

API & ESB Capabilities

2024

V 3.7

Year of Incorporation



- 2002

Team



- 650+ Employees

Footprint



- India
- USA
- Singapore
- Canada

Portfolio



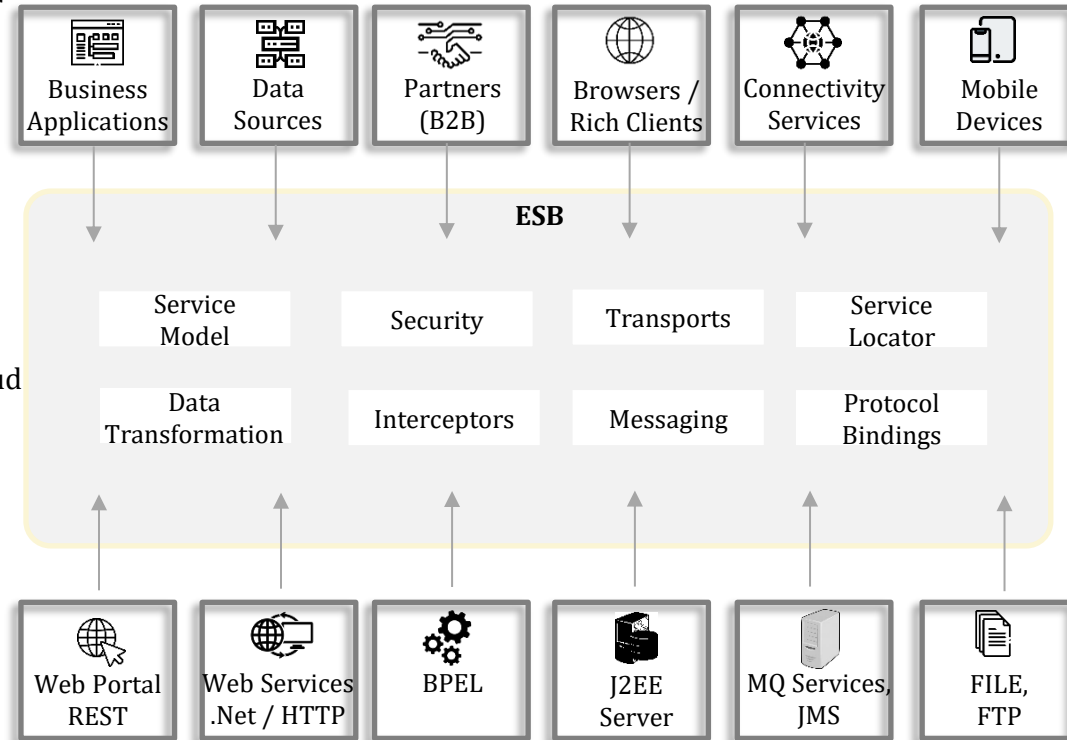
- Technology Services
- Software Solutions
- Software Reselling

Verticals

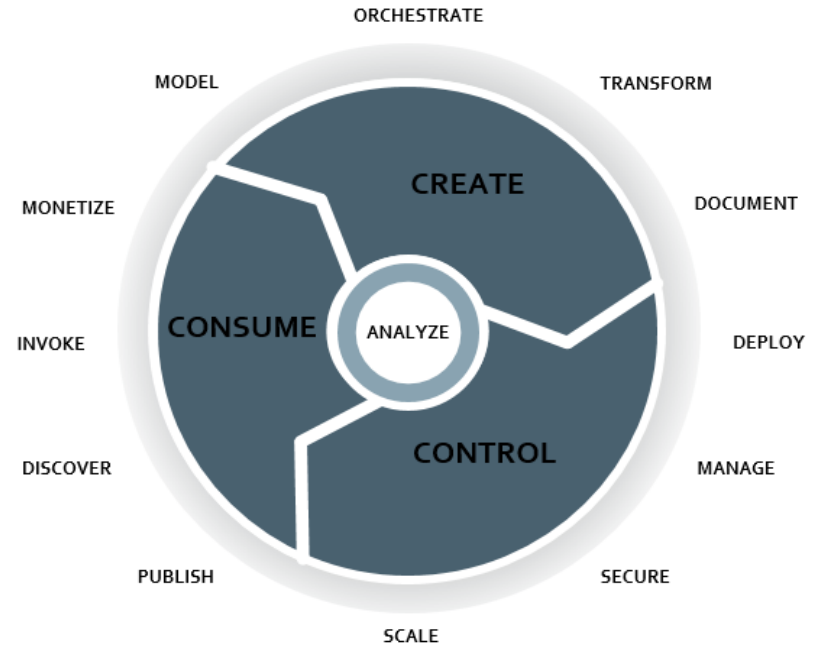


- Banking
- Insurance
- Capital Markets
- Financial Services
- Pharma

- Consulting
 - Consulting on ESB needs and best practices for implementation
- Discovery
 - Identify producers and consumers across Application landscape
- Architecture
 - Design an ESB-based solution aligned with Enterprise Architecture
- Provisioning
 - Provision ESB platforms on-premise or on cloud
- Implementation
 - Parsing Payloads, Routing, transformation, applying business rules, encryption
- Security
 - Secure in-flight data at the network as well as Application layer
- OSGI support
 - Create OSGI bundles and expose services
- Support
 - Ongoing L1, L2 support
 - Multiple support models



- Managing entire API Life Cycle
 - Create
 - ▲ Design, Develop, Secure, Test
 - Manage
 - ▲ Deploy, Publish, Monitor, Scale
 - Consume
 - ▲ Discover, Invoke, Monetize
 - Retire
 - ▲ Withdraw, Version
- API Implementation experience on multiple platforms
 - IBM API Connect
 - AWS API Gateway
 - Azure API Management
- Successful implementations in Banking & Insurance Industry
- Capabilities on backend service/orchestration development
 - ESB/Kubernetes/OpenShift/REST Services
- Full range of implementation and support services including
 - API Administration
 - Customer onboarding
 - API Usage support
 - Technical support



Case Studies

API Implementation at a Bank



CLIENTS

The Client

A tier 2 bank serving a customer base of over 1.4 million customers. The bank has five major divisions: corporate and institutional banking, commercial banking, retail banking, agricultural and development banking, and financial markets.



Business Need

In line with its strategy to embark on the journey to digitization, the bank had a need to transform itself. A key step was to implement application programming interfaces (APIs), which will help the bank offer new solutions to customers through aggregators.



The Solution

The implemented solution enabled the bank to support at least 2,000 API connections per second while giving them the flexibility to scale as volumes increased. By doing this, the bank was able to provide an alternative to the traditional way of doing cash management, by opening up its APIs (application programming interfaces). The API Manager, deployed at the bank, facilitates quicker roll-out of digital solutions both directly from the bank as well as trusted partners. With sharp increase in e-commerce and third party providers offering such solutions, this platform provides the necessary agility to the bank to quickly and efficiently extend its products and services to its customers.



Tools & Technology

- IBM API Manager
- IIB



Business Outcome

By using APIs, the bank could simplify customer transactions while reducing operating and technology costs. The bank achieved substantial savings within the first three months on operating costs and on technology capital expenditures.

API Implementation at a Life Insurance Company



CLIENTS

The Client

A leading Life Insurance company belonging to a global financial conglomerate, the company provides a complete bouquet of insurance products (viz. pure term plan, life stage products, health plan and retirement plan). It has an extensive reach through its network of 600 branches and 147,900 advisors.



Business Need

The client wanted to open up their product lines to multiple distribution channels ranging from third party distributors to aggregators. By doing this, the insurance company wanted to increase their revenue.



The Solution

With the successful implementation of the solution, the client was able to securely expose services from multiple back-end systems such as Channel Management System, Policy Administration System, New Business Workflow and Policy Services Systems to external entities. Services exposed include - Benefit Illustration, Additional Document Requirement, Application Form Filling, Policy Details, CMS, Premium Calculation, etc. Furthermore, the developer portal attempts to educate third party developers with API usage information and facilitates faster development by providing ready interface definition files.



Tools & Technology

- IBM API Manager
- IBM Process Server



Business Outcome

The API implementation helped the client provide their products to a larger customer base using third party distribution channels. The API implementation also enabled them to communicate with their end customers through external systems with the help of web services, thereby, enabling them to provide better services to their customers.



The Client

The client is an NBFC that conducts its financial services businesses through various subsidiaries. The client is a holding company for the financial services business of one of the largest Indian multi-national firms.



Business Need

The client wanted to improve responsiveness to change by limiting the number of changes in back-end systems. Sanctioning of loans, in particular, was a manual process with a longer turnaround time. The client needed a solution that would help them avoid the need to make changes to all connected applications each time a change / data modification was done in one of the applications.



The Solution

MindCraft developed an IIB solution for the client that involved building distinct reusable services around key applications such as LOS, Digio, Dedupe and CRM. Local service stubs binding to external services such as eKYC (NSDL), Credit Check (Equifax) and eSignature (Legal Desk) were developed. Orchestration between these services was done to enable automated exchange of business data. Some of these services were then packaged as APIs and selectively and securely exposed to partners / aggregators.



Tools & Technology

- IBM Integration Bus Version: 10
- IBM DataPower Version: 7.5.0.10
- IBM API Connect Version: 5.0.7.2



Business Outcome

With this implementation all applications interact with each other through the ESB, thus, reducing turnaround time for rolling out new features / changes & eliminating data synchronization errors. It also helped them onboard new alternate channels such as 3rd Party Distributors & Aggregators and introduce a chargeback model (future), where per usage charges were introduced, thereby, improving the ROI.



The Client

The client is one of India's fastest-growing non-banking financial companies (NBFCs) offering tailored financial solutions to a wide range of customers under wholesale, retail, and emerging markets verticals.



Business Need

The client was using an older version of IBM App Connect which had to be upgraded to the latest version as it had reached end of life and the client was struggling to get IBM support in case of product related issues.



The Solution

MindCraft successfully migrated the client's IIB (version 11.0.0.3) to App Connect (version 12.6.0). The approach taken was to create a new MQSI profile on the same server and extract and import configuration into this profile. This was done node-wise as multiple nodes were to be migrated. The entire migration exercise followed the recommended best practices of upgrading the lower environments, followed by environments like Production and DR. All suggested best practices like backing up the environment, were followed during the migration process.



Tools & Technology

- IBM App Connect



Business Outcome

With this migration, client has now moved to a supported version of App Connect and can continue to enjoy benefits of latest features and support from IBM.

ESB as a Service Gateway



The Client

One of India's leading private sector life insurance providers, this company ranks among the top 3 private sector financial services and banking companies in terms of net worth.



Business Need

With numerous peripheral systems (Portals, CRM, Mobility) mushrooming around the core policy administration system, there was a need to streamline interactions between these systems so that only one point of interaction was made available for all systems consuming functions of the Policy Administration System.



The Solution

WebSphere Process Server is used as a service gateway for providing services related to Policy Administration such as client inquiry, proposal updates, funds inquiry, funds switch, etc. All point-to-point interactions were replaced by a single service entry point. Any changes in the backend system could be affected at one point thereby reducing the efforts and time required for provisioning new services or changing existing ones. The New Business Workflow was one of the major consumers of these services.



Tools & Technology

- IBM BPM Advanced



Business Outcome

Deployment of a Service gateway around the Policy Administration Systems has eased the process of making changes to the core systems without impacting all peripheral applications using these core functions.

Centralized Planning & Procurement enabled using ESB



The Client

A major pharmaceutical company, involved in manufacturing, local distribution and export of various drugs. The company has several manufacturing facilities for manufacture of prescription and bulk drugs.



Business Need

The customer had invested in a new packaged application for Centralized Planning and Purchasing. It was important that correct transactional and master data from distributed systems was made available in the centralized AX system so that the planning run could be successfully executed.



The Solution

The ESB was used as a service gateway to expose Manufacturing Requirement Planning and Distribution Requirement Planning functions of Microsoft Dynamics. More than 40 disparate systems used these services to post transaction data into Dynamics, thus allowing a centralized run of the planning process. The role of the ESB was to transform the disparate formats supported by various applications into web services calls supported by Dynamics (AX).



Tools & Technology

- IBM BPM Advanced
- IBM InfoSphere Information Server



Business Outcome

An effective planning process enabled the customer to streamline their supply chain and lower the cost of procurement by issuing bulk raw material orders to suppliers thereby reducing cost of procurement.



The Client

A major private life insurance companies in the country, with over a decade of experience selling complex Life Insurance Products. The company is a part of a multinational financial services group.



Business Need

Define a service layer exposing core functions of the Policy Administration System so as to ensure reusability across peripheral systems.



The Solution

A service layer was built around the Policy Administration System (PAS) which presented unique challenges in terms of its monolithic architecture and Cobol-based programs. The service layer thus built, allowed external applications to interact with the PAS without getting into complexity of invoking native code. The loosely coupled architecture allowed easier management of changes on either side of the integration without impacting other integration points.



Tools & Technology

- IBM BPM Advanced



Business Outcome

Increased business agility by reduction of effort , cost and turnaround time required in building new real-time interfaces between critical business systems and the core policy Administration System.



The Client

A major state-owned oil and natural gas company. The company is amongst the Fortune 500 companies.



Business Need

Real-time integration between ERP Systems of Oil Marketing Companies, thereby eliminating long and costly reconciliation processes.



The Solution

Real time integration between systems of Oil marketing companies for Oil Exchange transactions. The solution facilitated near real-time netting-off of oil exchange invoices and receipts and issuance of a Joint Certificate. ESB enabled routing and transformation of messages flowing between disparate ERP systems such as SAP and J D Edwards.



Tools & Technology

- IBM BPM Advanced 7.0
- IBM Transformation Extender 8.3
- IBM Adapter for JD Edwards OneWorld
- IBM WebSphere Application Server 6.1



Business Outcome

Real time Oil Exchange reconciliation between Oil Marketing Companies ending all paper-based reconciliation and resulting in massive cost savings across the industry



The Client

The client is a leading private sector bank in south India with over 1000 branches spread across the country. One of its major business is based on inward remittances from GCC countries.



Business Need

To meet the challenges of a growing business in cross-border remittances without a corresponding significant increase in operational costs.



The Solution

Implementation of a cross-border Remittance solution based on the IBM IIB. The solution allows STP of remittance instructions from over 42 exchange houses with little or no manual intervention. Owing to the STP nature of the solution, the bank could on-board a number of exchange houses quickly and support large transaction volumes. It also significantly helped improve TAT for processing of Remittances and allowed the Bank to offer value added services such as Instant Remittance to its Exchange House customers. By using the Internet as a medium for transfer of information, it also helped reduce the expensive SWIFT network charges.



Tools & Technology

- IBM Integration Bus
- IBM MQ
- IBM Transformation Extender



Business Outcome

The bank managed to quadruple its remittance business in a short span of time by increasing volumes and adding value added services.



The Client

The client is the country's leading private sector bank. It offers the entire spectrum of financial services to customer segments covering Large and Mid-Corporates, MSME, Agriculture & Retail Businesses.



Business Need

1. On-board Corporate customers quickly without the need for agreements on file formats.
2. Setup an Enterprise Architecture that allows creation of a Service Repository and a Service Gateway to expose reusable functions as services.



The Solution

Corporate on-boarding is being enabled using the ESB for transformation of customer file formats, thus allowing rapid on-boarding of customers and providing the customer with multiple facilities.

In parallel, a service discovery exercise is in progress where all systems of the banks are being evaluated for possible callable functions that can be exposed as services. It is envisioned that all interactions between systems will happen through the ESB thus increasing reusability and reducing the complexity induced by a point-to-point architecture.



Tools & Technology

- IBM Integration Bus



Business Outcome

1. Quicker corporate on-boarding by eliminating the need for agreements on file formats.
2. Proposed SOA will streamline the Enterprise Architecture resulting in better reusability of IT investments

Instant Remittance using ESB



The Client

The client is amongst the first private sector banks in South India with over 750 branches across the country. Cross-border remittance is one of the high-growth business areas of the bank.



Business Need

To provide instant remittance services to Exchange House customers.



The Solution

This remittance solution, based on the IBM IIB platform, allowed the customer to exponentially scale up on their remittance business by offering instant remittance facility to its Exchange House Customers. A service interface exposed by the solution also allows Exchange houses to credit beneficiary accounts on a real-time basis, thus gaining a competitive edge over other banks. The exchange houses can easily see the status of their remittance instructions by using the web interface offered by this solution.



Tools & Technology

- IBM Integration Bus
- IBM MQ
- IBM Transformation Extender



Business Outcome

The bank could significantly increase its Remittance business by adding a number of Exchange House customers and increase customer satisfaction manifold by increasing throughput, providing visibility and offering value added services.



The Client

One of the youngest life insurers of the country, the company provides life insurance, investment funds, and group policies. They have recently introduced a range of health, pension and wealth accumulation plans.



Business Need

The Life Insurance company uses IIB as the integration platform between their core policy administration system and a whole array of front-office applications ranging from Mobility Solutions to Portal Solutions to CRM systems.



The Solution

Support and enhancement of close to 20 services centred around various systems These services are used across the enterprise by multiple systems ranging from mobility platforms to CRM to Customer/ Agent and Employee Portals.



Tools & Technology

- IBM Integration Bus



Business Outcome

Effective support and enhancements of existing IIB Implementation at an optimized cost .



The Client

The client is amongst the top three banks in India and it provides the best-in-class customer experience with leading technology initiatives



Business Need

Bank had to provide Kiosk systems at each of its bank branch and enable ATM Banking, Internet Banking & Mobile Banking to its customers



The Solution

An Enterprise Integration Layer was built around the core systems of the bank like, Core Banking System, Credit Card Management System, Loan System, Card Management System, Payment Systems etc. Functional Services of the core system were exposed using ESB as SOA layer and it provided Security, Governance and Monitoring for the bank



Tools & Technology

- IBM Integration Bus
- IBM WebSphere Message Queue



Business Outcome

Enabling processes of core systems as Services, increased the banks capability to provide Banking functionalities on diverse technology platforms

IIB to App Connect Upgradation



CLIENTS

The Client

One of the largest private Sector Insurance companies in India. Their product line consists of term products, endowment policies, linked policies, pension products etc. Business is sourced from multiple channels such as Bancassurance, Digital (Tablet), Direct and Third-party distributors.



Business Need

The client was using an older version IBM IIB platform and wanted to upgrade and migrate it to the latest version to provide their applications the required scalability to handle large business volumes.



The Solution

MindCraft successfully migrated the client's IIB platform, which was the core of their customer onboarding application, to App Connect. This was done by adopting an in-parallel migration strategy. MindCraft established a new environment alongside the existing IIB platform, which served as the target for the migration. This environment allowed for a safe and isolated space for the migration activities to take place. Code enhancements were performed simultaneously to ensure that the codebase was in sync with the latest version. To guarantee a seamless transition, comprehensive testing was conducted. The deployment process was carefully orchestrated to minimize any potential disruptions to ongoing operations.



Tools & Technology

- IBM App Connect
- IBM Business Automation Workflow (BAW)



Business Outcome

The migration was executed with near-zero downtime, and the client's operations continued without disruption. With this migration, the client was able to leverage the advanced features of App Connect for future development, enhancing their overall business capabilities and competitiveness in the insurance industry.



The Client

One of India's fastest growing private sector banks. It is continuously expanding its presence across India through a growing network of branches and ATMs.



Business Need

Converting banking process as service from its core systems to end-user applications by routing and transforming multi-technology transactions



The Solution

Continuous engagement to understand, optimize and convert banking processes of core systems as loosely coupled services to allow easier management and integrations without impacting other integration points. Services were hosted for transformation of message structures from complex legacy formats to industry standard formats



Tools & Technology

- IBM Integration Bus



Business Outcome

Increased business agility by reduction of effort , cost and turn around time required in building new real-time interfaces between critical business systems and the core systems

Fuse Migration



The Client

The client is a leading Financial Services Company in Singapore specializing in insurance. The client was established with the aim to offer technology-driven solutions and a diverse array of products and services.



Business Need

The client was using an old version of Fuse (version 6.0) which was now out of support. Moreover, with FUSE adopting the OSGI framework as the de-facto services model, the existing java-based modules and artifacts had to be restructured to meet OSGI-compatibility requirements.



The Solution

MindCraft successfully migrated the existing Artifacts to OSGI bundles and deployed the same on Fuse 7. Some artifacts had to be reengineered to move common components into a separate OSGI bundle. Managing version dependencies was the key challenge posed in this process as several frameworks (such as Spring Data JPA) had their own requirements in terms of compatibility. Each of these dependencies were carefully analyzed and deployed on FUSE (Apache Karaf) with appropriate manifests to avoid version conflicts. In some cases, code had to be changed to support appropriate persistence mechanism.



Tools & Technology

- Fuse (version 7.0)
- Java
- Spring
- IBM MQ



Business Outcome

With this migration, the client has now moved to a supported version of Fuse and can continue to enjoy benefits of latest features and support from IBM.

IBM API Manager Upgrade



CLIENTS

The Client

The client is a leading life insurance company that brings together the financial strength of a leading global life insurance provider and a leading nationalized bank. They provide a wide range of protection and retirement products and provide access to Employee Benefit plans for over 800+ corporate clients.



Business Need

The IBM API Management platform was on version 5 and had to be upgraded to version 10.x, the latest offering of IBM API Connect, as it was about to reach end of support. The customer also wished to use some of the advanced features of IBM API Connect such as the new DataPower Gateway and integrated analytics in a highly available configuration.



The Solution

The customer had created multiple domains, one for API Connect and one for DataPower. Hence the migration had to be sub-divided into two parts –

1. API Connect Migration, and
2. DataPower domain migration

The new environment was created with 3-node clusters for all sub-components with the gateways placed in the DMZ and the rest of the components in the secure zone. The DataPower AO module was used to achieve self-balancing between the DataPower gateways. IBM-provided tools and best practices were followed for the migration, thereby ensuring a smooth migration without any service disruption.



Tools & Technology

- IBM API connect
- IBM DataPower



Business Outcome

The customer can now avail of benefits of a highly-available (clustered) environment, uninterrupted support from IBM and also latest features of the API Connect platform.

Banks



Insurance



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Financial Services



Mutual Funds



Pharmaceuticals



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Thank You!



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