Big Data Europe Open Platform for Wind Turbine Condition Monitoring

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Project scope

- Develop an adaptable, simple to get started solution to boost adoption of Big Data technologies in EU.
- Offer basic building blocks to get started with Big Data technologies and make integration with other technologies or applications easy.
- 14 Partners from across Europe that cover a wide range of disciplines.

Technology – Supported Components

- Data Processing & Computational Frameworks: Spark, Flink, Sansa
- Data Storage: Hadoop HDFS, Hive, Cassandra, OpenLink Virtuoso, 4Store
- Data Acquisition: Flume
- Message passing: Apache Kafka
- Semantic components: FOX, GeoTriples, Silk, SEMAGROW engine, Sextant, Strabon, UnitedViews, Ontario
- Component packaging & deployment: Docker

Big Data in Wind Energy – A pilot Condition Monitoring research case

- Modular distributed system using standard Ethernet network
- Robust and reliable continuous operation - High-throughput DAQ rates – NAS data storage.
- Acoustic Emission (time and hit driven capture).
- Operation of pilot: 1 year (on-going).
- Analytics: engineering signal analysis, research on parametrics, fault identification and loop with updated methodologies on raw data.

Topology and h/w throughput of the CMS data acquisition.

Data analysis using BDE components.

Platform opportunities

- Big Data Europe offers a easy-to-use generic platform to encourage community’s entrance to big data technologies.
- Project’s pilot cases show the applicability of tools and deliver open data.
- Implement your case: GitHub https://github.com/big-data-europe

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