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Cloud Data and Application Migration to Azure for Faster Innovation on Data Analytics

Seamless and secure data migration for a massive volume of sensitive and confidential data stored on-premises to the cloud right from the beginning phase (migration plan), core migration phase till system documentation improved the performance by 56%.

Problem Statement

The client is a 35-year-old healthcare solutions enterprise that provides revenue cycle management solutions. The customer had massive data migration challenges such as multiple input data sources, duplicate ETL pipelines with redundant data flow, lack of documentation, etc. The data contained sensitive information about patients and facilities that cannot be lost or leaked during migration from on-prem to the cloud.

Challenges

- Massive volume of sensitive and non-sensitive data
- Multiple input data sources
- Duplicate ETL pipelines with redundant data flow
- Lack of documentations
- Multi-layered data consolidation
- Unmanaged Data Catalog

Our Approach

- We analyzed the customer requirements using the process below.
- Templatized and captured the entire data flow at all system layers
- Identified the control data for cloud migration
- Identified the existing Azure Cloud functions to leverage the current data touchpoints
- Graphed documentation for all the data flow and parameterized the entire data flow
- Re-organized and optimized the data ETL scripts from SSIS on-prem to cloud functions
- Identified and consolidated the existing DataMarts and Data Cubes at all department level

We designed a phase-wise migration approach.

Migration Plan:

In this phase, we ensured that the organization is aligned with the data migration requirements, including hardware and software for the business applications to which the host is decided. As part of the migration plan, we assured the stakeholders about the rollback management plans and architecture framework design. We ensured all the redundant data is also captured in this phase.
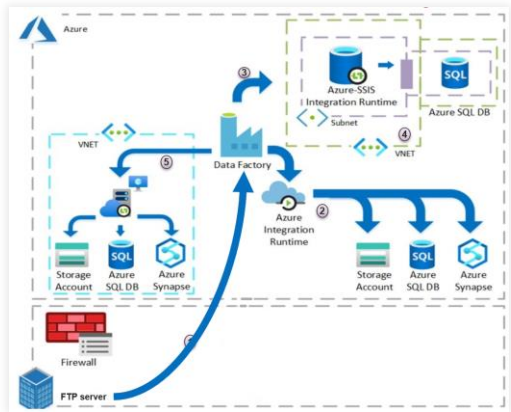
Core Migration:

We ensured that the complete data migration is executed within a short span of downtime. This stage includes data migration and analytics platform integration, application migration, and database migration. We applied additional measures to ensure all the data is transferred in an encrypted format to avoid any security breach and data leakage.

Data verification:

We tested and conducted parallel runs of the old and migrated systems to ensure that there is no disparity and data loss. imagine Tech provides all additional reporting and system documentation to enterprises for better clarity and to avoid further reworks.

Business Outcomes

Imagine Tech provided a new on-cloud system and integration to the existing data analytics application for the business continuity. The redundant data flow has been optimized. The turnaround for reports has been optimized at 40 % down. Performance of the systems has been improved to 56% with effective utilization of cloud resources.

| **Ported ETL scripts to the cloud with PHI Compliance** | **Applications refactored to Azure Kubernetes Ecosystem** | **56% increased system performance** | **34% Reduction in Infra Cost from earlier estimate due to AKS Recommendation** | **40% Better API performance due to solution scalability** |

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