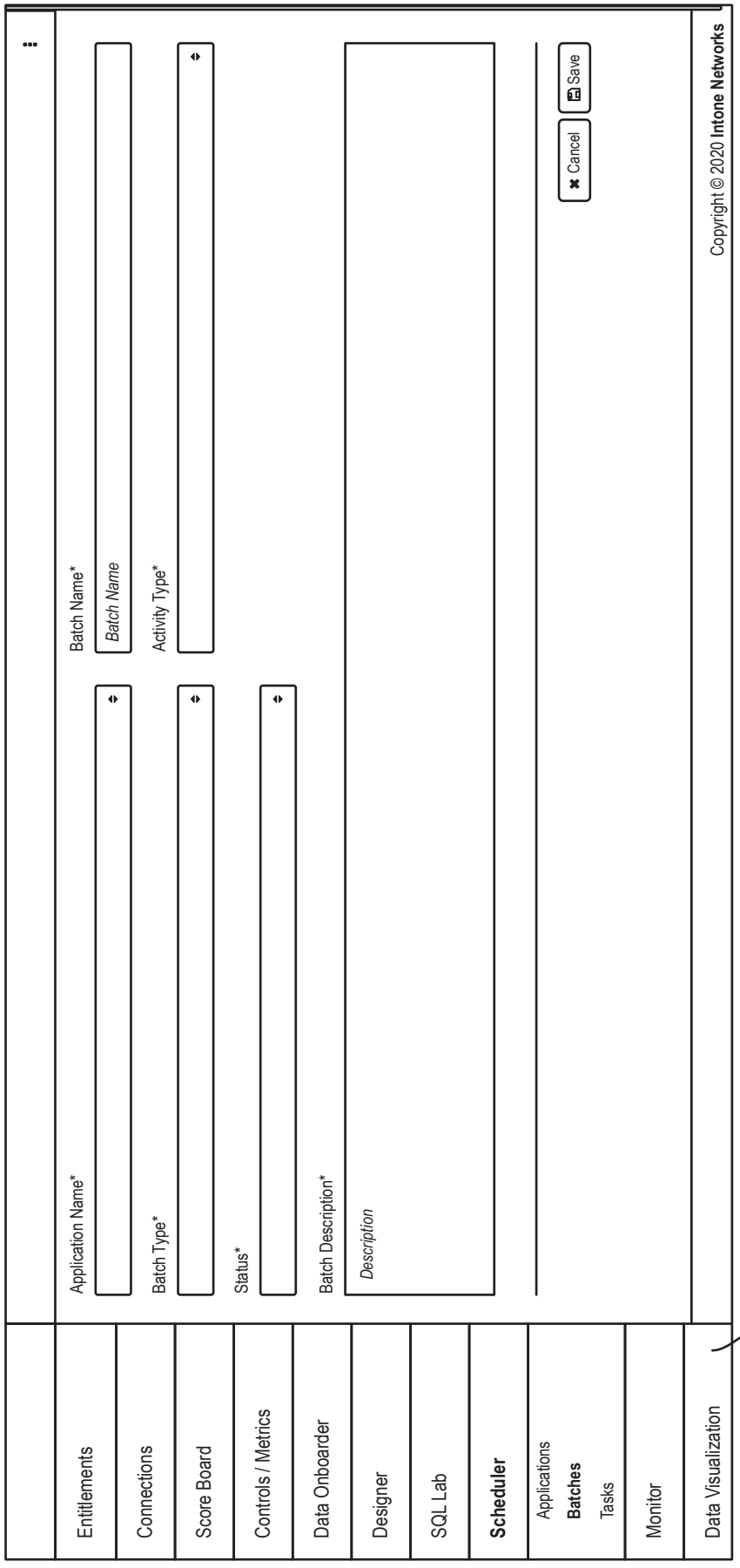
Entitlements
Connections
Score Board
Controls / Metrics
Data Onboarder
Designer
SQL Lab
Scheduler
Applications
Batches
Tasks
Monitor
Data Visualization
85
Application Name*
Batch Name*
Batch Name
Batch Type*
Activity Type*
Status*
Batch Description*
Description
Cancel
Save
Copyright © 2020 Intone Networks

FIG. 17

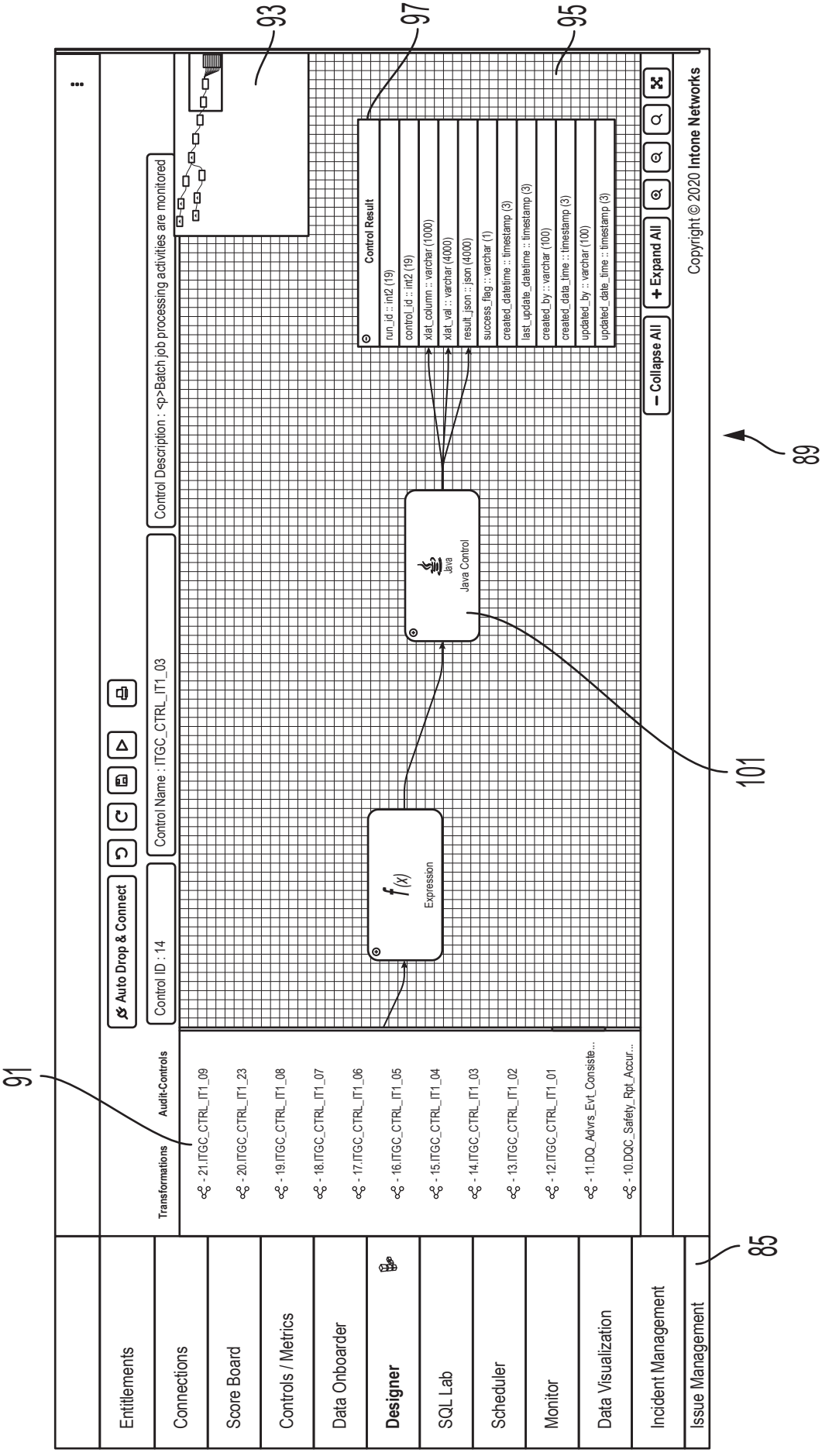
91
93
97
95
85
89
101
Entitlements
Connections
Score Board
Controls / Metrics
Data Onboarder
Designer
SQL Lab
Scheduler
Monitor
Data Visualization
Incident Management
Issue Management
Transformations
Audit-Controls
- 21.ITGC_CTRL_IT1_09
- 20.ITGC_CTRL_IT1_23
- 19.ITGC_CTRL_IT1_08
- 18.ITGC_CTRL_IT1_07
- 17.ITGC_CTRL_IT1_06
- 16.ITGC_CTRL_IT1_05
- 15.ITGC_CTRL_IT1_04
- 14.ITGC_CTRL_IT1_03
- 13.ITGC_CTRL_IT1_02
- 12.ITGC_CTRL_IT1_01
- 11.DQ_Advrs_Evt_Consiste...
- 10.DQC_Safety_Rpt_Accur...
Auto Drop & Connect
Control ID : 14
Control Name : ITGC_CTRL_IT1_03
Control Description : <p>Batch job processing activities are monitored
Control Result
run_id :: int2 (19)
control_id :: int2 (19)
xlat_column :: varchar (1000)
xlat_val :: varchar (4000)
result_json :: json (4000)
success_flag :: varchar (1)
created_datetime :: timestamp (3)
last_update_datetime :: timestamp (3)
created_by :: varchar (100)
created_data_time :: timestamp (3)
updated_by :: varchar (100)
updated_date_time :: timestamp (3)
f(x)
Expression
Java
Java Control
– Collapse All
+ Expand All
Copyright © 2020 Intone Networks

FIG. 18

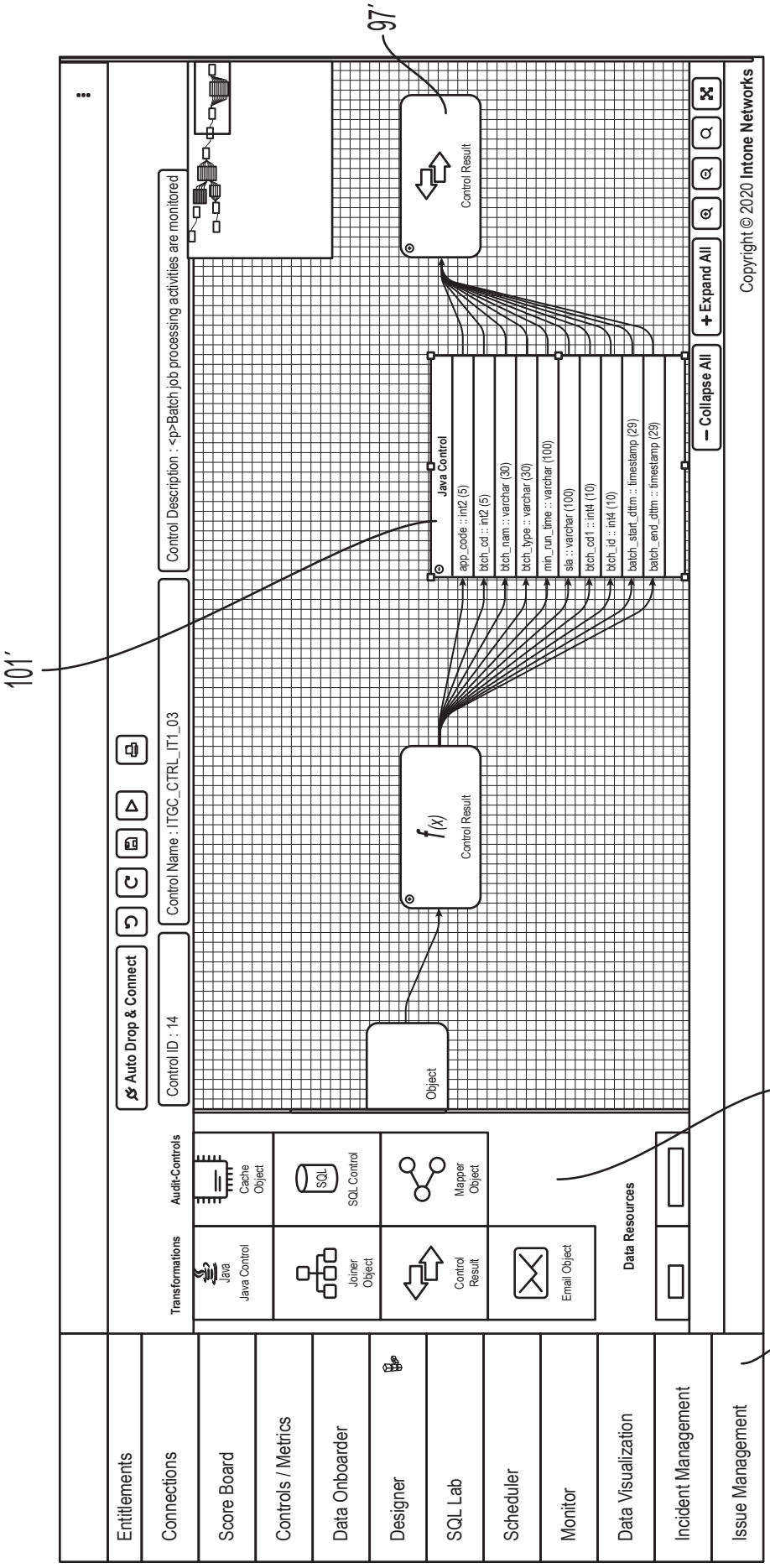
101'
97'
99
89
85
Entitlements
Connections
Score Board
Controls / Metrics
Data Onboarder
Designer
SQL Lab
Scheduler
Monitor
Data Visualization
Incident Management
Issue Management
Auto Drop & Connect
Control ID : 14
Control Name : ITGC_CTRL_IT1_03
Control Description : <p>Batch job processing activities are monitored
Transformations
Audit-Controls
Java
Java Control
Joiner Object
Control Result
Email Object
Cache Object
SQL Control
Mapper Object
Data Resources
Object
f(x)
Control Result
Java Control
app_code :: int2 (5)
btch_cd :: int2 (5)
btch_nam :: varchar (30)
btch_type :: varchar (30)
min_run_time :: varchar (100)
sla :: varchar (100)
btch_cd1 :: int4 (10)
btch_id :: int4 (10)
batch_start_dttm :: timestamp (29)
batch_end_dttm :: timestamp (29)
Control Result
– Collapse All
+ Expand All
Copyright © 2020 Intone Networks

FIG. 19

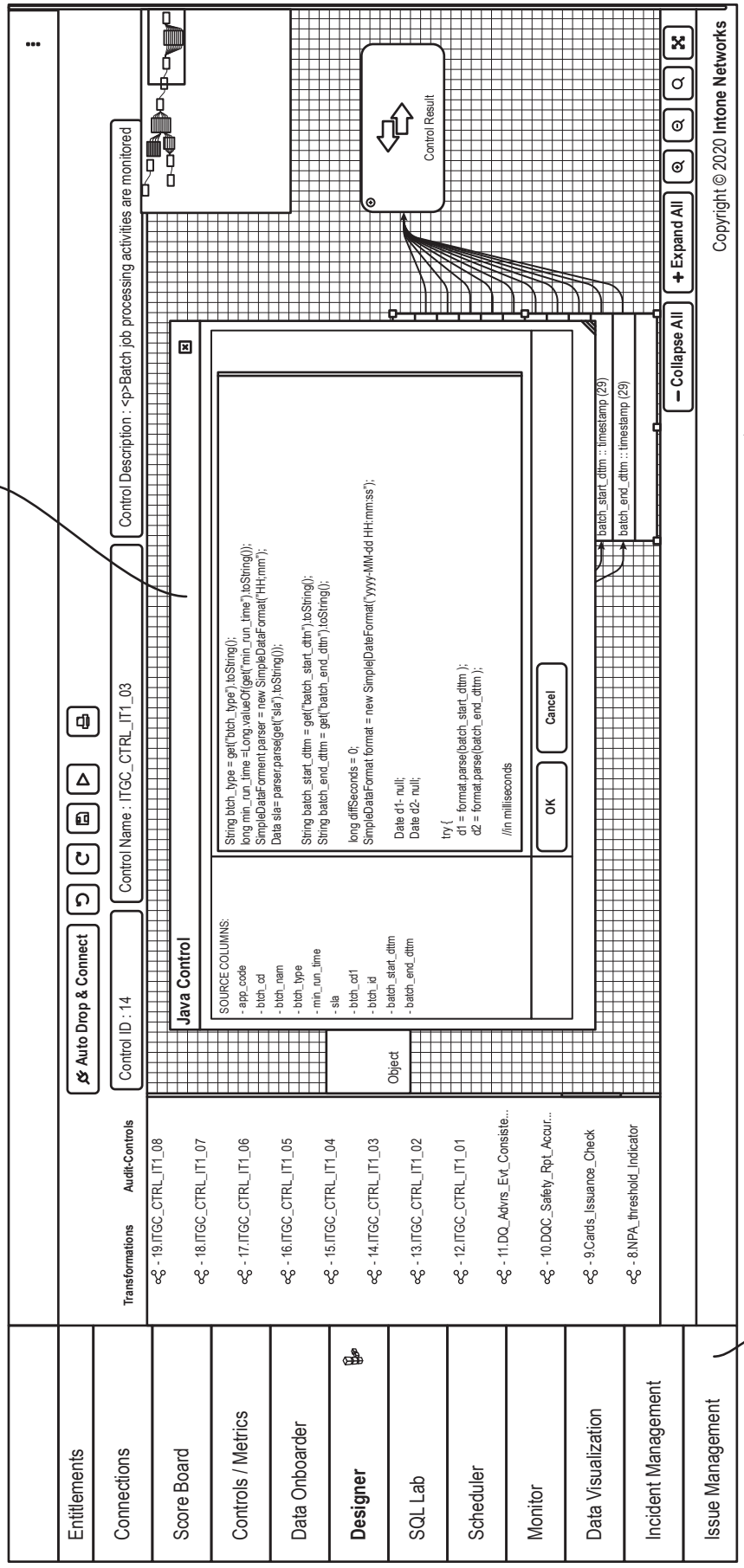
101''
85
89
Entitlements
Connections
Score Board
Controls / Metrics
Data Onboarder
Designer
SQL Lab
Scheduler
Monitor
Data Visualization
Incident Management
Issue Management
Transformations
Audit-Controls
- 19.ITGC_CTRL_IT1_08
- 18.ITGC_CTRL_IT1_07
- 17.ITGC_CTRL_IT1_06
- 16.ITGC_CTRL_IT1_05
- 15.ITGC_CTRL_IT1_04
- 14.ITGC_CTRL_IT1_03
- 13.ITGC_CTRL_IT1_02
- 12.ITGC_CTRL_IT1_01
- 11.DQ_Advrs_Evt_Consiste...
- 10.DQC_Safety_Rpt_Accur...
- 9.Cards_Issuance_Check
- 8.NPA_threshold_Indicator
Auto Drop & Connect
Control ID : 14
Control Name : ITGC_CTRL_IT1_03
Control Description : <p>Batch job processing activities are monitored
Object
Java Control
SOURCE COLUMNS:
- app_code
- btch_cd
- btch_nam
- btch_type
- min_run_time
- sla
- btch_cd1
- btch_id
- batch_start_dttm
- batch_end_dttm
String btch_type = get("btch_type").toString();
long min_run_time =Long.valueOf(get("min_run_time").toString());
SimpleDataFormentparser = new SimpleDataFormat("HH:mm");
Data sla= parser.parse(get("sla").toString());
String batch_start_dttm = get("batch_start_dttm").toString();
String batch_end_dttm = get("batch_end_dttm").toString();
long diffSeconds = 0;
SimpleDataFormat format = new SimpleDateFormat("yyyy-MM-dd HH:mm:ss");
Date d1= null;
Date d2= null;
try {
d1 = format.parse(batch_start_dttm);
d2 = format.parse(batch_end_dttm);
//in milliseconds
OK
Cancel
batch_start_dttm :: timestamp (29)
batch_end_dttm :: timestamp (29)
Control Result
– Collapse All
+ Expand All
Copyright © 2020 Intone Networks

FIG. 20