Cloud D&A Modernization™

SYSTECH

Microsoft Partner

Microsoft

Gold Small and Midmarket Cloud Solutions
Gold Collaboration and Content
Gold Application Development
Gold Cloud Productivity
Gold Cloud Platform
Gold Data Analytics
Gold Messaging
Gold Datacenter

About Systech

We help enterprises get insights-driven answers to What and Why of your operations, the ecosystem they operate in and market dynamics, so they know How best to drive desired outcomes.

We are problem solvers at heart, focusing on realizing pragmatic solutions to complex problems. We bring unsurpassed technical breadth and depth and 25+ years of industry experience, domain understanding, solutions and partner expertise to everything we do. We have mastered the art of going from abstract strategy and vision to

Cloud D&A Modernization™ powered by Microsoft Azure

Most of recent technological advancement is either entirely happening on cloud or have well integration capabilities on the cloud. So, it's needless to state that modern data and analytics framework heavily rely on cloud as its infrastructure mostly because of its high availability and low cost, low maintenance. Moreover, starting off with cloud as infrastructure of choice, then comes the modernization part. But the cloud movement makes the modernization quite seamless. Once there, you need to capitalize on the huge efficiency and innovation potential it offers. This means building applications and services specifically to maximize the value of a cloud environment.

Systech's Cloud D&A Modernization™, Starts with exhaustive assessment of the legacy infrastructure and applications and carve down a target state cloud architecture for the customers with phased implantation plan.

Why Modernize?

In today's digital age, companies need to instantly adapt to market changes in order to stay relevant. Modern Data & Analytics is at the core of building that adaptive capability and fuel Business/Digital Transformation, with the ability to sense, collaborate, experiment and act fast. To gain a distinct competitive edge, Modern data & analytics strategies must be pervasive throughout the organization.

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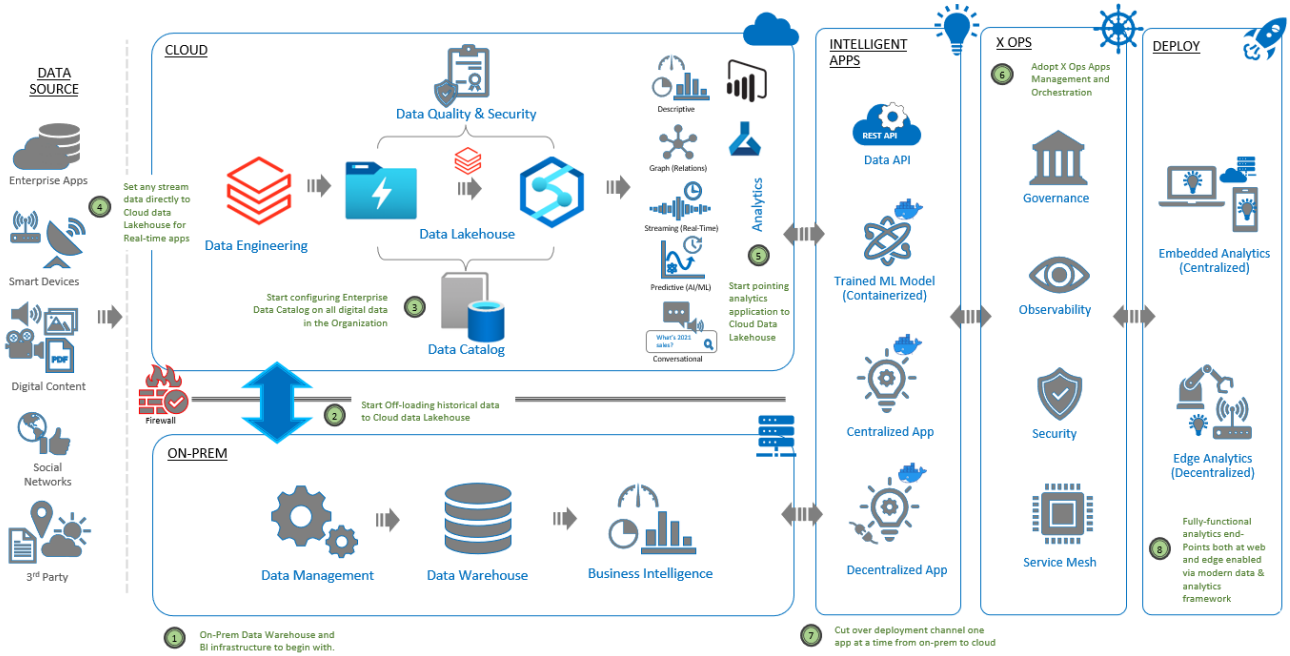
How **Cloud D&A Modernization™** works?



A Typical Target State Modern Cloud Architecture

Implementation Steps

Start with On-Prem Data infrastructure assessment

A complete assessment on the data volume, types of analytical application and current business engagement load is crucial to assess the existing data and analytics IT footprints in the organization. It's also important to understand the vision and future analytics appetite of various business functions of the organization for carving out an apt modern/target state (End-State Architecture) IT infrastructure.

Provision and integrate cloud infrastructure

Based on above target state design, provisioning a dev/test/Prod environment on cloud is crucial. Configuration/stress test and accessibility of the resources should be tested and documented well for the development team.

Off-load historical data to cloud

Cloud modernization usually take months to complete, and it should be done incrementally. In the interim, business continuity shouldn't be affected. Our approach on non-critical data off load ensures of the business continuity and tests new cloud production system with real business data (Historical).

Configure Enterprise Data Catalog

Enterprise Data Catalog (EDC) is an unified metadata repository of all digital data, analytics and processes (pipelines). This trace backs the full lineage of each data elements and its corresponding enterprise-wide usage in the organization. An AI (Recommendation and suggestive) driven EDC increases the productivity of analysts, increases accuracy of analytics and business solutions and truly enables self-service for business users. Setting up EDC as next steps will certainly provide foundation to the entire Data landscape of the organization.

Start pointing new data sources and stream data directly to new cloud setup

If the current setup doesn't have the mechanism to process real-time stream data, then starting with it on the new modern cloud setup will be easy and seamless. Also, start point all new data sources directly from the cloud infrastructure and

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Building new analytical application right on the cloud

Once all required data sources are plugged in to the cloud channel then it can become the primary development environment for the analytical app development. Web based integrated development environment makes it easier for developers to collaborate with peers and businesses for development of well structured, intuitive and purpose-built analytical apps.

Intelligent Apps

In our typical cloud target state architecture, we have provisioned a complete application configuration and management center which containerize analytical application (wherever possible) and maintain their source code in code repository for version control and enhancements. Various types of apps which can be developed from the above design are as below:

Data API
These are mostly processed/intelligent data feed which is well curated and specific to certain business requirement. These data APIs are meant to be readily ingested by any application listening for it and has proper access rights.

Containerized ML Model App
Modern cloud infrastructure supports developing and training ML models and these trained ML models then get deployed at either a web application (Embedded) or directly at a lean (Hardware) device in containerized form.

Centralized App
The design also supports creating an analytical app which is still connected with the data lakehouse for continuous intelligence feed but running as independent entity as embedded application.

Decentralized App
Quite often there's a requirement of deploying analytical apps at remote devices which are completely disconnected to the centralized infrastructure. Decentralized apps concept of above design makes it possible to develop and deploy apps at remote locations (i.e., IoT)

XOps

An unified framework for governance, monitoring, secure, and ensure a seamless app level communication via service mesh.

Governance
It's inevitable to ensure a proper governance of all the apps which gets deployed to ensure uniformity and standardization for all business functions to work without conflicts.

Observability
Post app deployment, it needs to scale up and down based on the requirement of resources and workload on the app. Observability ensures of auto-scaling of all deployed app by using Azure Kubernetes Services.

Security
Users access rights can be ensured via security framework that is part of the XOps. To enable (or disable) accesses for users just in time is done via security manager in the XOps.

Service Mesh
App to app communication can be established in service mesh framework and that enable multi containerized deployment of application for specific business requirements.

Deployment Center

There are typically couple of avenues to deploy analytics applications from the target state architecture. One on Embedded web/mobile, where these apps can either be infused with the existing web apps or created entirely from the cloud platform. Few examples are fraud detection model in payment gateway. Intelligent and personalized ad display for the users.
Other form of deployment be on isolated devices such as IoT. These devices generally have low compute and storage capabilities and often requires running standalone (disconnected). The cloud platform enables deployment of apps to these Edge devices as well.

Cloud D&A Modernization™ combines our advanced analytics expertise with Azure data storage and powerful compute **to provide high-quality, adaptive, and scalable infrastructure to our customers** which saves them **50% on execution time** with **60% cost saving**