

Claims

1. A method of synchronizing data records responsive to variable update notifications, the method comprising:
 - receiving, at an aggregator server, from a provider system, an update notification corresponding to a master data object maintained by the provider system;
 - responsive to receiving the update notification, retrieving a record at the aggregator server containing a local data object that corresponds to the master data object;
 - determining whether the update notification contains update definitions identifying changes to the master data object;
 - selecting between a delta synchronization mode, when the determination is affirmative, and an object comparison synchronization mode, when the determination is negative;
 - when the delta synchronization mode is selected, updating the local data object according to the update definitions, wherein updating the local data object comprises checking for unsynchronized changes to the master data object and determining whether the update definitions are compatible with the local data object;
 - when the object comparison synchronization mode is selected, obtaining a copy of the master data object, and updating the local data object based on a comparison between the local data object and the copy of the master data object; and
 - storing the updated local data object in the record at the aggregator server.
2. The method of claim 1, further comprising:
 - transmitting a notification from the aggregator server to a client system.
3. The method of claim 1 or claim 2, further comprising:
 - storing an update indication in a queue at the aggregator server for retrieval by a client system.
4. The method of any one of claims 1 to 3, wherein obtaining a copy of the master data object comprises:
 - determining whether the update notification contains the copy of the master data object; and when the update notification does not contain the copy of the master data object, requesting the copy of the master data object from the provider system.

5. The method of claim 4, further comprising:
requesting the copy of the master data object responsive to receiving a request for the record from a client system.
6. The method of claim 4, further comprising:
requesting the copy of the master data object responsive to selecting the object comparison synchronization mode, prior to receiving a request for the record from a client system.
7. The method of any one of claims 1 to 6, further comprising:
responsive to selecting the delta synchronization mode and prior to updating the local data object, determining whether the update definitions and the local data object are compatible.
8. The method of claim 7, wherein determining whether the update definitions and the local data object are compatible comprises, when the update definitions identify a field and define one of a change or a cancellation corresponding to the field:
detecting whether the local data object contains the field identified in the update definitions; and
when the local data object does not contain the field, generating an error notification.
9. The method of any one of claims 1 to 8, further comprising:
responsive to updating the local data object according to the update definitions following selection of the delta synchronization mode,
determining whether further changes to the local data object are required according to the checking for unsynchronized changes.
10. The method of claim 9, wherein determining whether further changes to the local data object are required comprises: selecting and performing the object comparison synchronization mode according to a copy of the master data object retrieved by the aggregator server.
11. An aggregator server for synchronizing data records responsive to variable update notifications, the aggregator server comprising:
a communication interface;

a memory storing a plurality of local data objects corresponding to respective master data objects maintained by a provider system external to the aggregator server; and

a processor interconnected with the communication interface and the memory; the processor configured to:

receive, via the communication interface from the provider system, an update notification corresponding to an updated one of the master data objects;

responsive to receiving the update notification, retrieve a selected one of the local data objects that corresponds to the updated master data object; determine whether the update notification contains update definitions identifying changes between the updated master data object and the local data object;

select between a delta synchronization mode, when the determination is affirmative, and an object comparison synchronization mode, when the determination is negative;

when the delta synchronization mode is selected, update the selected local data object according to the update definitions in which the update comprises checking for unsynchronized changes to the master data object and determining whether the update definitions are compatible with the local data object;

when the object comparison synchronization mode is selected, obtain a copy of the updated master data object, and update the local data object based on a comparison between the selected local data object and the copy of the updated master data object; and

storing the updated local data object in the memory.

12. An aggregator server comprising a processor, configured to execute the method steps according to any one of the claims 2 to 10.
13. A computer program product comprising program instructions stored on a computer readable medium to execute the method steps according to any one of the claims 1 to 10 when said program is executed on a computer.