



T2EAK – 04612_DIASTEMA - Data-driven stack for big data applications management and deployment

The new data-driven industrial revolution driven highlights the need for big data technologies to unlock the potential in various application domains. To this end, DIASTEMA delivers a complete high-performant stack of technologies addressing the emerging needs of data operations and applications. The stack is based on a frontrunner infrastructure management system that drives decisions according to data aspects thus being fully scalable, runtime adaptable and performant for big data operations and data-intensive applications. Therefore, DIASTEMA promotes automation and quality and ensures that the provided data are meaningful, of value and fit-for-purpose through its Data as a Service offering that addresses the complete data path with approaches for data cleaning, modelling, semantic interoperability, and distributed storage. Furthermore, DIASTEMA introduces a pioneering technique for seamless analytics which analyses data in a holistic fashion across multiple data stores and locations, handling analytics on both data in flight and at rest. Complemented with an innovative CEP running in federated environments for real-time cross-stream processing, predictive algorithms and process mining, DIASTEMA offers a complete suite for big data analytics. DIASTEMA's holistic solution incorporates approaches for data-focused application analysis and dimensioning, and process modelling towards increased performance, agility and efficiency. A toolkit allowing the specification of analytics tasks in a declarative way, their integration in the data path, as well as an adaptive visualization environment, realize DIASTEMA's vision of openness and extensibility. With an emphasis on standardisation and open-source contributions targeting high impact, DIASTEMA will enable data operations and data-intensive applications to take full advantage of the developed technologies, exhibiting their applicability through commercial use cases from the marketing, and healthcare domains.



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