Insight
Centre for Data Analytics

Testing and Optimising the
SAP HANA Platform for Academia

Insight uses its data analytics expertise to help SAP to validate and enhance the SAP HANA platform for use in novel applications

Executive Summary

Challenges

SAP HANA is a relational database system developed by SAP, which is used to store and analyse data. SAP wishes to optimise SAP HANA for novel as well as standardised business use cases. This requires:

- Using the platform on a variety of research projects and data types
- Identifying new possibilities for the programme
- Developing new methods of data management

What Insight Delivered

Insight organised a project to provide a large and varied number of use cases from academia, including:

- **Heterogeneous data from online sensors**
- **Statistical computing environments**
- **Social semantic data**
- **Mining location information for insights and patterns**
- **Dynamic decision problems**

Measurable Impacts

SAP's design thinking is a key philosophy and driving principle and requires as many different sources of feedback as possible to aid innovation. In this significant project, Insight provided:

- Analysis of SAP HANA's performance across a broad range of research projects
- Research on SAP HANA in use cases outside its original scope
- Identification of previously unconsidered uses for HANA

SAP HANA is an in-memory, column-oriented, relational database management system developed by SAP. It primarily functions as a database server to store and retrieve data.

SAP HANA has a number of features that make it ideal for data analytics: The system can support volumes of up to a petabyte of data in-memory while returning query results in under a second. It has built-in advanced analytics and multi-modal data processing engines. Additionally, the system can rapidly perform common statistical measures.

While SAP HANA is highly optimised for business use cases, SAP wished to better understand novel research use cases. Insight has developed and identified challenges for the SAP HANA platform in such contexts, as well as new areas where it can be used, which have not previously been considered.

Solution and Outcome

Insight researchers challenged the SAP HANA platform using different data sources and creating a variety of new demands for the platform. For example, some of the data sets that the Insight team have are ultra-wide in terms of column width – more indeed than HANA can typically accommodate.

The objectives of the various projects are to identify new possibilities for the platform and to develop new methods of data management. Exposing HANA to new, unforeseen use cases helped SAP hone the product and optimise it for solving the real challenges that customers and users face. This non-linear approach to product testing is impactful for SAP as it increases awareness of the system capabilities.

SAP's vision is to help the world run better and improve people's lives – to seamlessly connect people and technology in real-time. With SAP HANA as the great simplifier, SAP customers are creating breakthroughs that solve complex, intractable problems.

SAP
For further details on SAP and HANA see
http://www.sap.com/

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"Being exposed to challenges from Insight researchers has been invaluable, as it helps us hone our products on real challenges which our customers and users face." Liam Ryan, MD, SAP Labs Ireland

See Insight's contact information on the Web at www.insight-centre.org