IBM WebSphere Business Integration Collaborations
  for Property and Casualty Insurance Version 1.0
IBM WebSphere Business Integration Collaborations
  Version 4.5

IBM

Solution Overview

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This edition applies to:

   Version 1 of *IBM® WebSphere® Business Integration Collaborations for Life Insurance* (5724-H57)

   Version 1 of *IBM WebSphere Business Integration Collaborations for Property and Casualty Insurance* (5724-H58)

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Solution Overview

IBM^(R) WebSphere^(R) Business Integration Collaborations enable insurance companies to leverage process and application integration. To address the current trends in a rapidly changing market - namely, corresponding revenue declines, cost increases, and new government regulations - the insurance industry requires a combination of products and thought leadership to enable business process reengineering. WebSphere Business Integration Collaborations for the insurance industry, based on IBM WebSphere InterChange Server technology, meet those challenges, providing maximum flexibility by streamlining access to customized content and integrating and automating business processes.

Industry trends and challenges

The insurance industry is known for its traditions of conservatism and dependability. Insurance vendors have historically offered a wide range of products within the two main insurance categories: *life and asset management* (including pensions, life insurance, and investments), and *property and casualty* (including motor, household, aviation, marine, and health care). Insurance coverage is available for both personal and commercial lines and can also include reinsurance, intermediaries (such as tied agents and brokers), and the insurance activities of self-insurers, government departments, and other insurance-related organizations.

The insurance industry as a whole is now facing tremendous challenges as the traditional business environment evolves with increasing speed. Among the issues currently facing the industry are:

- Deregulation
- Globalization
- Increased competition from traditional and nontraditional insurers and financial service providers
- Shrinking profit margins

Recently, the industry has experienced an unprecedented series of events that have threatened the survival of some companies: natural disasters, climate change, and terrorist actions have combined with an economic downturn, shrinking investment income, and a reduction in corporate spending to produce a business climate unlike any other that the industry has faced. Insurance companies must pay more attention than ever before on speed, efficiency, customer service, and the leveraging of technology if they wish to compete in such a challenging environment.

To succeed in the current business climate, insurance companies must position themselves to quickly adapt to new business practices and emerging technologies while continuing to leverage existing practices and legacy systems. Among the key goals of insurance companies planning to compete in the evolving insurance sector are integration, growth, differentiation, cost reduction, infrastructure upgrades, and administration system improvements.

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Key business processes

The same key business processes are common to most companies in the insurance industry. To achieve their main goals, individual companies and the insurance industry as a whole must streamline these processes and ensure that their systems are able to work together to maintain efficiency and flexibility. The key business processes in the insurance industry can be broken into four main categories:

- Financial
- Underwriting
- Policy Administration
- Claims Processing

The most successful insurance companies have been the ones that manage these process categories most effectively. However, given the major transition that the industry now faces, traditional process management is no longer as effective. The industry is changing from a largely regulated market to a highly competitive and deregulated market. Success now depends on such factors as customer service, knowledge management, multi-channel integration, innovation, and cost efficiency. In addition, the products themselves are changing, from a focus on risk protection to an expansion that includes significant elements of investment and asset accumulation.

Business process integration

Key among the challenges facing the insurance industry is integration. A company that cannot integrate its systems will not be able to keep pace in the evolving marketplace. A company that takes full advantage of process integration will be able to:

- Create an infrastructure more responsive to marketplace changes
- Upgrade infrastructure elements to improve customer service
- Achieve information connectivity, enabling IT departments to handle different administrative systems obtained through mergers and acquisitions
- Present a single brand image while simultaneously dealing with a product-focused organization
- Create new electronic channels for selling and servicing insurance products
- Provide financial advice and premium services quickly and efficiently
- Develop claims management systems based on Internet technologies

To aid in achieving these ambitious results, business process reengineering must be able to synchronize data between multiple sources and data stores, integrate with and connect to multiple applications, and provide access to and share data between applications.

Solution description

WebSphere Business Integration Collaborations, based on IBM WebSphere InterChange Server technology, are ideally suited for insurance organizations seeking to compete in the modern insurance industry. IBM's integration technology enables the interaction of different applications, facilitating the integration of front-end and back-end systems, and speeding the integration of merged departments and companies. WebSphere Business Integration Collaborations provide pre-built components designed specifically for insurance-related business processes.

This comprehensive solution addresses the insurance industry's key business processes from start to finish. The solution speeds development, implementation, and ongoing performance because it allows the interaction of multiple disparate applications, reducing costs of integration and product delivery. WebSphere Business Integration Collaborations can improve performance in each of the industry's key business processes, enabling insurance companies to:

- Interconnect individual applications so they can share data and actions
- Interconnect multiple applications across enterprise boundaries (such as departments, divisions, or subsidiaries)
- Interconnect systems both internal and external to the enterprise

WebSphere Business Integration Collaborations also provides the insurance industry with the ability to add new services quickly, resulting in increased revenues and market share. Utilizing pre-built, industry-specific collaborations and application/technology connectors, the solution enables quicker competitive responses to market changes. For financial officers, policy administrators, claims managers, and underwriters alike, WebSphere Business Integration Collaborations for the insurance industry provides enterprise-scale workflows that allow entire business processes to be integrated and reengineered, simplifying processes to reduce IT costs and improve service.

Technical overview

WebSphere Business Integration provides a scalable framework that allows businesses to interconnect multiple disparate processing entities (such as applications, systems, and human resources) within an enterprise context. The solution connects data and processing entities in a way that fully leverages existing applications and integrates them with new applications. The result is total system exploitation, providing increased return on investment and business value to the enterprise.

WebSphere Business Integration Collaborations offer a solution based on IBM WebSphere InterChange Server technology, which provides pre-built integration components, including collaborations, maps, connectors, and business objects, enabling swift integration of disparate applications. The foundation of WebSphere Business Integration Collaborations is the IBM WebSphere InterChange Server (ICS). ICS is a scalable, reliable, and secure environment for business integration, providing the following benefits:

- A centralized, common view of enterprise-wide data and processes
- A comprehensive set of technical services
- A logical, distributed hub-and-spoke architecture
- Data and messaging format independence

For a detailed description of WebSphere InterChange Server, refer to the following documents (see the WebSphere Business Integration Library):

- IBM WebSphere Business Integration Server Technical Introduction
- IBM WebSphere Business Integration Server System Implementation Guide

Integration types

WebSphere Business Integration consists of two main types of integration:

- Information Connectivity and Integration
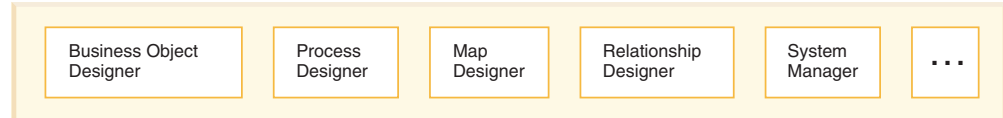- Process Integration

Information Connectivity and Integration (ICI) is the coupling of heterogeneous application information and data. Connectivity between applications is a fundamental starting point for Information Integration solutions. As connectivity configurations and topologies grow in complexity, additional considerations involve the management of information and data delivery from one application to another (for example, routing rules and data transformation). ICI provides routing and data integration functionality. It routes its information between endpoints, leaving decisions on what actions to take next to the senders and receivers. ICI focuses on *where* data is located and handles data normalization.

Process Integration (PI) is the implementation of internal and external business processes in a way that fully utilizes IT systems to add efficiency and flexibility within an enterprise. Process Integration includes functions required for traditional business process management solutions. Typically, PI solutions begin with a focus on processes internal to the enterprise and evolve to include processes that fully integrate external partners. This external integration requires functions that support business-to-business interaction management. PI focuses on *what* data is needed and *how* that data is used.

Solution architecture

With WebSphere Business Integration Collaborations, internal and external collaborative processes are utilized throughout the operations of an enterprise. As the diagram below illustrates, WebSphere Business Integration Collaborations for the insurance industry provide the platform, connectors, and tools to integrate applications, data models, and process workflows, creating a more efficient, uniform, and responsive business environment, both within the enterprise and between the enterprise and its customers.
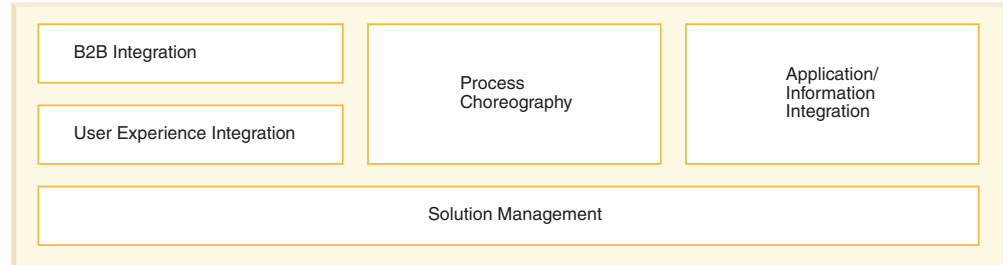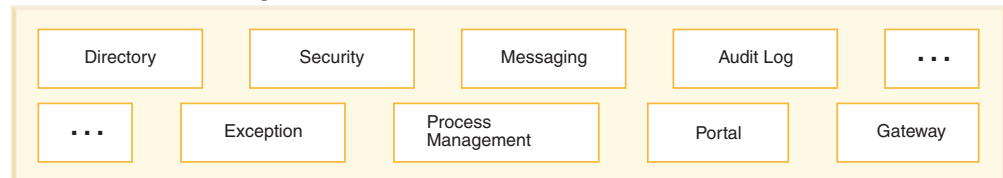
Solution Studio

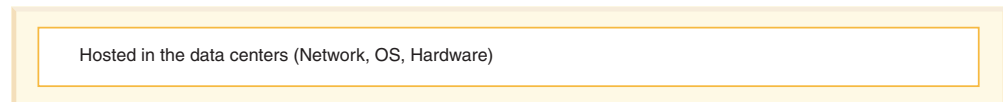| Business Object Designer | Process Designer | Map Designer | Relationship Designer | System Manager | . . . |

Industry Libraries

| HomeOwner First Loss | Partial Withdrawal Surrender Quote | Personal Articles Coverage Quote | Traditional Life Policy Addition | HIPAA Transaction | . . . |

Runtime Solutions

B2B Integration	Process Choreography	Application/ Information Integration
User Experience Integration		
Solution Management		

Common Solution & Integration Services

| Directory | Security | Messaging | Audit Log | . . . |
| . . . | Exception | Process Management | Portal | Gateway |

WebSphere Platform

| WebSphere Application Server | MQSeries | DB2 | Tivoli |

Infrastructure

| Hosted in the data centers (Network, OS, Hardware) |

The Solution Studio provides a common build environment for applications and solutions. WebSphere Business Integration Collaborations for Life Insurance and WebSphere Business Integration Collaborations for Property and Casualty Insurance, positioned within the Industry Libraries layer, consist of processes, application adapters, message sets, business objects and so on. The collaborations are built on runtime solution components, including IBM WebSphere InterChange Server, that govern the interaction of logical components in any particular solution deployment. In this architecture, the ICI layer (contained within Common Solution and Integration Services) provides the connection between the business process definitions, located within the Runtime Solutions layer, and the WebSphere platform and existing infrastructure, which hold the business functions operating on legacy systems.

ICI executes the state transitions, required by Process Integration (contained within the Runtime Solutions layer) to traverse the business processes that drive the integration architecture, in a way that allows these business processes to be reused.

The primary goal of ICI is to provide loose coupling of the business functions to the business process so that either or both can be independently enhanced over time.

To achieve this goal, ICI must provide message routing and transformation services against a granular set of messages in the particular message model utilized between PI and ICI. This approach ensures that the interactions that leverage the coupling of the functions and the navigation are a normalized implementation of the message vocabulary, and as such, are independent of the systems providing the functions. By taking this approach, systems can be integrated without needing to be continually adjusted as other aspects of the topology are changed. This approach also simplifies the architecture because it positions all process choreography within the PI layer, so that it reflects all aspects of the business process.

Process integration requirements involving only automated processing are addressed using IBM integration technology in the form of layered collaborations.

Collaborations

IBM's integration technology provides the flexibility and scalability to implement a variety of e-business models, enabling companies to distribute business processes across the Internet, across different applications on local networks, or both. WebSphere Business Integration Collaborations for Life and WebSphere Business Integration Collaborations for Property and Casualty Insurance utilize the IBM WebSphere InterChange Server and industry-specific collaboration templates to allow different applications to communicate with one another. *Collaborations* contain the business logic that describes a fundamental business process, coordinating the functionality of business processes for different applications and enabling data exchange between them.

WebSphere Business Integration Collaborations include four collaborations specifically designed for insurance companies. Each of these collaboration templates facilitates business process reengineering and addresses specific integration challenges.

WebSphere Business Integration Collaborations for Life Insurance

The following collaborations are designed specifically for companies offering life insurance:

WebSphere Business Integration Collaboration for Partial Withdrawal Surrender Quote

WebSphere Business Integration Collaboration for Partial Withdrawal Surrender Quote is designed for the life insurance sector and focuses on core insurance processes. This collaboration facilitates the business process used to submit a request for the partial surrender of the value of an existing life policy. It manages the submitted policy information, allowing the client to submit the request for the quote using a Web browser or other electronic means. The entire business process is automated through to the return of the quote to the client.

WebSphere Business Integration Collaboration for Traditional Life Policy Addition

WebSphere Business Integration Collaboration for Traditional Life Policy Addition is designed for the life insurance sector and focuses on a key transaction. It allows

a client to electronically submit an application for a standard life insurance policy. The client uses a Web browser or other electronic means to provide appropriate data and submit the application. The collaboration object then manages the process through to approval or rejection, adding and updating the insurance company's database records.

WebSphere Business Integration Collaborations for Property and Casualty Insurance

The following collaborations are designed specifically for companies offering property and casualty insurance

WebSphere Business Integration Collaboration for HomeOwner First Loss

WebSphere Business Integration Collaboration for HomeOwner First Loss is designed for the property and casualty insurance sector. This collaboration enables policy holders to submit an e-claim for property loss, reducing the time it takes to process the claim, thus improving customer service. Using a Web browser or other electronic means, the policy holder enters the property loss details (for example, damage due to a fire) to begin the claim process, and the collaboration object retrieves the requested data and returns the results to the client.

WebSphere Business Integration Collaboration for Personal Articles Coverage Quote

WebSphere Business Integration Collaboration for Personal Articles Coverage Quote is designed for the property insurance sector. It enables a potential or existing client to query and receive a quote for insurance coverage of personal effects, whether it be a new policy or an extension of an existing policy. The collaboration object enables the client to issue the query using a Web browser or other electronic means, and manages the process through the return of the quote to the client.

Collaboration task flow

The following tables list four collaboration templates that mirror four distinct business processes within the insurance industry. The collaborations contain business logic that describes a specific business process. The tables list the individual collaboration templates and provide step-by-step descriptions of the tasks that they perform when a client or potential client submits their request:

Table 1. WebSphere Business Integration Collaborations for Life Insurance collaboration templates

Collaboration	Main tasks
AddTraditionalLifePolicy	1. Validates the user is a client.
	2. Issues the SubmitLifeApplication message.
	3. Retrieves the user's policy using the InquiryInsurancePolicy message.
	4. Routes the user's policy information back to the user through a pub/sub mechanism.

Table 1. WebSphere Business Integration Collaborations for Life Insurance collaboration templates (continued)

Collaboration	Main tasks
PartialWithdrawalSurrenderQuote	1. Validates the user as a client. 2. Validates the user-supplied policy information. 3. Issues the Partial Surrender. 4. Issues an e-mail response to the user.

Table 2. WebSphere Business Integration Collaborations for Property and Casualty Insurance collaboration templates

Collaboration	Main tasks
ValidateLossInputAndSubmitClaim (Utilized by HomeOwner First Loss)	1. Validates the user as a client. 2. Validates the user-supplied policy information. 3. Routes a HomeOwnerAddFirstNoticeOfLoss message. 4. Retrieves the complete claim using the HomeOwnerClaimInquiryClaim message. 5. Routes the appropriate claim information to the client using a pub/sub mechanism.
PersonalArticlesCoverageQuote	1. Checks whether the user is an existing client by issuing InquiryParty message. 2. If the user is a client, validates that the policy information supplied is correct. 3. Issues PersonalArticlesQuote message. 4. Issues an e-mail response indicating an estimated quote and a note to the user that the quote will require a formal appraisal before it is firm.

Business example

The following example shows how WebSphere Business Integration Collaborations can improve a common business process for the insurance industry. In this example, a client submits a claim against a homeowner policy. IBM WebSphere Business Integration Collaboration for HomeOwner First Loss manages the request, reducing the length of the claim cycle, which in turn reduces cost and opportunity for error. A reduction in the length of the claim processing cycle has the added benefit of improved customer service ratings, as the client is able to avoid lengthy delays during a difficult time.

Business problem: Long claim processing cycles, increased costs, opportunity for error, and client dissatisfaction.

Business benefit realized: Reduction of claim cycles, costs, and errors; improved customer service ratings.

Collaboration template: WebSphere Business Integration Collaboration for HomeOwner First Loss

1. Having suffered fire damage to the family dwelling, the user submits an initial claim over the Internet using a Web browser

2. The HomeOwner First Loss collaboration object is initiated upon receipt of the user input.

3. The HomeOwner First Loss collaboration object validates the user as a client in good standing by retrieving the client information from the legacy system that manages Party/Client data.

4. The HomeOwner First Loss collaboration object retrieves the policy against which the user is making the claim by issuing a retrieve message to the legacy system that manages Policy data.

5. The HomeOwner First Loss collaboration object validates that the policy returned is valid for the client.

6. The HomeOwner First Loss collaboration object creates a claim and routes it to the Policy legacy system.

7. The HomeOwner First Loss collaboration object retrieves the updated claim from the Policy legacy system.

8. The HomeOwner First Loss collaboration object issues a publish/subscribe message containing the updated claim.

Sample implementation

WebSphere Business Integration Collaborations for the insurance industry provides a sample implementation, available on the IBM WebSphere Business Integration Collaborations support site. Go to www.ibm.com/software/integration/wbicollaborations/support and enter *WBI Insurance sample* in the **Search** field. Click **WBI for Insurance V4.2 & V4.1 Sample Business Objects** to access the downloadable files.

The sample implementation's ICI layer is built on WebSphere MQ, WebSphere MQ Integrator[R] Broker - Enabler, and the WebSphere Business Integration Adapter for MQ Integrator. The WebSphere MQ software platform addresses the asynchronous aspects of the ICI. For detailed information on WebSphere MQSeries and the MQ Integrator adapter, see the following documentation:

- For information on the WebSphere MQ family, see the WebSphere MQ family Web site at www.ibm.com/software/ts/mqseries.

- For general information on IBM WebSphere Business Integration adapters, see the IBM WebSphere Business Integration Server Technical Introduction.

- For information on the MQ Integrator adapter, see the Adapter for MQ Integrator User Guide.

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