

Cloud-Edge providing a solution to the challenge of Big Data for IoT

The Strength of Cloud-Edge for IoT lies in the speed and cost effectiveness of importing and cleaning disparate data sources. The speed and efficiency of imports is perhaps the fastest available due to the maximum utilization of the hardware resources and the elimination of the need to preprocess the data before using it.

Combined with data compression, the smallest possible platform is required, maximizing the cost effectiveness.

For cleaning the data before analysis, many transformations can be performed simultaneously with the import, without sacrificing speed. For cleaning functions that cannot be performed during import, the speed of “Seed” processing, with flat files, enables the highest performance on a given platform. The import and cleaning functions can be developed and implemented in the DPE Development Studio, in a fraction of the time required by other technologies. DPE Studio also enables ongoing maintenance and modifications to be handled in the easiest, most efficient manner, due to the graphical organization of the logic.

One of the main objectives in IoT is the continued research into ways the data can be used beneficially through different analyses. Due to the nature of IoT data, an important strength is Cloud-Edge’s ability to facilitate iterative/agile development, where the algorithm logic evolves as more is learned about the data. All the above, assumes a central repository where data is received from a multitude of devices.

Research on this IoT data may reveal that a Cloud-Edge algorithm could be beneficial if embedded in one or more of a set of interconnected IoT devices.

IoT data is typically bite-sized data which is transmitted at regular intervals from thousands of devices, which with Cloud-Edge, would be handled more efficiently with the benefit of the algorithms. Much of the IoT data will be duplicated and repetitive so, with Cloud-Edge (and as part of the algorithm) it would only record the changed/updated data allowing for increased economies/productivity. The Cloud-Edge system can rapidly ingest and compress this IoT data, resulting in great value for throughput speed, less spectrum needs & reduced storage requirements.