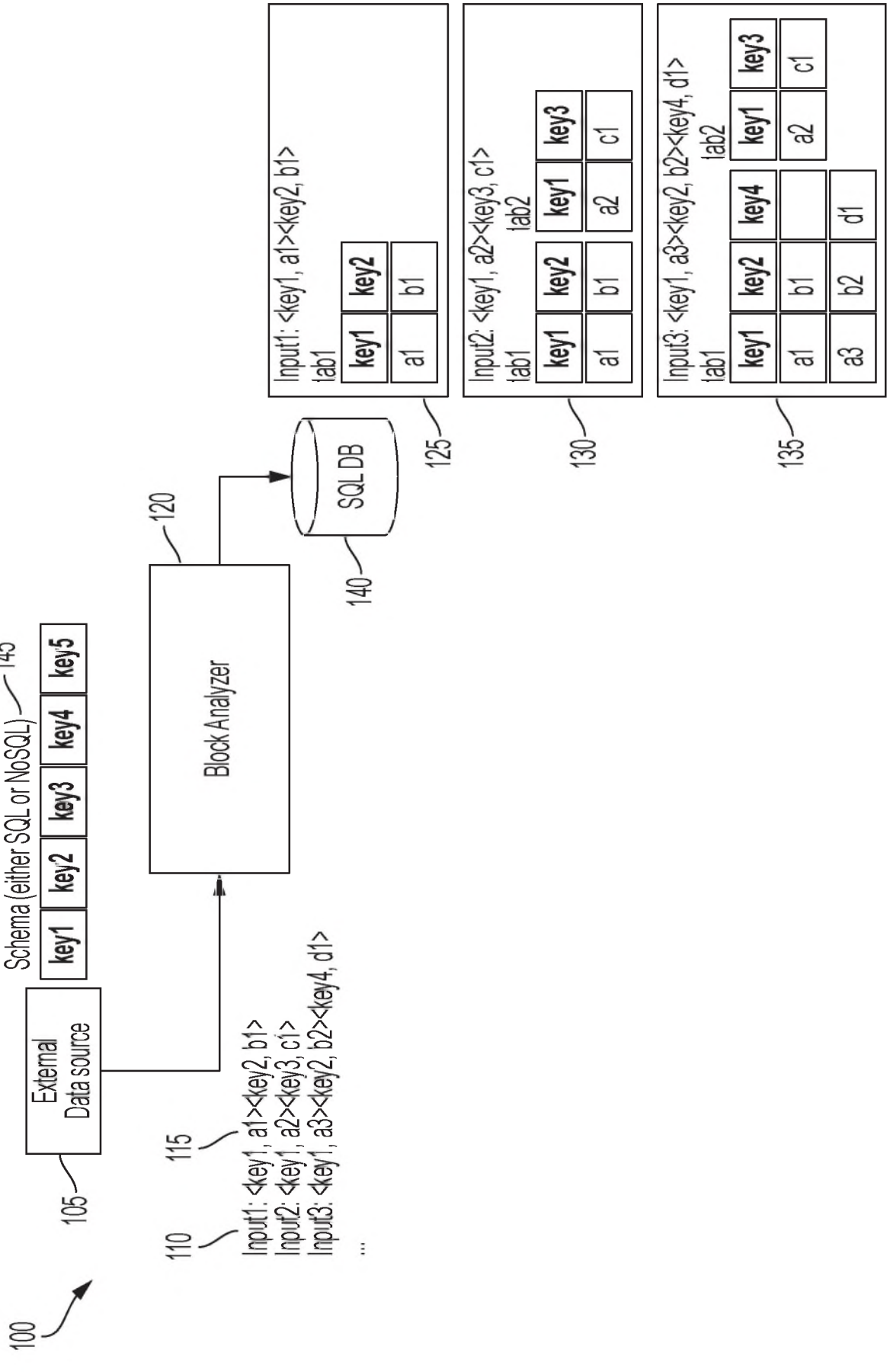

100
External Data source
105
Schema (either SQL or NoSQL)
key1
key2
key3
key4
key5
145
110
Input1: <key1, a1><key2, b1>
Input2: <key1, a2><key3, c1>
Input3: <key1, a3><key2, b2><key4, d1>
...
115
Block Analyzer
120
SQL DB
140
Input1: <key1, a1><key2, b1>
tab1
key1
key2
a1
b1
125
Input2: <key1, a2><key3, c1>
tab2
key1
key3
a2
c1
130
Input3: <key1, a3><key2, b2><key4, d1>
tab2
key1
key4
a3
b2
d1
135

FIG. 1

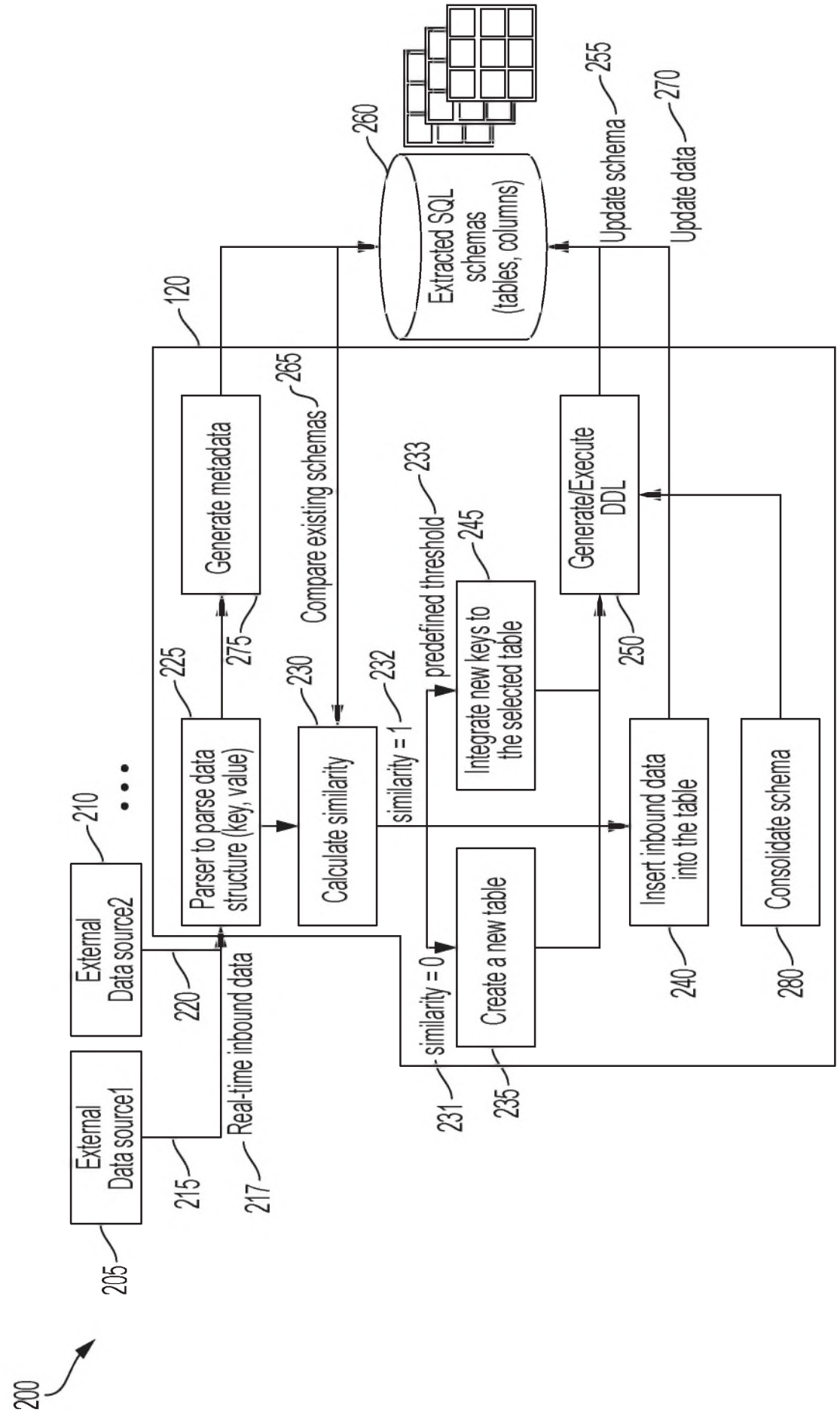

200
External Data source1
External Data source2
205
210
215
220
Real-time inbound data
217
120
Parser to parse data structure (key, value)
225
Generate metadata
275
Calculate similarity
230
Compare existing schemas
265
similarity = 1
232
predefined threshold
233
similarity = 0
231
Create a new table
235
Integrate new keys to the selected table
245
Extracted SQL schemas (tables, columns)
260
Generate/Execute DDL
250
Update schema
255
Update data
270
Insert inbound data into the table
240
Consolidate schema
280

FIG. 2

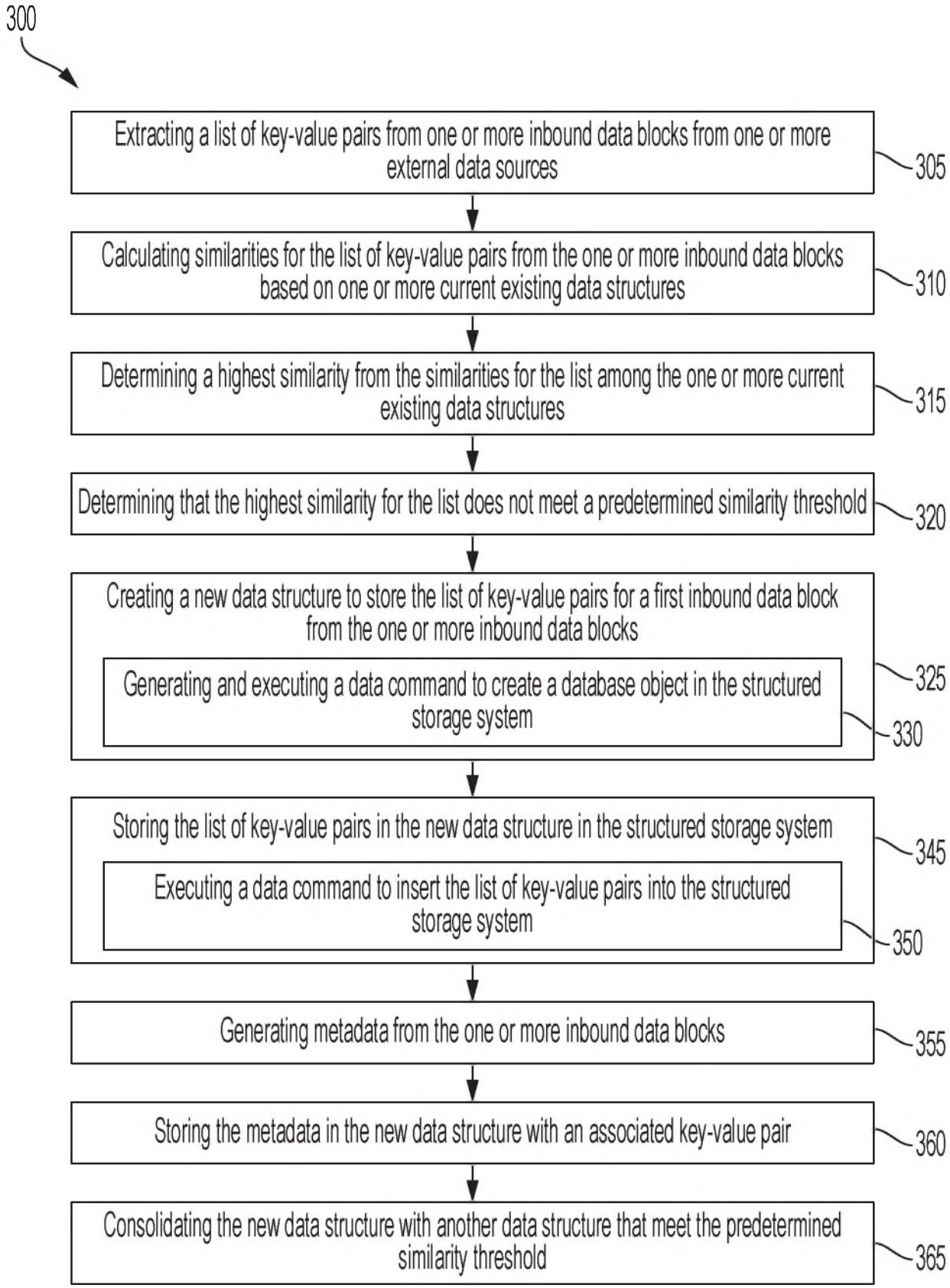

300
Extracting a list of key-value pairs from one or more inbound data blocks from one or more external data sources
305
Calculating similarities for the list of key-value pairs from the one or more inbound data blocks based on one or more current existing data structures
310
Determining a highest similarity from the similarities for the list among the one or more current existing data structures
315
Determining that the highest similarity for the list does not meet a predetermined similarity threshold
320
Creating a new data structure to store the list of key-value pairs for a first inbound data block from the one or more inbound data blocks
325
Generating and executing a data command to create a database object in the structured storage system
330
Storing the list of key-value pairs in the new data structure in the structured storage system
345
Executing a data command to insert the list of key-value pairs into the structured storage system
350
Generating metadata from the one or more inbound data blocks
355
Storing the metadata in the new data structure with an associated key-value pair
360
Consolidating the new data structure with another data structure that meet the predetermined similarity threshold
365

FIG. 3

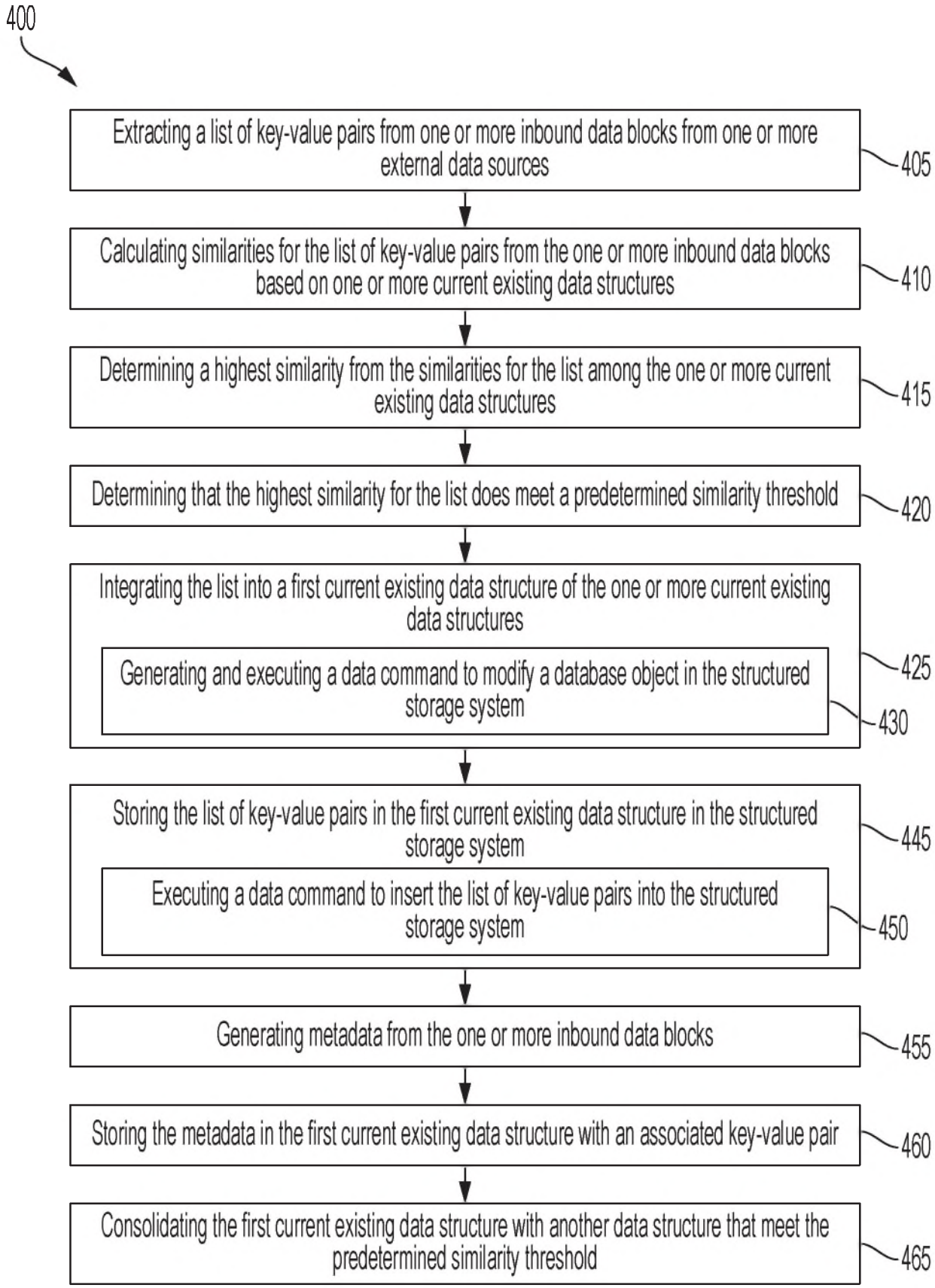

400
Extracting a list of key-value pairs from one or more inbound data blocks from one or more external data sources
405
Calculating similarities for the list of key-value pairs from the one or more inbound data blocks based on one or more current existing data structures
410
Determining a highest similarity from the similarities for the list among the one or more current existing data structures
415
Determining that the highest similarity for the list does meet a predetermined similarity threshold
420
Integrating the list into a first current existing data structure of the one or more current existing data structures
425
Generating and executing a data command to modify a database object in the structured storage system
430
Storing the list of key-value pairs in the first current existing data structure in the structured storage system
445
Executing a data command to insert the list of key-value pairs into the structured storage system
450
Generating metadata from the one or more inbound data blocks
455
Storing the metadata in the first current existing data structure with an associated key-value pair
460
Consolidating the first current existing data structure with another data structure that meet the predetermined similarity threshold
465

FIG. 4

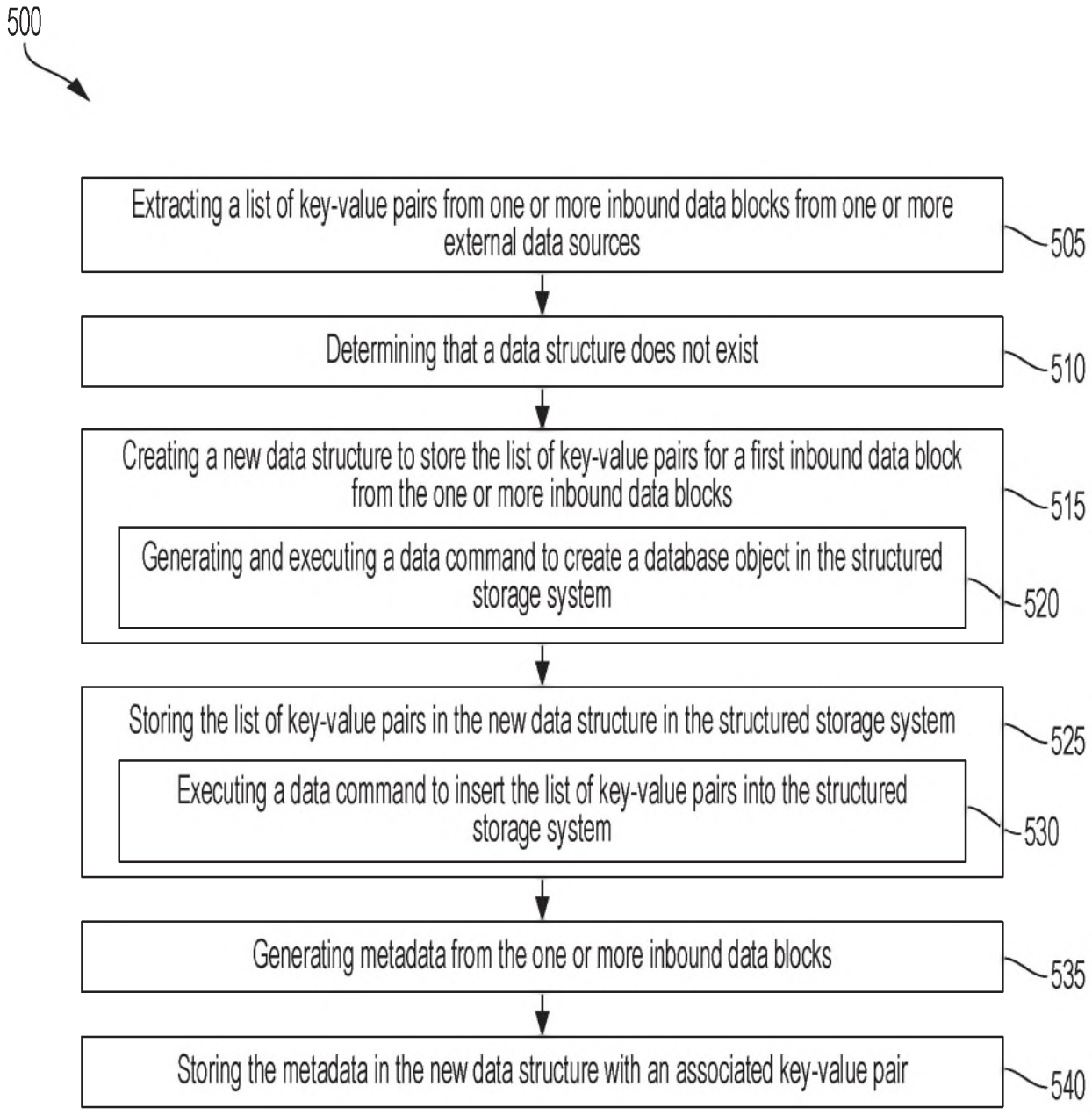

500
Extracting a list of key-value pairs from one or more inbound data blocks from one or more external data sources
505
Determining that a data structure does not exist
510
Creating a new data structure to store the list of key-value pairs for a first inbound data block from the one or more inbound data blocks
515
Generating and executing a data command to create a database object in the structured storage system
520
Storing the list of key-value pairs in the new data structure in the structured storage system
525
Executing a data command to insert the list of key-value pairs into the structured storage system
530
Generating metadata from the one or more inbound data blocks
535
Storing the metadata in the new data structure with an associated key-value pair
540

FIG. 5

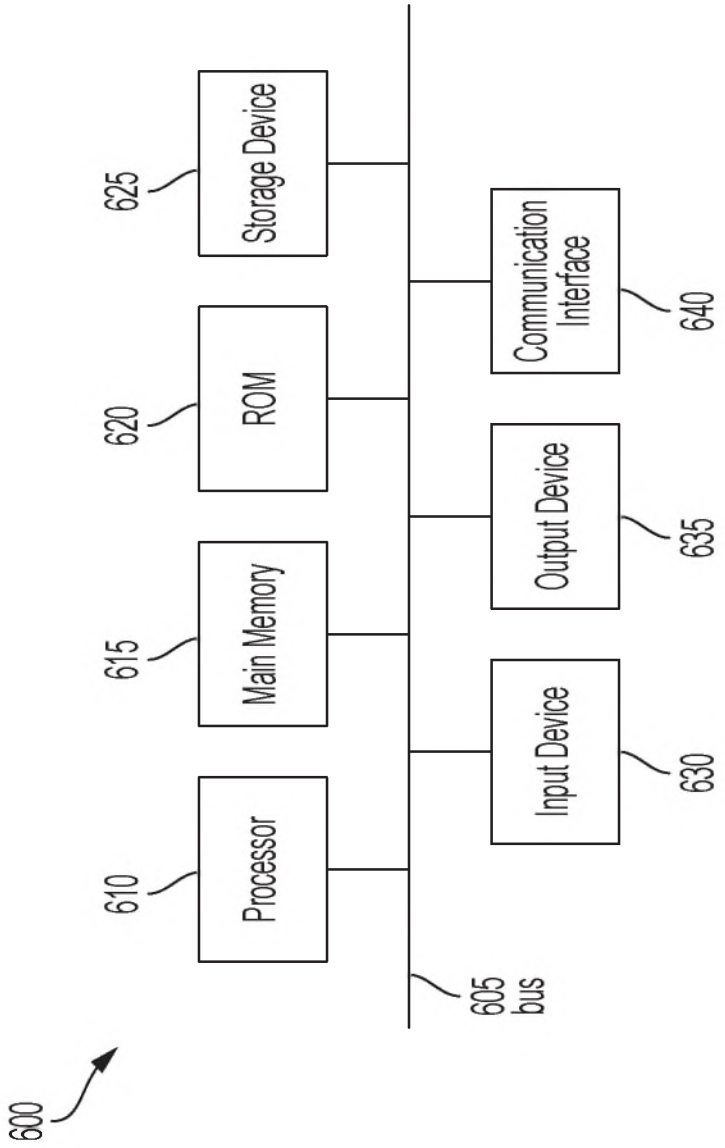

600
605
bus
610
Processor
615
Main Memory
620
ROM
625
Storage Device
630
Input Device
635
Output Device
640
Communication Interface

FIG. 6