



CASE STUDY
ANALYTICS SERVICES

BIG DATA ENTERPRISE SOLUTION

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Big data enterprise solution with a central Data Lake and Azure-based analytical services

PROJECT OBJECTIVES

Provide a central data lake for the whole enterprise, intended to store all sorts of data (both structured, semi-structured and potentially also unstructured) from various source systems of the enterprise, accompanied with a set of analytical tools based on Azure services. Objectives:

- Provide one place for storing data in a central data lake
- Build a platform for big data, with two aspects:
 - Quantitative: >100 times more data than in DW
 - Qualitative: support for non-structured data
- Provide machine learning capability for predictions
- Provide structured data layer (SQL, SSAS) on top of large data layer (Data Lake)
- Visualize data via Power BI reports
- Enable exporting data from the data lake to other systems
- Provide a security model for securing access rights to data
- Achieve high level of automation (CI / CD)
- Fully in PaaS (no physical / IaaS servers to be maintained)
- Explore and experiment with latest Azure services

CUSTOMER BENEFITS

Modern big data platform for the enterprise, overcoming some of the shortcomings of traditional DW / BI technologies. Utilizing huge and relatively cheap storage for data coming from many systems, including IoT data. Below is a summary of the benefits experienced by the customer:

- Availability of data from many source systems
- Practically no size limits
- Machine learning capability (has not existed before)
- Optimized for bulk load of huge amounts of data
- High performance transforming big data sets
- Short development cycle for integrating an additional source system (thanks to ELT vs ETL)
- Short development sprints thanks to agile methodology
- Quick adoption of new Azure services even in public-preview mode
- Possibility to store and analyze IoT data
- Easy integration with 3rd party service providers

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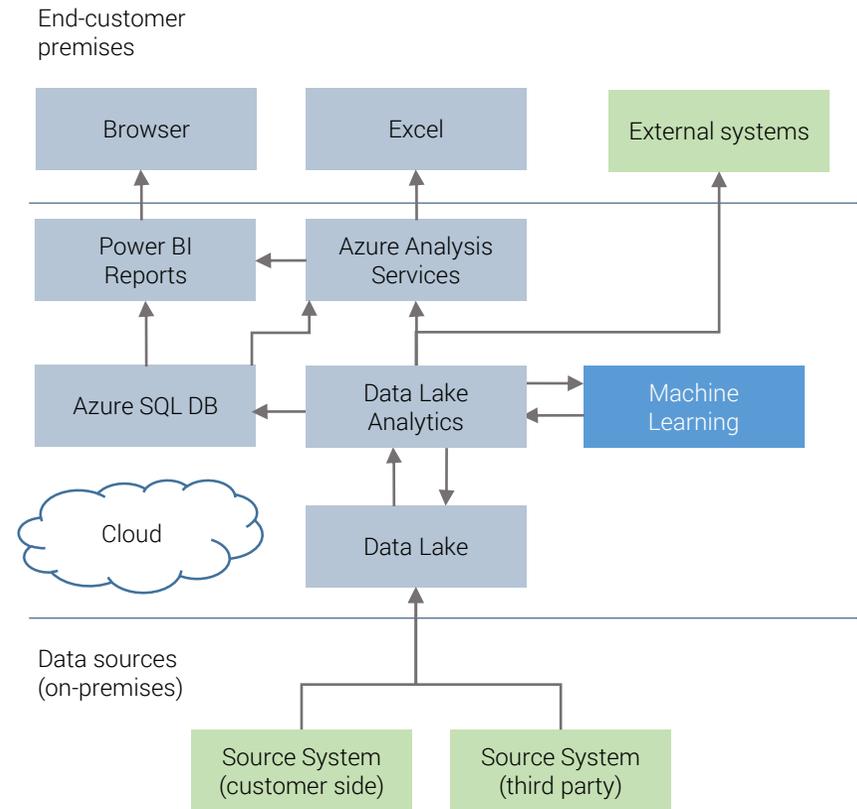
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IPS EXPERTISE

IPS is involved in most phases and aspects of the project, from consultancy, architecture, implementation of the framework, implementation of project-related tasks, testing, system maintenance and handling of support questions.

TECHNOLOGIES USED

- ADLS (Azure Data Lake Store)
- ADLA (Azure Data Lake Analytics)
- ASA (Azure Stream Analytics)
- AEH (Azure Event Hubs)
- ADF (Azure Data Factory)
- AML (Azure Machine Learning)
- AHDI (Azure HDInsight)
- ASQL (Azure SQL Database)
- AAS (Azure Analysis Service)
- PBI (Power BI Site and Reports)
- AF (Azure Functions)
- AAI (Azure Application Insights)
- ALA (Azure Log Analytics)
- ARM (Azure Resource Manager)
- Programming (C#, R, M, SQL, DAX)



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