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A Cloud-based Remote Sensing Data Production System

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Abstract

The data processing capability of existing remote sensing system has not kept pace with the amount of data typically received and need to be processed. Existing product services are not capable of providing users with a variety of remote sensing data sources for selection, either. Therefore, in this paper, we present a product generation programme using multisource remote sensing data, across distributed data centers in a cloud environment, so as to compensate for the low productive efficiency, less types and simple services of the existing system. The programme adopts "master-slave" architecture. Specifically, the master center is mainly responsible for the production order receiving and parsing, as well as task and data scheduling, results feedback, and so on; the slave centers are the distributed remote sensing data centers, which storage one or more types of remote sensing data, and mainly responsible for production task execution. In general, each production task only runs on one data center, and the data scheduling among centers adopts a "minimum data transferring" strategy. The logical workflow of each production task is organized based on knowledge base, and then turned into the actual executed workflow by Kepler. In addition,

☆ Fully documented templates are available in the elsarticle package on CTAN.

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