



# Introduction to iWay Version 7

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# Preface

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This manual introduces you to iWay 7, defines the product components, and describes how you can apply the power of iWay 7 to your enterprise data management and integration practices.

Visit the iWay 7 Technical Library at <http://ecl.informationbuilders.com/iway/index.jsp> or see [Additional Information](#) on page 61 for information regarding:

- ❑ Related Publications
  - ❑ Provide Feedback or Make a Customer Connection
  - ❑ Information Builders Services & Support
- 

## How This Manual Is Organized

This manual includes the following chapters:

<b>Chapter/Appendix</b>	<b>Contents</b>
1 Overview: iWay 7 Integration and Integrity Solutions	Illustrates the organization of iWay 7 integration and integrity solutions.
2 Introducing iWay 7	Introduces iWay 7 and provides an overview of the components that comprise the iWay 7 solution.
3 iWay Integration Suite	Describes components of the iWay Integration Suite in iWay 7 and highlights key features.
4 iWay Data Quality Suite	Describes components of the iWay Data Quality Suite in iWay 7 and highlights key features.
5 iWay Master Data Suite	Describes components of the iWay Master Data Suite in iWay 7 and highlights key features.
6 Additional Information	Provides information on related publications and Information Builders Customer Support Services.



# Overview: iWay 7 Integration and Integrity Solutions

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This section illustrates the organization of iWay 7 integration and integrity solutions.

**In this chapter:**

- ❑ [iWay 7 Integration and Integrity Solutions](#)
- 

## iWay 7 Integration and Integrity Solutions

iWay 7 integration and integrity solutions enable you to harness critical information assets and resources in your organization, and ensure their integrity. A key advantage of this is to advance your usage of relevant information throughout the organization.

iWay 7 integration and integrity solutions make it possible to redefine your business/IT relationship, thereby enabling users, IT, and executives to participate in ensuring that reliable information is available for the systems, people, and processes that run the business.

- ❑ Increase confidence and trust in your data using the iWay 7 Data Quality and Master Data Suites through comprehensive data profiling, cleansing, managing, and governing capabilities.
- ❑ Ensure rapid, accurate, secure, and real-time access to data across all systems, applications, processes, and stakeholders through the iWay 7 Integration Suite.
- ❑ Integrate with proven WebFOCUS Intelligence solutions to build even more application types through core products or extensions to the WebFOCUS platform. For more information, see the *Introduction to WebFOCUS Release 8* documentation.





## Introducing iWay 7

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This chapter introduces iWay 7 and provides an overview of the components that comprise the iWay 7 solution.

**In this chapter:**

- ❑ [The iWay 7 Solution](#)
  - ❑ [iWay 7 Product Overview](#)
- 

### The iWay 7 Solution

Information Builders iWay 7 solution enables rapid access to timely, accurate data across all systems, processes, and stakeholders. Designed to satisfy enterprise-scale, as well as project-oriented and departmental-level requirements, the iWay 7 solution delivers comprehensive capabilities that allow organizations to:

- ❑ Overcome data silos and obtain direct access to information from any source with a wide range of pre-packaged integration components that are specific to your industry or business type.
- ❑ Optimize business processes and enhance real-time decision making by drawing on existing application and infrastructure investments to support operational and analytical needs.
- ❑ Build a real-time data quality firewall equipped with reporting and monitoring capabilities.

Additional key features and advantages that are provided include:

- ❑ Ease of use through a unified Eclipse-based toolset (iWay Integration Tools) that re-purposes existing products as integrated facilities and capabilities. A key benefit is a consistent user experience across the iWay 7 suites from the perspective of user interfaces, technologies, and methods.
- ❑ Integration with source management systems (for example, SVN) to allow seamless source control within teamwork-based development environments.
- ❑ Integration with all versions of Java Virtual Machines (for example, Oracle and IBM).
- ❑ Integration with all industry network management tools, including support for Simple Network Management Protocol (SNMP).

- ❑ Support for many industry-standard message types, including EDI/X12, EDIFACT, FIX, HL7, HIPAA, and SWIFT.
- ❑ Support for web services and an extensive collection of adapters that are targeted toward industry standard ERP, CRM, database, transactional systems, B2B formats, and protocol connectivity. For example, SAP R/3, PeopleSoft, Siebel, Oracle Applications, Salesforce, LDAP, CICS, IMS, and EDI/X12 just to name a few.
- ❑ Enterprise Service Bus (ESB) support (third-party or native) to enable the creation, composition, and management of services.
- ❑ Support for most B2B standards, including ebXML, AS1, AS2, AS3, SOAP, and REST.
- ❑ Identity management through data quality profiling, cleansing, enrichment, and management.
- ❑ No custom integration coding requirements.

The power of iWay 7 lies in its ability to offer one unified toolset for both application and data integration. In this way, the iWay 7 solution enables you to provide seamless, yet secure, access to your enterprise data and integrate with any application or data store.

Together or standalone, iWay 7 product suites offer you efficient solutions for building and maintaining complete, powerful integration architectures.

Here are some examples:

- ❑ Application integration through iWay 7 allows you to develop applications that connect and integrate with distinct systems (for example, SAP R/3 for supply chain and PeopleSoft for CRM).
- ❑ Data integration through iWay 7 allows your applications to access data from any data source (for example, connect to an Oracle database and move your data to a Teradata database).

## iWay 7 Product Overview

iWay 7 is comprised of the following product suites.

- ❑ **iWay Integration Suite**, which delivers powerful integration capabilities that enhance information unification and accessibility.

The iWay Integration Suite bundles the iWay Service Manager and iWay DataMigrator toolsets.

For more information, see [iWay Integration Suite](#) on page 13.

- ❑ **iWay Data Quality Suite**, which is a unified toolset for profiling, cleansing, and enriching information. With the Data Quality Suite, consistency, accuracy, and completeness is dramatically improved, so organizations can increase their information capital to yield higher business value.

The iWay Data Quality Suite includes the entire iWay Integration Suite.

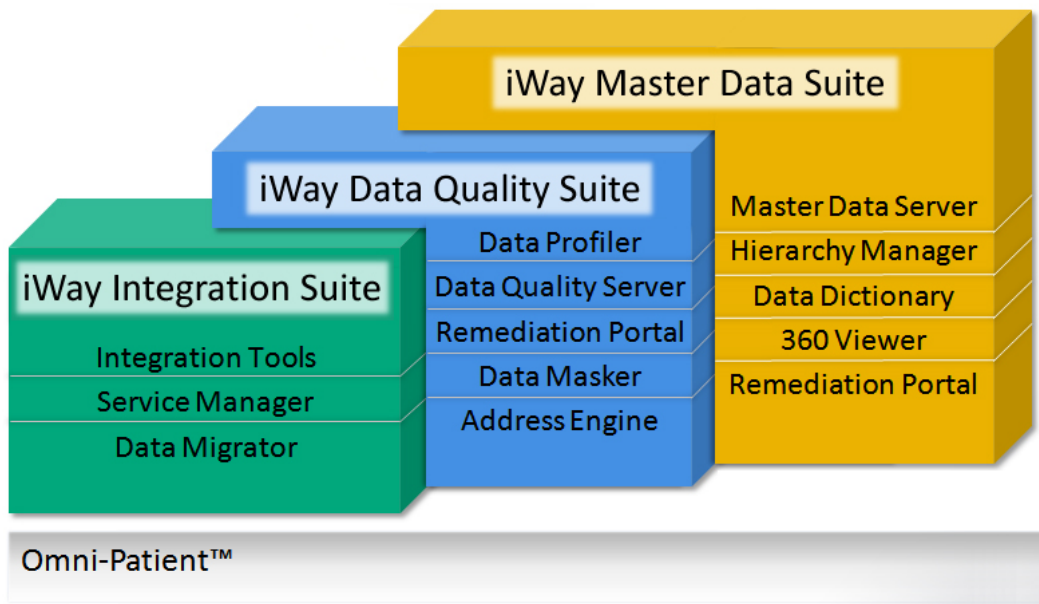
For more information, see [iWay Data Quality Suite](#) on page 37.

- ❑ **iWay Master Data Suite**, which provides functionality that enables data analysis and manipulation, 360-degree views, and hierarchy management to ensure information consistency, uniformity, and accuracy across an enterprise.

The iWay Master Data Suite includes the entire iWay Integration Suite and iWay Data Quality Suite.

For more information, see [iWay Master Data Suite](#) on page 49.

The following diagram provides a high-level summary of the features and toolsets that are bundled with each iWay 7 suite.





## iWay Integration Suite

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This chapter describes components of the iWay Integration Suite in iWay 7 and highlights key features.

**In this chapter:**

- ❑ [Introduction](#)
  - ❑ [iWay Service Manager](#)
  - ❑ [iWay Integration Tools](#)
  - ❑ [iWay DataMigrator](#)
  - ❑ [iWay Software Development Kit](#)
  - ❑ [Data Connectors](#)
  - ❑ [Security](#)
-

## Introduction

In iWay 7, the iWay Integration Suite delivers a unified toolset that ensures rapid access to timely, accurate data across all systems, processes and stakeholders.



Designed to satisfy enterprise-scale, as well as project-oriented and departmental-level integration requirements, the iWay Integration Suite delivers comprehensive integration capabilities that allow organizations to:

- ❑ Guarantee message delivery across all systems.
- ❑ Unify diverse and disparate environments with over 300 pre-packaged integration components that provides direct, native access to any information, in virtually any source.
- ❑ Accelerate time to market for critical enterprise IT and business projects, such as mobile applications, big data analytics, and real-time supply chains.
- ❑ Optimize business processes and real-time decision making by leveraging existing application and infrastructure investments to support operational and analytical needs.

## Components of the iWay Integration Suite

The following table lists and describes the iWay components that are included with the iWay Integration Suite.

Component	For More Information
iWay Service Manager	See <i>iWay Service Manager</i> on page 17.
<ul style="list-style-type: none"> <li>❑ iWay Integration Tools</li> <li>❑ iWay Software Development Kit</li> </ul>	<ul style="list-style-type: none"> <li>❑ See <i>iWay Integration Tools</i> on page 26.</li> <li>❑ See <i>iWay Software Development Kit</i> on page 33.</li> </ul>
iWay DataMigrator	See <i>iWay DataMigrator</i> on page 30.

## iWay Application Integration Key Advantages

A unique and powerful enterprise service bus (ESB) enables the creation, composition, and management of services, whether invoked as web services or through other interfaces. In simple terms, an ESB is a software protocol that delivers messages from one system to another, for example, email (SMTP).

iWay provides a native ESB if required. It also provides event-driven integration and B2B interaction management and, unlike other ESBs, interoperates with other ESBs and proprietary technologies as well as industry standards.

The iWay Integration Suite lays the foundation for real-time integration, and web-oriented or event-driven architectures. It delivers rapid throughput and latency, making it a prime component of high-performance networks and business processing solutions. The iWay Integration Suite:

- ❑ Optimizes skilled and expensive IT resources by reducing IT complexity and simplifying service design, deployment, and maintenance.
- ❑ Drastically reduces integration total cost of ownership (TCO) by eliminating most custom integration code.
- ❑ Provides complete support for service-enabling disparate enterprise technologies.
- ❑ Does not require proprietary technology. It runs on top of popular messaging systems, a variety of JMS implementations, and dozens of other common protocols, and can be deployed to a standalone Java Virtual Machine, open-source J2EE application servers, or any commercial J2EE application server. It also supports security, architecture, and B2B standards including ebXML, AS1, AS2, AS3, SOAP, and REST.

- ❑ Decentralizes development while centralizing administration with a unique combination of distributed run-time environments, easy-to-use graphical tools, and broad-reaching monitoring and policy management.
- ❑ Provides real-time activity monitoring, to identify and correct bottlenecks or inefficiencies and remediate process and data exceptions.
- ❑ Is fully integrated with the iWay Data Quality Suite and Master Data Suite to enhance the completeness, accuracy, and consistency of information.
- ❑ Automates and accelerates deployment through tools, a console, or a script. Users can build applications, then deploy them to a test and production environment, or to multiple servers. iWay Integration Applications and the iWay Software Development Kit (SDK) enable rapid deployment across multiple environments in a managed and controlled manner, while fitting into existing enterprise infrastructures.
- ❑ Facilitates real-time data replication by copying source tables to target tables, even when the database types vary, or by performing complex actions such as manipulating data as it is transferred between tables, or cleansing and transforming data as it is moved between databases.
- ❑ Supports Simple Network Management Protocol (SNMP), allowing users to track iWay activity within a managed network using any popular third-party SNMP tool.
- ❑ Facilitates big data management by enabling high-volume, high-performance document storage through MapReduce-style parallel processing capabilities, as well as integration with the Hadoop Distributed File System.
- ❑ Enables rapid, effective management of trading partner and related activities through a comprehensive infrastructure that dramatically improves the way partner transactions, as well as those performed over external exchanges, are planned, executed, and tracked.

### **iWay Data Integration Key Advantages**

Direct access to any data, in any source, allows organizations to address the individual information needs of all users and systems. iWay accelerates deployment and reduces risk for all types of data integration projects, including enterprise information management, data migration, web services, on-premise or cloud-based implementations, and co-existing or federated integration platform as a service (iPaaS) environments. The iWay Integration Suite provides:

- ❑ End-to-end integration of the widest variety of sources, including big data, structured and unstructured information, cloud-based sources, social networks, and machine-generated data.

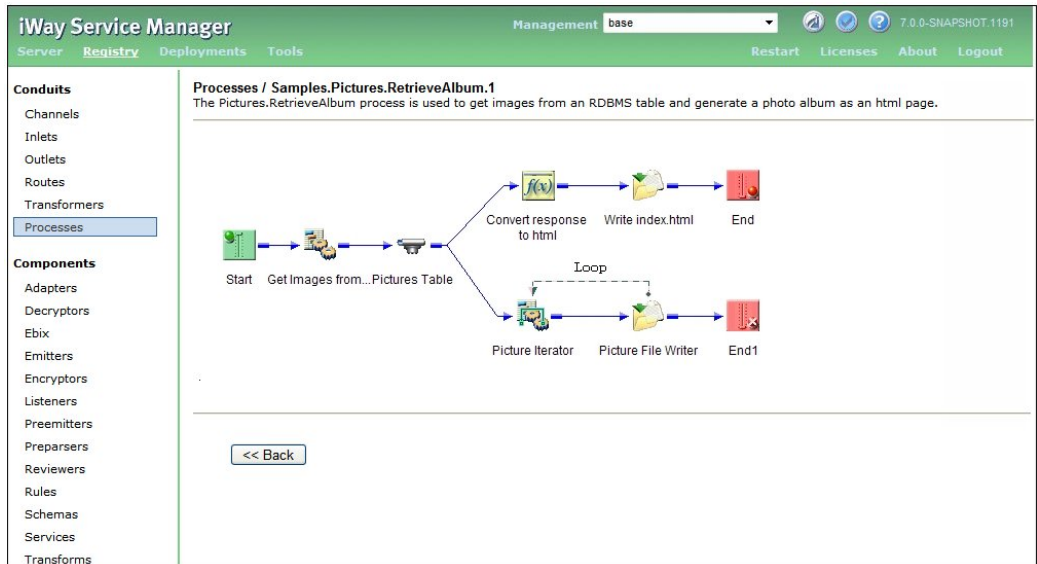


- ❑ Fast, flexible extraction, transformation, and load (ETL) process creation, as well as message-based integration involving heterogeneous data structures across disparate platforms.
- ❑ Real-time data warehousing with event listening capabilities across all applications, databases, cloud, and legacy systems. Each event can trigger a variety of business processes while feeding the data warehouse in real time.
- ❑ Simplified development through a change data capture system completely integrated with ETL.
- ❑ Bi-directional data movement, where data can be fed to or extracted from a data warehouse.
- ❑ Messaging, replication, event-based integration, managed file transfer, and non-intrusive log-scraping technology to avoid impact on source systems.
- ❑ Advanced transformation and data dictionary capabilities.
- ❑ Integration with data quality services to cleanse data before it is fed into the warehouse.
- ❑ Master data management, inside and outside the warehouse.
- ❑ An advanced message-based SOA architecture for seamless integration with business processes.

## **iWay Service Manager**

iWay Service Manager (iSM) is an enterprise service bus (ESB) product that enables you to create, compose, and manage services, whether they are deployed as web services or as services accessible through other commonly-used and industry-standard interfaces. iSM lays the foundation for a quickly deployable and easily maintainable Service-Oriented Architecture (SOA) or Event-Driven Architecture (EDA) for your enterprise. iSM is lightweight, general purpose, and highly configurable.

The following image shows the Processes page of the iSM Administration Console, where you can review the structure of published process flows that can be added to your channel as defined routes.



## Key Features and Advantages

Key features and advantages that are provided through iSM and its associated facilities include:

- ❑ A robust, highly scalable and customizable platform for message and transaction processing. iSM is packaged with its own high performance ESB, which enables integration across an array of systems. It also enables you to join other ESBs already in place in other enterprise deployments by providing and following standard interfaces and message processing concepts for synchronous and asynchronous communication. For a seamless deployment into existing infrastructures, iSM can also run within common web application servers.
- ❑ A highly secure communication and data processing framework by conforming to the latest industry standards, which includes secure communication with:
  - ❑ AS2
  - ❑ SSL/TLS
  - ❑ SFTP
  - ❑ FTP/S
  - ❑ REST

- ❑ SOAP

Data security services are also supported through:

- ❑ XML Digital Signatures (XML DSIG)
- ❑ XML Advanced Electronic Signatures (XAdES-c)
- ❑ AES

An array of additional encryption and signature services are available to ensure that the data is not compromised during processing. iSM provides support for file-based, as well as hardware-based, security modules and enables the use of a centralized Online Certificate Status Protocol (OCSP) for certificate management.

- ❑ Required facilities to develop an application that takes into account possible Denial of Service Attacks, security violations, and provides avenues for handling and trapping such events, if they occur. iWay event flows are designed to capture any events in data processing or communication, and execute designated application logic without interfering with main application processing.
- ❑ A native queuing system that enables message prioritization, persistence, ordering, retry-capability, and optimized message propagation across iWay channels. The Reverse Verified Invocation (RVI) gateway allows you to propagate messages transparently across existing firewalls. This is in addition to using and communicating with an array of external systems for data processing, enrichment, and tracking.

### **iWay Activity Monitor**

iWay Activity Monitor is an extension of iSM and provides an end-to-end, non-invasive view into transaction life cycles as they span across multiple channels and iSM servers.

The following image shows the Transaction Activity tab in the Activity Management area of iWay Activity Monitor, which provides a quick way to view ongoing transactions in real time. This enables you to easily diagnose and troubleshoot an error by tracing back to the source of the issue.

Transaction ID	Start Time (UTC)	End Time (UTC)	Protocol	Source Name	Status
1 cb0f8b64-e086-4c2f-b472-5025ab20d250	2012/04/03 19:54:12.063Z	2012/04/03 19:54:12.773Z	FILE	order_success_march8.xml	✓
2 df186297-8591-44b5-8bb6-c9a7b82f967a	2012/03/26 16:06:46.723Z	2012/03/26 16:07:16.820Z	FILE	out.xml	✓
3 6a579d71-a344-4f2d-af5e-a2c69c2e7d04	2012/03/26 16:05:44.667Z	2012/03/26 16:06:14.833Z	FILE	out.xml	✓
4 36e1339c-46a4-49ab-aeed-184bda53f7c8	2012/03/26 15:27:22.270Z	2012/03/26 15:27:52.530Z	FILE	in2 - Copy.xml	✓
5 02f48229-a99b-497c-addr-ff8b14c8e89f	2012/03/22 20:05:27.143Z	2012/03/22 20:05:27.193Z	FILE	101010.xml	✓
6 a19025bd-e469-4992-976a-d5e44731609f	2012/03/22 20:05:23.530Z	2012/03/22 20:05:25.193Z	FILE	order_success_WAR.xml	✓
7 69e79571-721e-4d31-82a0-b010fa1a190f	2012/03/22 20:05:23.503Z	2012/03/22 20:05:23.527Z	FILE	order_fail_WAR.xml	✗
8 767dde7f-a1e4-4030-b326-5fdb412de60d	2012/03/22 19:52:26.720Z	2012/03/22 19:52:26.757Z	FILE	5432111.xml	✓
9 d6f22640-f5e3-4353-a294-2e2c09eb1866	2012/03/22 19:52:24.020Z	2012/03/22 19:52:24.783Z	FILE	order_success_AAA.xml	✓
10 94507739-b5f6-458b-a91b-78bf7ea2571c	2012/03/22 19:52:23.817Z	2012/03/22 19:52:24.007Z	FILE	order_fail_march8.xml	✗
11 a8bd9add-f973-46ce-84c7-4522928be44e	2012/03/22 14:40:50.427Z	2012/03/22 14:40:50.503Z	FILE	order_success_AAA.xml	✗
12 ed759f0e-3090-4529-8d30-e20930a0fa54	2012/03/22 14:14:58.507Z	2012/03/22 14:14:58.583Z	FILE	54321.xml	✓

### Key Features and Advantages

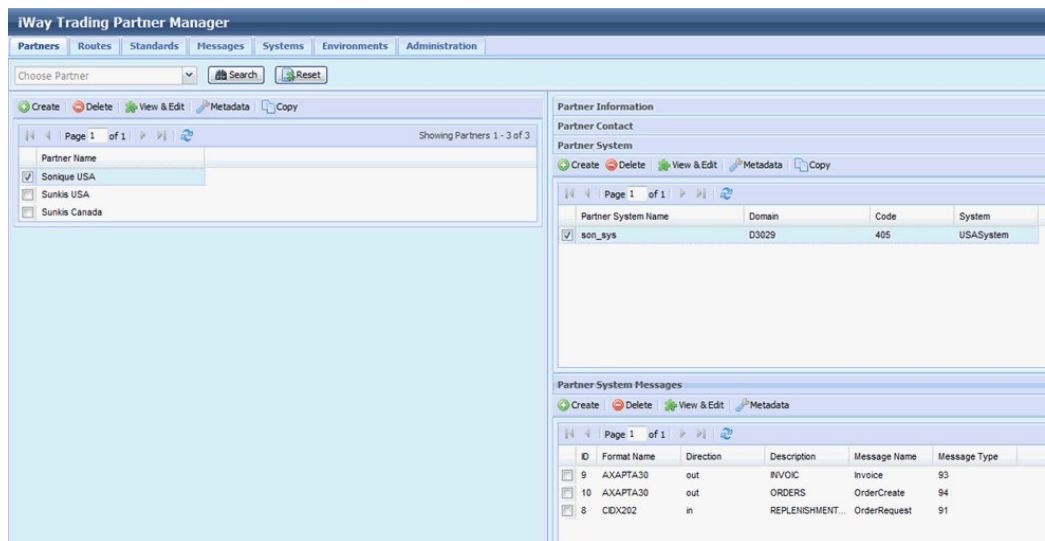
Key features and advantages that are provided through iWay Activity Monitor include:

- ❑ Ability to capture, analyze, resolve, audit, and act upon real-time business transaction events that are gathered. The architecture of iWay Activity Monitor is based on iSM and uses standard iSM components to provide a seamless integration with an existing application life cycle.
- ❑ A two layer architecture to distinguish and increase control over data capture and presentation capabilities. A data capture layer is facilitated by the iWay Activity Monitor driver facility, and a data presentation layer is facilitated by the iWay Activity Monitor web application console.
- ❑ Support for Simple Network Management Protocol (SNMP), allows you to track iWay activity within a managed network using any popular SNMP tool.

### iWay Trading Partner Manager

iWay Trading Partner Manager (TPM) enables centralized management of partner, system, and external entity information. Providing a user-friendly interface, iWay TPM can be used in B2B and other applications. The data from iWay TPM is then used to dynamically drive and process the transactions, and load additional systems and partners on board. iSM is designed for dynamic configuration based on external (and message) properties to enable dynamic message processing and routing.

The following image shows the iWay TPM web console, where you can access various facilities easily by clicking the corresponding tabs at the top of the console. For example, if you are required to define a trading partner, which sends and/or receives messages using an iSM configured application, then you would click the *Partners* tab to access the Partners facility.



The screenshot displays the iWay Trading Partner Manager web console. The interface includes a navigation bar with tabs for Partners, Routes, Standards, Messages, Systems, Environments, and Administration. The main area is divided into three sections:

- Partner Information:** Shows a list of partners. The selected partner is 'Sonique USA'. Other partners listed are 'Sunkis USA' and 'Sunkis Canada'.
- Partner System:** Shows a table with one entry:
 

Partner System Name	Domain	Code	System
son_sys	D3029	405	USASystem
- Partner System Messages:** Shows a table with three entries:
 

ID	Format Name	Direction	Description	Message Name	Message Type
9	AXAPTA30	out	INVOIC	Invoice	93
10	AXAPTA30	out	ORDERS	OrderCreate	94
8	CIDX202	in	REPLENISHMENT...	OrderRequest	91

The Partners facility enables you to select an input and output message type that can be processed by a trading partner system you define.

### Key Features and Advantages

Key features and advantages that are provided through iWay TPM include:

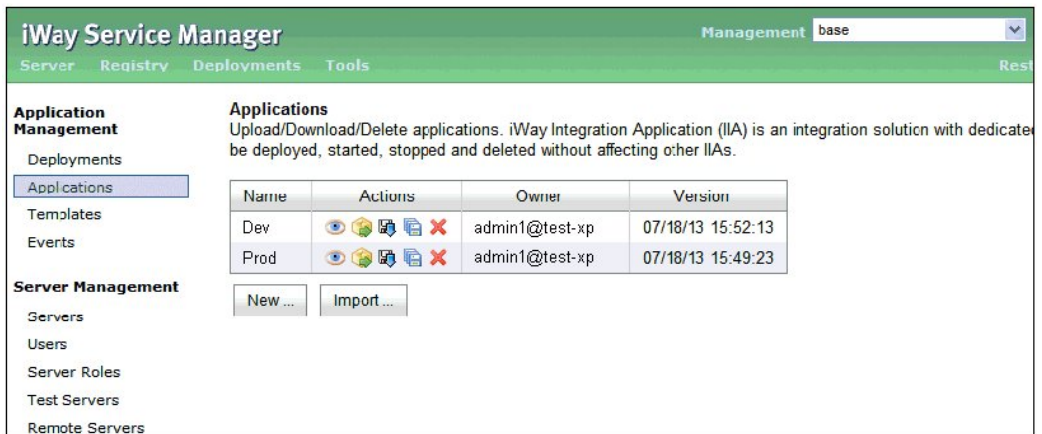
- ❑ Simplifying the creation and management of trading partner agreements using a design-time GUI (iWay TPM web console) and additional run-time capabilities.
- ❑ Using Audit Manager, which is called automatically at points during the message lifecycle. Audit Manager can be configured to record any stage of message processing and can be accessed from the web console for transaction review. The Audit Manager is designed to be extended or replaced depending on business requirements.

- ❑ Using Correlation Manager to identify the state of a message (send, technical acknowledgement, satisfaction), what acknowledgments are expected for each message, and whether they have been executed. This can also be used to monitor service-level agreements (SLAs).
- ❑ Using iWay TPM Information and Profile facilities. These facilities provide access to variables about each trading partner, correlation information, and other important B2B information. This includes transformations and process flows used for each partner, access keys (for example, ISA06), error handler contacts, DUNS numbers, and more.

### **iWay Integration Applications**

iWay Integration Applications (iIAs) are designed for application packaging and migration across various deployment environments (for example, Development, QA, Production, and so on). This allows you to ensure the integrity of an application during its entire life cycle.

The following image shows the Applications pane in the iSM Administration Console, which allows you to upload, download, create, and delete iIAs (for example, Dev and Prod) according to your requirements.



### **Key Features and Advantages**

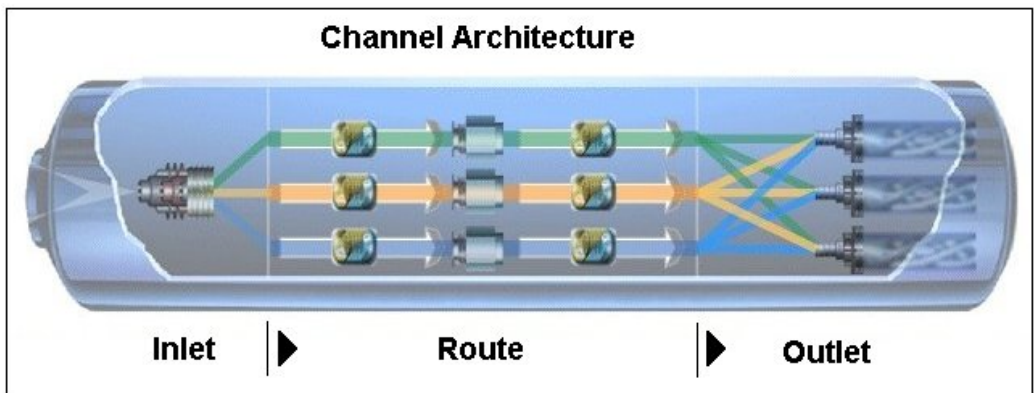
Key features and advantages that are provided through iWay Integration Applications (iIAs) include:

- ❑ Usage of standard iSM components to provide a seamless integration with existing application life cycles.
- ❑ Eliminates the need for most custom integration code.

- ❑ Simplifies the overall process of designing, deploying, and maintaining iIAs through a user-friendly GUI interface within iWay Integration Tools (iIT) and the iSM Administration Console.

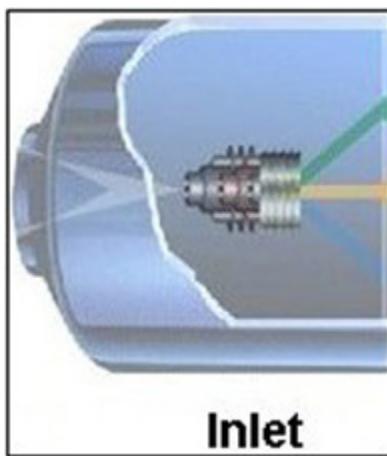
## iSM Channel Architecture

iWay Service Manager (iSM) defines a channel (conduit) as a container of components through which messages flow. The channel is a key component of iSM operations, which is used to deploy message flows from the design time repository to one or more run-time iSM instances. The unit of deployment is known as a channel archive (.car file). Channels contain references to inlets, routes, and outlets.



### Anatomy of an Inlet

Inlets contain references to listeners, decryptors, and preparers.



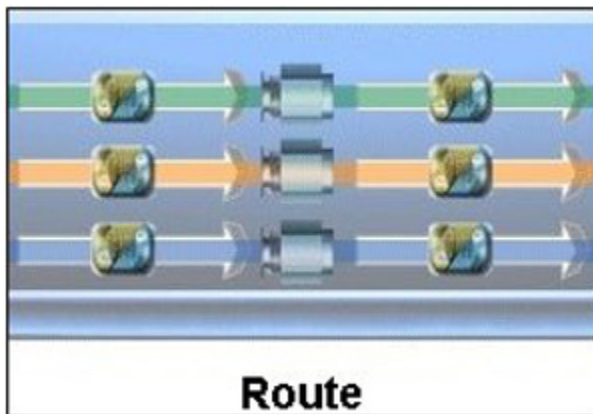
Listeners are defined as protocol handlers and are responsible for startup, shutdown, and obtaining the incoming messages. Listeners receive the messages from the transport protocol, set special registers (such as header values and input sources) and then pass the message to a decryptor.

Decryptors can apply a decryption algorithm to the incoming message and verify the security of the message. It can be used to verify that the sender is authorized, to check that the message has not been changed, and to decrypt any part of the message that has been encrypted. Finally the decryptor passes the message to a preparser.

Preparsers convert transported messages into documents that can be processed. For example, a preparser can be used to convert non-XML messages into XML documents. Preparsers can be stacked, so that the output of one preparser becomes the input of the next preparser. Input to the first preparser is a byte stream, and output is a properly encoded string. Subsequent preparsers accept and emit strings.

### **Anatomy of a Route**

Routes contain references to transformers, processes, and outlets.



A route describes the path that a document takes during its passage through the system.

Transformers convert the document information to a common format suitable for general business processing. For example, similar messages from two trading partners might differ slightly in format. A common format is often desirable for business processing.

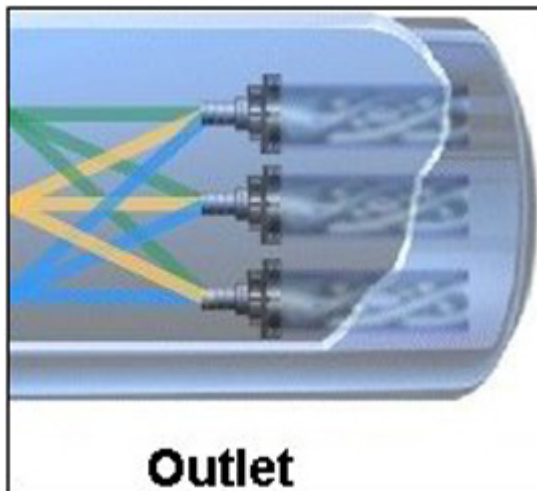


Processes perform the actual business operations on the document. A business process is composed of one or more services, with appropriate switching, testing, iteration, and error handling. Processes can call on other processes and web services, and in turn can be packaged as web services for external consumption. Business processes (referred to as process flows) are designed using iWay Integration Tools (iIT) Designer. For more information, see [iWay Integration Tools](#) on page 26.

Outlets pass the processed document to one or more designated recipients. They convert the document to the required transport format and then emit the message.

### **Anatomy of an Outlet**

Outlets contain references to premitters, encryptors and emitters.



Once a document has been processed, it must be sent on to one or more designated recipients. This is the job of the outlet. The outlet is responsible for all aspects of preparing the document to be emitted.

Outlets contain a sequence of components tailored for this task. Multiple outlets can be configured for a single message flow. Each outlet incorporates all of the components needed to send the message to its destination.

Preemitters convert the document from the internal processing format to an external format message. This may include simply flattening XML or may be more complex, involving transformation logic. An example is converting the document to external EDI or HIPAA format. Preemitters can be chained, so the output of one becomes the input to the next. The first premitter receives the document in internal form, and flattens it to a message format. Subsequent preemitters can perform extra work on this message. Transformations are designed using iWay Integration Tools (iT) Transformer. For more information, see *iWay Integration Tools* on page 26.

Encryptors operate on the message that is ready for emitting. Parameters such as encryption keys or certificate aliases can be stored by destination address in the optional iWay Trading Manager component.

The emitter uses the appropriate transport protocol to send the document on to its destination. A few examples include JMS, HTTP, email, and AS2. Header information that has been prepared by processes and stored in special registers is applied to the message in a format-specific manner.

### For More Information

See the following manuals at <http://documentation.informationbuilders.com>:

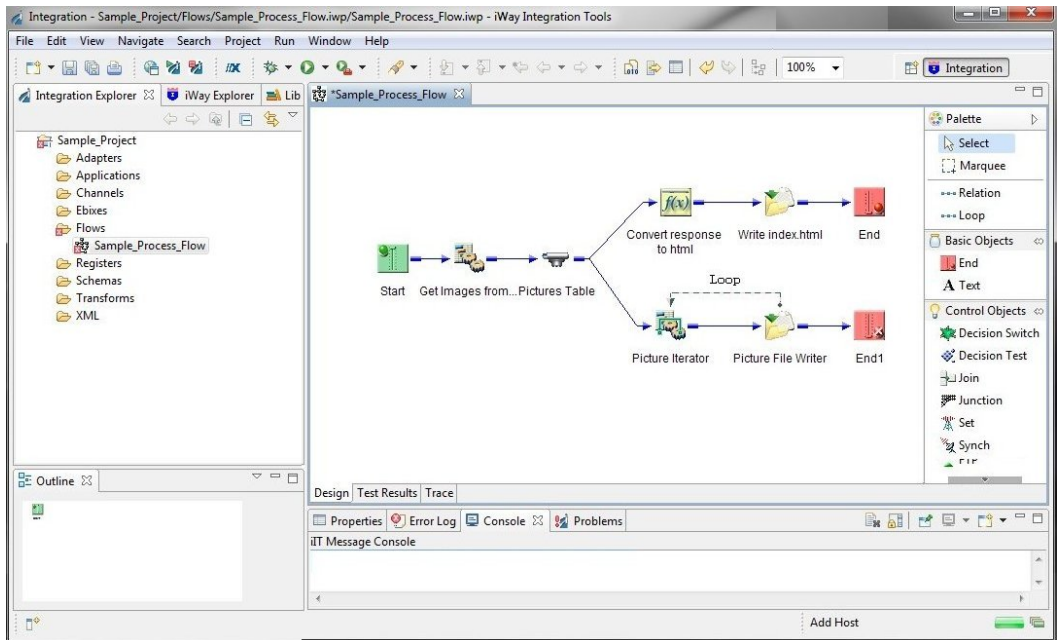
- ❑ *iWay Service Manager User's Guide*
- ❑ *iWay Business Activity Monitor User's Guide*
- ❑ *iWay Trading Partner Manager User's Guide*
- ❑ *iWay Integration Application User's Guide*

### iWay Integration Tools

Developed in Eclipse, iWay Integration Tools (iT) is a unified, design-time environment, which allows you to connect with source systems for data discovery.

In addition, iT enables you to design process flows, and develop applications for deployment. This user-friendly environment integrates with popular source management systems such as SVN, through an Eclipse plug-in framework. Following Eclipse standards, iT can integrate with other Eclipse-based plug-ins, and is deployable as a plug-in into an existing Eclipse-based environment.

The following image shows the Integration Explorer tab in iIT, where a sample integration project is being used to design a process flow.



### Key Features and Advantages

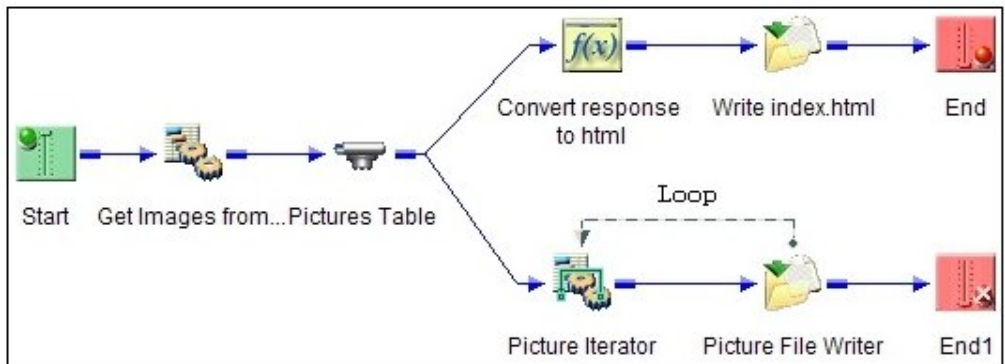
Key features and advantages that are provided through iWay Integration Tools (iIT) include:

- ❑ Full integration of iWay Designer and iWay Transformer (previously standalone tools with independent user interfaces in earlier iSM releases) within the unified (Eclipse-based), design-time environment.
- ❑ Ability to develop applications across various iWay product suites by providing unified perspectives into integration, data quality, and other iWay solutions within a single interface.
- ❑ Localized design-time and testing facilities as part of integrating with source management systems, enables teamwork on complex application development. This occurs while maintaining integrity of the application, which is then deployed into a centralized environment and propagated across various environments (for example, Development, QA, Production, and so on).
- ❑ Library Manager, which provides a centralized repository of reusable components, such as transformation mappings, process flows, and pre-configured services. These components can be reused across multiple applications within a project.

iIT includes the following set of design-time graphical tools to help you create sophisticated integration services without the need, in many cases, for any custom programming:

- ❑ **iIT Designer.** The capability of graphically visualizing a business process is a powerful and necessary component of any application integration offering. iIT Designer provides a visual and user-friendly method of creating a business process, also called a process flow.

The following image shows a sample process flow that is designed to retrieve images from an RDBMS table and generate a photo album as an HTML page.

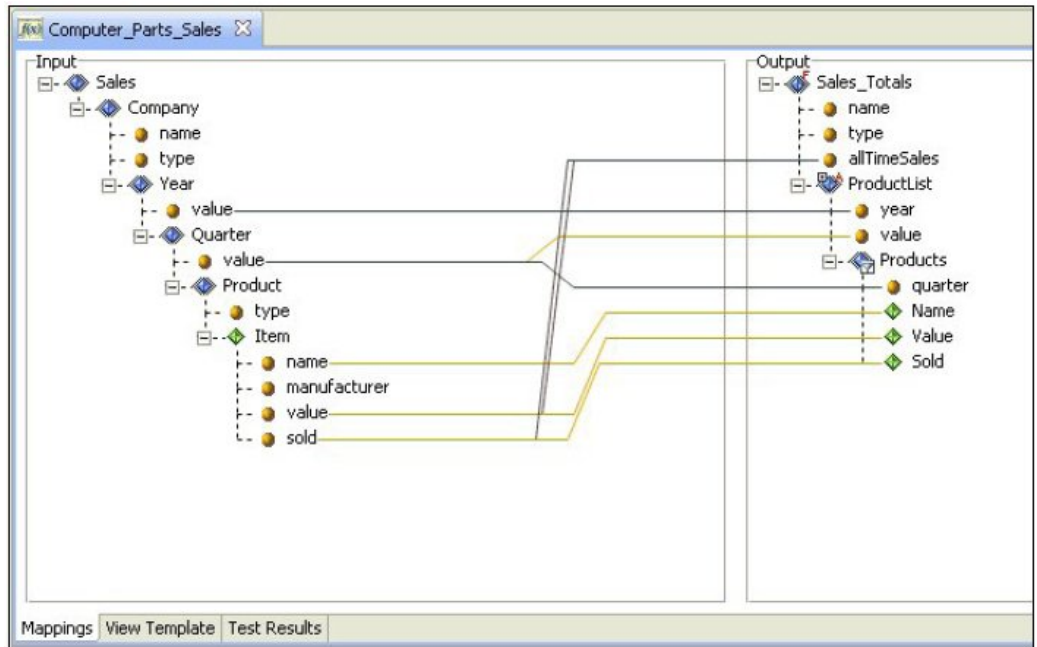


Through a process flow, you control the sequence in which tasks are performed, and the destination of the output from each task in the process flow. In the iIT Designer user interface, you can create a project that holds one or more process flows. Each process flow that you create is a single unit of work made up of one or more process objects (such as Email, Adapter, or Emitter). Each process flow is graphically represented by icons and connected by lines that establish a relationship between the objects.

- ❑ **iIT Transformer.** iIT Transformer offers integrated data transformation services within iWay Service Manager. Transformation is the means by which messages are converted from one data format or structure to another.

iIT Transformer is natively capable of working with formats and rules contained in iWay archives called Ebixes (e-Business Information Exchange). Ebix archives are collections of metadata that are used to direct the processing of electronic business messages. The Dictionary Builder facility, which is available in iIT Transformer, enables the examination and modification of these standard business rules to meet specific application requirements.

The following image shows a sample Transform project where an input structure is being mapped to an output structure.



A graphical tool called Mapping Builder provides design services for specifying and defining transformations. The Publishing Manager allows you to publish these transformations to iWay Service Manager.

### For More Information

See the following manuals at <http://documentation.informationbuilders.com>:

- ❑ *iWay Integration Tools User's Guide*
- ❑ *iWay Integration Tools Designer User's Guide*
- ❑ *iWay Integration Tools Transformer User's Guide*

## iWay DataMigrator

iWay DataMigrator is a powerful and comprehensive set of fully automated tools designed to dramatically simplify data integration, including the creation, maintenance, and expansion of data warehouses, data marts, and operational data stores. With its intuitive, easy-to-use interface, DataMigrator enables fast, flexible, end-to-end ETL process creation involving heterogeneous data structures across disparate computing platforms. DataMigrator allows users to efficiently:

- ❑ Aggregate, join, merge, and apply selection criteria to information from any combination of back-office systems.
- ❑ Simplify data movement from back-office systems to e-business platforms, using automatically generated and managed FTP scripts or most native transport protocols.
- ❑ Transform data from raw forms into structures that are more suited to your application.
- ❑ Simplify loading of data into a target database through the automatic invocation of bulk loaders or row-at-a-time inserts.
- ❑ Execute, schedule, review, manage, audit, and create dependencies among ETL requests.

### **Key Features and Advantages**

Key features and advantages that are provided through iWay DataMigrator include:

- ❑ **Changed Data Capture for Active Data Warehouses.** DataMigrator is now integrated with available changed data capture (CDC) capabilities. With CDC, changed records (inserts, updates, or deletions) are detected by reading database logs for the major relational databases including Oracle®, DB2®, and MS SQL Server® 2008. Since only changes need to be copied, this can dramatically reduce job processing time and CPU cycles, as well as improve the timeliness of information in a data warehouse.

Changed records can be pulled as frequently as every minute, so you can enable near real-time or active data warehouses. All CDC configuration is done in the Metadata Editor so that building a data flow for changes is just as easy as for the initial load.

- ❑ **Metadata Editor.** The Metadata Editor allows you to create synonyms for data sources, add transformations to be shared by other users, and create views of joined tables
- ❑ Accessing source data in numerous formats and operating systems.
- ❑ Integrating multiple data sources into a single target or multiple data targets.
- ❑ Applying powerful data cleansing rules and transformation logic.
- ❑ Aggregating data and create roll-ups to aid decision support.

- ❑ Using specialized, high-volume data loaders.
- ❑ Scheduling data updates at user-defined intervals, triggered by events, or based on conditional dependencies.
- ❑ Loading a Star Schema with Slowly Changing Dimensions.
- ❑ Monitoring and manage key server functions.
- ❑ Viewing comprehensive logging and transaction statistics.

Since iWay DataMigrator is a true client/server middleware solution, underlying communications protocols and data source subsystems are transparent.

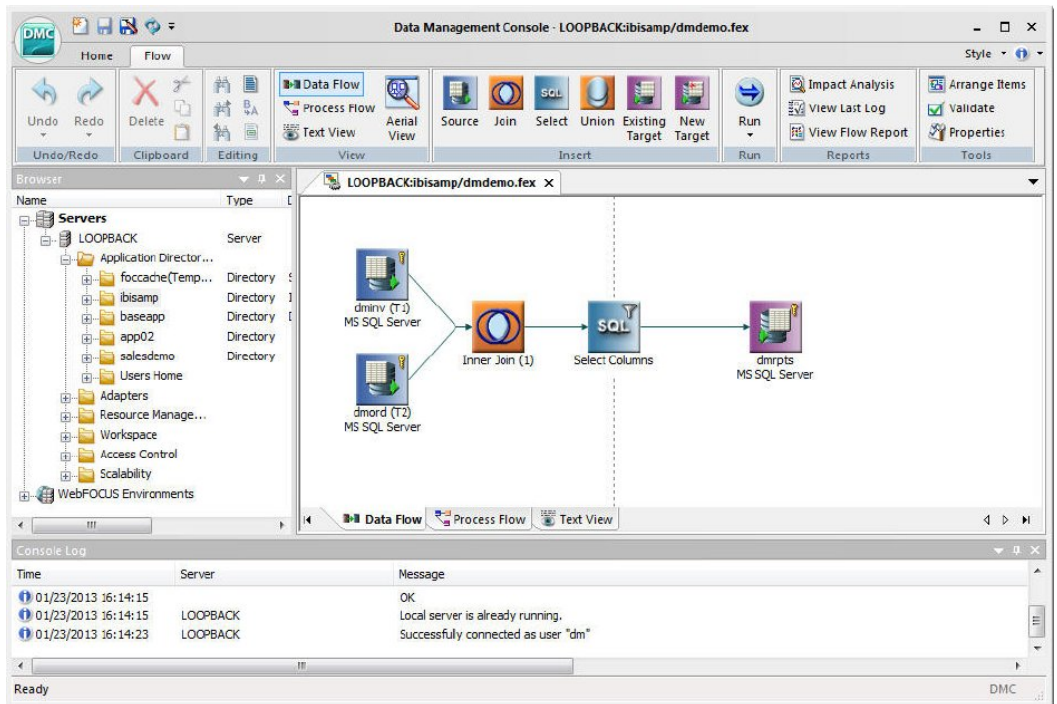
### iWay DataMigrator Architecture

iWay DataMigrator is comprised of two basic components and one supplementary component:

- ❑ **DataMigrator Server.** A server must be installed and configured to support iWay DataMigrator operations. The server houses and executes data and process flows, which are the key iWay DataMigrator design elements.
- ❑ **DataMigrator Data Management Console (DMC).** The main component of the DMC is the DataMigrator graphical user interface. It runs on a Windows PC, where you design, test, and run data and process flows.
- ❑ **Server Web Console.** The Server Web Console is installed with the server. It enables you to perform browser-based server administration tasks.

You must install and configure these components before you can begin using iWay DataMigrator to build the data flows and process flows that will build your data targets.

The following image shows the main window of the DMC, where a data flow is being designed in the workspace.



At the core of iWay DataMigrator is the ability to design data flows and process flows, which are types of procedures. The DMC facilitates the design task using two tabs, Data Flow and Process Flow, and provides a Text View tab from which you can see the code generated by the graphical tools.

- ❑ **Data Flow.** Normally, you design a data flow from a set of objects that identifies your data sources, your data targets, the columns of data to include in the data targets, and the business rules that govern how the data is extracted from the sources, transformed, and loaded into the targets.

You can join multiple data sources, filter and sort the extracted source data, and specify column mappings from the source to the target.

- ❑ **Process Flow.** You structure how the data flow is processed by positioning objects in your workspace and defining their interactions. You can combine:
  - ❑ A schedule object that defines when to run the process.



- ❑ Data flow objects that indicate what data to extract and move from data sources to data targets.
- ❑ E-mail objects that notify users about the status of the process at specified points.
- ❑ Stored procedure objects that perform a variety of supplementary tasks before or after the extraction and load steps defined in a data flow.
- ❑ Variable objects that set values for the variables used in a flow.
- ❑ Connector objects, represented as arrows, that specify execution logic for the objects in the process flow (for example, what to do next when a step succeeds or fails).
- ❑ Group objects that specify parallel, rather than sequential, execution of a subset of objects within the total flow. Objects that follow are not executed until processing for the grouped objects is complete.
- ❑ **Text View.** This tab enables you to toggle between the graphical interface and the underlying code at any point in your design process.

### For More Information

See the following manual at <http://documentation.informationbuilders.com>:

- ❑ *iWay DataMigrator User's Guide*

### iWay Software Development Kit

The iWay Software Development Kit (SDK) provides the tools and technologies that are required for the development of iWay applications and their web archives at an enterprise level.

#### Key Features and Advantages

Key features and advantages that are provided through the iWay Software Development Kit (SDK) include:

- ❑ A complete Java/ANT based framework, which can be integrated into an existing IT operations cycle as part of an existing build process.
- ❑ Enabling ANT-based scripting to comprise, build, and deploy iWay Applications from a centralized build system without requiring an iSM installation.
- ❑ A fully scriptable, scheduled, remote distribution and management of iWay Applications across an enterprise environment.

## For More Information

See the following manual at <http://documentation.informationbuilders.com>:

- ❑ *iWay Software Development Kit User's Guide*

## Data Connectors

Data connectors are a part of the iWay Universal Adapter Framework, which contains off-the-shelf adapters to provide easy access to any information system.

### Key Features and Advantages

Key features and advantages that are provided through iWay data connectors include:

- ❑ Eliminating the need for most custom integration code, allowing resources to focus on critical operations so better decisions can be made based on the data.
- ❑ Simple access and interaction with disparate data and application systems.
- ❑ Allowing organizations to access data at every latency level from real-time, zero latency transactions to staged data in the most summarized data mart.
- ❑ Increased productivity, reusability, flexibility, and business agility when strategically positioning the iWay Universal Adapter Framework.

## For More Information

See the manuals under the following adapter categories at <http://documentation.informationbuilders.com>:

- ❑ *Technology Adapters*
- ❑ *Application Adapters*
- ❑ *E-Business Adapters*
- ❑ *Legacy Adapters*
- ❑ *Log Event Adapters*
- ❑ *Protocol Adapters*

## Security

iWay Service Manager (iSM) is designed to service secure message traffic.

### Key Features and Advantages

Key features and advantages that are provided through security handling within the iSM framework include:

- ❑ Message acquisition and disposition using standards-based message protocols and security standards, such as SSL/TLS enabled HTTP, AS/2, S/FTP, and FTP/S.
- ❑ Identification and rejection of spurious messages including DOS-type attacks.
- ❑ Standards-based cryptography to process secure messages such as S/MIME messages.
- ❑ XML Digital Signature for non-repudiation of messages.
- ❑ Authentication and authorization for connection and access to secure services within the server.
- ❑ Policy-based protected configuration, which prevents tampering or unauthorized changes to system components and their use during message processing.
- ❑ Masking of stored passwords.
- ❑ Security-related functions in the iWay Functional Language.

The *iWay Service Manager Security Guide* discusses each of these areas in terms of the security mechanisms being applied and the ways in which these mechanisms fit into the use of the server.

### For More Information

See the following manual at <http://documentation.informationbuilders.com>:

- ❑ *iWay Service Manager Security Guide*



## iWay Data Quality Suite

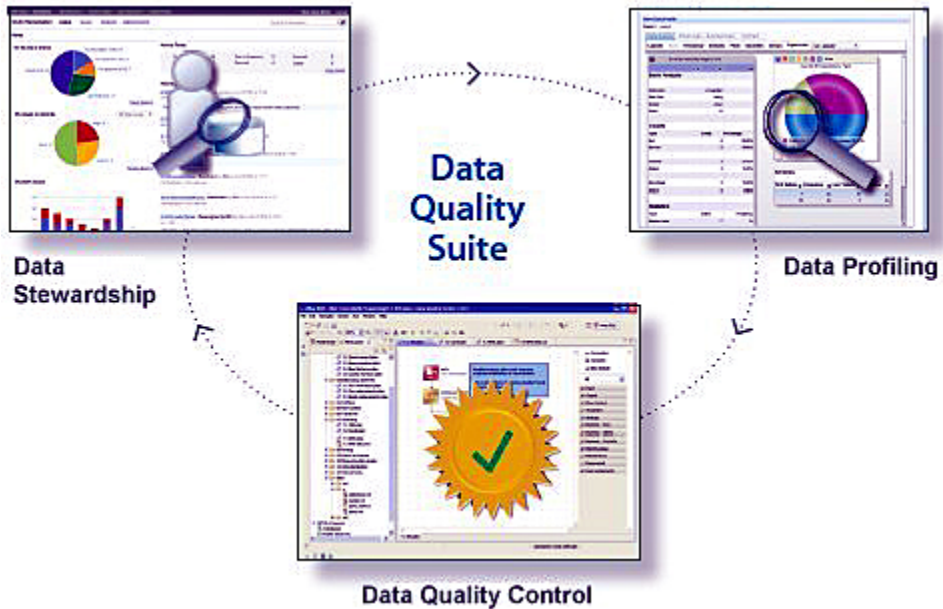
This chapter describes components of the iWay Data Quality Suite in iWay 7 and highlights key features.

**In this chapter:**

- ❑ [Introduction](#)
- ❑ [iWay Data Quality Server](#)
- ❑ [iWay Data Profiler](#)
- ❑ [iWay Data Steward Portal](#)

### Introduction

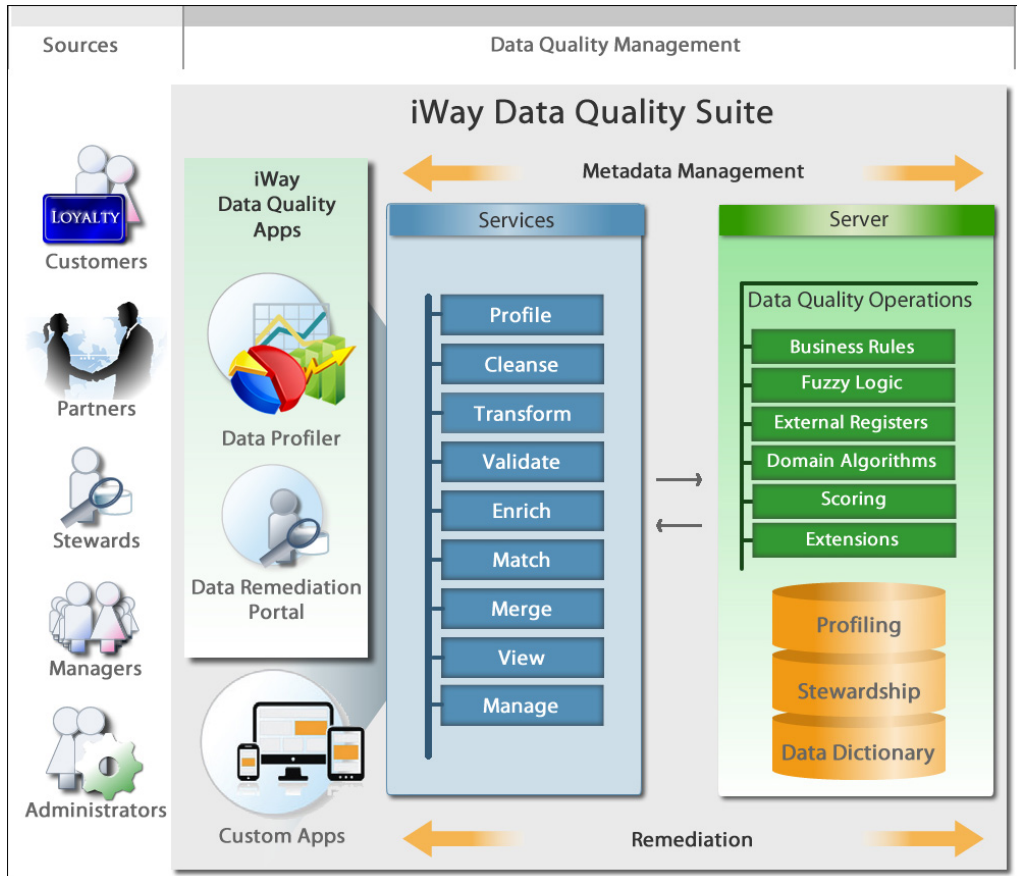
In iWay 7, the iWay Data Quality Suite delivers a unified toolset for profiling, cleansing, and enriching information.



With the iWay Data Quality Suite, organizations can better control transactional and analytical applications, enhance system migration or software integration projects, improve customer identification processes, validate inputs in self-service and other online applications, and much more by:

- ❑ Building a real-time data quality firewall, complete with real-time reporting and monitoring.
- ❑ Profiling and analyzing data, to assess its quality and immediately identify and correct any integrity issues.
- ❑ Dynamically cleansing data using an automated rules engine. Restrictions, constraints, and other data quality rules can be defined and implemented, then automatically applied to data values across the information landscape, triggering instant changes to existing data to eliminate mistakes.
- ❑ Enriching information by appending it with relevant content gathered from external sources.
- ❑ Matching and merging information across multiple data sets to promote consistency, in conjunction with the iWay Master Data and Integration Suites.

The following diagram illustrates a high level overview of the iWay Data Quality Suite.



Easy to implement and packed with rich functionality, the iWay Data Quality Suite leverages modern platforms and code optimization techniques to minimize initial investment and total cost of ownership.

### Components of the iWay Data Quality Suite

The following table lists and describes the iWay components that are included with the iWay Data Quality Suite.

Component	For More Information
iWay Data Quality Server	See <a href="#">iWay Data Quality Server</a> on page 41.

Component	For More Information
iWay Data Profiler	See <a href="#">iWay Data Profiler</a> on page 43.
iWay Data Steward Portal	See <a href="#">iWay Data Steward Portal</a> on page 46.

## Data Profiling

The first step in any data quality initiative, data profiling enables users to assess and understand data through basic analysis. Additionally, the profiling capabilities of the iWay Data Quality Suite include pre-built metrics and customizable business rules for monitoring data, developing distributable reports, and performing offline analytics in batch or real time. The iWay Data Quality Suite can generate advanced, built-in, in-depth reports and profiling information that provide efficient and accurate tracking and comparisons of data quality improvements over time.

## Data Quality Management

This state-of-the-art solution is designed to optimize information integrity throughout its lifecycle. It leverages comprehensive, fully customizable business rules and a portfolio of localized dictionaries, as well as advanced unification, validation, cleansing, and enriching techniques, to not only identify and correct bad data, but to proactively prevent it from entering the environment in the first place.

Serving as the main hub for data quality within an organization, this vital component of the iWay Data Quality Suite delivers centralized management of business rules, information integrity, and data flows, while providing a single point of integration and management for data from external master data systems and other sources.

## Data Stewardship

A web-based foundation for data governance allows business users and data stewards to manage configurable process-based remediation workflows to correct and resolve data quality issues quickly and efficiently. Notifications can be sent to mobile devices when human intervention is required. With ease of access for business users, data quality issues can be monitored, managed, resolved, and tracked in real time, with an end-to-end audit trail of all changes. The workflow orchestrator for remediation processes can be customized, and optionally allows remediation edits to be reincorporated back to the source or destination.

## Data Cleansing

Corrupt, invalid, or incorrect data can be cleansed by:



- ❑ Parsing data into pattern-based components.
- ❑ Standardizing formats and abbreviations with language-specific replacements.
- ❑ Practicing data quality validation against rules and reference tables.
- ❑ Accessing a large number of domain-oriented algorithms for addresses, parties, vehicles, names, identification numbers, credit card numbers, and bank account numbers.
- ❑ Easily extending custom validation steps using complex functions and rules such as Levenshtein distance, SoundEx, and internal Java-based functions.

## Data Enriching

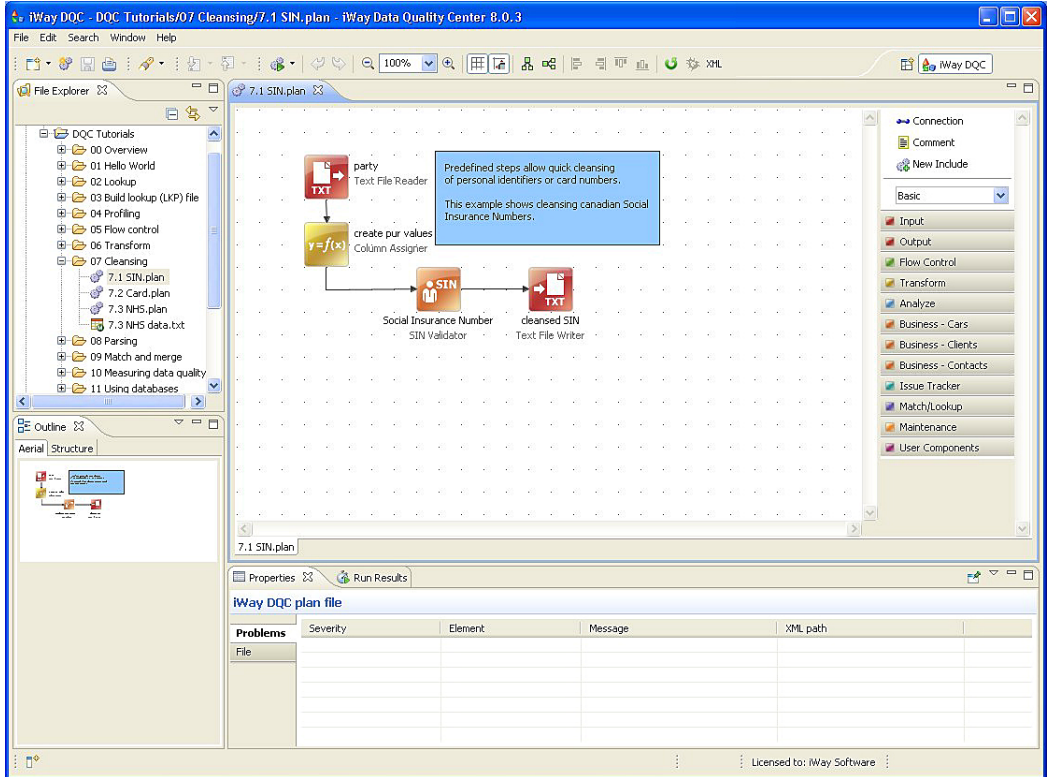
Any information from any source can be enhanced and enriched by:

- ❑ Leveraging external company registers.
- ❑ Incorporating geocodes for identified address map locations and geomarking for insurance risk.
- ❑ Adding missing zip codes, street names, and more to complete address records.
- ❑ Including names, surnames, and academic or social titles for more holistic contact details.

## iWay Data Quality Server

iWay Data Quality Server (DQS) is a complete tool for complex data quality management. iWay DQS not only evaluates, monitors, and manages the quality of data in different information systems, but it also prohibits inaccurate data from being admitted into those systems. iWay DQS is bundled with a specific set of business rules and localized dictionaries. Banks, insurance, health care, and telecommunication companies choose iWay DQS for its ease of implementation and tangible business gains.

The following image shows a sample plan opened in the workspace area of iWay DQS. Here you can design and configure plans (workflows), which can range from simple to complex, using predefined steps (objects). For example, you can design a plan to cleanse personal identification numbers (Social Security Numbers) or credit card numbers.



### Key Features and Advantages

Key features and advantages that are provided through iWay Data Quality Server (DQS) include:

- ❑ Ease of use through a unified Eclipse-based toolset (iWay Integration Tools). This provides a consistent user experience across the iWay 7 suites from the perspective of user interfaces, technologies, and methods.
- ❑ A drag-and-drop workspace area to easily add preconfigured data quality components (steps) to build simple or complex workflows.
- ❑ Ability to tap into a wide range of supported external data sources, such as national addresses or names registries, to retrieve reference data for parsing, cleansing, and validation.

- ❑ Includes prepackaged components that help accelerate your development of data quality applications.
- ❑ Data quality control in transactional and analytical applications.
- ❑ Data cleansing and unification during data system migrations.
- ❑ Data quality assurance in software integration projects.
- ❑ Quality improvements in address and contact information.
- ❑ Data cleansing and unification of customer data for client identification purposes.
- ❑ Customer profile validation and correction of incomplete data records.
- ❑ Customer input data validation in self-service online applications.
- ❑ Data profiling as a part of data-integration project analysis.

iWay DQS is the hub for data quality management in your organization. It delivers centralized management for business rules, data quality, and data flows. iWay DQS also enables the integration and management of data from external master data systems and other data sources through a single data quality platform.

### For More Information

See the following manuals at <http://documentation.informationbuilders.com>:

- ❑ *iWay Data Quality Server Getting Started Guide*
- ❑ *iWay Data Quality Server User's Guide*
- ❑ *iWay Data Quality Server Reference Guide*

### iWay Data Profiler

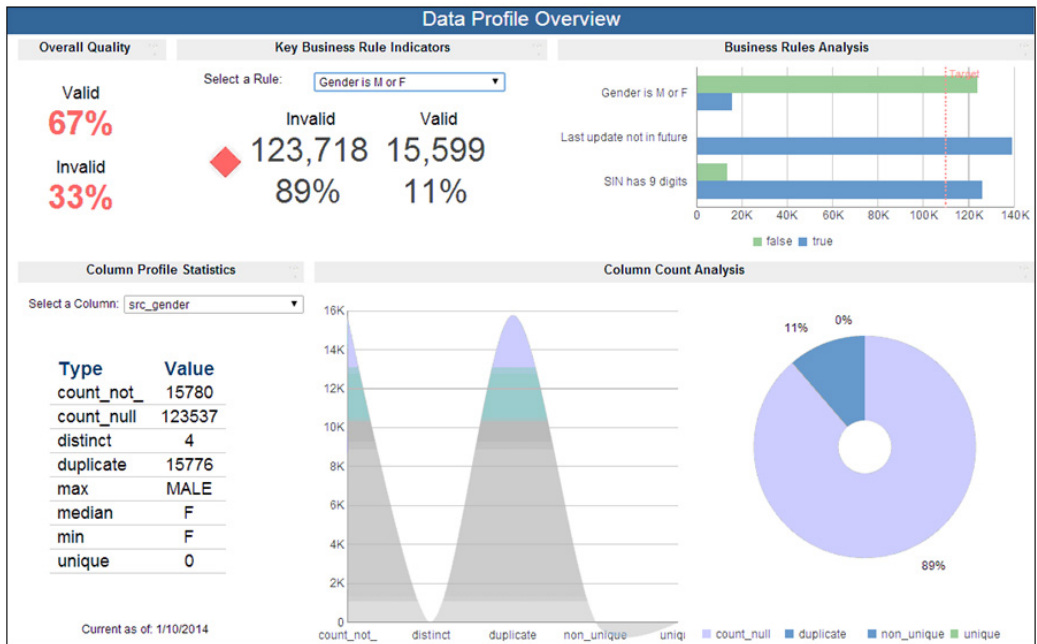
iWay Data Profiler (iDP) is a tool for business users that is designed as a Web 2.0 application leveraging the Profiler functionality in iWay Data Quality Server (iWay DQS) and the strength of WebFOCUS business intelligence capabilities.

iDP generates eye catching active reports using the latest business intelligence technology, including Adobe PDF and Adobe Flex, for easy analysis of key business data by integrating output from iWay DQC. In addition, iDP supports the iOS mobile operating system (iPad®, iPhone, or iPod touch®).

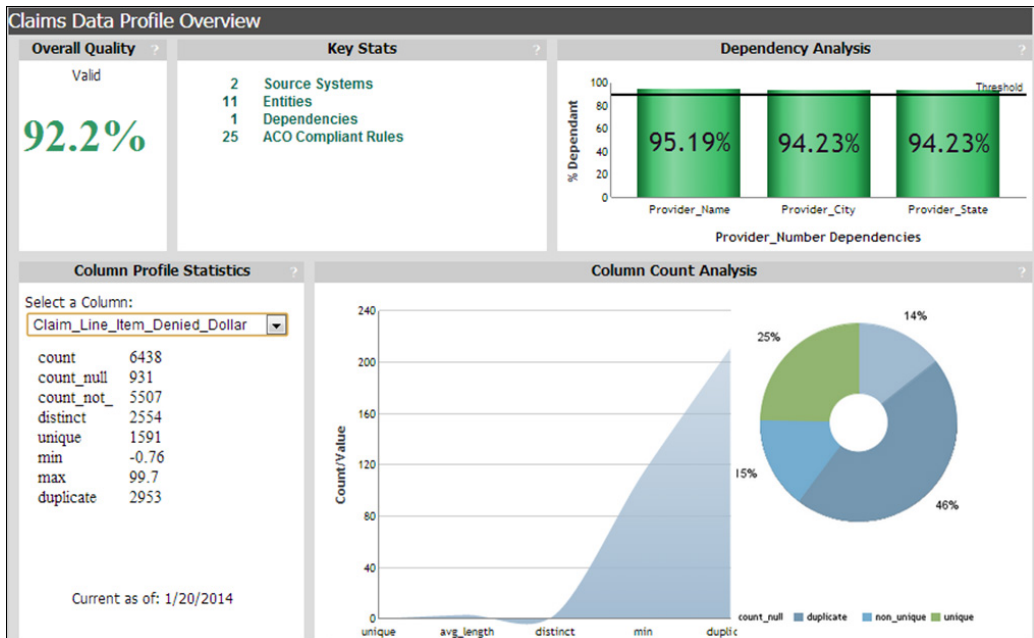
It allows business users to view, analyze, distribute, and monitor how much of their data follows the rules defined by their company. iDP also enables steady improvement in data quality towards following defined business rules and standards. In addition, iDP also allows a company to generate a Data Quality Assurance report.

The iDP Security Center allows administrators to limit access to iDP by creating, editing, and deleting groups, users, folders, and their roles.

The following image shows a data profile generated in a dashboard framework. In this example, the count, frequency, and percentage of duplicate, non-unique, and unique data based on a selected business rule is being evaluated. Several graphical charts are used as visual aids to represent the data profile.



The following image shows another data profile generated in a dashboard framework, where the overall data quality is also calculated. Several graphical charts are used as visual aids to represent the data profile.



### Key Features and Advantages

Key features and advantages that are provided through iWay Data Profiler (iDP) include:

- ❑ A browser-driven, thin-client solution, iDP allows you to extend powerful data profiling capabilities to anyone who needs them without any additional client software, plug-ins, or report viewers.
- ❑ Collecting profiling data easily and directly from iWay DQS through seamless integration.
- ❑ Tagging and archive profiling data input as a set into an associated RDBMS for easy retrieval.
- ❑ Viewing the data profiling set using advanced data manipulation and graphics.
- ❑ Comparing multiple archived data profiling sets to view the variance in profiling data.
- ❑ Printing and exporting any of the supported views in industry-standard formats, such as HTML, PDF, and Excel.
- ❑ Sharing data with other users across the intranet or Internet.

Using the latest market technology for Web 2.0 BI dashboards, reports, and charts, iDP leads to a steady improvement in data quality, following business rules and standards.

iDP is built mainly for analysis of data. It provides insight into the quality of data and aids in the identification of data quality issues.

### For More Information

See the following manuals at <http://documentation.informationbuilders.com>:

- ❑ *iWay Data Profiler Getting Started Guide*
- ❑ *iWay Data Profiler Installation and Configuration Guide*
- ❑ *iWay Data Profiler User's Guide*

### iWay Data Steward Portal

iWay Data Steward Portal is a tool for business users that allows data stewards to resolve various data quality defects. Problematic records identified by iWay Data Quality Server (DQS) are stored as data quality issues. iWay Data Steward Portal allows users to prioritize, assign, resolve, and monitor these data quality issues. Once the defects in the data are corrected, the source systems are updated based on the decision-making logic, thus, resolving the original faulty data.

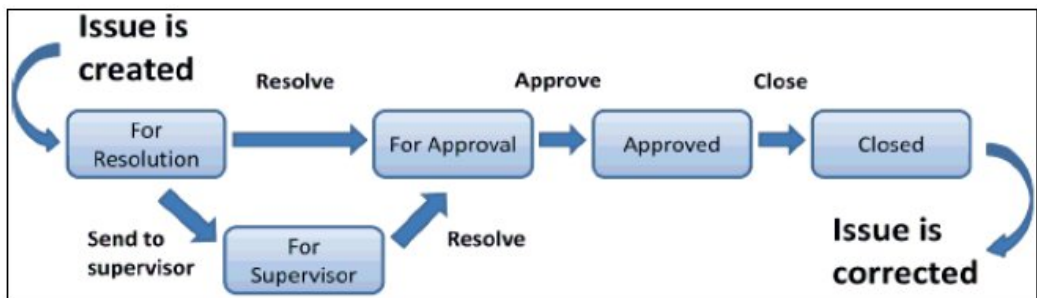
#### Key Features and Advantages

Key features and advantages that are provided through iWay Data Steward Portal include:

- ❑ A user-friendly web portal/dashboard interface that provides a single, easy-to-access location for all activities related to the monitoring, auditing, management, and resolution of data quality issues.
- ❑ Dynamic, proactive capture of bad data as it is entered into ERP systems or other applications, dropped into file directories, transmitted over FTP servers, generated during the course of automated processes and transactions, or sent through email.
- ❑ Intuitive color-coding, making it easy to see where data discrepancies or problems exist within data values.
- ❑ The ability to import bad records quickly, including full and incremental imports, to create new issues in the system or update existing ones.
- ❑ A customizable workflow engine that supports multiple tiers of reviewers and approvers, and allows for quick and easy assignment of issues to one or more data stewards.
- ❑ Automatic routing of changes to an approval queue.

- ❑ Flexible issue handling, including proposing corrections automatically, as well as allowing users to make manual adjustments to data as needed or merge duplicate records by selecting individual values from each.
- ❑ An end-to-end audit trail of all changes made to records.
- ❑ Proactive event triggers that route issues to specific individuals based on certain criteria, or automatically notify key stakeholders when certain types of problems are identified.
- ❑ Advanced, role-based security that keeps sensitive data fully protected at all times.

The established workflow is what defines an issue lifecycle, from the creation of the issue to its correction. Within the workflow, state and transition are two concepts that guide the issues through iWay Data Steward Portal. States represent the static points at which issues exist during their lifecycle and transitions represent the shifting of an issue from one state to another. The following diagram illustrates an example of a standard workflow within iWay Data Steward Portal.



In the workflow diagram above, you see the rectangles that represent the various issue states and the arrows that represent the transitions in between the states. Either the user or the automated system performs the transitions. For a transition to take place, permission must be granted, occurring when an issue is in a certain state before moving on to the next state. Other examples of events that occur during transitions are emails sent and the source system data being corrected. The specific workflow states are described as follows:

- ❑ **For Resolution.** Created issues that require attention.
- ❑ **For Supervisor.** Issues that the user is not able to resolve. The supervisor must review the issue before it continues further in the workflow.
- ❑ **For Approval.** Issues that the user, or supervisor, resolves and sends to a supervisor or manager for final approval.
- ❑ **Approved.** Issues that are resolved and approved.

- ❑ **Closed.** Approved issues that have been corrected in the system.

The following image shows a list of issues in the iWay Data Steward Portal console, which are related to customer billing and shipping data. These issues have been prioritized, and are waiting to be resolved.

ID	Sev.	System	Entity	Score	#Rec.	Data	Problem	Assignee	Changed
7	X	Shipping	Customer	1000	1	7 - Jane Jones	SIN invalid	Cindy	2011-03-17 08:47:40
9	X	Billing	Customer	1020	1	9 - Smith W. John	SIN invalid	Cindy	2011-03-17 08:47:40
12	X	Shipping	Customer	1000	1	13 - Smith John	Multiple problems	Alice	2011-03-29 11:34:54
13	X	Shipping	Customer	1000	1	14 - John Smith	Multiple problems	Bob	2011-03-29 10:42:17
16	!	Billing	Customer	0	2	420347213 - Peter	Manual merge	Bob	2011-03-29 10:43:13
17	!	Billing	Customer	0	2	- Smith	Manual merge	Bob	2011-03-29 11:35:18
18	!	Shipping	Customer	0	4	554898791 - Smith	Manual merge	Cindy	2011-03-29 11:34:31

## For More Information

See the following manuals at <http://documentation.informationbuilders.com>:

- ❑ *iWay Data Steward Portal User's Guide*
- ❑ *iWay Data Steward Portal Administration Guide*



## iWay Master Data Suite

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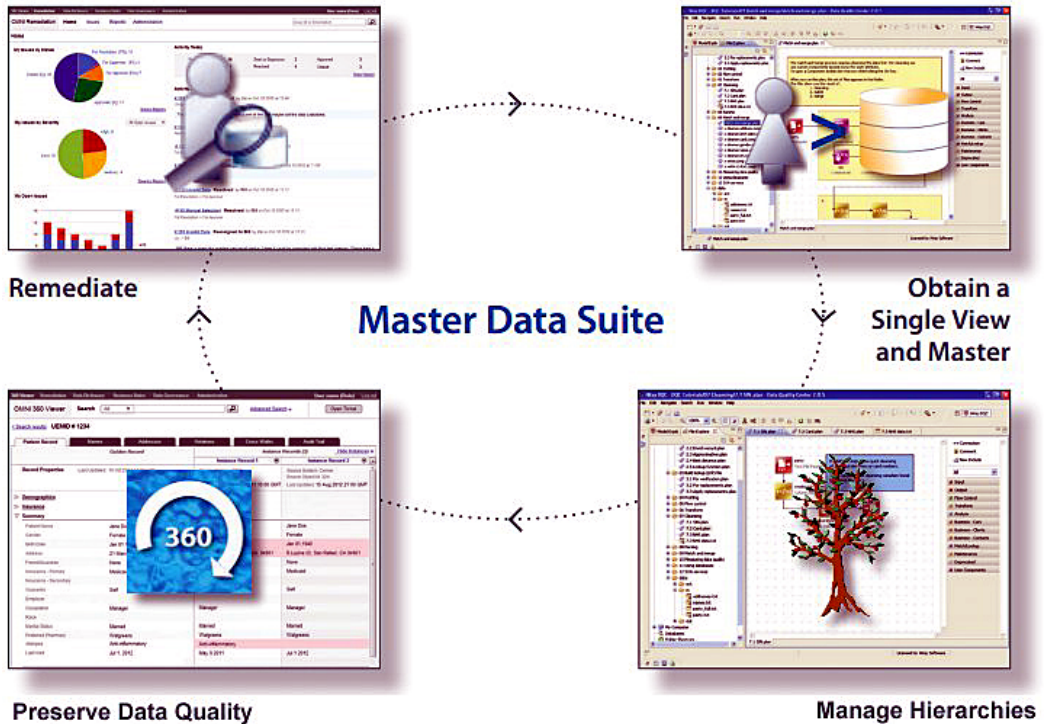
This chapter describes components of the iWay Master Data Suite in iWay 7 and highlights key features.

**In this chapter:**

- ❑ [Introduction](#)
  - ❑ [iWay Master Data Server](#)
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## Introduction

The iWay Master Data Suite is a comprehensive, unified toolset that ensures consistency, uniformity, and accuracy across all critical data assets. This powerful, scalable multi-domain master data management environment, allows organizations to enable effective data governance by rapidly creating and efficiently maintaining a single view of their core entities.

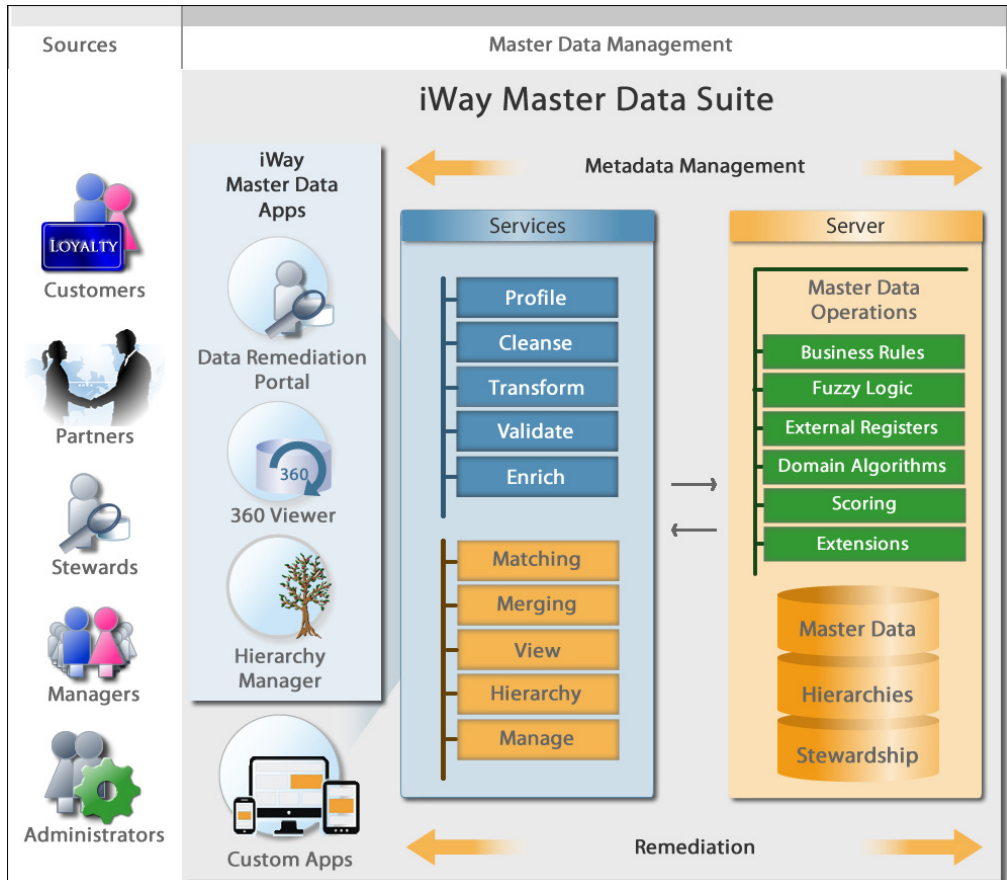


With the iWay Master Data Suite, organizations can:

- ❑ Obtain a browser-based, 360-degree view of golden records mastered across all functional domains.
- ❑ Interact with a wide array of different data structures, including industry-standard message formats, NoSQL-type repositories, packaged applications, and software-as-a-service solutions.
- ❑ Assess and visualize data through dashboards, hierarchy management, open presentation interfaces, user-driven/interactive execution, or scheduled/batch execution.
- ❑ Identify related data entities by leveraging deterministic, probabilistic, linguistic, cross-language, and weighting techniques for the execution of rules and schemes.

- ❑ Improve data quality with an embedded real-time data quality engine with support for standardization, validation, cleansing, custom business rules, and integration with external data sources.
- ❑ Facilitate data governance using an integrated data stewardship portal with customizable workflows for insight and remediation.

The following diagram illustrates a high-level overview of the iWay Master Data Suite.



The iWay Master Data Suite provides a complete end-to-end solution for managing master data with complete governance and data quality capabilities.

The iWay Master Data Suite includes all the features of the iWay Data Quality Suite, in addition to specialized master data management capabilities.

## Components of the iWay Master Data Suite

The following table lists and describes the iWay components that are included with the iWay Master Data Suite.

Component	For More Information
iWay Master Data Server	See <a href="#">iWay Master Data Server</a> on page 52.
iWay Hierarchy Manager	See <a href="#">iWay Hierarchy Manager</a> on page 55.
360 Viewer	See <a href="#">360 Viewer</a> on page 57.

## iWay Master Data Server

iWay Master Data Server (MDS) is an IT infrastructure component for supporting Master Data Management (MDM) strategies at an enterprise level. The primary purpose for MDM in any organization is to create a single view of the business in order to drive overall business performance. It should be noted that iWay Data Quality Server (DQS) is part of iWay MDS.

Designed to plug in smoothly into an existing IT infrastructure, iWay MDS supports real-time SOA architectures as well as batch mode operations, or a combination of both.

iWay MDS is built upon component architecture designed to integrate with various systems and data sources within existing IT infrastructure. The main system components are:

- ❑ **MDS Storage.** Data management for consolidated records as well as original records to be processed. Uses predefined and customizable vertical data models for key master-data entities, such as customers, contacts, products, and more.
- ❑ **MDS Master Data Services.** A set of services used for data processing and master data management as maintained by the system. This set comprises more than 100 elementary and component methods fully configurable from the administration application.
- ❑ **MDS DQ Services.** A subset of services used in master data processing and data quality measures. For example, these services can be used for customer-address verification of records entered into external self-service applications.
- ❑ **MDS Adapters.** Data and application interfaces to application data structures and methods. These are data record APIs, native Java API, JDBC API, and other industry standard interfaces. iWay MDS leverages the iWay Software suite of adapters.
- ❑ **MDS Master Manager.** An end-user interface for visualization and job management for master data management business users and data stewards.

- ❑ **MDS Metadata Interface.** An interface that allows export of iWay MDS metadata to other systems and metadata repositories.
- ❑ **MDS Server.** A Java server platform for on-demand processing that integrates with IT infrastructure logging and monitoring services. Integration with iWay Service Manager, WebSphere®, WebLogic®, and SAP NetWeaver®.
- ❑ **MDS Repository.** An internal repository optimized for the fast data access used in on-demand application mode.

### Key Features and Advantages

Key features and advantages that are provided through iWay Master Data Server (MDS) include:

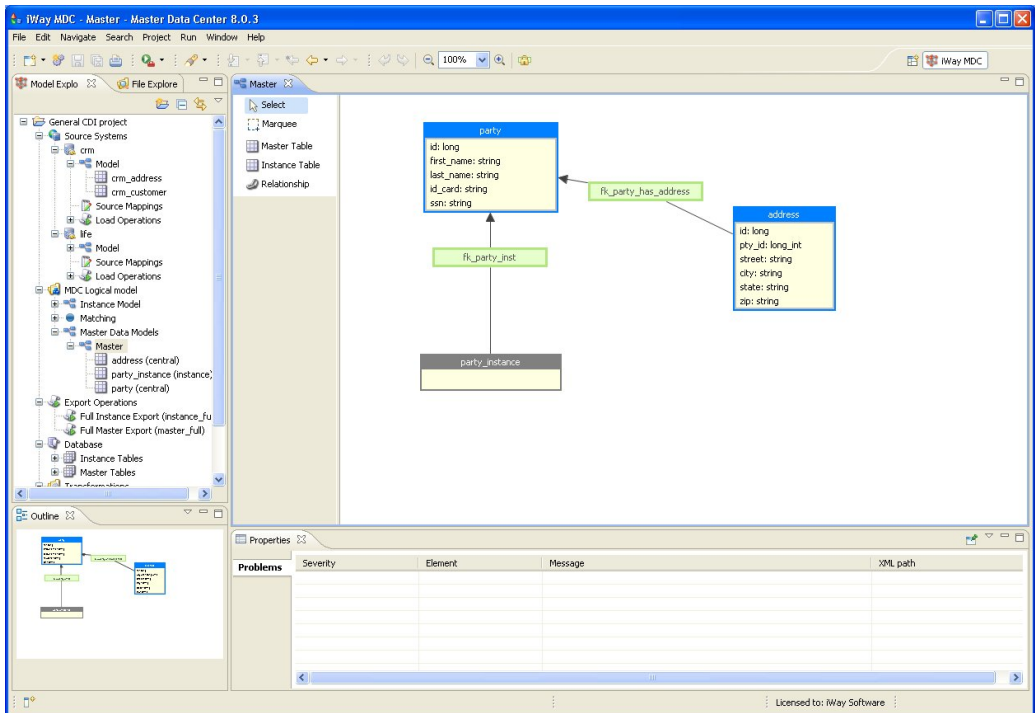
- ❑ Ease of use through a unified Eclipse-based toolset (iWay Integration Tools). This provides a consistent user experience across the iWay 7 suites from the perspective of user interfaces, technologies, and methods.
- ❑ A drag-and-drop workspace area to easily add preconfigured master data components (steps) to build simple or complex workflows.
- ❑ Provides a basis for customer-facing process and CRM segmentation, cross-selling, up-selling, and efficient utilization of call centers.
- ❑ Reduces the expense of marketing campaigns through accurate client address and household information.
- ❑ Enables advanced analysis and segmentation of customers, product classification, marketing and sale opportunities, current client value, and more.
- ❑ Facilitates the creation of customer data used in data-mining models such as market predictions, fraud detection, client risk, future client value, and more.
- ❑ Helps financial institutions implement one of the prerequisites of Basel Capital Accord II, especially for credit and behavioral scoring.
- ❑ Assists healthcare organizations in implementing an enterprise master patient index (EMPI) leveraging connectivity to legacy systems and databases.
- ❑ Pre-built business models, optimized for customer, contact, and product, are provided. Models may be imported, modified, or created from scratch to suit business needs.

Business processes can directly leverage a variety of pre-defined and pre-configured master data management services, from simple customer management to customer profile searches and unification with additional business entities. Vertical solutions for healthcare, financial services, insurance, and government are also available.

The iWay Master Data Server (MDS) is a specialized cutting-edge technology that delivers the high-quality master data essential to every organization. A plug-and-play solution designed to integrate seamlessly with existing systems, iWay MDS simplifies project complexity and reduces the time from initial development to delivery, so companies can more rapidly implement, and benefit from, their master data management strategy.

iWay MDS is designed for easy integration with most enterprise service bus (ESB) middleware through web services, messaging queues, or specific plug-in modules. In addition to these real-time interfaces, iWay MDS can schedule and execute batch operations on its own for performing tasks that involve large amounts of data (for example, initial loads), or accessing systems that do not allow online change processing.

The following image shows a sample model project opened in the workspace area of iWay MDS. You can design and configure model projects and plans (workflows), which can range from simple to complex. Model projects consists of connected systems, the MDS logical model, the database, transformations, batch interfaces, and files.



The following are business drivers that support MDM initiatives and where iWay MDS can serve a leading role:

- ❑ Improved regulatory compliance ability or reduced regulatory risk.
- ❑ Increased marketing effectiveness (up-sell and cross-sell) through integrated customer information.
- ❑ Increased customer satisfaction and service.
- ❑ Improved real-time business-decision making capabilities through better information quality.
- ❑ Reduced costs associated with data quality.

### **For More Information**

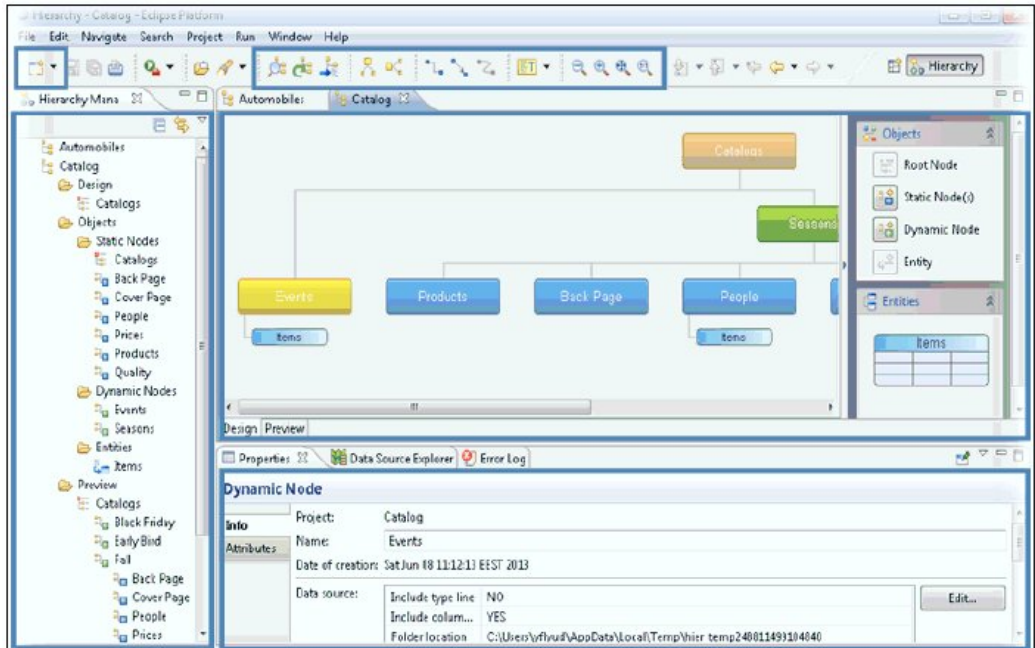
See the following manual at <http://documentation.informationbuilders.com>:

- ❑ *iWay Master Data Server Getting Started Guide*

### **iWay Hierarchy Manager**

iWay Hierarchy Manager is a plug-in for Eclipse that is used to create and maintain hierarchies within a hierarchy management system. Specifically, this plug-in provides design-time interfaces for Eclipse development environments.

The following image shows a sample hierarchy opened in the workspace area of iWay Hierarchy Manager and the general layout of this plug-in.



### Key Features and Advantages

Key features and advantages that are provided through iWay Hierarchy Manager include:

- ❑ Ease of use through a unified Eclipse-based toolset (iWay Integration Tools). This provides a consistent user experience across the iWay 7 suites from the perspective of user interfaces, technologies, and methods.
- ❑ A drag-and-drop workspace area to easily add preconfigured components to build and develop product hierarchies and categories, organizational structures, and more.
- ❑ Provides the following wizards to easily create and edit the primary project components:
  - ❑ **Tree Navigator.** Visualizes the current hierarchy structured by different functional specialties of its nodes.
  - ❑ **Graph Viewer.** Designs and previews hierarchies.

Caching of dynamic data (data retrieved from external data sources) is supported. It is one of several internal mechanisms that are used to speed up the development time of the hierarchy.



The iWay Hierarchy Manager plug-in is delivered as a .zip archive that includes all of the resources required to install the plug-in on any Eclipse-based environment.

## For More Information

See the following manual at <http://documentation.informationbuilders.com>:

- ❑ *iWay Hierarchy Manager User's Guide*
- ❑ *iWay Hierarchy Manager Template Usage and Maintenance Guide*

## 360 Viewer

The 360 Viewer is a business users tool that provides a browser-based comprehensive view of the golden records that are mastered across defined domains (for example, Patient, Provider, Employee, and Facility).

### Key Features and Advantages

Key features and advantages that are provided through the 360 Viewer include:

- ❑ Viewing a list of golden records across domains.
- ❑ Conducting domain simple searches among golden and instance records.
- ❑ Conducting domain advanced searches among golden and instance records.
- ❑ Viewing details of golden records across domains.
- ❑ Viewing and comparing golden records and supporting instance records.
- ❑ Viewing subdomain records related to the golden record.
- ❑ Comparing instance records with the source record.
- ❑ Viewing the history of a golden record.
- ❑ Comparing current golden records with earlier versions.

Additionally, data stewards, data supervisors, and system administrators can unlink and delete instance records that are associated with a particular golden record group. To preserve data security, all users must be authenticated and authorized with roles and privileges before accessing the 360 Viewer.

After logging on to the 360 Viewer, you are automatically redirected to the Home page (Domain main page), as shown in the following image.

Id	First Name	Middle Name	Last Name	Postal Code		
PatientMaster:111	Jacoby	G	Rollins		Details 360	Master Comparison
PatientMaster:115	Ernesto	J	Odom		Details 360	Master Comparison
PatientMaster:117	Zaiden	I	Duke		Details 360	Master Comparison
PatientMaster:119	Joe	K	Andersen		Details 360	Master Comparison
PatientMaster:121	Melany	L	Downs		Details 360	Master Comparison
PatientMaster:123	Aileen	M	Hatfield		Details 360	Master Comparison
PatientMaster:125	Kristopher	N	Benitez		Details 360	Master Comparison
PatientMaster:127	Jonas	O	Archer		Details 360	Master Comparison
PatientMaster:129	Gary	P	Huerta		Details 360	Master Comparison
PatientMaster:131	Lillie	R	Mcneil		Details 360	Master Comparison

Here you can view a list of records for the current domain in the system. The list of domains and default current domain are metadata driven and can be configured using the Admin Console.

You can also quickly preview a record as required. The Preview panel is displayed when you click anywhere on a record row, as shown in the following image.

The screenshot displays the 360Viewer OMNIPATIENT Patient Masters interface. At the top, there is a search bar with 'Patient Masters' and an 'Advanced Search' button. Below the search bar, a 'Patient Masters 43' button indicates the total number of records. The main area shows a table of records with columns: UEMID, First Name, Middle Na..., Last Name, Date Of Bi..., Address, and City. The first record is highlighted with a red border, indicating it is the selected record. The preview panel for this record is expanded, showing the following details:

UEMID	First Name	Middle Na...	Last Name	Date Of Bi...	Address	City
10	Bridget	B	Mooney			
Gender		F - Female	Race Code			
Marial Status		S	Race Code Description			
		Single	Ethnic Group Code			
			Ethnic Group Code Description			
Language Code			Religion Code			
Language Code Description			Religion Code Description			
Citizenship Code			Handicap Code			
Citizenship Code Description			Handicap Code Description			
12	Giovani	C	Ewing			
14	Malcolm	D	Ritter			

At the bottom of the interface, there is a pagination bar showing '1-20 of 43 records. Number of records per page 20'.

The row is highlighted when pausing your mouse pointer to indicate that the specific row can be clicked.



## Additional Information

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**In this chapter:**

- ❑ [iWay 7 Technical Library](#)
- ❑ [Focal Point Community](#)
- ❑ [Provide Feedback or Make a Customer Connection!](#)
- ❑ [Customer Support](#)
- ❑ [Customer Education and Training, Professional Services](#)

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### **iWay 7 Technical Library**

To access our complete library of iWay 7 technical manuals, visit the iWay 7 Technical Library at <http://ecl.informationbuilders.com/iway/index.jsp>. To request print copies of any of these manuals, contact [Frances\\_Gambino@ibi.com](mailto:Frances_Gambino@ibi.com).

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## Customer Connections

*Where users partner with Information Builders to provide feedback and create quality documentation.*

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