Accelerate AI Data pipeline in Multi-cloud

Edge-Core-Cloud
“By 2020, the spend on edge infrastructure will reach up to 18% of the total IoT infrastructure spend (IDC)“
BANDWIDTH

LATENCY

PROCESSING POWER

Distributed AI Model

Decision

Action

Data Creation
## How Our Client using AI - ML - DL

<table>
<thead>
<tr>
<th>INPUTS</th>
<th>BUSINESS QUESTION</th>
<th>AI/ML/DL TASK</th>
<th>EXAMPLE OUTPUTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text Data</td>
<td>Is “it” present or not?</td>
<td>Detection</td>
<td>Cancer Detection, Targeted ads, Cybersecurity</td>
</tr>
<tr>
<td>Images</td>
<td>What type of thing is “it”?</td>
<td>Classification</td>
<td>Image Classification, Basket Analysis, Credit Scoring</td>
</tr>
<tr>
<td>Video</td>
<td>To what extent is “it” present?</td>
<td>Segmentation</td>
<td>Tumor Size/Shape Analysis, Build 360º Customer View, Credit Risk Analysis</td>
</tr>
<tr>
<td>Audio</td>
<td>What is the likely outcome?</td>
<td>Prediction</td>
<td>Survivability Prediction, Sentiment &amp; behavior recognition, Fraud Detection</td>
</tr>
<tr>
<td></td>
<td>What will likely satisfy the objective?</td>
<td>Recommendations</td>
<td>Therapy Recommendation, Recommendation Engine, Algorithmic Trading</td>
</tr>
</tbody>
</table>
Data Architecture ASKs

- Cloud-First
- Streaming-First
- Data Science
- Self Service
- Portability
- Scalability
- Modernise building blocks

Bridge
Data Pipeline Diverse Needs

Data Scientists
Real-world Data for App Dev

Need Agile Infrastructure:
- Refreshed access to Production Data
- Enable DevOps, Data Scientist
- Enable Multi Tenant Data Science
- Data, AI/ML Models as Code
- API Based

Data Architects
Future Proof Architecture

Seek Extensible Architecture:
- Architecture spans Edge, Core and Cloud
- Future Proof to allow shifts in deployment
- Tiering is the new Scaling
- No Data and Compute Sprawl
- Architect for overall TCO

Data/IT Admins
Lowest TCO in face of shrinking budgets

Balance Cost & TTM:
- Reduce IT/Licensing costs
- Automated Data Lifecycle Management
- Meet SLAs
- Non-Disruptive Operations

Balanced Architecture to Deliver for Stakeholders
### Data Pipeline Requirements

<table>
<thead>
<tr>
<th>Edge</th>
<th>Core</th>
<th>Cloud</th>
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</thead>
<tbody>
<tr>
<td>Data Ingest, Collection, Transport</td>
<td>Data Lake, AI Model Training, Deployment, Serving</td>
<td>Data Lake, Training, Deployment, GPU as a Service, Archive</td>
</tr>
<tr>
<td>- Massive data (few TB/device/day)</td>
<td>- Ultra High I/O bandwidth (20 - 200+ GBps)</td>
<td>- Cloud Analytics, AI/DL/ML</td>
</tr>
<tr>
<td>- Real-time Edge Analytics/AI</td>
<td>- Ultra-low latency (micro – nanosec)</td>
<td>- Consume and not Operate</td>
</tr>
<tr>
<td>- Ultra Low Latency</td>
<td>- Linear Scale (1-128 node AI)</td>
<td>- Cloud Vendor vs. On-Prem stack</td>
</tr>
<tr>
<td>- Network Bandwidth</td>
<td>- Overall TCO for 1-100+ PB</td>
<td>- Cost-effective Archive</td>
</tr>
<tr>
<td>- Smart Data Movement</td>
<td></td>
<td>- Need to avoid Cloud Lock-in</td>
</tr>
</tbody>
</table>
Our execution from
Edge –to– Core –to– Cloud
Analytics Project

Data and analytics advisory
We'll help you define the strategies needed to realise more value from your data and further use data to inform your business objectives.

Analytics and data visualisation
We'll help you gain insight into your organisation through data analytics, business intelligence, and data visualisation.

Modern data architecture
We'll help define the appropriate storage and processing architectures to ingest, process, and integrate hybrid data in a cost-effective manner.

Business assurance
We'll make sure you have a resilient architecture, automated multi-cloud backup, and DR plans to support your business risk and assurance outcomes – so that you can protect your valuable data, and ensure governance and compliance.

Modern data management
We'll show you how to establish processes and tools to gain control over data across your organisation, and improve data quality aligned to governance and regulatory mandates.

Dataset Cybersecurity
We'll help you put in place the right security policies, architectures, processes, and controls used to comply with GDPR, and expertise to protect your infrastructure, applications, and data.

Database services
We'll help you develop, optimise, audit, and consolidate your enterprise databases in order to maximise business value.
Next Steps toward your Data Management

- Leverage analytics to refine processes and transform business outcome.
- Optimise data infrastructure, apply automated policies, enforce governance, apply security controls and backup and recovery approach.
- Identify critical data, ascertain retention strategy, assess business risk, and place optimally to extract maximum value.
Thank you