



DATA PLATFORM TRANSFORMATION

TAMING THE DATA DELUGE

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Digital is Driving New Trends in Data Usage

The dominance of digital has given rise to an era where the growth of data has become an area of concern. Data isn't bad news. Quite the contrary, organizations are welcoming data into their systems. But they have been caught unprepared by the implications of data at scale and its diversity. That is why data platforms are in urgent need of transformation or rationalization. If organizations don't do this, valuable business intelligence will remain buried and inaccessible within the data. No business can risk that.

Today's global business requirements must manage millions of business transactions, an inordinate increase in the number of concurrent users and exponential data growth from internal and external sources. Additionally, as businesses change their processes, data structures undergo a concurrent change. This flood of complex data is crippling current systems. What businesses need is robust scalability, resource optimization, consolidation and flexibility to meet even unforeseen business needs. That's why, across industries, there is a growing demand for innovation around data platforms.

Migrating to improved data management solutions

Database vendors have come up with an effective solution in the form of data appliances. These are pre-packaged servers loaded with OS, database management systems (DBMS), memory, storage, analytical engines, services and support. The appliances are able to support the growing volumes of data and transactions generated by modern businesses. With data being in close proximity to the analytic engine, there is no need to prepare and ship data to remote servers. Time cycles are reduced, the data is more secure and total costs associated with support and maintenance etc. can be brought down.

Although more expensive than traditional relational database management systems (RDBMS), data appliances offer an effective solution to the data problem. But the very cost of these appliances is also forcing organizations to migrate their data from one platform to other platform either on premise or cloud based solutions. In these instances, organizations are wary of migration. This stems

from a variety of factors and perceptions that play a role in shaping the final data platform and migration solution:

- Data migration to another RDBMS or appliance is risky without SME knowledge about existing platforms
- The expertise required to manage new platforms is scarce
- The transformation process implies downtime and is too hazardous for business

These are natural anxieties. But they also point to the precautions that must be in place before migration.

These precautions include consulting technology partners about standardizing the IT landscape, tailoring the solution to meet specific business needs, restructuring data to meet new process requirements, rapidly deploying the solution without compromising quality and minimizing downtime.

5 ways to tell if you are ready to transform your data platform

The foremost question that every organization wants answered is: Am I a candidate for migration? There are multiple scenarios that help identify ideal migration candidates:

- **Application/ Business Platform Transformation:** The existing hardware may not scale to needs and may require transformation
- **Consolidating multiple database(s):** When you have hundreds of instances of databases running, you may want to consolidate them in one big box, thereby reducing the resources required for support
- **Application/ Database migration from one database into another database:** As an example, business logic may dictate that all SQL servers now move to Oracle – or the other way around
- **Optimizing licenses/ support costs for existing databases:** A business may decide to move from Oracle to SQL or open source to bring down costs
- **Consolidating business processes:** This may entail rationalizing applications such as SAP or Salesforce across the organization all of which have underlying data that will need to be moved

How to minimize downside and increase upside

Once you've worked your way through the Am-I-a-candidate-for-migration filter, there is going to be a short list of challenges that will crop up. First and foremost is the problem associated with the required data structures for migration from legacy systems to appliances. The odds that your database knowledge has long gone with an employee are high. You will need to ponder on how to either build that knowledge back into the system (very time consuming and iffy) or outsource it to platform experts (cross checking their fit for your business needs could be daunting) before data can be safely migrated to the target state.

It is also necessary to keep an eye out for data integrity and consistency. Given the growing number of platforms spewing data at your business, the source of data needs to be carefully chosen to

maintain data integrity. Finally, a non-technical quality is essential for effective data platform transformation. Risk must be minimized by ensuring that the transformation is rolled out in a phased manner, calling for tremendous planning and patience.

An aspect of migration that is not well thought-out is the effort required for data validation and quality, post migration. No business should wait for the lack of data quality to affect business before responding. Instead, the migration plan must include a data validation/ reconciliation strategy that is also incremental and in step with the phased roll out.

The benefits of data platform transformation can be realized across operations, technology and support groups through:

- Faster and simpler access to data ensuring identification of inefficiencies and deployment of measurable improvement intervention
- Inherent data management capability improvement of several fold – an important factor in the context of the emerging data chaos
- Reduced license, storage and support cost – this is especially so when an increasing amount of open source is used to enable the transformation
- Ability to scale and optimize based on business need – unlike traditional databases that have limited capabilities and scaling implies time and cost
- Data accessibility across the enterprise – better distribution of data, previously trapped in siloes, ensures enterprise wide ability to innovate
- Standardization of data platform environments – leading to reduced complexity and increased ability to integrate with any system

Is it enough to gain the benefits listed above? We think not. Working with an experienced partner to understand existing data structures, create new architectures that meet business needs, identify early migration candidates within the enterprise and create data validation strategies is the complete story. When undertaking such a significant exercise, enterprises must also invest time and effort in improvements. This would mean identifying existing bottle necks, recommending the acquisition of select in-house skills and adopting industry best practices. It is this holistic approach that makes for successful data platform transformation.

About The Author

Suvakanta Mohanty- Practice Lead - Data Warehouse & Appliance Practice In Wipro Analytics

Suvakanta Mohanty is Practice Lead for Database & Architecture Tower - Data Warehouse & Appliance Practice in Wipro Analytics.

Suvakanta has more than 19 years of experience in IT Industry and worked different areas of Database technology led transformations in Wipro. He is a hard core Database Practitioner and deeply involved in almost every aspect of the Database & Data Warehouse Architecture and served with various Customers across a broad range of Industries such as Manufacturing, Pharmaceuticals banking and Retail & High Tech. He has been providing Data driven strategic insight to Customers as well as helping Accounts across WT to develop Scalable and robust Database solutions to meet high performance applications. He has been leading enterprise level end-to-end Database solutions as well as various Data Management strategies for strategic accounts as well as involved in modelling, implementing, debugging and performance tuning of Big Data systems. Has also extensive experience with the Database Design, Development, & Implementation of both OLTP & EDW Applications. Prior to Wipro, he is having significant experience with leading global outsourcing and product consulting firms like Manhattan Associates, & Virtusa on areas of Product Architecture, System Architecture and Information Architecture. Suvakanta holds a Master's in Computer Application from Nagarjuna University and has a Bachelor's degree in Mathematics.

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