WHAT IS CLAIMED:

1. A storage apparatus, comprising:

an ingestion application programming interface (API) mechanism that receives requests from data sources to store data, the requests each containing an indication of a type of data to be stored;

at least one data processing engine that is configured in accordance with executable instructions contained within a data cartridge to process the type of data by reading messages from an associated message queue that contain the type of data, wherein the associated message queue forwards the messages to a multi-threaded handler that communicates the messages to the data cartridge in order to transform the type of the data in substantially real time as it is received to processed data having a data-interchange format;

a plurality of databases that store the processed data and provide the processed data to consumers; and

a pull API mechanism that is called by the consumers to retrieve the processed data.

2. The apparatus of claim 1, further comprising an API management component that authenticates, meters and throttles the requests and the calls to the ingestion API mechanism and the pull API mechanism.

3. The apparatus of claim 2, wherein the ingestion API mechanism and the pull API mechanism are exposed by the storage apparatus to receive requests at respective Uniform Resource Identifiers (URI).

4. The apparatus of claim 1, wherein data received by the ingestion API is processed and stored in a non-blocking fashion into one of the databases in accordance with the type of data indicated in the request to the ingestion API mechanism.

5. The apparatus of claim 1, wherein the ingestion API mechanism further comprises load balancers that determine resources within the storage apparatus to be utilized in order to minimize response time to store the processed data in the databases.

6. The apparatus of claim 1, wherein the ingestion API mechanism places the data into a predetermined message queue in accordance with the type of data indicated in the request for processing by a respective data processing engine associated with the type of data.

7. The apparatus of claim 1, wherein the at least one data processing engine further comprises:

a data pump that reads message from the associated message queue;

a database interface that writes the processed data to a predetermined database among the plurality of databases; and

an exchange mechanism that provides processed data directly to the consumers,

wherein the predetermined database is selected based on the type of data to be stored therein.

8. The apparatus of claim 7, wherein if the respective data processing engine receives data of an unknown type, the respective data processing engine places the data into a queue of another of the at least one data processing engines that can process the data.

9. The apparatus of claim 1, wherein the data is gridded data provided by the data sources

10. The apparatus of claim 9, wherein the type of data is one of pollen data, satellite data, forecast models, wind data, lightening data, air quality data, user data, temperature data or weather station data.

11. A method of storing and providing data, comprising:

receiving a request at an ingestion application programming interface (API) mechanism from data sources to store data, the requests each containing an indication of a type of data to be stored;

processing the data at a data processing engine that is instantiated in accordance with resource requirements of a storage apparatus and configured by executable instructions contained within a data cartridge to process the type of data, by reading messages that contain the type of data from an associated inbound message queue and forwarding the messages to a multi-threaded handler that communicates the messages to the data cartridge to transform the type of data in substantially real time as it is received to processed data having a data-interchange format;

storing the processed data at one of a plurality of databases that further provide the processed data to consumers; and

receiving a call from a consumer at a pull API mechanism to retrieve the processed data.

12. The method of claim 11, further comprising authenticating, metering and throttling the requests and the calls to the ingestion API mechanism and the pull API mechanism using an API management component.

13. The method of claim 12, further comprising exposing the ingestion API mechanism and the pull API mechanism at respective Uniform Resource Identifiers (URI).

14. The method of claim 11, further comprising storing data in a non-blocking fashion into the one of the plurality databases in accordance with the type of data indicated in the request to the ingestion API mechanism.

15. The method of claim 11, further comprising providing load balances that determine resources within the storage apparatus to be utilized in order to minimize response time to store the processed data in the one of the plurality of databases.

16. The method of claim 11, further comprising placing the data into the associated message queue in accordance with the type of data indicated in the request for processing by a respective data processing engine associated with the type of data.

17. The method of claim 11, further comprising providing the data processing engine further with a data pump that reads the messages from the associated message queue, a database interface that writes the processed data to a predetermined database among the plurality of databases, and an exchange mechanism that provides processed data directly to the consumers.

18. The method of claim 17, further comprising:

determining if the respective data processing engine receives data of an unknown type; and

placing the data into a queue of another of the at least one data processing engines that can process the data.

19. The method of claim 11, wherein the data is gridded data provided by the data sources

20. The method of claim 19, wherein the type of data is one of pollen data, satellite data, forecast models, wind data, lightening data, air quality data, user data, temperature data or weather station data.