TIBCO® Reward

Integration Guide

Version 22.3.0
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Contents

Data Integration Concepts

This chapter introduces key concepts about integrating with TIBCO® Reward and discusses the various files needed for information exchange.

Topics

- Software as a Service (SaaS)

- Implementation and Data Integration

- Secure Data Transfer

- Other Data Security Measures

Software as a Service (SaaS)

The TIBCO Reward solution helps your company build stronger customer relationships: You retain customers, increase repeat business, and gain strategic insight about your customers and your market.

Designed from the ground up as a Software-as-a-Service (SaaS) solution, TIBCO Reward does not license its software for installation on corporate servers. Instead our clients rent the complete solution, including all normally required hardware, storage, application hosting, upgrades, quality assurance, site hosting, and integration. Because TIBCO Reward provides software as a service, rather than a packaged enterprise software application, we eliminate the need to purchase, deploy, and maintain additional hardware and software. This approach dramatically reduces complexity and costs.

TIBCO Reward's SaaS provides your company with a hosted application. This software delivery method provides remote access to software and its functions as a web-based service. Your company enjoys the use and benefits of the TIBCO Reward solution without the outright purchase of a licensed software application.

Because TIBCO Reward performs the data processing and maintains the database, you do not need extensive knowledge of the software to establish your own TIBCO Reward Customer Relationship Manager Suite (CRMS) and your own customer microsite (the loyalty site that your company's shoppers will use). You provide the data. We provide the software and the service. This leaves you free to apply strategy and creativity.

Implementation and Data Integration

Your company, as a TIBCO Reward Client, uses our code base, infrastructure, and expert services to set up and maintain a customer loyalty system. TIBCO Reward imports data that you already have available. We store your data in our normalized and highly scalable databases, and then enable you to use your data in new ways, using our suite of on-demand applications, which you access via a standard web browser. This greatly reduces the impact of our technology on your existing IT department.

TIBCO Reward manages the data integration process, and our experts work with your technical staff to define any necessary data file format transformations. Data is transferred via batch files and real-time API processes. Once the integration set-up work is completed, your technical staff is responsible only for routine batch file data transfers (for example, automatically generating and forwarding report files).

When the basic file transfer mechanisms are in place, your data is normalized, matched, transformed, and processed to help you with marketing segmentation, targeting, reporting, and analysis. As you get familiarized with the TIBCO Reward system, you can choose to use more features and applications as your organization's marketing needs mature.

At the same time, our consultants and creative staff help you design your customer loyalty site, the "customer portal." This is an account management microsite, which provides optional support for offers, clubs, and collection of customer preferences.

All data in the system is regularly updated, and includes data volunteered by site visitors and the information tracked by the system across all channels. Profiles are updated daily and applied across the platform to revise offers, communications, messages, notifications, and results. The solution provides a wide set of flexible reports and analyses that enable you to evaluate performance, learn from the results, and modify activities accordingly.

TIBCO Reward as an Integration Hub

The TIBCO Reward integration hub is made up of a collection of application interfaces that allows for seamless data flow between TIBCO Reward and customer point of contact and analytical systems such as POS, eCommerce, Email, Reward and CRM systems. The simplicity of our integration reduces the high cost and time requirements of a custom-built solution.

TIBCO Reward integration hub
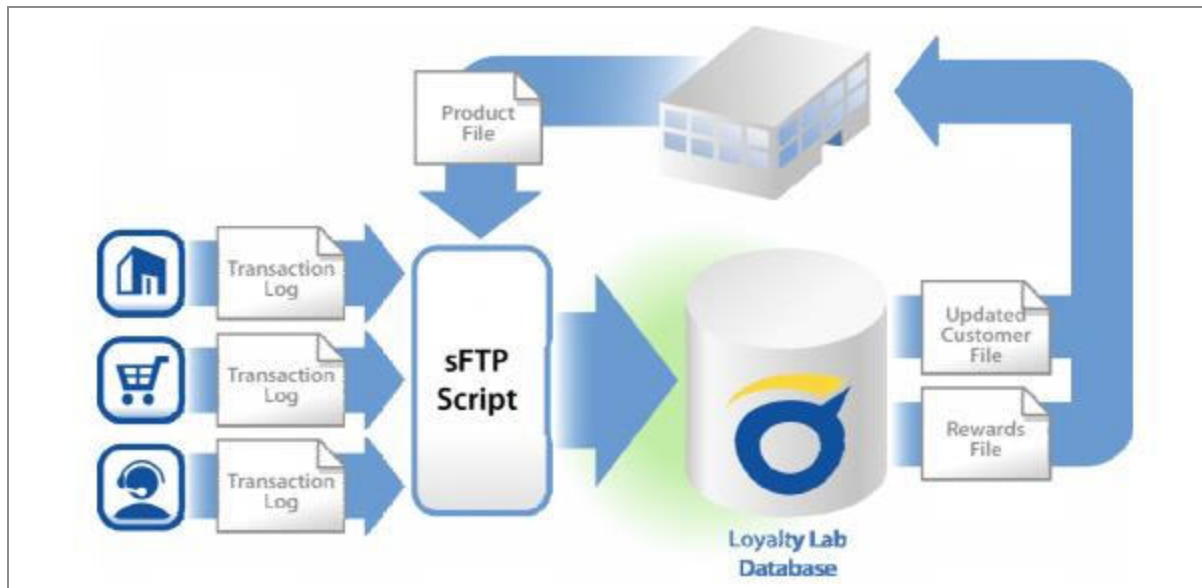
Data Files Sent To and From TIBCO Reward

TIBCO Reward accepts data from clients in XML, flat delimited ASCII files, or flat fixed-format ASCII files. While any of these formats can be accepted and processed, certain data is required, such as the key data that identifies each shopper. If flat ASCII files are sent, they must not have extraneous line feeds. XML files are much less prone to error and require less maintenance over the medium and long term.

TIBCO Reward also delivers data files to clients. There are two options for delivery: XML or a flat delimited ASCII file. The client downloads these files from their FromInStorecard directory on TIBCO Reward's secured server on a daily or weekly basis. After downloading these files, the client must delete them.

Secure Data Transfer

Successfully transferring data files to TIBCO Reward is the most important recurring job described in this document. Sharing data makes the TIBCO Reward solution work. If the data files that you are required to provide to TIBCO Reward are complete and properly formatted, and if you transfer these files in a timely manner, then the rest of the process flows smoothly.

Due to the confidential nature of the data transmitted, TIBCO Reward's company policy forbids sending or receiving files containing real data over insecure channels such as email. In the first stage of integration, sample data files, which contain only fictional data, may be sent via email for testing purposes. However, the initial sample testing sessions quickly come to an end, and then a secure channel is required.

Secure File Transfer Options

All files are securely transferred between TIBCO Reward and the client using a secure file transfer protocol. At present, the most commonly used file transfer protocol is Secure FTP (SFTP). For clients using the AS/400, FTPS is used. Command line clients can also work quite well, and offer some advantages to clients who want to support this technology.

TIBCO Reward provides you with a username and password for accessing our secure file server through a secure client account.

For more information about file transfer protocols and secure FTP, refer to the following:

- http://southrivertech.com/products/

- https://en.wikipedia.org/wiki/Secure_Shell

- http://en.wikipedia.org/wiki/File_transfer_protocol#FTP_over_SSH

Other Data Security Measures

Both TIBCO Reward and its Clients must adhere to industry standard Information Security policies. TIBCO Reward complies with Payment Card Industry (PCI) data security standards and is certified as compliant with Visa Cardholder Information Security Principles (CISP). Among other stringent data security requirements, these guidelines require passwords to be transmitted verbally or via secure, encrypted email with precautions taken to eliminate copies of the email being saved.

Passwords must not be transmitted in writing or non-secure email.

TIBCO Reward takes extreme measures in providing a highly secure environment for merchant transaction data and applications. Our data-transmission security capabilities meet PCI and CISP requirement standards.

Encryption

All communication with the TIBCO Reward interfaces must be over, at minimum, 128-bit SSL connection. The certificates used by the client must be current and signed by an

accepted certificate provider. Connections that do not meet these standards will not be accepted.

Authentication

The authentication of connections is done using HTTP-Auth. Username/password must be sent with every request. Any unauthenticated connections will be rejected.

TIBCO Reward CRMS Overview

This chapter gives an overview of TIBCO Reward's Customer Relationship Management Suite (CRMS).

Topics

- Integration Hub

- Features and Benefits

- Multi-Channel Marketing

- Implementation and Data Integration Summary

- Secure Data Transfer

- Other Data Security Measures

Integration Hub

The TIBCO Reward solution serves as an "integration hub" that brings together your existing data resources (POS, eCommerce, CRM) and data marts. This integration allows you to exploit the hidden capabilities of these systems when they are used in concert. The TIBCO Reward platform unifies fragmented information without disrupting existing business processes. Not only does this platform support the IT investments that your company has already made, the integration teams up these existing resources to create new capabilities and opportunities.

Because TIBCO Reward performs the data processing and maintains the database, you do not need extensive knowledge of the software to establish your own TIBCO Reward CRMS and your own customer microsite (the loyalty site that your company's customers will use). You provide the data. We provide the software and the service. This leaves you free to apply strategy and creativity.

Features and Benefits

Clients use TIBCO Reward to build and strengthen customer relationships in several distinct ways, including:

- loyalty programs

- targeted customer email

- campaign management

- relationship marketing

Each of these avenues is defined below.

Loyalty Program:

- Rewards customers with points and other retention-oriented incentives.

- Manages accruals, redemptions, reward catalogs, customer tiers, rules-based promotional offers, and includes support email and a customer service application.

- Includes campaign and support email messaging.

Email:

- A full email service provider platform for developing and delivering targeted, relevant messages to whomever you want, whenever you want.

- Leverages the available customer database for improved targeting and personalization.

- Includes deliverability reporting, personalization, WYSIWYG editor, event-based messaging, optimized delivery by ISP, and more.

Campaign Management:

- Generates and helps manage highly targeted and automated campaigns based on your transaction, demographic, and preference data.

- A dynamic customer profiling system triggers messages as customers change their behavior.

Relationship Marketing:

- Applies dynamic targeting to promotions and incentives to ensure relevance and avoid fraud.

- Includes a collection of smaller applications including site personalization, clubs, refer a friend, hosted account management, questionnaires, and real-time cart integration.

Multi-Channel Marketing

The following figure illustrates how TIBCO Reward supplies a closed-loop, relationship marketing platform that both collects customer ("shopper") data and helps you use it to build and strengthen your market across multiple channels. In addition to the kinds of programs described earlier in this document, you get complete reporting and data analysis features that provide strategic insight and market intelligence.

TIBCO Reward's relationship marketing platform
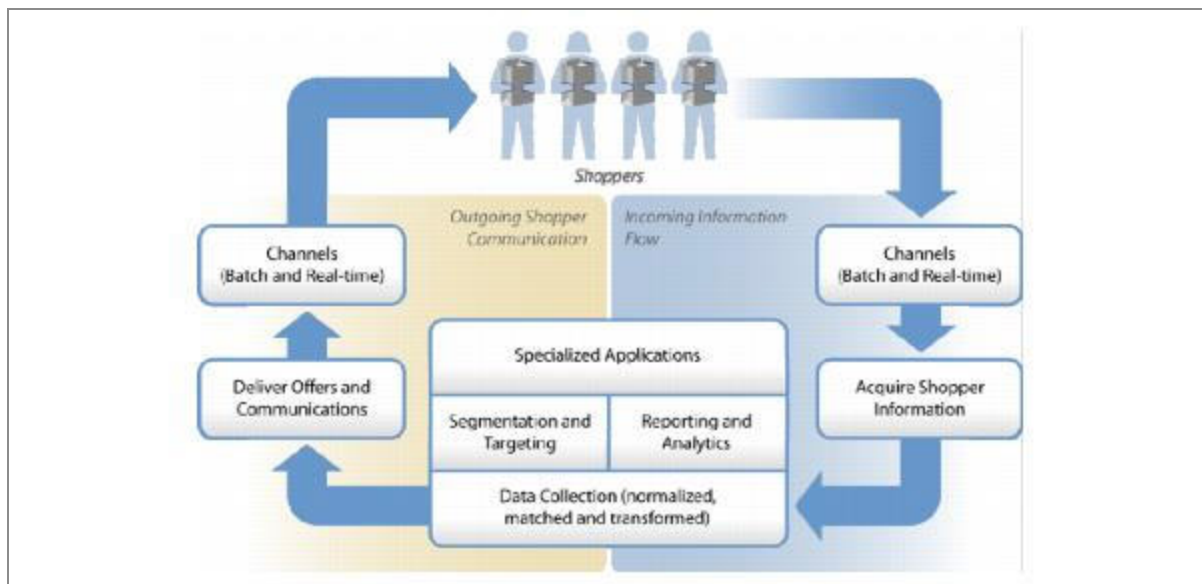
Implementation and Data Integration Summary

As a TIBCO Reward client, your company uses our code base, infrastructure, and expert services to set up and maintain a customer loyalty system. TIBCO Reward imports data that you already have available. We store your data in our normalized and highly scalable databases, then enable you to use your data in new ways, using our suite of on-demand

applications, which you access via a standard web browser. This greatly reduces the impact of our technology on your existing IT department.

TIBCO Reward manages the data integration process, and our experts work with your technical staff to define any necessary data file format transformations. Data is transferred via batch files and real-time API processes. Once the integration set-up work is completed, your technical staff is responsible only for routine file data transfers (for example, automatically generating and forwarding report files).

When the basic file transfer mechanisms are in place, your data is normalized, matched, transformed, and processed to help you with marketing segmentation, targeting, reporting, and analysis. As you "get onboard" the TIBCO Reward system, you can choose to use more features and applications as your organization's marketing needs mature.

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TIBCO Reward's integration hub
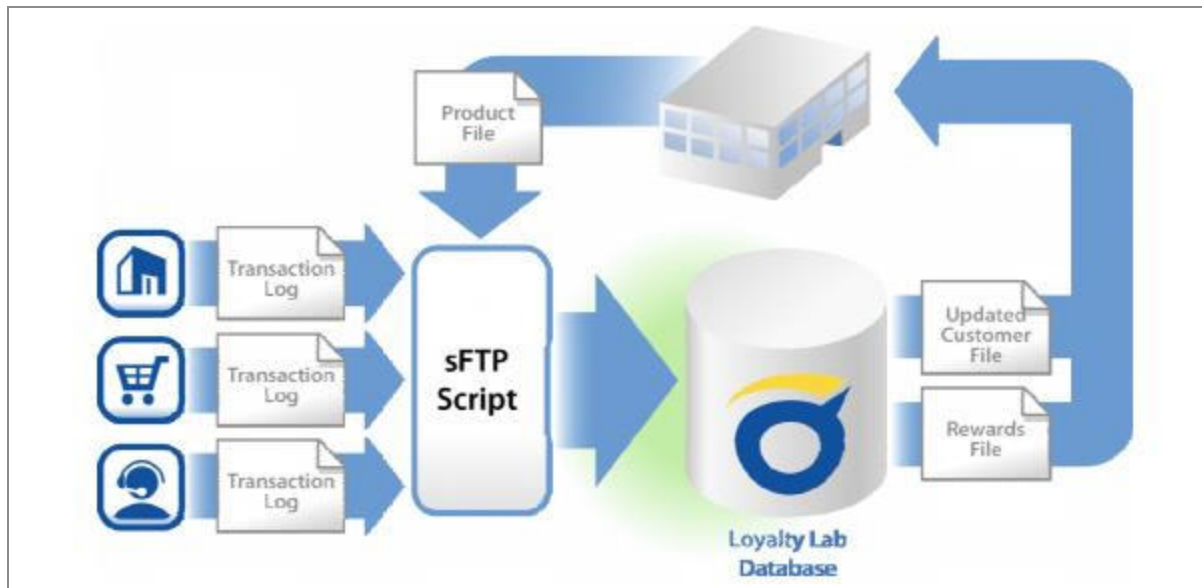
Data Files Sent To and From TIBCO Reward

TIBCO Reward accepts data from clients in XML, flat delimited files, and flat fixed-format files. The XML format offers clients the most flexibility and control. It allows the use and addition of custom attributes without additional custom development work. Flat files will require additional time and development in order to customize the data feed as a loyalty program becomes more sophisticated. Flat files are also more prone to error in comparison with XML files, which explicitly call out the data.

The information in files delivered to TIBCO Reward includes transactions, customers, products, and stores. TIBCO Reward loads your historical data while we are setting up your loyalty program. Thereafter, we support a daily load of new and changed customer information.

TIBCO Reward also delivers data files to clients via Secure File Transfer Protocol (SFTP). There are two format options for delivery: XML or a flat delimited file. The client will download these files from their FromInStorecard directory on TIBCO Reward's secured server on a daily or weekly basis. After downloading these files, the client must delete them.

Secure Data Transfer

Successfully transferring data files to TIBCO Reward is one of the most important recurring jobs. Sharing data makes the TIBCO Reward solution work. If the data files that you are required to provide to TIBCO Reward are complete and properly formatted, and if you transfer these files in a timely manner, then the rest of the process flows smoothly.

Due to the confidential nature of the data transmitted, TIBCO Reward's company policy forbids sending or receiving files containing real data over insecure channels such as email. In the first stage of integration, sample data files, which contain only fictional data, may be sent via email for testing purposes. However, the initial sample testing sessions quickly come to an end, and then a secure channel is required.

The details of setting up for secure file transfers are presented in Setting Up FTP File Directories. The information below provides high-level summary of secure file transfers with respect to the TIBCO Reward solution.

During the initial integration process for most clients, much effort is focused on file transfers. However, for nearly instantaneous processing of customer data as part of normal operations, TIBCO Reward also performs real-time exchanges of customer data and customer award balance data. Typically, the real-time APIs provide data used for POS, online shopping carts, and/or payment terminals or gateways. For data security, real-time data is sent over Hypertext Transfer Protocol Secure (HTTPS). Real-time processing is summarized in Real-time SOAP-based APIs.

Customers who implemented TIBCO Reward's earlier generation of REST-based APIs will find information on these older APIs only in earlier versions of this User Integration document. All files are securely transferred between TIBCO Reward and the client using Secure File Transfer Protocol (SFTP). FTP over SSL (FTPS) is also available for clients using AS/400 systems. The client is expected to provide its own software (or command line utility) for SFTP data transfer. For details, refer to Setting Up FTP File Directories.

TIBCO Reward will provide you with a username and password for accessing our secure file server through a secure client account.

For more information about file transfer protocols and secure FTP, refer to the following:

- http://www.webdrive.com/products/webdrive/index.html

- https://en.wikipedia.org/wiki/Secure_Shell

- http://en.wikipedia.org/wiki/File_transfer_protocol#FTP_over_SSH

Other Data Security Measures

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Authentication

The authentication of connections is done using HTTP-Auth. Username/password must be sent with every request. Any unauthenticated connections will be rejected.

The Data Integration Process

This chapter explains the data integration process.

Topics

- The Data Integration Challenge
- The TIBCO Reward Technical Integration Process
- Project Task Descriptions

The Data Integration Challenge

TIBCO Reward works with many client companies engaged in different types of business. Each client may produce data in a different format. The formatting parameters of the different files sent to TIBCO Reward often vary greatly from one client to another.

In some cases, a client has already standardized its data format on a common industry standard that is already in multiplatform format, such as ARTS/IXRetail. Transforming data files in these formats requires a smaller effort.

Examples

Consider the transaction logs sent by four current TIBCO Reward clients:

- Client 1 supplies weekly product and daily transaction files in fixed length files from Ecometry, a Cobol-based system that groups headers, line items, and shoppers separately.
- Client 2 supplies daily transaction files from an Innotrac system, with complex order date/ship date logic Altura-format weekly product files.
- Client 3 supplies transactions directly from its payment processor, with non-standard customer identifiers and Rewards fulfilled directly onto a debit card through the payment processor.
- Client 4 routes/parses data via a dedicated server (appliance) behind the firewall (not recommended as part of initial integration).

TIBCO Reward addresses the challenges of integration with a well-defined, highly evolved process, of which this integration document is a component.

The TIBCO Reward Technical Integration Process

As part of the kickoff of the integration process, TIBCO Reward Professional Services Group (PSG) devotes a day to review integration requirements and develop the project plan. Using our Onboarding Checklist, Pre-built Project Plan along with the technical documentation, we review the process in collaboration with clients. Required participants from your company might include the Program Manager, Marketing, the IT Manager, IT Developers, and Finance (to discuss shopper crediting processes), as needed.

Prerequisites to Data Integration

Once the integration process has started, participants typically want to make rapid progress, without stopping or slowing to collect fundamental data and resources. TIBCO Reward has therefore identified the following information gathering and planning milestones, which should be completed before the technical data integration effort begins:

- Client receives and completes the Onboarding Questionnaire, or completes it to a reasonable degree. TIBCO Reward's PSG representative for the individual client determines when there is sufficient information to proceed.

- Client receives documentation, data-mapping guidelines, templates, and sample files to define the mapping between TIBCO Reward's native representation of transaction data and the client's native data format.

- Client receives standard site flow diagrams and Client Review Documents (CRDs) from TIBCO Reward for reference. (Working with these standard design starting points, the client can customize the design of its own site.) Getting these standards sets the process in motion. Completion of the final site flow design is not required at this point.

- Client receives a project plan and tentative timeline from TIBCO Reward. These planning tools allow TIBCO Reward and its clients to work efficiently together towards their shared implementation goals. TIBCO Reward applies standard project

management tools and its own practical experience to guarantee progress.

> **ℹ Note:** The integration progress can begin only after all four of these prerequisites are met.

The Data Integration Project Plan and Project Tasks

TIBCO Reward typically manages the data integration process with a project plan similar to the one represented below. This summary plan information includes both the tasks performed by TIBCO Reward and the tasks that you perform as a client. Note that more detailed task information is provided further below.

Data Integration Project Requirements and Project Plan Summary

Task	Owner
Send Technical Integration Documents and Sample Data	Data Integration
Technical Integration kickoff	Data Integration
Client sends sample data in accepted format	Client
Create client data mapping and requirements documents	Data Integration
Set up a secure FTP connection.	Client
Review sample data and give feedback	Data Integration
Client revises and sends sample data (round 1)	Client
Review revised sample data and give feedback	Data Integration
Client revises and sends sample data (round 2)	Client
TIBCO Reward signoff on final client data formats	Data Integration
Send Final Data Mapping documents to client	Data Integration
Client signs off on Data Mapping document	Client

> ℹ **Note:** The project description details listed above are only samples. Actual project plans are customized for each client, according to specific needs and circumstances. For details about our approach, refer to the documentation for Microsoft Project® and the .mpp format.

Project Task Descriptions

The data integration tasks for which you, as a client, are primarily responsible are listed and explained below. These tasks correspond loosely to the Data Integration tasks in the Project Plan listed above. Some of the tasks listed in the following table are subordinate to the tasks in the standard project plan and include more details.

Data Integration Task Descriptions

Task	Actions	
	TIBCO Reward	**Client**
Allocate a technical point of contact in the client organization to receive technical integration information.	Provide the client with the contact information for TIBCO Reward's Technical Integration Lead and a back- up contact.	Provide TIBCO Reward the name, email address, phone number, and time of availability of the technical point of contact who will receive technical integration documents and sample data.
Confirm that technical contact has access to the TIBCO Reward "Client Extranet."	Provide links and passwords to client technical contact, as necessary.	Confirm access. Resolve any access problems, as necessary.
Send Data Mapping document templates and file samples.	TIBCO Reward Account Management representative sends data mapping documents and sample files (and related links) for the baseline data integration. The set of	Client receives all appropriate data mapping templates, sample files, and related documentation (including this Integration Guide). Client initiates data file mapping project.

Task	Actions	
	TIBCO Reward	**Client**
	documents sent to the client corresponds to the client's needs, as documented by their responses to the Onboarding Questionnaire.	
Set up a secure FTP connection.	• Configure secure file transfer protocol to allow access to ToInStorecard and FromInStorecard directories for the client. • Deliver SFTP or FTPS username and password to client in a secure manner: by secure email, phone, personal meeting.	• Download secure client software, as necessary. • Complete SFTP or FTPS setup and log in. • Attempt to upload a file to ToInStorecard directory. Attempt to download a file from FromInStorecard directory. • Communicate attempts and results to TIBCO Reward.
Client provides completed data mapping documents and sample files for transaction, product and retail stores data.	Verify that completed data mapping documents and sample files have arrived, are readable. Help the client make corrections.	• Transfer completed data mapping documents and sample files to TIBCO Reward over secure transfer (or email, if secure path is not yet set up). • Provide a point of contact to answer questions and make corrections relating to the file formats.

Task	Actions	
	TIBCO Reward	**Client**
Note: • This step is repeated as necessary (round 1, round 2, etc.). • TIBCO Reward's native file format is XML, but flat files are accepted. • Sample files must not contain valid credit card numbers.		
TIBCO Reward provides client with sample reward and sample customer files.	Test file transfer process. Provide files for export to client.	Test file transfer process. Test ability to consume export data. Provide technical assistance.
TIBCO Reward provides client with sample reward and sample customer files.	Test file transfer process. Provide files for export to client.	Test file transfer process. Test ability to consume export data. Provide technical assistance.
TIBCO Reward reviews files, ensures that transaction, product and retail store file formats have required fields.	Check the documentation and sample files to ensure that all of TIBCO Reward's required fields exist and that the file format is understood.	• Provide technical assistance. • Ensure that TIBCO Reward file format and transfer requirements are understood by technical associates at client. (For

Task	Actions	
	TIBCO Reward	**Client**
Note: • Transaction data should include customer (shopper) data. • This step is repeated as necessary (round 1, round 2, etc.).		example: "If the file format ever changes, the changes must be communicated to TIBCO Reward."
Client signs off on final data mapping document.	TIBCO Reward's QA department develops a test plan based on the approved data mapping document.	Client approves (via email) a final data mapping document that identifies the final formats to be used in production.
TIBCO Reward creates a process to import the client's transaction, product and retail store data into the client's account.	Create import process for client-specific file formats if the data is not in TIBCO Reward native format.	Provide technical assistance. Set up plan to notify TIBCO Reward and implement changes if a local (client-specific) file format changes.
In some cases, set up for transfer of historical transaction data file. More rarely, set up for transfer of email address update file.	Provide technical assistance.	Provide technical assistance.
Client creates a process to export transaction, product and retail store data to the	Provide technical assistance.	• Ensure successful secure transfer capability. • Automate

Task	Actions	
	TIBCO Reward	**Client**
ToInStorecard directory.		uploading/downloading to/from SFTP directories. • Automate export of three files: transaction, product, and retail store data.
Client creates a process to accept/consume the customer file and rewards file from the FromInStorecard directory.	Provide technical assistance.	Provide technical assistance.
TIBCO Reward tests and validates import process.	Test import process and validate data.	Provide technical assistance.
Test regular end-to-end import process. This requires a period of live file transmissions from the client to ensure that systems on all sides are working correctly.	Turn on automated import process.	Turn on automated file delivery process. Provide technical assistance during test period.
Establish file monitoring process (to ensure timely file processing and catch errors).	Data Integration Team monitors the status of all incoming and outbound files.	Establish an email contact (ideally an alias for several people in the client organization) for any data integration/monitoring issues.
Turn on production import process.	Turn on production processes.	Turn on production processes.

Data Exchange Overview

This chapter introduces the types of data that TIBCO Reward exchanges with its clients, and briefly describes the available methods – Batch file transfer, Real-time API, and On Demand transfer – for performing these data exchanges.

Topics

- Relationship between Data Content and Data Exchange Methods

- Data Content Types

- Data Exchange Methods

Relationship Between Data Content and Data Exchange Methods

The following table shows the methods(s) of data exchange that may be used for transferring each different type of data. As indicated in this table, there is not a one-to-one relationship between the method of transferring and the content-type of the data. To convey some types of data, two or more different methods may be used. For example, customer data may be updated by a Transaction file as a batch process or by a real-time API.

Data Exchange Methods used for Data Content Types

Content		Batch Transfer	On Demand Transfer	Real-Time API *
	Transaction	Transaction file (ISCLog.xsd)		Example*:• GetTransactions (by Shopper)
	Customer	Transaction file (ISCLog.xsd)		Examples*: • CreateShopper

	External Registration File For export only: Customer Registration File (Shopper.txt)		• GetRegisteredCard • GetShopperOffers • GetShopperPointBalance • RedeemReward
Product Catalog	Product File (ISCProduct.xsd)		
Location	Store File		
Reward	Reward File (RewardsSample.txt)		Example*: • RedeemReward
List	List.txt	Import List (CRMS) Export List (CRMS)	
Profile		Export Profile (CRMS)	
Reward Catalog		Reward Catalog Import (CRMS)	
Points		Point Expiration Forecast Report Export (CRMS)	Example*: • GetShopperPointBalance
Generic	ISCEventInstance.xs		Example*:

Events	d		• CreateEventInstance
Custom Questions	CustomQuestions.csv	Custom Question Import (CRMS)	

> **ℹ️ Note:** For specific information about obtaining and updating data in real time, and API methods involved, see the TIBCO Reward API Reference Guide.

Each of the types of data mentioned in the table above is explained in the following section. Later in this document, you will find specific information and instructions for performing data exchange processes.

The TIBCO Reward Account Management team will also assist you with instructions, guidelines, and data mapping templates, and other tools to help you with your specific needs.

Data Content Types

TIBCO Reward and its clients exchange data of the following types:

- Transaction
- Customer
- Product catalog
- Location
- Reward
- List
- Profile
- Generic Event
- Custom Question

Each of these types of data is described in brief below. For more complete information about the processes and formats used to transfer these types of data, refer to Batch File Integration, On Demand File Exchange, and Post-integration Maintenance and Monitoring.

Transaction

In the context of TIBCO Reward's technology, transaction data includes data concerning purchases or returns of products or services, and also customer data. The Transaction File is the data feed that clients most commonly provide to TIBCO Reward.

Transaction data allows TIBCO Reward to award points and give other rewards based on offers. In addition, it builds the ability to target customers based on their purchase behavior. Also, clients can view the performance of customers.

Typical TIBCO Reward implementations involve the loading of a historical transaction file that provides two years worth of data and a daily transaction file. The daily files transmitted to TIBCO Reward include new transaction information. During our requirements phase we will work with you to determine the historical and daily volume of data transfers.

Customer

Sometimes called Shopper data or Loyalty Member data, this data refers to our client's customers.

Clients give TIBCO Reward customer information together with transactions to be able to track behavior, report, target, and communicate to customers. After the initial loading of the customer data, customer updates (deltas only) can be provided to TIBCO Reward on a daily, weekly, or monthly basis, using the Transaction File format.

TIBCO Reward gives back new registration and updated customers so that clients can maintain their own records.

Product Catalog

The product catalog includes information for each individual product SKU or service supported by a client.

Use this file if you want to:

- Present SKU-specific and category-specific offers.

- Target on past purchases of specific SKUs or categories.

- Collect category preferences from Customers and target on them.

This file should always be the master file. All Product data will be overwritten on each file load.

Location

Includes store or sales channel information for each store.

This allows clients to target on store information, including store locations. For example, the zip code of stores can be compared to the zip code for loyalty program members to determine their proximity to a store for targeting.

Similar to the Product Catalog data load, this file should always be the master file. All store information will be overwritten on each file load.

Rewards

Point-based programs generate rewards, typically by converting points into rewards, such as gifts or gift cards.

Rewards refer to goods, gift cards, credits to a reward account, etc.

Rewards data (for example, Reward Export files) generally go to the client or a client-designated third party for fulfillment of the rewards.

List

Lists are fixed groups of customers as defined by their email addresses. Most CRM and marketing systems treat customer groups as lists, so TIBCO Reward provides native support of the concept.

Exchanges of list information typically involve handing lists from one system to another so that the recipient can perform an action based on the list.

Clients can import customer lists to be used for sending email within the CRMS or for reporting. Clients can also export customer lists to be used in external systems.

List data import includes email addresses. Because the email address serves as a unique identifier, it allows access any other existing customer data.

Profile

A profile is a set of business rules that defines a group of customers. A profile dynamically defines a customer segment by filtering a customer population with targeting parameters such as gender, location, prior purchases, etc. For example, a profile might comprise a set of demographic criteria that are used to filter one list of customers in order to define a new list.

Clients can define profiles in the CRMS and export profile information from the CRMS (for example, lists of customers who match a profile).

Generic Event

Use generic events to capture data about customer activities and behavior beyond the TIBCO Reward system. Examples of generic events include customer actions such as writing a product review, abandoning a product in an online shopping cart, playing a game online, or adding an item to a list of favorite products.

The generic event file includes event-related data that a client provides to TIBCO Reward. This event data enables TIBCO Reward (and by extension, the client) to:

- Identify specific events

- Collect data about customer actions performed during these events

- Target these customers (creating profiles) based on the collected event data.

TIBCO Reward uses generic event data to extend its customer-analysis capabilities so that clients can capture and use customer data from a wider variety of sources. In addition to customer transaction data, the most commonly used source of customer data, the generic events framework can capture records of any customer actions that marketers consider significant, as long as the event data meet the basic requirements defined for a generic event record.

In the context of TIBCO Reward's generic event processing, an Event is defined as "an action taken by a customer (known as the subject) on an object (a data entity, such as an item or person) at a given time". As an option, an event can be defined to include a "master value" that adds greater specificity. For example, you might define a customer review of a product as an event. Referring to this event, the basic definition is: customer X (subject) reviews (action) product Y (object) on date (time). You could add a product rating value (for example, a zero to five star rating) as the master value, to gather even more detail about this customer activity.

Generic Event data includes such information as:

- Event ID

- Event Reference tag name

- Subject

- Object

- Event Date and Time

- Master Value

The ability to target customers by event data adds a new dimension to your existing customer profiling tools and extends the reach of your marketing resources beyond the limits of traditional data sources.

Data Exchange Methods

The standard data exchange options include:

- Batch-file exchange
- Real-time SOAP API
- On-demand file exchange (CRMS)

Each data exchange method supports different sets of data. During on-boarding, and depending on your requirements, TIBCO Reward advises clients on the data exchange method options that are available and recommended. This guide also describes in detail what options are available for each method. For example, you can import transactions as batch files but not on demand.

During the process of defining and setting up the Loyalty program for a new client (the onboarding process) the emphasis is on Batch-file exchange and/or SOAP APIs.

Batch-file Exchange

This is a summary of TIBCO Reward's batch file processing. This summary is included here to explain the role of batch file processing with respect to other data exchange methods.

Batch file processing is ideal for high volume, asynchronous processing. Most client requirements can be achieved through batch file data loads. Complete details about each of TIBCO Reward's batch files and how to work with them are provided later in this document, in Batch File Integration.

Most of TIBCO Reward's batch processes require files in XML (Extensible Markup Language) format that adhere to common retail standards, such as ARTS and IXRetail. Note, however, that TIBCO Reward can usually use files in your existing proprietary format, if you make arrangements with TIBCO Reward during your onboarding process. TIBCO Reward can write transformations to convert flat files in delimited text format (for example, comma or tab separated value files) into usable XML files.

TIBCO Reward's batch file integration works as follows:

- By default, you send files using a secure transfer protocol (for example, SFTP) according to TIBCO Reward's standard schedule, unless your company has negotiated a different batch file transmission schedule.

- TIBCO Reward picks up these files and processes them, applying different transformation routines, as necessary, to convert the data into our required format.

- Inbound XML files are processed in their native format.

- Flat files that match TIBCO Reward's standard file formats are handled using standard transformations.

- Flat files that do not match TIBCO Reward's standard file formats are handled using custom transformations. Requests for changes to these file formats must be submitted through TIBCO Reward's Account Management Department and may incur a fee. (Consult your TIBCO Reward Account Management representative for details.)

- In return, TIBCO Reward posts the resulting files using a secure transfer protocol according to our standard schedule, unless your company has negotiated a different batch file transmission schedule.

- These outbound files are formatted by default in either XML or CSV format (depending on the file), unless a client has requested a custom transformation.

- You can see a file report that provides data about file imports. For details, see Appendix D, File Import Reports.

Features and benefits

- Flexible frequency – based on your needs and capabilities.

- Rapid transfer of large quantities of data (up to 200K transactions or 200M per day).

- Flexible file requirements – use common XML retail standards including ARTS and IXRetail, or use existing data feeds and let TIBCO Reward write the transformations.

- Monitoring – monitor your imports using the File Import Report.

- High security – Visa CISP certified, secure FTP.

Real-Time SOAP-Based APIs

TIBCO Reward's real-time APIs are used to add, retrieve, update, or delete one record at a time, with almost instantaneous response to the request for service.

Clients most often use real-time data transfer to get, add or update customer data, or to get or update a customer's reward balance in operational systems. For data security, this data is sent via https (Hypertext Transfer Protocol over Secure Socket Layer).

Real-time APIs are for client companies who require near-real-time processing, and who can dedicate technical resources to the project. Typically, the real-time SOAP-based APIs provide for POS, ecommerce Shopping Cart sites, and/or Payment Terminals or Gateways. Implementing a real-time API requires additional effort, including programming, from the client's technical staff. This data transfer method is meant for experienced programmers already familiar with web services and programming via SOAP-based APIs.

Features and benefits:

- Near instantaneous data exchange.

- Real-time SOAP-based API.

- Supports POS and/or Payment Terminals or Gateways.

- Solutions can be different for each channel.

- Can mix real-time with batch by location and/or channel.

TIBCO Reward's SOAP-based APIs provide a simple language- and platform-independent interface that enables implementers to work in whatever language and platform they are most comfortable. The only requirements are that the implementation language and platform support HTTPS and XML. For more information on SOAP see: http://en.wikipedia.org/wiki/SOAP.

On-Demand File Exchange

TIBCO Reward and its clients typically use On-Demand file transfers to import or export certain types of data.

The following list includes all on-demand file exchanges:

- List Import – clients can create a new list by uploading a file that includes email addresses.

- List Export – clients can export all customers in a list.

- Profile Export – clients who have defined customer segments can export the customer segment for use in third party systems.

- Reward Catalog import – clients can upload a file with reward item data that can be

used to create or update the reward catalog.

- Custom Questions import – clients can import Custom Question records (which include answers) that are added to the pool of custom questions available in the CRMS.

Setting Up Access to Secure File Transfer Directories

This chapter explains how to configure secure file transfer directories.

Topics

- Overview

Overview

TIBCO Reward sends and receives data files containing client data through a secure file transfer system, never through an unsecured file transfer mechanism. Note, however, that the sample files used to set up data mapping standards, which have no live or sensitive data, can be sent via email.

An introduction to the subject of file transfer protocols and secure FTP is provided in the Secure Data Transfer section of this guide.

TIBCO Reward has standardized client data exchange on the Secure File Transfer Protocol (SFTP). SFTP is a file transfer protocol that uses the SSH (secure shell) environment for authentication and encryption. TIBCO Reward also supports FTPS for AS/400 clients. FTPS is an enhancement to the standard FTP protocol, using the same commands and communication ports with SSL/TLS authentication and encryption.

TIBCO Reward sets up file directories and a corresponding secure client account on TIBCO Reward's SFTP server for your Company. An FTP client that specifically supports SFTP or FTPS will be required. TIBCO Reward does not provide support for third-party vendor software, however your Company's Integration Engineer should be able to recommend an appropriate FTP client based on your operating system. Your TIBCO Reward Account Management representative will provide you with the required credentials for accessing our system.

All files to be transferred to and from TIBCO Reward MUST BE located inside one of the following folders:

- ToInstorecard

- FromInStorecard

Files should not be stored on the root directory. In many cases, write access to the root directory is denied to avoid confusion. To obtain an exception to this policy, you must explicitly request an exception in writing and obtain written permission, which will document the details and terms of the agreement. If an exception is required, TIBCO Reward will provide you with an additional directory to store files for a short term. To further ensure that your customers' data is secure, eight days of file exports will be available via the FromInstorecard folder (for example, Monday to Monday). Files left on the server for more than eight days are subject to archiving and deletion.

To get access to these secure directories, you need access to an FTP client application that supports SFTP or FTPS as described in Appendix B, Setting Up FTP File Directories. Your TIBCO Reward Account Management representative will provide you with a username and password associated with this SFTP or FTPS application

TIBCO Reward and each of its clients test the secure file transfer system by sending and receiving sample files using the new secure client account.

An excellent introduction to secure FTP protocols and technologies is available at the South River Technologies' WebDrive site:
http://www.webdrive.com/products/webdrive/index.html.

Platform-Specific Constraints

To securely transfer files between systems running a Windows OS, TIBCO Reward typically sets up an SFTP file directory and a corresponding secure account for each client. Some of the legacy platforms will only support the FTPS protocol; therefore, any TIBCO Reward company client that needs to transfer files from these devices will need to install an FTPS solution.

Appendix B, Setting Up FTP File Directories provides instructions for obtaining access to such a client application. These instructions are provided only as an example, for the purposes of illustrating the set-up process.

Batch File Integration

This chapter provides information about batch file integration.

Topics

- About the Batch Files

- Guidelines and Specifications Provided for Each Batch

- Transaction and Customer Import File

- Product Catalog Import File

- Store Import File

- Reward Export File

- New and Updated Customer Export File

- Generic Event Import File

About the Batch Files

Use batch files to update the TIBCO Reward database, which supports your Company's loyalty program, and to provide updates to you, the client, with the latest information maintained by TIBCO Reward. Most of the data transmitted between TIBCO Reward and its clients is transmitted through batch files. Batch processing is a highly efficient method of transferring large volumes of data.

Refer to Batch-file Exchange for a basic introduction to the subject.

File Processing Constraints

Under normal circumstances, TIBCO Reward processes data at a rate of around 100,000 records per hour. TIBCO Reward's file processing limit is roughly 200MB (for XML files) per file or approximately 200,000 records per file, as a general rule.

Note that regularly scheduled file import processes are not intended to support the population or re-population of a client's entire collection of records, nor is normal file export processing set up to handle large "dumps," that is, downloads of the complete collection of a client's records.

If you believe you may need to import or export batch files that far exceed the normal and customary processing limits, contact your TIBCO Reward Account Management representative

Batch File Summary Descriptions

This chapter describes the batch files and their usage, and includes guidelines and specifications to help you define and format the batch files. It includes detailed information about the following files:

- **Transaction and Customer Import File** – Also called the Transaction file, describes a client's (retailer's) transactions, and usually contains the transactions for a 24-hour period. The Transaction file includes data about the client's customer (shopper), the item (product or SKU), and the store or location associated with the transaction, as well as the quantities and amounts.

- **Product Catalog Import File** - Sometimes called the Product file, this is a complete listing of all products offered by the client. To use TIBCO Reward features that include SKU-based programs or offers, you must supply product data. The Product and Store files are the only complete replacement files at this time. Each time the Product File is loaded, all previous product data is inactivated. Product files can be transmitted daily, weekly, or monthly depending on how frequently your product catalog changes.

- **Store Import File** - Provides a list of client stores or locations, and may include variations such as web-based retail channels. This data is required for any features that include store- based offers. Similar to the Product File, clients should always transmit their master store list to TIBCO Reward since the latest transmitted file completely replaces the previous.

- **Reward Export File** – Provides the current list of rewards that are due to be delivered to shoppers for a given period. It includes specific data about the reward and the recipient customer.

- **New and Updated Customer Export File** - TIBCO Reward extracts all customers whose profile information was updated in the system between the current time and

the time at which the previous extract occurred. More specifically, a customer's record is included in the New and Updated customer Export File if there are changes in the following types of information in that customer's record:

- Shopper Name

- Shopper Address

- Email Address

- Opt-In/Out of Email

- Change in point balance

- Custom attribute data changes

- Tier status

- Loyalty membership status

- Shopper Status

- Registered card/loyalty card.

- **Generic Event Import File** - This file allows clients to submit instances of events to be tracked with the Generic Event framework. The file includes new event data such as the event ID, subject, object, master value, and time. A wide variety of information can be passed using the generic event file, including, for example: instances of customers writing product reviews, instances of customers adding items to a wish list or favorites list, data about customer activities captured from social networking sites, and web analytics data about customer activities.

- **Email Update Import File** - This is not a standard option. Allows clients to update email addresses in the TIBCO Reward database. TIBCO Reward imports this batch file when the email address is the only available identifier for the customer and TIBCO Reward is not the party responsible for maintaining the "system of record," that is, when the customers' new and current email addresses are maintained in another non-TIBCO Reward application. In this case, the updated record is imported by TIBCO Reward to update its database. Contact TIBCO Reward for information about using this, and refer to the information in Appendix E, Email Update Import File.

Refer to the following chapter subsections for detailed batch file information.

The particular set of batch files your company provides or consumes depends on your particular TIBCO Reward program. Typically, only a subset of the batch files mentioned above is required, and these files are identified during your onboarding process (when you first define and implement your program with TIBCO Reward). Based on your business

needs, your TIBCO Reward Account Management representative designates the batch files that your company needs to send and receive.

Guidelines and Specifications Provided for Each Batch

For each data file documented here, the following information is provided:

- General description

- Use cases

- Standard XML sample file and XML Schema Definition (XSD)

- File data elements, formats and guidelines

- Samples and formats of files from clients

- File failures

After your Company's initial kickoff meeting with TIBCO Reward, we will send you all of the templates and guidelines for each batch file you should use. Contact your Account Management representative if you do not have the information you need. Use this guide to obtain additional information about the integration process and the technology involved.

The client data-mapping templates that are included in this section help you map your company's data fields to the corresponding fields used as input by TIBCO Reward. These templates help you move your company's data to TIBCO Reward, that is, from your files to ours.

The purpose of the mapping is to assist in creating an XML transaction file in which your company's data is "repackaged" in XML format, which can be read and used by TIBCO Reward.

TIBCO Reward highly recommends using XML. Whether or not you decide to use XML, some familiarity with TIBCO Reward's simple XML data format will help you complete the data mapping process.

Whatever the format of the files you send, TIBCO Reward will establish a few fundamental guidelines regarding the transmission of these files during the integration. These guidelines will address information such as the following:

- Expected maximum size of a daily file

- Filename format for this file

- Schedule transmit time

- Expected number of files sent per day

Processing Thresholds for Import Files

TIBCO Reward has identified the following recommended processing thresholds for import files listed in the following table. Clients expecting to exceed these thresholds should notify their Client Service contact.

Import File	File Size	Number of Records
Import File	500 MB	200,000
Product Catalog	100 MB	100,000
Store Import	100 MB	200,000
Generic Event	10 MB	50,000
Email Update	10 MB	500,000

> **Note:** These thresholds are not file processing limitations but serve to assist TIBCO Reward's operations teams with capacity planning.

Batch File Formatting

TIBCO Reward encourages its clients to provide their batch file data in XML files that match the schema published by TIBCO Reward. Such files require no transformation and offer the most flexibility.

For more information on ARTS/IXRetail standards, see https://nrf.com/who-we-are/retail-communities/technology/arts.

Some clients provide their batch file data to TIBCO Reward in non-XML files that are in the standard output format generated by their native systems. While importing such files,

TIBCO Reward converts the files into XML by applying transformation processes developed and agreed upon during the initial phases of data integration with a client. A crucial part of TIBCO Reward's initial data integration efforts is the definition and testing of these data transformations. When this is complete, TIBCO Reward can transform these files, normalizing and repackaging the file data into the XML format that TIBCO Reward uses.

By contractual arrangement, data exported from TIBCO Reward to a client can be transformed from TIBCO Reward's XML format into the native file format of a client.

The batch file specifications in this chapter assist in setting up these transformations, especially when used in coordination with the client Data Mapping Templates supplied by TIBCO Reward's Account Management team at the start of data integration.

If TIBCO Reward is handling any transformation, you will need to notify your Account Management Representative when you want to make a change to that batch integration as the Data Integration team will need to change the transform to handle the new or modified data elements.

After any necessary batch file transformations are completed, the batch file feeds data to the TIBCO Reward database in XML format. The XML format follows the appropriate schema for the type of data being provided. For each batch file, links to the corresponding schema and schema documentation are provided.

Batch File Naming Convention and Example

Each of the different batch files for a given client is, by agreement, assigned a name that follows this convention:

<client_name>_<file type>_<YYYYMMDDHHmmss>.<file extension>,

where:

- client_name is an identifying text string name assigned by TIBCO Reward

- file type is one of the following:

    ◦ transactions

    ◦ products

    ◦ stores

    ◦ shoppers

    ◦ rewards

- list
- event

- YYYYMMDDHHmmss is the date and time of the file transmission, including the year, month, date, hour, minute, and second of the transmission.

- file extension is either xml or txt, where txt is used to indicate a text file (for example, a comma separated or tab separated value file, or a width/location-defined value file)

For example, on January 1, 2012, at exactly 11:30 PM, a client, "BrandX", should send a transaction data file in XML format named: `BrandX_transactions_20120101233000.xml`

When the file is a text file (for example, a comma-separated or tab-separated value file), the file extension should be ".txt".

Other XML batch files sent by the same company on the same day at the same time would be assigned similar names; the only change would be in the text string representing the file-type. For example, a product catalog file would be named: `BrandX_products_20120101233000.xml`.

Transaction and Customer Import File

The goal of this section is to explain the purpose of the Transaction and Customer Import file and its data elements, and to describe the characteristics and requirements of each Transaction file data field so that this data can be transferred from your Company to TIBCO Reward and processed correctly.

In addition to providing transaction data, clients use this file to provide fundamental customer data.

General Description

The Transaction and Customer Import file (sometimes called the Transaction file for short) is used to provide data about a client's transactions. Most clients provide this file daily. The Transaction file includes data about the client's customers (shoppers), the item (product or SKU), and the store or location associated with the transaction, as well as the quantities, amounts, and payment tendered.

Transaction files provide the most important data imported into a TIBCO Reward solution. Transaction file data is often used to award points to customers and to target customers based on their past purchases. Clients use Transaction files to create customer (shopper)

data and to update this data. All analyses based on purchases and purchase-behavior use Transaction file data.

TIBCO Reward accepts Transaction data from all of a client's sales channels (store, e-commerce, and catalog sales). TIBCO Reward can accommodate different channels are in different formats during the data import and transformation process.

During the integration process and prior to launch, most clients also provide the previous two years of historical transaction data, which can be used as a baseline to create customer histories and profiles.

Ultimately, TIBCO Reward must process the transaction data in the form of a TIBCO Reward ISCLog file, which is an XML file that follows the XML schema definition in the ISCLog.xsd file. (This is explained in more detail in the Standard XML Sample File and XSD Schema section.) As necessary, and by contractual agreement, TIBCO Reward can transform a client's Transaction file from that client's native file format into the required XML format.

Use this file to import customer Data

Clients also use the transaction file to provide customer data to TIBCO Reward. To use this file to send customer data only, send the portion of this file that conveys customer data. In addition to the XML header, you must include the following standard transaction file data to satisfy processing requirements:

- TransactionID

- RetailStoreID

- ReceiptDateTime

The use of this file to add, change, and delete customer data is addressed in detail in the Customer Data section.

Initial Integration Notes

After a client has completed the Onboarding Questionnaire and when a client is ready to start the initial data integration process, the TIBCO Reward Account Management team asks the client to prepare a sample Transaction file. To help you prepare this sample file, TIBCO Reward provides tables and templates that provide guidance in developing the Transaction file. You use these tables and templates to record information about batch file formats you will use, and to document other agreements with TIBCO Reward about Transaction batch file processing.

These tables and templates are particularly crucial when file transformations are necessary. If you need copies of these templates or information about them, contact your Account

Management representative. During the initial data integration process and any subsequent integration efforts that involve the Transaction file, TIBCO Reward and its clients use these documents to record the currently agreed-upon requirements for successful batch file transformation and processing.

Transaction and Customer Import File Use Cases

The Transaction and Customer Import file is used for a variety of purposes and in a variety of cases. A transaction can be:

- Matched to a loyalty program member (eligible for awards)

- Matched to a non-member of the loyalty program (not eligible for awards)

- Matched to a new customer created during the import. The new customer can be eligible for awards – or not – depending on the program membership rules.

- Unmatched to any known or new customer (anonymous purchases, such as cash purchases).

Transactions that are not matched to a customer are used for the purposes of analyses and reports only, for example, to compare loyalty member sales vs. non-member sales.

Some standard Transaction and Customer Import file use cases:

- Case 1: Transaction and Customer Import file import with email identifier

For this scenario, each customer transaction has an associated email address. This might be true, for example, because the client's e-commerce system requires an email to complete the customer's check-out.

The imported transactions are matched against existing customers, including both members and non-members of the loyalty program. Any transactions matched to customers enrolled in the loyalty program are eligible for awards. Transactions matched to customers not enrolled in the loyalty program are not eligible for awards; however, these transactions can be considered in reports and analyses.

Transactions associated with a new email address result in a new customer account and matched transaction.

All transactions are used in customer segmentation and targeting and for reporting.

- Case 2: Transaction and Customer Import file import with credit card identifier

The client sends a Transaction and Customer Import file that includes credit card information to be used as the customer (shopper) identifier. Transactions that are paid for in cash may be included in the file.

Cash transactions are treated as anonymous and are used for reporting purposes only, to compare sales volumes over time.

Credit card transactions can be matched to a customer if the customer is registered and the credit card has been registered by the customer. If this is true, the transaction is eligible for awards. Credit card transactions that are not matched to a registered card are stored, and the credit card is stored as an encrypted unregistered credit card. That is, all of the transaction data is imported and stored. However, many of the transactions are not associated with a known customer and are used solely for reporting.

- Case 3: Import past Transaction file history and Customer Data before program launch

A client wants to import two years' worth of past transactions and associated customer data prior to the program launch. This will enable segmenting customers based on their past purchasing history and other customer attributes, such as location and custom attributes. The client provides TIBCO Reward with a number of transaction files (in XML format) that include transactions and customer information.

As an option, if the client has implemented a points program and would like to award customers for purchases that happened prior to its program launch, this one-time import can be configured such that purchases made up to 12 months before the launch date can be awarded points.

> **ℹ Note:** In order to award points to a customer for a past transaction, the customer must exist in the database before the back-dated transaction is loaded.

The client can automatically enroll customers into the loyalty program. By providing the loyalty member flag in the Transaction and Customer Import file, the client determines whether a customer becomes a loyalty program member.

- Case 4: Import customers with custom attributes

Besides transaction data, the Transaction and Customer Import process can be used to import customer data that includes custom attributes.

If the client uses an external analytics tool to segment customers, then the client can import each externally defined attribute as a custom attribute, and then segment customers based on the attribute(s) within the TIBCO Reward system.

To do this, the client creates a Transaction file that does not have transaction information; rather, it includes customer information, including custom attribute values. By enabling updates within the file import process, the client is able to update all existing customer records and to populate the custom attribute values. New customers will still be created if the customer is not found in TIBCO Reward's database. Note that custom attributes must be set up in advance of import.

- Case 5: Import transactions with store location data for targeting stores, local customers

Transaction information can include store location. This information is used for reporting and enabling store-specific offers.

For example, suppose a client who has just opened a new store wants to create an offer that awards double points to customers who shop at the store on the opening weekend. The CRMS allows clients to create an offer and limit the offer to specific stores. For this offer to work, the transaction file must include the store information.

This requires integration with the Store file.

- Case 6: Change the date used to establish customers' eligibility for awards

During the initial data integration that occurs during the onboarding process, you can establish whether you want to award at the time the receipt was issued (the ReceiptDateTime) or at the time the order was shipped (ShipDateTime).

This rule is set up during the onboarding process and applies to all transaction files.

- Case 7: Import customer data

A client can also use the transaction and customer file to simply create customer records in the TIBCO Reward database. The client needs to pass minimal transaction information that will allow the file to be processed in addition to adding the new customer data.

TIBCO Reward will match customers based on the identifiers set up during on-boarding (such as email address or client customer identifier or loyalty id). If a match is found, the customer record will be updated or not based on the decisions made during on-boarding. If no match is found, a new customer is created in the TIBCO Reward database using the information provided.

Clients typically use this process when they host the sign up pages and don't want to implement real-time integration with TIBCO Reward. In this case, they send a daily file with new members of the loyalty program to TIBCO Reward.

Standard XML Sample File and XSD Schema

TIBCO Reward's standard XML transaction file format is based on the ARTS/IXRetail data model, and this is the preferred format for the Transaction files sent from clients. For more information on this format, see Standards and References.

Crucial information about the required transaction data is provided in the sample Transaction file (ISCLogSample.xml) and the XSD (ISCLog.xsd). Even if your company cannot provide a Transaction file in this format, the self-documenting characteristics of the sample file make it worth studying.

See the sample of a transaction file in TIBCO Reward's XML format at http://www.instorecard.com/schema/v1/samples/ISCLogSample.xml.

See http://www.instorecard.com/schema/v1/docs/ISCLog/ for a detailed description of Reward's XML schema definition for its XML transaction file format.

Transaction File Data Elements, Formats and Guidelines

Each Transaction file is composed of the basic elements (data subdivisions) listed below:

- Transaction Header Data and Transaction Data

- Customer/Shopper Data

- Line Item Data

- Tender Data

Because the Transaction file is very large, each of its elements is described in a separate subsection below. (The first part of the Transaction file is described in The Transaction Header and Transaction Data Elements.) For each element, a table lists the data fields associated with that element. Not all data fields listed in the tables below are required in the transaction file. Required fields are indicated with an asterisk (*).

Notes:

- Only the Transaction file is discussed element by element; other files are described as a whole, and all supported data are described in a single table.

- Check each subsection below for crucial details about using the data in that element.

- Note that the custom/shopper data element, described in Customer Data, is used to convey and update customer information, including data regarding the customer's loyalty program membership.

The Transaction Header and Transaction Data Elements

The transaction header information supports the Transaction ID, the Store ID, and the Receipt data and time data, as described below.

> **ℹ Note:** The Transaction ID must be unique within a file, otherwise the import will fail.

Records within a single file that have duplicate transaction IDs will not be loaded. TIBCO Reward's Data Integration team can help to ensure that a unique transaction identifier is used.

Store ID provides information on the store where the transaction took place. This data is required if you are using offers that are redeemable only at certain stores. To use this functionality, you must have implemented the store file import in addition to providing store information in the transaction file.

The ReceiptDateTime defines the date and time of the transaction, and so serves as a time stamp. This information can be used to:

- Identify a transaction's eligibility for offers and awards.

- Target customers based on past purchases and Recency Frequency Monetary (RFM) considerations.

- Establish the membership start date. This occurs when a new customer record is being created with the transaction, and the customer is being defined as a member of the loyalty program.

- Serve as a dimension in reporting and analysis.

ShipDateTime is an alternate field that can be used to date a transaction. Some clients prefer to use this date, especially for their e-commerce systems. Use ReceiptDateTime if

the award is to be given as of the date of receipt of the item. Use ShipDateTime if the award is to be given as of the date the product is shipped.

TIBCO Reward requires Transaction IDs to be unique within a file, and this is enforced as a technical restriction during file processing. Note that Transaction IDs should in fact be unique across all files. To achieve this result, TIBCO Reward advises clients who re-use old transaction IDs to add a date/time stamp to the Transaction ID.

Transaction Data Table

Field Name	Description	Data Type	Size	Sample Data	Notes
TransactionID*	The client's unique ID of this transaction.	String	50	"T101123456"	Used to group line items, can be defaulted if no transaction grouping is required. Each Transaction ID must be unique within each file and across all files sent to TIBCO Reward system.
RetailStoreID*	The client's ID of the store where the transaction took place.	String	50	"S101"	Among other purposes, this field is used to qualify store-specific offers. This functionality requires Store file integration.

Field Name	Description	Data Type	Size	Sample Data	Notes
ReceiptDate Time*	The client's date and time stamp of when the transaction took place, that is, the time on the receipt.	DateTime		"2012-10-14T 10:00am"	By default, this is the transaction date used to establish award eligibility. This is compared with membership start date on the customer (shopper) record. This data can also be used to define the membership start date, if a new customer record is being created during import of this file. The "T" is needed between the date and the time as part of the XML schema xs:dateTime data type syntax.

*Data is required in the file.

Customer Data Purpose and Usage

The transaction file includes the customer (shopper) information as well as transaction details. Customer information in the Transaction file is used to match transactions with existing customers and to award points.

The transaction file is also used to create new customer records and to update existing customer records (for example, to update customer address data or opt in/out of emails, in the data).

Customer data can be matched to transactions based on the following customer fields:

- Email address
- Credit card information
- Loyalty card ID
- Shopper ID

Onboarding Matching Criteria and Matching Hierarchy

During onboarding, clients define their matching criteria and matching hierarchy.

In general, a customer's email address is the preferred identifier. If the customer's email address is not available, the other identifying data can be used.

Updating information for an existing customer

During the onboarding process, you can set the Update customer Information option in the system configuration to allow updates of customer information. This determines whether selected customer data fields will be updated when a customer identifier matches an existing customer.

Because a customer identifier is required to identify the record to update, updates to the customer identifier(s) require additional configuration. If you require such an update, contact your TIBCO Reward's Account Management representative to set up the process.

Important Notes on Using the LoyaltyProgramID field

Do not send a Transaction file that provides the Loyalty Program Id OR any non-whitespace character in the LoyaltyProgramID field for a non-member of your Loyalty program. This sends contradictory data that will corrupt the record of each customer for whom the contradictory data is provided.

- Passing any non-whitespace character in the LoyaltyProgramID field of a customer's record will prevent a former Loyalty Member from re-enrolling.

- Passing any non-whitespace character in the LoyaltyProgramID field will enroll the customer in your Loyalty Program if they have not previously been a member. Enrolling members using LoyaltyProgramID is legacy functionality that is no longer supported.

Un-enrolling customers via file import

TIBCO Reward supports the ability to un-enroll customers via batch import by setting the Loyalty Member flag to 0 (zero). Setting this flag to 0 will cause the customer to be un-enrolled as if that customer were un-enrolled via the CRMS, using the Customer Service Representative (CSR) tools.

This means:

- Loyalty member flag is changed from 1 to 0.

- Status is changed from Active to Inactive.

- The Email opt-in status (bulk email) flag is changed from true to false (if applicable).

- All registered cards are deleted.

- Points are reset according to the rules set up in the CRMS Admin section.

- All program and club memberships are terminated.

This unenrollment makes it impossible to send email to the customer until their status changes back to active. Also, the customer will not be able to log in into their microsite. In the CRMS support options (Customer Details page), the customer is listed as inactive, and a notation in this format is added to the record, "Customer was Un-enrolled on <date/time> via import <importID>" In this context, date/time is the RetailerReceiptDateTime of the transaction in which loyalty member is set to false:
<LoyaltyMember>false</LoyaltyMember>.

Anonymous transaction: No customer information. If the Transaction file does not provide customer information for a transaction, the transaction is considered anonymous. An anonymous transaction cannot be updated to a loyalty member-related transaction. However, the anonymous transaction data is still valuable, because it provides useful data for reports..

Geographical targeting requires postal codes. To target customers based on geographical location, a client must collect postal codes. The best way to populate this data is by using Transaction files. You can also populate geographical data by using data supplied via APIs, Customer Service Representatives, or the Microsite.

Adjusting the customer's awards eligibility date. During onboarding, a client decides whether to use purchases made by customers prior to the time they became loyalty program members.

If the client decides to use a customer's past purchases, the client must establish the number of past days to be used. Transaction file data is used to establish the date when a customer's purchases become eligible for rewards, as explained in the table below. In general, eligibility for awards is based on membership in a loyalty program. The client defines this variable as a value representing a number of days (for example, three). This value represents an adjusted date (that is, a date prior to a customer's membership date by this specified number of days). The awarding process will consider the customer's transactions to be eligible for awards if they are made on or after this adjusted date. So, for example, if a client sets the "Number of days to award past transactions" to 3, and a customer establishes a loyalty membership on May 5, then that customer's purchases on May 2, 3, or 4 could earn loyalty member points, but purchases made before May 2 could not.

Integration prerequisite: To use records from past days, the client must give TIBCO Reward the customer information, including the member information, before sending TIBCO Reward the past transactions.

Controlling which Customers receive email with EmailOptIn. U.S. law allows customers to opt out of commercial emailings. This means that we have to include a means recording and honoring any loyalty member's expressed wishes not to receive email. A flag in the customer data called "EmailOptIn" records this information and determines whether a customer is sent such emails. A customer who opts out will not receive marketing emails, but may still receive email with administrative content (for example, an email about a forgotten password). This flag is part of the customer data. A client can set a default value for this flag in the system configuration, as described below.

TIBCO Reward requires clients to provide the EmailOptIn flag in their customer data. In the case where EmailOptIn field information is not provided, the EmailOptIn default value will be set to 0; for such clients, all new Customers will, by default, NOT receive email.

> **ⓘ Note:** If you set the EmailOptIn flag set to 1, then you need to define the default email format for your email messages during onboarding. This is defined by the system configuration managed by the TIBCO Reward data integration team. Configuration of the DefaultEmailFormat can be set either to text or to HTML (the standard default value).

Updating custom attributes in your transaction-customer data. If you use XML files, you can assign a null value to a custom attribute after updating your data processing standards

to use the new functionality. To make this change, submit a request to your TIBCO Reward Account Management Representative.

Customer Data Table

Field Name	Description	Data Type	Size	Sample Data	Notes
ShopperID+	Client's unique identifier for a shopper.	String	50	"123459876"	Client-defined identifier. Can be used for customer and transaction matching; should be unique.
Title	Customer's Title	String	4	"Mr.", "Ms.", "Dr."	
MiddleName		String	100	"C"	
LastName*	Required, if ShopperName is provided.	String	100	"Doe"	
AddressLine1	Required, if ShopperAddress is provided.	String	100	"123 Main Street"	
AddressLine2	Optional. Used to augment Line1, or to provide an alternate address.	String	100	"Apt. 1"	This data is only updated if Customer (shopper) information updates are enabled and

Field Name	Description	Data Type	Size	Sample Data	Notes
					AddressLine1 is provided.
City	Shopper's city.	String	100	"San Francisco"	Should be correct for use with address.
State	Shopper's state.	String	2	"CA"	Should be correct for use with address.
PostalCode	Shopper's postal code, for example, U.S. zip code.	String	100	"94104"	Required for location-based targeting.
ShopperPhoneNumber	Shopper's given phone no., including area code.	String	100	"408-555-1234"	Shopper phone number. Not used for matching customers or transactions.
ShopperEMail*+	Format: <alphanumeric>@<alphanum eric>.<alpha>	anyURL	1	"jane@example. com"	Preferred field for identifying a customer. This should be a unique email address identifying

Field Name	Description	Data Type	Size	Sample Data	Notes
					this shopper. Note that this email address must be well-formed so that it passes standard email address validation rules. See section the Email Address Validation Criteria section for more information. --Note that an email address is required in the TIBCO Reward system. If it is not provided for new customers, an "@example.com" email address is added by default.

Field Name	Description	Data Type	Size	Sample Data	Notes
LoyaltyProgramID+	Loyalty Card number - a unique ID that can be used as a primary or secondary customer identifier for members of the loyalty program.	String	100	12345678901234 56	Do NOT send this number if the customer is not a member of the loyalty program.
LoyaltyMember	Indicates membership in client's loyalty program.	Flag/bit	1	"1" = Loyalty member "0" = Non- Loyalty member	To remove a shopper from the loyalty program, set this value to "0". For an existing Loyalty Member, the value should be "1"; for an existing customer who is not a member, "0".
EmailOptIn*	Controls the status of whether a shopper opted in to receive emails other than administrative emails.	Bit	1	"1"", "0"	This field is required. However, in the rare case when this is not provided, TIBCO Reward will default to "0" – not opted in – for privacy

Field Name	Description	Data Type	Size	Sample Data	Notes
					reasons, and the shopper will not receive marketing email communications.

*Data is required in the file.

+ As explained in the Customer Data Purpose and Usage section, one of the customer ID values must be selected as a standard and consistently supplied for all customers. One of these values is required, not all.

Line Item Data Purpose and Usage

Line item data include transaction information such as the SKU, quantity, extended amount, etc. Line item data must be included in the transaction file to support the following functionality:

• Award processing. All awards (that is, points awarded based on the main program and on promotional offers) are based on line items only. Within the line, points are awarded based on the extended amount data only. For example, if a customer purchases four of one SKU item at $5 each, the extended amount is $20. If a customer purchases only one of one SKU item at $5 each, the extended amount is $5. If you want to award points and other awards that require purchases, you must include the extended amount data for each line item in the Transaction file. Redemption limits also use line items to evaluate eligibility. If a redemption limit for an offer is set to 1, the offer will apply only to the first line item.

- Customer targeting based on past purchases. The SKUs and quantities are crucial purchase data. To make use of line item data in targeting, the Product Catalog file must be loaded before transactions involving the catalog products are processed.

- Customer targeting based on monetary values. Monetary value calculations are based on the transaction extended amount.

- Returns. Returned items are handled by providing a negative quantity and negative

extended amount. Including returned item data is not mandatory, but it is necessary if the client wants to:

- ○ reverse points and/or reverse offer awards based on returns.

- ○ generate accurate reports, since returned items are considered part of net sales data (purchases and returns).

To make full use of line item data, the Product Catalog file must be loaded before transactions involving the product catalog are processed.

Line Item Data Table

Field Name	Description	Data Type	Size	Sample Data	Notes
LineNumber*	Numbering of line items within an order. Required if Sale is provided.	String	100		Identifies line items in this transaction. If unavailable in the client's data feed, this can be defaulted to a sequence number.
ItemSKU*	Stock Keeping Unit – unique number to identify the product purchased. Required, if Sale is provided.	String		"ABC123456"	Unique identifier for the item being purchased. Must match exactly the SKU in the product data feed.
Quantity*	Quantity of units sold. Required, if	Decimal		"1", "16.00"	Should contain a negative value if this line item

Field Name	Description	Data Type	Size	Sample Data	Notes
	Sale is provided.				represents a return sale. The value should be positive if this is a purchase. Quantity and ExtendedAmount must both be positive or both be negative.
ExtendedAmount*	Total amount spent on this item.	Decimal		"1", "16.00"	Should contain a negative value if this line item represents a return sale. The value should be positive if this is a purchase. Quantity and ExtendedAmount must both be positive or both be negative. A positive Quantity and negative ExtendedAmount is treated as a discount.
ShipDateTime	The date and time stamp of when this item shipped.	Datetime		"2012-05-07T13:00:00"	By changing pipeline configuration, the awarding process can be overridden to use ShipDateTime

Field Name	Description	Data Type	Size	Sample Data	Notes
					instead of ReceiptDateTime for award eligibility.

*Required

Tender Data Purpose and Usage

Credit card information (which TIBCO Reward stores in encrypted format) can be used to match transaction information to a shopper. Credit card data is optional.

Tender Data Table

Field Name	Description	Data Type	Size	Sample Data	Notes
Amount		Decimal		"1", "16.00"	
CardNumber	Number of the card used	String	100	"4111 0123 4567 8901"	If this value is being used for matching, formatting must be consistent across applications and transactions.

Samples and Formats of Transaction Files from Clients

As explained above, clients agree to send Transaction files to TIBCO Reward in a format that is strictly defined. This format is the result of a careful needs analysis and a

corresponding data mapping effort that identifies which of the client's available data fields will be included in the transaction file supplied to TIBCO Reward.

The preferred format is an XML file corresponding to the requirements of the XSD schema (ISCLog.xsd).This file format is based on ARTS/IXRetail data model, and this is the preferred format for the Transaction files received from clients. TIBCO Reward can also transform Transaction files sent in other formats so that they can be used to supply the necessary transaction data. TIBCO Reward has extensive experience in performing such transformations.

Samples of some transaction files appear below. Each sample is followed by a corresponding table that shows the sample file format and its data formatting parameters.

Typically, a client company provides a sample file and a formatting table to indicate the data and formatting it will provide in its transactions files. The file format samples and tables convey information about the fields in their native file format. The client and TIBCO Reward must formally agree on the information provided in these tables, and TIBCO Reward must be able to use the sample files (after any agreed-upon transformations).

When a live Transaction file is imported by TIBCO Reward, any required transformations are performed automatically, based on the understanding that each transaction file will always follow the formatting guidelines established and documented in the tables. Each live file is transformed (as necessary) and ultimately processed as part of a TIBCO Reward ISCLog file.

> **ℹ Note:** A client must notify TIBCO Reward any time there is a change in the format of this file.

XML File Format - Sample

See the sample of a transaction file in TIBCO Reward's XML format at http://www.instorecard.com/schema/v1/samples/ISCLogSample.xml.

See http://www.instorecard.com/schema/v1/docs/ISCLog/ for a detailed description of Reward's xsd schema for its XML transaction file format.

Transaction File Failures

The Transaction file import can fail because of errors at the file level, or it can partially succeed.

- A Transaction file failure may occur as a whole because the file is empty, because of data type validation errors, etc.

- Partial success means that the file as a whole is accepted, but specific records may be rejected, as explained in the descriptions of error codes numbered 1 through 10 in Transaction File Errors. In the case of a partial success, the client is advised to correct the error that caused each data failure and to re-send the data.

- TIBCO Reward generates a file report for each client on a daily basis. This File report provides information about the success of each file import. Files that were to be imported from the client over the previous day are listed by their file import ID, and the final file import status for each file is recorded. This status is listed as success, partial success, or failure. Clients can check the file import status and obtain information about each file. In addition to summary information about a file, some details concerning failure status and partial success status are available.

Transaction File Errors

Error Code	Error Type	Error Reason	Suggested Action
0	File failure	File import failed for unspecified reason.	Contact TIBCO Reward Account Management Representative for information.
9	Transaction failed to import.	Transaction failed to import because shopper creation failed.	You can correct this error by fixing the shopper record and then re-submitting the records for the customer and the transaction(s).

Error Code	Error Type	Error Reason	Suggested Action
11	File failed.	This file is a duplicate of a previously sent file.	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be a duplicate, ignore this notice.
12	File failed.	The file failed to import because it does not include any records.	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be empty, ignore this notice.
13	File failed.	The file failed to import because of a general error.	Contact TIBCO Reward for diagnosis.
14	File failed.	The file failed to import because of a data format error.	You can correct the file by fixing data format errors. Common issues include having an alphanumeric value in a date field.
15	File failed.	The file failed to import because the file type is incorrect.	This file was not recognized by our process. Common reasons for this issue include misnaming the file or accidentally sending a different file. You can correct this issue by sending the correct file.
17	File failed.	The file failed to import because it failed a validation rule.	Contact TIBCO Reward for diagnosis.

Email Address Validation Criteria

- These characters cannot be the last character:

    - @ (at sign)

    - . (period)

- These character cannot be the first character:

    - @ (at sign)

    - # (pound sign)

    - + (plus sign)

    - & (ampersand)

    - , (comma)

    - / (slash)

- Only one "@" (at sign) character is allowed.

- The domain name should end with two or more characters after the last period; for example: ".au" or ".com" or ".net"

- These characters and character combinations are not allowed:

    - .@

    - //

    - @.

    - .. "

    - --

- There must be a "."' (period) character somewhere in the string following the "@" (at sign) character.

Product Catalog Import File

This file, sometimes called just the Product file, is a complete listing of all products and categories offered by the client.

Several features offered by TIBCO Reward, including SKU/Category-based offers and targeting based on past purchases, require the use of this file.

The data is typically provided daily or weekly.

This file and its fields will be transformed (as necessary) and ultimately processed in the form of a TIBCO Reward ISCProduct file.

General Description

The Product Catalog file provides detailed information about SKUs and their attributes. When the information in this file is used in coordination with the fundamental SKU information in the Transaction file, there is substantial improvement in the depth and breadth of marketing information available to clients. Related reporting and offers can become much more specific, bringing all the benefits of more tightly targeted marketing.

The Product Catalog file can supply details about a product, including its description, image URL, caption-text, list price, sale price, cost, UPC code, vendor or brand. It can also include information about categories to which the product belongs, such as its retailer-defined hierarchy.

More information about the purposes and usage of this file is presented in the following use cases.

Product Catalog File Use Cases

A client does not need to provide the product file in order to use the most basic TIBCO Reward functionality. The file is required, however, if you want the following capabilities:

1. Targeting based on past purchases of certain products within certain categories.

2. Offers valid only on purchases of certain products or categories.

3. Ability to collect category preferences from customers and target based on preferences.

Detailed Use Cases

Use Case 1. The client wants to target customers based on past purchases. The client has launched a cross-sell campaign to convince customers who bought an HDTV in the last year to purchase a new model. Using the TIBCO Reward CRMS, the client sends an email presenting the new HDTV models to all customers who have bought a product in the flat

screen TV category in the last year. In order to complete this scenario, the following data integration is required:

- Transaction and Customer file Import

- Product File Import

Use Case 2. The client wants to create an offer that awards 50 bonus points to all purchases in the "Cashmere" category. Using the TIBCO Reward CRMS, the client sets up a new offer that awards 50 bonus points to all customers who buy any product in the "Cashmere" category. In order to complete this scenario, the following data integration is required:

- Transaction and Customer file Import

- Product File Import

Use Case 3. The client wants to quickly move some additional inventory of a given product. The client creates an offer to give 100 additional points for purchasing selected products and associates a SKU image with the offer. The client includes the offer in an email communication sent to customers who have bought similar products in the past. In order to complete this scenario, the following data integration is required:

- Transaction and Customer file Import

- Product File Import

Use Case 4. The client wants to collect category preferences from customers so that the client can target email communications and offers based on each customer's self-expressed interests. Customers can select their preferred categories in the microsite, which lists the available product categories, and the client can then create offers and email communications tailored to customers based on their preferences. In order to complete this scenario, the following data integration is required:

- Product File Import

Use Case 5. The client wants to create a new Product custom attribute that is called "Seasonal Collections." This product attribute will allow clients to search for selected seasonal items, which will be useful when creating offers or segmenting customers by purchase history. SKUs that are part of a seasonal collection, such as the items labeled as "Winter Collection," can include items from different categories and brands, so this custom attribute provides a means of searching for and selecting items that are not addressed by other existing product category or brand criteria.

To implement this product custom attribute, the client:

- Defines a set of lookup values for this custom attribute by creating a simple file containing a list of values for the Seasonal Collections custom attribute.

- Defines a product custom attribute using the CRMS (under the Admin>Custom Attributes menu). The custom attribute is a lookup type attribute that is named "Seasonal Collections."

- Modifies the Product Catalog file, assigning selected products a custom attribute of the Lookup type called Seasonal Collections, and assigning the product a Seasonal Collection attribute value from the list of lookup values. One of these is Winter Collection.

Standard XML Sample File and XSD Schema

Clients provide Product data in TIBCO Reward's native schema, ISCProduct.xsd, as published at http://www.instorecard.com/schema/v1/RetailIntegration/ISCProduct.xsd.

A sample of a product file in TIBCO Reward's XML format is at http://www.instorecard.com/schema/v1/samples/RetailStoreSample.xml.

A sample of the product file in flat file format (tab separated value format) is provided in Appendix C, Flat File Formats and Examples.

Here is another sample of a product file in XML format:

```
- <transmission
xmlns="http://www.instorecard.com/schema/v1/RetailIntegration/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.instorecard.com/schema/v1/RetailI
ntegration/
http://www.instorecard.com/schema/v1/RetailIntegration/ISCProd uct.xsd">
<?xml-transform type="text/xslt"
href="ISCLogToCustomAttributeNumeric.xslt"?>
- <product_container>
<caption>20 GB iPod</caption>
- <department>
<department_level_1>Music</department_level_1>
<department_level_2>Portable Music</department_level_2>
<department_level_3>MP3 Player</department_level_3>
</department>
<description>Apple iPod 20GB</description>
- <image>
<image_url>http://apple.com/ipod20GB-X.jpg</image_url>
</image>
```

```
- <product>
<sku>56143</sku>
<list_price>200.00</list_price>
<brand>Apple</brand>
</product>
- <CustomAttributes>
- <NumericType>
<CustomAttribute name="StorageCapacity_GB" value="20" />
</NumericType>
- <LookupType>
<CustomAttribute name="Bundled" value="yes" />
<CustomAttribute name="ColorMatch" value="AppleBlue" />
</LookupType>
- <TextType>

 <CustomAttribute name="CelebrityRecommendation" value="One of the few
fine things that go in my ears. --Brett Pitt" />
</TextType>
- <DateTimeType>
<CustomAttribute name="ShipmentReceiptDate" value="2008-07-
14T02:03:04" />
</DateTimeType>
- <MonthDayType>
<CustomAttribute name="LastInventory" value="2006-07-14T00:00:00" />
</MonthDayType>
</CustomAttributes>
</product_container>
</transmission>
```

Product Catalog, File Guidelines, Data Elements, and Formats

Purpose and Usage

The Product Catalog file is used to give TIBCO Reward a complete and current record of your product catalog and product hierarchy.

TIBCO Reward can support up to five levels of product catalog categories in a hierarchical fashion. Here is one example of a product hierarchy with a product:

Women's Apparel/Outerwear/Leather/Leather Jackets/Brown Leather Jacket Model 100.

When TIBCO Reward imports a Product Catalog file, you will receive an email warning you if there is an orphaned category. If there are orphans, you can submit a new product file to correct the problem.

You can use all TIBCO Reward features if there are orphaned products, but you might not obtain the desired behavior. For example, if you have set up an offer that awards 50 bonus points for all leather jackets, but a particular model of leather jacket is not correctly mapped to the right category, the purchase of the orphaned product will not qualify the shopper to receive the award.

Each time you upload the product file, a new set of products and categories is created. That is, the product file is considered a complete and comprehensive list of all current products every time it is imported. Even if products and categories were included in a previous Product Catalog import file, if they are not included in the current import file, then they will be effectively deleted and no longer available.

Product Data Format Table

Field Name	Field Description	Data Type	Size	Sample Data	Notes
product_container	Product Information				
caption*	Name or heading for a product.	String	255	"Great Product!"	This is the value that appears throughout the CRMS, wherever a user sees product information.
department*	Client defined department (category) hierarchy.				TIBCO Reward supports at most five department levels. These categories are used for targeting,

Field Name	Field Description	Data Type	Size	Sample Data	Notes
					reporting, and offer qualification.
department_l evel_1*	Top-level product category	String	100	"Books" "DVDs" "CDs" "Software" "Toys"	The range of values for this field across all products are the categories available in the Shopper Application for the "What I Like" functionality. These same values appear in the "Preferred Category Breakdown" report.
department_l evel_2	Second-level product category	String	100	"Fiction", "Books", "DVDs", "CDs", "Periodicals" "Fantasy" "Educationa l"	If Department_ Level_2 is specified, Department_Level_ 1 is required.
department_l evel_3	Third-level product category	String	100	"Mysteries", "Fantasy" "Financial" "Cooking" "Jazz" "automotive"	If Department_ Level_3 is specified, Department_Level_ 2 is required.
description*	Human Readable			"Complete New	

Field Name	Field Description	Data Type	Size	Sample Data	Notes
	Description			Collection"	
image_url	URL to an image of the product.	String	100	http://example.com/image.gif	This image is available when creating new offers and when adding rewards to the Reward Catalog.
sku*	Required, must be unique. SKU, stock keeping unit, or product number.	String	100	"S100000123"	Catalog management (additions, removal) is done on SKU, which must be unique. This appears in most of the application where product name (caption) does. This SKU does not correspond to the SKU used in the Rewards Catalog.
list_price*	List price of product. i.e. The manufacturer's suggested retail price.	Decimal		15.23,34.78	

Field Name	Field Description	Data Type	Size	Sample Data	Notes
sale_price	Sale price of product. This is the price the customer should pay for the product.	Decimal		12.23,31.78	
brand	brand	String	100	Maytag	Brand used for targeting.
CustomDateTi meValueLastC hangedDateTi me		Date Time	19	2018-01-17 14:22:01. 032	The last time a custom date field was changed for this product, cumulative across all product custom date/time fields.
CustomDateTi meName1		String	100	Shipment Received	The name of the first date/time custom attribute, as defined in CRMS: in this case, "ShipmentReceive d". The line can be omitted from the file if a custom attribute is not defined.
CustomDateTi meValue1		Date Time	19	2018-07-19T00:00:01.	The value of the 1st date/time

Field Name	Field Description on	Data Type	Siz e	Sample Data	Notes
				065	custom attribute for this product. A Custom Attribute line can be omitted from the file if a custom attribute is not defined. Can be blank if not defined.
CustomDateTi meName2		Strin g	10 0	ReleaseDate	The name of the second date/time custom attribute, as defined in CRMS: in this case, " ReleaseDate ". Line can be omitted from the file if a custom attribute is not defined.
CustomDateTi meValue2		Date Time	19	2018-07- 01T00:00 :00.001	The value of the second date/time custom attribute for this product. Line can be omitted from the file if a custom attribute is not defined.
					Name and value columns repeat for third through 19th

Field Name	Field Description	Data Type	Size	Sample Data	Notes
					attributes
CustomDateTi meName20		String	100		The name of the 20th date/time custom attribute, as defined in CRMS. Line can be omitted from file if a custom attribute is not defined.
CustomDateTi meValue20		Date Time	19		The value of the 20th date/time custom attribute for this product. Can be omitted if not defined.
CustomNumericValueLastCh angedDateTime		Date Time	19		The last time a custom numeric field was changed for this product, cumulative across all custom numeric fields.
CustomNumeri cName1		String	100	StorageCa pacityIn Gigabyte s	The name of the 1st numeric custom attribute, as defined in CRMS: in this case, " StorageCapacityInG igabytes".. Can be blank if not defined.

Field Name	Field Description	Data Type	Size	Sample Data	Notes
CustomNumeri cValue1		Decimal	10	20	The value of the first numeric custom attribute for this product. Can be blank if not defined.
CustomNumeri cName2		String	100	GenericDollars	The name of the second numeric custom attribute, as defined in CRMS. Can be blank if not defined.
CustomNumeri cValue2		Decimal	10	128.94	The value of the second numeric custom attribute for this product. Can be blank if not defined.
					Name and value columns repeat for third thru 19th attributes
CustomNumeri cName20		String	100		The name of the 20th numeric custom attribute, as defined in CRMS. Can be blank if not defined.
CustomNumeri cValue20		Deci	10		The value of the

Field Name	Field Description	Data Type	Size	Sample Data	Notes
		mal			20th numeric custom attribute for this product. Can be blank if not defined.
CustomLookup ValueLastChangedDateTime		Date Time	19		The last time a custom lookup field was changed for this product, cumulative across all custom lookup fields.
CustomLookup Value1		String	45	Winter Collection	The value of the first lookup custom attribute for this product. Can be blank if not defined.
CustomLookup Name2		String	100		The name of the second lookup custom attribute, as defined in CRMS. Can be blank if not defined.
CustomLookup Value2		String	45		The value of the second lookup custom attribute for this product. Can be blank if not defined.

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
					Name and value columns repeat for third thru 19th attributes.
CustomLookup Name20		String	100		The name of the 20th lookup custom attribute, as defined in CRMS. Can be blank if not defined.
CustomLookup Value20		String	45		The value of the 20th lookup custom attribute for this product. Can be blank if not defined.
CustomTextVa lueLastChange dDateTime		String	100		The last time a custom text field was changed for this product, cumulative across all custom text fields.
CustomTextNa me1		String	100		The name of the first text custom attribute, as defined in CRMS. Can be blank if not defined.
CustomTextVa lue1		String	10		The value of the

Field Name	Field Description on	Data Type	Siz e	Sample Data	Notes
		g	0		first text custom attribute for this product. Note: Only the first 100 characters of the text custom attribute fields are included in the Export file.
CustomTextNa me2		Strin g	10 0		The name of the second text custom attribute, as defined in CRMS. Can be blank if not defined.
CustomTextVa lue2		Strin g	10 0		The value of the second text custom attribute for this product. Note: Only the first 100 characters of the text custom attribute fields are included in the Export file.
CustomDateTi meName3		Strin g	10 0		The name of the third date/time custom attribute, as defined in CRMS. Line can be omitted from the file if a custom

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
					attribute is not defined.
CustomDateTi meValue3		Date Time	19		The value of the third date/time custom attribute for this product. Line can be omitted from the file if a custom attribute is not defined.
					Name and value columns repeat for fourth through 19th attributes
CustomDateTi meName20		String	100		The name of the 20th date/time custom attribute, as defined in CRMS. Line can be omitted from the file if a custom attribute is not defined.

* Required

Product File Failures

The process of importing the Product file can either succeed or fail. This file does not support the ability to partially succeed. Thus, any error will make the entire file fail. Users can correct the error and submit the file again.

Product File Error Table

The following table includes the error codes that apply to Product file imports.

Error Code	Error Type	Error Reason	Suggested Action
11	File failed.	This file is a duplicate of a previously sent file.	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be a duplicate, ignore this notice.
12	File failed.	The file failed to import because it does not include any records.	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be a duplicate, ignore this notice.
13	File failed.	The file failed to import because of a general error.	Contact TIBCO Reward for diagnosis.
14	File failed.	The file failed to import because of a data format error.	You can correct the file by fixing data format errors. Common issues include having an alphanumeric value in a date field.
	File failed.	The file failed to import because the file type is incorrect.	This file was not recognized by our process. Common reasons for this issue include misnaming the file or accidentally sending a different file. You can correct this issue by sending the correct file.
17	File failed.	The file failed to import because it failed a validation rule.	Contact TIBCO Reward for diagnosis.

Store Import File

This file provides a list of client stores or locations, and may include variations such as web-based retail channels.

General Description

The store file includes all stores and locations across all channels. This file is used to create store- or channel-based offers, targeting based on store proximity, and reporting based on store or channel information.

Initial Integration Notes

This file and its fields will be transformed (as necessary) and ultimately processed in the form of a TIBCO Reward`RetailStore.xml` file.

Store File Import Use Cases

Importing all the store locations allows you to implement the following scenarios:

- Create store and channel-specific offers that are redeemable only in selected stores/channels.

- Segment customers based on their proximity to a store (for example, location within a 25-mile radius based on zip code).

- View sale and transaction data based on stores or channels and compare store performance for members of the loyalty program vs. non-members

Detailed Use Case

The client is a national retail chain that employs both nation-wide and local marketing initiatives. In this case, the client wants to create an offer that is exclusive to stores in the San Francisco area.

Using the CRMS, the client creates an offer that gives double points on purchases in the stores in the San Francisco area. This means that only transactions that take place at the selected stores will be eligible for the award. In addition, the client targets the offers only to customers located in the vicinity of the stores.

To implement this scenario, the following data integration is required:

- Transaction and shopper import file

- Store Import file

This same use case applies to retailers that operate through multiple channels, for example, through both e-commerce and physical store locations. In order to compare channel performance, store integration is required.

Standard XML Sample File and XSD Schema

See http://www.instorecard.com/schema/v1/docs/RetailStore/ for a detailed description of this schema.

A sample of a product file in TIBCO Reward's XML format is at http://www.instorecard.com/schema/v1/samples/RetailStoreSample.xml.

A sample of the store file in flat file format is provided in Flat File Formats and Examples.

Here is another sample of an XML file in an acceptable TIBCO Reward XML format:

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<RetailStore xmlns=
"http://www.instorecard.com/schema/v1/RetailIntegration/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.instorecard.com/schema/v1/
RetailIntegration/
http://www.instorecard.com/schema/v1/RetailIntegration/RetailStore.xsd">
<Store>
<StoreID>S101</StoreID>
<StoreName>SF Store #1</StoreName>
<StoreAddress>
<AddressLine1>123 Main Street</AddressLine1>
<AddressLine2>Suite 100</AddressLine2>
<City>San Francisco</City>
<State>CA</State>
<PostalCode>94104</PostalCode>
</StoreAddress>
<StorePhoneNumber>415-245-1234</StorePhoneNumber>
</Store>
</RetailStore>
```

File Usage Guidelines, Data Elements and Formats

Purpose and Usage

The Store ID is used to identify each store and to match the store to transactions included in transaction files. This is necessary for offer redemptions. In order for this to work correctly, you need to make sure that the store ID provided in this file matches the store ID values provided in the transaction file.

To use store-based targeting, you must provide postal codes in the store files and you must provide postal code information for customers.

The store file is also required if you want to report on store performance.

Store Data Table

TIBCO Reward Field Name	Description	Data Type	Size	Sample Data	Notes
Store ID*	The client's unique ID of this store.	String	100	"S101"	This identifier must be unique within a file
Store Name*	Display Name for the store/channel	String	100	"SF Store #1"	This is the value that appears throughout the CRMS
AddressLine1*		String	100	"123 Main Street"	
AddressLine2		String	100	"Suite 100"	
City*		String	100	"San Francisco"	
State*		String	2	"CA"	

TIBCO Reward Field Name	Description	Data Type	Size	Sample Data	Notes
PostalCode*		String	100	"94104"	
StorePhoneNumber*	The phone number to call in order to get store information.	String	100	"415-555-1234"	

* Required

Store File Failures

Error Code	Error Type	Error Reason	Suggested Action
11	File failed.	This file is a duplicate of a previously sent file.	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be a duplicate, ignore this notice.
12	File failed.	The file failed to import because it does not include any records.	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be empty, ignore this notice.
13	File failed.	The file failed to import because of a general error.	Contact TIBCO Reward for diagnosis.
14	File failed.	The file failed to import because of a data format error.	You can correct the file by fixing data format errors. Common problems include having an alphanumeric value in a date field.

Error Code	Error Type	Error Reason	Suggested Action
15	File failed.	The file failed to import because the file type is incorrect.	This file was not recognized by our process. Common reasons for this issue include misnaming the file or accidentally sending a different file. You can correct this issue by sending the correct file.
17	File failed.	The file failed to import because it failed a validation rule.	Contact TIBCO Reward for diagnosis.

Reward Export File

The Rewards Export file includes the current list of rewards for shoppers for a given period. It includes all customers who qualified for a reward and their corresponding reward information.

General Description

The Reward file lists Rewards and Customer Award and Reward information for:

- customers who have earned rewards, either by converting existing points into rewards catalog items, or as the result of automated point conversion

- customers who have earned rewards by meeting the requirements of an offer excluding points.

When designing the loyalty program, clients must select a mechanism to convert points into rewards. TIBCO Reward offers the following two options:

- Shoppers' points are automatically converted into rewards eligibility (that is, rewards data) based on a point threshold, and a set of this rewards data is generated and delivered in the Reward file for all of the shoppers who meet reward conversion criteria. These criteria are defined during the onboarding process.

- Customers spend their points ("burn points") by trading them for rewards from a

rewards catalog. These rewards are recorded in the reward file for all of the shoppers who completed reward selections.

- The automatic point conversion occurs on a weekly basis.

- The reward file is made available for downloading once a week.

The reward file includes the rewards obtained by meeting loyalty program criteria as well as awards that were the direct result of offers, such as those given for bonuses and sweepstakes entries. If your company implemented its TIBCO Reward program prior to May 2007, your reward file may include awards obtained by meeting award program criteria. Contact your TIBCO Reward Account Management representative for more information.

Initial Implementation Notes

Use of this data file is optional. For additional information about data integration, contact your TIBCO Reward Account Management representative.

Contents of the Reward File

The standard rewards file will show the following abbreviations for the new awards:

Award Type	
Bonus Award from Offer	N
Rebate Award from Offer	R
Sweepstake Award from Offer	S
Awards due to Point Burns by Auto Spend Points	O
Awards by Reward Catalog	B

Information to be included for Bonus award:

- Offer ID

- Offer Internal Name

- Award Type: "Bonus"

- Award Text: description associated with the bonus award

Information to be included for sweepstakes award:

- Offer ID

- Offer Internal Name

- Award type: "Sweepstakes"

- Award Text: description associated with the sweepstakes award

Information to be included for Rebate award:

- Offer ID

- Offer Internal Name

- Award type: "Rebate"

- Award Text: $ amount as specified in CRMS

If a customer qualifies to get an award, that customer must be included in the next Rewards Export file. The Reward Export file includes awards from offers regardless of whether the client is using auto-conversion or reward catalog.

Reward Export File Use Cases

Use Case 1: The client uses a reward catalog.

Customers can redeem their points for a variety of products offered in a rewards catalog. A Customer logs into his or her account and selects a reward. Customer information and reward information is automatically included in the next scheduled reward export. The client or its designated partner can then fulfill the reward.

Use Case 2: The client uses autoconversion.

The client has implemented a program that awards a $10 gift card for every 200 points accrued. The reward file lists all shoppers who had at least 200 points and have been awarded one or more $10 gift cards since the last reward export file was generated. The weekly reward file is made available to the client or third party for fulfillment.

Use Case 3: The client implements offers that award bonus rewards or a sweepstake entry.

The client has implemented an offer that rewards customers with a sweepstake entry (that is, "Complete a survey, and get a chance to win a 1,000 dollar shopping spree"). Every

week, the reward file will include the customers who have entered the sweepstake. This information will be used for fulfillment by the client or third party.

Use Case 4: The client implements a tier that automatically qualifies customers in the tier for a bonus offer: a 10% discount.

A client wants to create a tier whose benefit is a permanent 10% off. This can be implemented by creating the tier's dominant offer as a bonus offer whose description is 10% off. When the customer joins the tier, they qualify for the offer. The reward information will be included in the next Reward file for fulfillment by the client or third party.

XML Sample File and XSD Schema

The Reward Export File is provided in comma separated value (CSV) format by default. At your request, TIBCO Reward will also provide this file in XML format.

Important: To see a sample of a Rewards Export file in its default CSV format, see section Standard CSV Sample File.

Refer to http://www.instorecard.com/schema/v1/RetailIntegration/Rewards.xsd

for TIBCO Reward's XML rewards file format.

Also refer to the schema documentation located at http://www.instorecard.com/schema/v1/docs/Rewards/

A sample of a rewards file in TIBCO Reward's XML format is at http://www.instorecard.com/schema/v1/samples/RewardsSample.xml

Here is another example of an XML file:

```xml
<?xml version="1.0" ?>
<Rewards xmlns="http://www.instorecard.com/schema/v1/RetailIntegration/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.instorecard.com/schema/v1/RetailIntegrati
on/ http://localhost/schema/v1/RetailIntegration/Rewards.xsd">
<DateRange>
<BeginDate>2018-01-01T00:00:00</BeginDate>
<EndDate>2018-01-01T00:01:00</EndDate>
</DateRange>
<Reward ID="3">
<RewardInformation>
```

```
<InStorecardRewardID>3452912</InStorecardRewardID>
<RewardCompensation>Bonus</RewardCompensation>
<ProgramInformation>
<ProgramID>0</ProgramID>
<ProgramName>NONE</ProgramName>
</ProgramInformation>
<RewardText>$20 Gift Certificate</RewardText>
<RewardValue>0</RewardValue>
<RewardProduct>
<SKU>RP-20</SKU>
<ProductName>$20 Gift Certificate</ProductName>

<Description>$20 Gift Certificate</Description>
<RedeemValue>2000</RedeemValue>
</RewardProduct>
</RewardInformation>
<InStorecardShopperID>23162911</InStorecardShopperID>
<ShopperName>
<PersonFullName>
<FirstName>Sara</FirstName>
<LastName>Conner</LastName>
</PersonFullName>
</ShopperName>
<ShopperAddress>
<AddressLine1>3932 East 93rd Street</AddressLine1>
<City>Los Angeles</City>
<State>CA</State>
<PostalCode>93012</PostalCode>
<CountryCode>US</CountryCode>
</ShopperAddress>
<EMail>sara@example.com</EMail>
<ProcessDateTime>2018-01-01T21:00:59</ProcessDateTime>
<ShopperPointBalance>7500</ShopperPointBalance>
<PointBalanceExtractDate>2018-01-01T23:59:59</PointBalanceExtractDate>
<OfferId>3703</OfferId>
<OfferName>070101-0131Get $20 Storebucks for every $100
spent</OfferName>
<LoyaltyCardNumber>123412341</LoyaltyCardNumber>
</Reward>
</Rewards>
```

Export File Usage Guidelines, Data Elements and Formats

The Rewards export file is an incremental export. It includes data for all the customers who have earned rewards since the last Rewards export file was generated.

The Reward Export file includes a line of reward data for each reward for each shopper.

Purpose and Usage

This file is used to provide an accounting for recent rewards and related customer point balances. The Rewards file provides up-to-date information about the customers who are using programs and offers and how they are using them, as well as information about the rewards. The file can be provided to third parties to fulfill rewards.

If a customer qualifies to get an award, that customer must be included in the next Rewards Export file. The Reward Export file includes awards from offers regardless of whether the client is using auto-conversion or the reward catalog.

Rewards Data Table

Field #	Name	Description	Type	Length	Sample Data	Notes
1	LoyaltyLabRewardID	TIBCO Reward's unique identifier for a reward.	Integer	10	3877824	
2	RewardCompensation	The compensation type of the reward. It can be: "OfflineRebate" (External	String	100	"B" , "O"	RewardCompensation for Reward Center redemptions will always be "B." If you are using automatic point

Field #	Name	Description	Type	Length	Sample Data	Notes
		Rebate), or "Bonus". See the Award Type table following this table.				conversion, the RewardCompensation will be "O".
3	RewardText	Text of the associated reward.	String	255	"100 Points", "$20 Credit",	This field contains different strings of text, depending on the type of reward: "$<Amount> Credit" – Dollar/Percent Off "<CRMS Description>" – Bonus "$<Rebate Amount> Rebate" – External Rebate "<Points><Points Name>" – Points Program "$<Rebate Amount> < Award Description>" – Automatic Point Conversion Award "<Reward Product Description>" – Reward Center.

Field #	Name	Description	Type	Length	Sample Data	Notes
4	RewardValue	Value of the associated reward.	Decimal	10	30.0000	This field contains different strings of text, depending on the type of reward: "20.00" – Bonus, Dollar/Percent Off, External Rebate "100"– Points Note: Does not apply to reward catalog items
5	ShopperID	Client's shopper identifier	String	50	"112358"	This element is not included in the output if ShopperId is not captured in the TIBCO Reward system.
6	InStorecardShop perId	TIBCO Reward's unique identifier for a shopper.	Integer	10	12345	
7	FirstName		String	100	"Jane"	
8	MiddleName		String	100	"C"	
9	LastName		String	100	"Doe"	
10	AddressLine1		String	100	"123 Main Street"	

Field #	Name	Description	Type	Length	Sample Data	Notes
11	AddressLine2		String	100	"Apt. 1"	
12	City		String	100	"San Francisco"	
13	State		String	2	"CA"	
14	PostalCode		String	100	"94104"	
15	PhoneNumber	Phone number of shopper earning the reward.	String	100	"415-555-1234"	
16	EMail	E-mail address of shopper earning the reward.	String	200	"jane@example.com"	
17	ProcessDateTime	The date and time the reward was processed at Reward	DateTime	19	CCYY- MM-DD hh:mm:ss.mmm	No equivalent in XML format
18	PointBalance	If there is a point program, the customer's current point balance.	Decimal	10	200.0000	

Fiel d #	Name	Description	Type	Lengt h	Sample Data	Notes
19	PointBalanceExt r actDate		DateTi me	19	CCYY- MM- DD hh:mm:ss.m mm	
20	OfferId	ID of Offer within TIBCO Reward that generated the Reward.	Intege r	9	4372897	
21	OfferName	A description of the Offer within TIBCO Reward that generated the Reward.	String	100	"$15 off $100 purchase"	
22	LoyaltyProgram ID		String	100	"112358"	This field only applicable if the shopper registers a loyalty card (not a credit card) when joining the client's main program, in which case this field will contain the card number of the loyalty card.

Field #	Name	Description	Type	Length	Sample Data	Notes
						Otherwise, this value will not be included.

Award Type Table

The standard rewards file will show the following abbreviations for the new awards:

Award Type	
Bonus Award from Offer	N
Rebate Award from Offer	R
Sweepstake Award from Offer	S
Awards due to Point Burns by Auto Spend Points	O
Awards by Reward Catalog	B

Variations in file data for different types of Awards

Information to be included for Bonus award:

- Offer ID
- Offer Internal Name
- Award Type: "Bonus"
- Award Text: description associated with the bonus award

Information to be included for sweepstakes award:

- Offer ID
- Offer Internal Name
- Award type: "Sweepstakes"

- Award Text: description associated with the sweepstakes award

Information to be included for Rebate award:

- Offer ID

- Offer Internal Name

- Award type: "Rebate"

- Award Text: $ amount as specified in CRMS

If a customer qualifies to get an award, that customer must be included in the next Rewards Export file. The Reward Export file includes awards from offers regardless of whether the client is using auto-conversion or reward catalog.

Standard CSV Sample File

The Reward Export File is provided in comma separated value (CSV) format by default. TIBCO Reward can also provide this file in XML format, as well as other commonly used flat file formats (tab separated, pipe delimited format).

The sample below shows a few lines of a sample Reward Export file in CSV format (line spaces added between records).

```
15208389,"N","Get $15 of CityCash for every $30 you spend!!",10.0000,
,53577870,"Firstname","A","Shopper","100 Pine Street","","  "," ","
","","emailnom@usdoj.govx",47:19.7,127,01:51.8,3138,"CityCash!","9900000
006212931" 15399681,"O","$25.00 off a $50 purchase ",25.0000,
,53578355,"First","M","Lastname","100 Pine Street","","  "," ","
","","NameSample5@example.comx",22:20.1,7,01:51.8,610,"",""

15399683,"O","$25.00 off a $50 purchase ",25.0000,
,53578355,"First","","Surname","100 Pine Street","","  "," ","
","","yournamehere@example.comx",22:20.1,7,01:51.8,610,"",""

15282202,"N","Get $15 of CityCash for every $30 you spend!!",10.0000,
,53579372,"Generic","P","Shopper","100 Pine Street","","  "," "," ","","
somename @comcast.netx",40:58.2,1,01:51.8,3138,"CityCash!",""

15236597,"N","Pants are Buy One Get One for $15 Only!",0,
,53579372,"Namefirst","P","Namelast","100 Pine Street","","  "," ","
","","Nonnumname@comcast.netx",35:52.9,1,01:51.8,3024,"Sexy Pants are
Back!",""
```

```
15431031,"N","Redeem Your $15 CityCash NOW!",0, ,53579799,"
Jane","E","Shopper","100 Pine Street",""," "," ","
","","Othername@comcast.netx",32:26.4,1,01:51.8,3139,"Redeem
CityCash!",""

15721002,"N","Pants are Buy One Get One for $15 Only!",0,
,53578099,"John","Q","Public", "100 Pine Street",""," "," ","
","","sample2name@aol.comx",49:17.4,1,01:51.8,3024,"Sexy Pants are
Back!",""

16021827,"O","$25.00 off a $50 purchase ",25,
,53578284,"Humphrey","","Bogart","100 Pine Street",""," "," ","
","","bogeyman@example.comx",42:19.7,2,01:51.8,610,"",""

15932493,"N","NEW YORK IS ON SALE!",0,
,53578287,"Lauren","","Bacall","100 Pine Street",""," "," ","
","","bacallwoman@ny.frb.orgx",08:13.9,4,01:51.8,3174,"NY is on
SALE!",""
```

> **ℹ Note:** If you wish to receive the Reward Export file in other than CSV format, specify to TIBCO Reward the format that you prefer. A request for a change in the format of this file that is made after the (pre-integration) onboarding process will be considered a customization.

Rewards Export File Failures

If the Rewards file export fails for any reason, TIBCO Reward will notify the client. The problem will be resolved, and TIBCO Reward will appraise the client of progress on the resolution.

New and Updated Customer Export File

The New and Updated Customer file is often called the Shopper file. Sometimes it is called the Customer Export, or Shopper extract file. This file lists customer (shopper) data that is new or has been changed since the previous version of this file was extracted from the TIBCO Reward database. This file is exported from TIBCO Reward to a client.

Regular exports of this file keep clients up-to-date with the most current information about customers, their loyalty membership, and their point balances. These files are typically made available to clients on a regular schedule: daily, weekly, or monthly.

General Description

The primary purpose of this file is to ensure that data concerning members of the loyalty program are transmitted on a timely basis from TIBCO Reward to the client, thereby guaranteeing that clients have high-quality, up-to-date customer data.

Clients can use this extract file to transfer customer information from TIBCO Reward to other applications, databases and reports, including market analysis and intelligence systems. The Customer export file provides the client with an update of customer records that is suitable for all purposes.

Regarding Custom Attributes

The Customer Export file can, as an option, specify how certain Custom Attribute data fields are to be used for custom purposes. Custom attributes fields are included in the Customer Export file by default, but to make use of one of them, you must define it by assigning a name to it. In the best case, a client should assign a name to each of the custom attributes that it will use while it is completing the TIBCO Reward Onboarding process. After that process has been completed, changes to the format of the Customer Export file are considered customizations, but such changes are fairly common. Further information is provided in the online help for the CRMS system in the topics that cover custom attributes.

New and Updated Customer Export File Use Cases

Use Case 1: Client wants up-to-date Customer Point Balance

The client needs to know the customer point balance (for segmentation, analysis, and/or support purposes outside of the TIBCO Reward system). Using the New and Updated Customer Export File, the client receives daily updates and can update their customer point balance every time there is a change.

Use Case 2: Customer Export file with Custom Attributes

The client has set up in the CRMS a custom attribute to collect its customers' birthday data. Customers' birthdays are collected during their sign up process, which is hosted by Reward.

The New and Updated Customer Export File provides customer data and custom attribute data for new and updated customers, including data collected during signups.

Use Case 3: Customer export file is needed when TIBCO Reward sends email

If TIBCO Reward sends any email on behalf of the client, it is important for the client to use the data in this file to update their opt-out list. Even when TIBCO Reward does not host the opt-out page, opt outs are still automatically processed based on hard or soft bounces and feedback loop. For this reason, it is important for the client to use the data in the New and Updated Customer Export file to keep the opt-out list up-to-date.

Standard XML Sample and XSD Schema

Unlike most other batch files, the New and Updated Customer Export File is sent in comma separated value (CSV) format by default. TIBCO Reward can also provide this file in XML format, as well as other commonly used flat file formats (tab separated, pipe delimited format).

Important: To see New and Updated Customer Export file in its default CSV format, see below.

This file includes new customer and updated customer information. For a detailed description of TIBCO Reward's XML shopper file format, see http://www.instorecard.com/schema/v1/docs/Shopper/.

A sample of a Customer file in TIBCO Reward's XML format is at http://www.instorecard.com/schema/v1/samples/ShopperSample.xml.

Another example of a New and Updated Customer Export File in XML file:

```xml
<?xml version="1.0" encoding="utf-8"?>
<ShopperRegistration
xmlns="http://www.instorecard.com/schema/v1/RetailIntegration/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.instorecard.com/schema/v1/RetailIntegrati
on/ http://www.instorecard.com/schema/v1/RetailIntegration/Shopper.xsd"
>
<Shopper>
<RegistrationDate>2005-07-15T14:22:00.000</RegistrationDate>
```

```xml
<CreationDate>2007-01-05T14:05:59.910</CreationDate>
<ShopperStatus>A</ShopperStatus>
<LoyaltyMember>1</LoyaltyMember>
<ShopperID>1381410875</ShopperID>
<InStorecardShopperID>22732884</InStorecardShopperID>
<ShopperName>
<PersonFullName>
<FirstName>GREG</FirstName>
<LastName>PETERSON</LastName>
</PersonFullName>
</ShopperName>
<ShopperAddress>
<AddressLine1>1916 SOME OLD RD</AddressLine1>
<City>MONTGOMERY</City>
<State>IL</State>
<PostalCode>60538</PostalCode>
</ShopperAddress>
<EMail>greg@loyaltylab.com</EMail>
<EMailOptIn>1</EMailOptIn>
<PhoneNumber>9999999999</PhoneNumber>
<TierInfo>
<TierName>Basic</TierName>
<TierJoinDate>2007-01-05T14:05:59.913</TierJoinDate>
</TierInfo>
<PointBalance>1001.0000</PointBalance>
<CustomAttributes>
<DateTimeType>
<CustomAttribute name="FirstPurchase" value="2006-07-19T00:00:01"/>
<CustomAttribute name="LastPurchase" value="2007-06-25T00:00:01"/>
</DateTimeType>
<NumericType>
<CustomAttribute name="TotalPurchases" value="3"/>
<CustomAttribute name="TotalDollars" value="128.94"/>
 </NumericType>
<LookupType>
<CustomAttribute name="Country" value="USA"/>
</LookupType>
</CustomAttributes>
</Shopper>
</ShopperRegistration>
```

> **Note:** <SourceOfChange> is considered a deprecated data element. If it appears in a schema that you are using, or that you refer to, be aware that this data is not used and is not usable.

File Usage Guidelines, Data Elements and Formats

Purpose and Usage

The data included in this Customer file is incremental.

The New and Updated Customer Export File. Only the records with new data or updated data are extracted and included in this file. TIBCO Reward generates this file by extracting information from its database for each customer whose "profile information" was updated between the current time and the previous time of extract. To be more specific, an update in any one of the following profile information fields in a customer's record will cause that customer's record to be included in the next Customer export file:

- ShopperStatus

- ShopperName

- ShopperAddress

- Email

- CustomerPrivacy

- PhoneNumber

- Change in point balance

- Tier Movement (if applicable)

> **Note:** If a Customer export file includes custom attributes, then a change in one of the following fields in a customer's record will cause that record to be included in the extract:
>
> - CustomDateTimeValueLastChangedDateTime DateRange
>
> - CustomNumericValueLastChangedDateTime
>
> - CustomLookupValueLastChangedDateTime
>
> - CustomTextValueLastChangedDateTime

New and Updated Customer Export Data Table

Field Name	Field Description	Data Type	Size	Sample Data	Notes
FileId		Integer	10	123	TIBCO Reward internal file identifier
RegistrationDate	Date the customer completed their registration for the client's program.	DateTime	19	2018-01-15 14:22:01.032	If the customer has signed up on the client's microsite, this value will be the date the customer completed signup. Otherwise, this value will be equivalent to the CreationDate. This is also known as "Member SinceDate."
CreationDate	Date the customer first entered the TIBCO Reward system	DateTime		2018-01-15 14:22:01.032	If the client provided a historical transaction feed, this value will be the date of the first transaction appearing for the customer.
ShopperStatus		String	1	"A" = Active "I" =	When a customer opts out of the

Field Name	Field Description	Data Type	Size	Sample Data	Notes
				Inactive	loyalty program, this value will be "I". Otherwise, the value will be "A".
LoyaltyMember		Bit	1	1 = Member 0 = Non-member	When a customer opts out of the loyalty program, this value will be "0". Otherwise, the value will be "1".
SourceOfChange NOTE: This is a deprecated schema element.		String	100	"Retailer", "Shopper", "CSR", or "Other"	Note: SourceOfChange is deprecated. It is not supported. If it appears in a schema, be aware that the data is not used or usable.
ShopperId		String	50	"123459876"	Client's identifier for this customer
InStorecardShopperI D		Integer	10	100123456	
FirstName		String	100	"Jane"	
MiddleName		String	100	"C"	
LastName		String	100	"Doe"	
AddressLine1		String	100	"123 Main	

Field Name	Field Description	Data Type	Size	Sample Data	Notes
				Street"	
AddressLine2		String	100	"Apt. 1"	
City		String	100	"San Francisco"	
State		String	2	"CA"	
PostalCode		String	100	"94104"	
EMail		String	200	"jane@exa m ple.com"	
EmailOptIn		Boolean	1	1 = Opted into marketing emails 0 = Opted out of marketing emails	EmailOptIn="1" maps to a value of "OptedIn" in the CustomerPrivacy XML element; EmailOptIn="0" maps to a value of "eMail" in the CustomerPrivacy XML element.
PhoneNumber		String	100	"415555123 4"	
LoyaltyProgramID		String	100	"112358"	This field only applicable if the customer registers a loyalty card (not a credit card) when joining the

Field Name	Field Description	Data Type	Size	Sample Data	Notes
					client's main program, in which case this field will contain the card number of the loyalty card. Otherwise, this value will not be included.
TierName		String	100	"Base tier", "Second tier"	This is the name of the customer's tier as it appears in the CSR tool. This is also used for display purposes when using Tier Signage.
TierJoinDate		DateTime	19	2018-01-15 14:22:01.032	
StatusUpdateDateTi me		DateTime	19	2018-01-15 14:22:01.032	When ShopperShopper Status changes from "A" to "I" or from "I" to "A", this value is updated with the time the change was made in the TIBCO Reward system.
PointBalance		Integer	10	10, 5000	

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
CustomDateTimeValueLastCh angedDate Time		DateTi me	19	2018-01-17 14:22:01.032	The last time a custom date field was changed for this customer, cumulative across all custom date/time fields.
CustomDateTimeName1		String	100	First Purchase	The name of the first date/time custom attribute, as defined in CRMS: in this case, "First Purchase". The line can be omitted from the file if a custom attribute is not defined.
CustomDateTimeVal ue1		DateTi me	19	2018-07-19T00:00:01 .065	The value of the first date/time custom attribute for this customer. A Custom Attribute line can be omitted from the file if a custom attribute is not defined. Can be blank if not defined.

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
CustomDateTimeName2		String	100	Last Purchase	The name of the second date/time custom attribute, as defined in CRMS: in this case, "Last Purchase". Line can be omitted from the file if a custom attribute is not defined.
CustomDateTimeValue2		DateTime	19	2018-06-25T00:00:04.083	The value of the second date/time custom attribute for this customer. Line can be omitted from the file if a custom attribute is not defined.
CustomDateTimeName3		String	100		The name of the third date/time custom attribute, as defined in CRMS. Line can be omitted from the file if a custom attribute is not defined.
CustomDateTimeValue3		DateTi	19		The value of the third date/time

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
		me			custom attribute for this customer. Line can be omitted from the file if a custom attribute is not defined.
					Name and value columns repeat for fourth through 19th attributes
CustomDateTimeName20		String	100		The name of the 20th date/time custom attribute, as defined in CRMS. Line can be omitted from the file if a custom attribute is not defined.
CustomDateTimeValue20		DateTime	19		The value of the 20th date/time custom attribute for this customer. Can be omitted if not defined.
CustomNumericValueLastChangedDateTi me		DateTime	19		The last time a custom numeric field was changed for this

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
					customer, cumulative across all custom numeric fields.
CustomNumericName1		String	100	TotalPurchases	The name of the first numeric custom attribute, as defined in CRMS. Can be blank if not defined.
CustomNumericValue1		Decimal	10	3	The value of the first numeric custom attribute for this customer. Can be blank if not defined.
CustomNumericName2		String	100	TotalDollars	The name of the second numeric custom attribute, as defined in CRMS. Can be blank if not defined.
CustomNumericValue2		Decimal	10	128.94	The value of the second numeric custom attribute for this customer. Can be blank if not defined.

Field Name	Field Description on	Data Type	Siz e	Sample Data	Notes
					Name and value columns repeat for third through 19th attributes.
CustomNumericName20		String	100		The name of the 20th numeric custom attribute, as defined in CRMS. Can be blank if not defined.
CustomNumericValue20		Decima l	10		The value of the 20th numeric custom attribute for this customer. Can be blank if not defined.
CustomLookupValueLastCha ngedDateTi me		DateTi me	19		The last time a custom lookup field was changed for this customer, cumulative across all custom lookup fields.
CustomLookupName1		String	100		The name of the first lookup custom attribute, as defined in CRMS. Can be blank if not

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
					defined.
CustomLookupValue1		String	45		The value of the first lookup custom attribute for this customer. Can be blank if not defined.
CustomLookupName2		String	100		The name of the second lookup custom attribute, as defined in CRMS. Can be blank if not defined.
CustomLookupValue2		String	45		The value of the second lookup custom attribute for this customer. Can be blank if not defined.
					Name and value columns repeat for third through 19th attributes.
CustomLookupName20		String	100		The name of the 20th lookup custom attribute, as defined in CRMS. Can be

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
					blank if not defined.
CustomLookupValue20		String	45		The value of the 20th lookup custom attribute for this customer. Can be blank if not defined.
CustomTextValueLastChangedDateTime		String	100		The last time a custom text field was changed for this customer, cumulative across all custom text fields.
CustomTextName1		String	100		The name of the first text custom attribute, as defined in CRMS. Can be blank if not defined.
CustomTextValue1		String	100		The value of the first text custom attribute for this customer. Can be blank if not defined. Note: Only the first 100 characters of the text custom attribute fields

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
					are included in the Customer Export file.
CustomTextName2		String	100		The name of the second text custom attribute, as defined in CRMS. Can be blank if not defined.
CustomTextValue2		String	100		The value of the second text custom attribute for this customer. Can be blank if not defined. Note: Only the first 100 characters of the text custom attribute fields are included in the Customer Export file.
<Custom Text Name and Value columns 2 through 19>					Name and value columns repeat for third through 19th attributes.
CustomTextName20		String	100		The name of the 20th text custom attribute, as defined in CRMS.

Field Name	Field Description on	Data Type	Size	Sample Data	Notes
					Can be blank if not defined.
CustomTextValue20		String	100		The value of the 20th text custom attribute for this customer. Can be blank if not defined. Note: Only the first 100 characters of the text custom attribute fields are included in the Customer Export file.

Customer Export Data Table

Valid only for clients who do not have custom attributes in their export

Field Name	Description	Data Type	Size	Sample Data	Notes
FileExportId	Internal TIBCO Reward identifier for the file export	Integer	12854		
Registration Date	Date the customer (shopper) completed	DateTime	19	"CCYY-MM-DDThh:mm:ss"	If the customer has signed up on the

Field Name	Description	Data Type	Size	Sample Data	Notes
	their registration for the client's program.				client's microsite, this value will be the date the customer completed signup. Otherwise, this value will be equivalent to the CreationDate.
LoyaltyLabCreationDate	Date the customer first entered the TIBCO Reward system.	DateTime	19	"CCYY-MM-DDThh:mm:ss"	If the client provided a historical transaction feed, this value will be the date of the first transaction appearing for the customer.
ShopperStatus	Customer status	String	50	"A" = Active "I" = Inactive	When a customer opts out of the loyalty program, this value will be "I". Otherwise,

Field Name	Description	Data Type	Size	Sample Data	Notes
					the value will be "A".
LoyaltyMember	Membership indicator – indicates membership in the client's loyalty program.	Flag/bit	1	"1" = Loyalty member "0" = Non- Loyalty member	When a customer opts out of the loyalty program, this value will be "0". Otherwise, the value will be "1".
SourceOfChange NOTE: This is a deprecated schema element.	Where the change came from. Either the client, customer or CSR.	Enum		"Shopper", "CSR", "Other"	Source Of Change is deprecated. It is not supported. If it appears in a schema, be aware that the data is not used or usable.
ShopperID	Client's unique identifier for a customer	String	50	"123459876"	
LoyaltyLabShopperID	TIBCO Reward's unique identifier for a customer	Integer	10	100123456	
Title		String	4	"Mr.", "Ms."	

Field Name	Description	Data Type	Size	Sample Data	Notes
FirstName		String	100	"Jane"	
MiddleName		String	100	"C"	
LastName		String	100	"Doe"	
ShopperAddress	Customer's address	(record)			
Address Line1		String	100	"123 Main Street"	
Address Line2		String	100	"Apt. 1"	
City		String	100	"San Francisco"	
State		String	2	"CA"	
PostalCode		String	100	"94104"	
Email	Customer's email address.	String	100	"jane@example.com"	
EmailOptIn	Email communications opt-in status. Denotes that the customer accepts commercial emails from client.	Flag	1	"1"– opted in, "0" – opted out	If the customer has opted out of receiving marketing emails, this value will be "0". In all other cases, this value will be "1"

Field Name	Description	Data Type	Size	Sample Data	Notes
PhoneNumber	Customer's phone number.	String	100	"415-555-1234"	
LoyaltyCardNumber	If a client has a loyalty program in place, this is the customer's ID card number for the current loyalty program.	String	100	"112358"	This field is only applicable if the customer registers a loyalty card (not a credit card) when joining the client's main program, in which case this field will contain the card number of the loyalty card. Otherwise, this value is not be included.
TierInfo	Current tier information (if applicable) for the customer	(record information)			
TierName	Name of the customer's current tier.	String	100	"Base tier", "Second tier"	Name of the customer's tier as it appears in the CSR tool; also used for

Field Name	Description	Data Type	Size	Sample Data	Notes
					display purposes when using Tier Signage.
TierJoinDate	The date the customer qualified for the current tier.	DateTime	19	"CCYY-MM-DDThh:mm:ss"	
StatusUpdateDateTime	The time when the customer record was most recently updated.	String	100	"CCYY-MM-DDThh:mm:ss"	This value is updated with the time the change was made in the TIBCO Reward system.
PointBalance	Current point balance for a customer (if a point program exists).	Decimal		"10", "5000"	Loyalty member's current point balance, if applicable.

Standard CSV Sample Files

Unlike some other exported batch files, the New and Updated Customer Export File is sent in comma separated value (CSV) format by default. TIBCO Reward can also provide this file in XML format, as well as other commonly used flat file formats (tab separated, pipe delimited format).

The two samples below (standard and pre-7.2 release) each show a few lines of a sample New and Updated Customer Export File in CSV format.

Standard File Format Sample

The next sample shows a few lines of a sample New and Updated Customer Export File in CSV format. This sample is for clients who want to use Custom Attributes. It includes fields for custom attributes. Most of the Custom Attribute fields are not used (empty fields are indicated by a pair of double quotation marks with no content between quotes. In this sample, the client uses only a few of the available fields available for assignment to custom attributes.

```
2773,2007-03-16 13:42:50.877,2007-03-16

13:42:50.903,"A",1,"Other","58841512",58841562,"Nastia","v","Molchanenko
","101 Pine
St","","San
Francisco","NJ","94005","anastasia@loyaltylab.com",1,"","","",1900-01-01
00:00:00.000,,220.0000,2007-03-21 16:52:52.383,"",,"",2007-02-02
00:00:00.000,
"dttnDateLastSale",,"",,"dttnDateLastMtc
e",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,,"",,"
StoreID",,"AssignedSalesperso
n",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,
2007-
03-21 16:52:52.430,"Marital Status","1","Age
Range","3","OpenRewards",,"",,"",,"",,"",
,"",,"",,"",,"",
,"",,"",,"",,"",,"",,"",,"",,"",,,"",,"",,"",,"",,"",,"",,"",,""
,,"",,"",,"",,"",
,"",,"",,"",,"",,"",,"",
2773,2007-04-23 01:00:00.000,2007-03-23
09:51:19.950,"I",1,"Other","05093951",
58841669,"Anastasia","","Molchanenko","100
Pine","","BRISBANE","CA","94111",
"anastasia2@loyaltylab.com",0,"6504151212","","",1900-01-01
00:00:00.000,,.0000, 2007-04-23
10:20:40.250,"",,"",2007-02-05 00:00:00.000,"dttnDateLastSale",2006-12-
01 00:00:00.000, "",,"dttnDateLastMtce",2006-12-14
00:00:00.000,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,
,"",,"",,"",,2007-04-23
10:20:40.640,"",,"StoreID",5.0000,"AssignedSalesperson",

1234.0000,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,""
,,"",,2007-04-23 10:20:40.377, "Marital Status","1","Age
Range",,"OpenRewards","false","",,"",,"",,"",,"",,"",,"",,"",

,"",,"",,"",,"",,"",,"",,"",,"",,,"",,"",,"",,"",,"",,"",,"",,"",,""
,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
```

File Format Sample: No Custom Attributes

This first sample, which is for clients who do not want to use custom attributes, includes no custom attribute fields.

```
12854,2007-01-22 23:41:32.473,2007-01-22 23:41:32.380,"A",1,"Other","
",53210971,"John","","Smith"," ",""," ","
","94114","jsmith@loyaltylab.com",1,"","","",,,300.0000

12854,2007-01-22 01:58:23.447,2007-01-22 01:58:23.587,"A",1,"Other","
",53184716,"Joe","","Baker"," ",""," ","
","60478","jbaker@loyaltylab.com",1,"","","",,,500.0000

12854,2007-01-22 02:34:43.424,2007-01-22 02:35:21.127,"A",1,"Other","
",53316847,"Bob","","Jones"," ",""," ","
","94609","bjones@loyaltylab.com",1,"","","",,,200.0000
```

File Failures

This file export can fail because of XML schema validation problems or because of large application failure (for example, failures due to natural disaster, power outage, etc.) If the file export fails, TIBCO Reward will assign a quality assurance or performance tracking case number to the incident, contact you, and provide you with the case number.

Generic Event Import File

This file provides a client's generic event data. The Generic Event data import file is used to communicate data about customers' actions and behavior other than their sales transactions and activities in a TIBCO Reward-administered website. Examples of generic events include such customer actions as writing a product review, abandoning a product in an online shopping cart, or adding a product to favorites.

General Description

The generic event file includes event-related data that a client provides to TIBCO Reward. Note that the sources of this Event data are external to TIBCO Reward. This event data enables TIBCO Reward (and by extension, its clients) to:

- identify specific events

- collect data about customer actions performed during these events

- target these customers (creating profiles) by applying logical test criteria to the collected event data.

TIBCO Reward uses generic event data to extend its customer-analysis capabilities so that its clients can capture and use event data in addition to customer transaction data, which has previously been the prime source of customer data.

What is an event, in the context of TIBCO Reward's generic event processing? –An Event is defined as "an action taken by a person (known as the subject) on an object or person at a given time". For example, you might define a product addition to the customer's wish list as an event. Referring to this event, the basic definition is: Customer X (subject) AddsToWishlist (action) Product Y (object) on date (time). If you define a customer reviewing a product as an event, the definition is: Customer X (subject) Reviews (action) Product Y (object) on date (time).

TIBCO Reward's Generic Events framework provides you with a generic method of identifying specific events, collecting data about customer actions performed during these events, and targeting these customers (creating profiles) by applying logical test criteria to the collected event data.

Broadly speaking, the Generic Events framework is designed to capture information beyond the reach of TIBCO Reward's other existing data sources. You can collect information about behavior such as customer web activities (for example, product browsing, game playing, sweepstake entries) and in-store activities (for example, trying new products). Note that these customer actions are non-transactional events, and are collected outside of the TIBCO Reward microsite pages.

If the behavior yields a quantitative attribute, you can also define the event to capture that data through the event's master value. For example, reviewing a product is definable event, but you can go even further by capturing the customer's one to five star rating of the product. In this scenario, the master value of the event would be the rating assigned to the product by the customer.

Reversing Events

In some cases, the effects of an event can be reversed by another event. For example, a client can define both an "add to the wishlist" event and a "remove from the wishlist" event; and in this scenario, the "remove" event reverses the "add" event. When defining an

event in the CRMS, the client using the CRMS to define an event specifies that another specific event is the "Reversing Event.

> ℹ️ **Note:** The identification of a reversing event is a one-time, one-way process, and this means that the sequence is crucial. Because it is slightly tricky, we describe it both here and in the CRMS online help, as follows:
>
> - In the CRMS, the Reversing Event should be defined first, so that it is available for selection when you define the primary event.
>
> - Then (using the example mentioned above), when you define the primary event, "Add", in the CRMS, you can select "Remove" as the reversing event.

> ℹ️ **Note:** Be aware that reciprocation is not required and is NOT allowed. This means that you would NOT define "Add" as the reversing vent when defining the "Remove" event.

When defining Generic Events in the CRMS, if the client defines the remove event as the reverse of the add event, this setting allows TIBCO Reward to match the events sent in the Generic Events import file. This refinement makes it possible to target customers more accurately, by adjusting the net number of instances. For example, if customer A adds an item to her wishlist and there is a current profile that includes all customers who have added at least one item in the wishlist in an encompassing time frame, then customer A is included in the profile. However, if customer A removes all items from the wishlist, the same profile will no longer target this customer.

If you believe that customers commonly perform an action on the object that has the effect of reversing the effect of another event, contact TIBCO Reward's Account Management department for assistance.

Generic Event File Import Use Cases

You might send TIBCO Reward a generic event file in order to implement the following scenarios:

- Identify customers who have reviewed a product and assigned a certain rating to the product.

- Identify customers who have added a product to their wishlist or gift registry.

Wishlist Use Case

A web-based retail store allows customers to specify items they are interested in by adding these items to a wish list. This client wants records of each instance of a customer adding an item to his/her wishlist, in order to gain additional insight into its customers. The client imports a generic event file containing this data.

Using this wishlist event data, the client creates profiles that leverage this information. One example is a profile of customers who have expressed interest in a given product by adding it to their wish lists. The client uses this profile to target a special offer to this customer segment. Other applications are also possible.

Using the CRMS, the client defines an event to record each instance of a customer (the subject) adding to his/her wishlist a product SKU. As part of the creation of the event definition, the client specifies a reference tag for the event, for example, "AddToWishList".

This functionality does not require a master value.

The client also defines an event called RemoveFromWishList. When defining AddToWishList in the CRMS, the client defines RemoveFromWishList as the Reversing Event.

To implement this scenario, the following data integration is required:

- Transaction and customer import file

- Product catalog file

- Generic Event import file

The client can then feed real time event data to TIBCO Reward through the API or send the same kind of data in batch files. Every instance of a customer adding to the wishlist or removing from the wishlist is recorded as an event. The event file used for batch processing can include multiple events.

The Wishlist data needs to include the following information:

- Event reference tag (add to wishlist or remove from wishlist)

- Event ID – Optional: Client can provide a unique identifier for the event. If the client does not provide this, TIBCO Reward will automatically assign its own unique event ID for internal processing purposes.

- Customer ID (email address or other standard identifier as defined during on-boarding)

- Date

- Product SKU

When targeting, clients can create segments based on the customer wishlist events, including past events. For example, clients can create a segment for all customers who have added a net total of one or more items to the wishlist (additions minus removals) in the last month.

Product Reviews Use Case

The client invites customers to review products on the website. Now the client wants to send this information to TIBCO Reward and use it to segment members who are active reviewers.

The client needs to set up an event to track instances of customers reviewing products, where the object is products. This event does not have a reversing event.

The master value can be the number of "stars" the reviewer assigns to the product: a number between one and five.

Clients can feed data to TIBCO Reward via API or batch. When sending batch files, the client needs to provide the following data:

- Event reference tag

- Event ID – Optional: Client can provide a unique identifier for the event. If the client does not provide this, TIBCO Reward will automatically assign its own unique event ID for internal processing purposes.

- Customer (email or other ID as specified during on-boarding)

- Date

- Product SKUs

- Master value – a numeric value.

This information can be processed daily. When targeting customers, The client can create segments based on product reviews. For example, the client can create a profile of people who have written two or more 5 star reviews in the last 60 days.

Add a Friend to Your Social Network

The client has a presence on a social network, and they would like to track and reward customers who have sent a message referencing the client or its products to at least five

friends. The client defines an event as Customer SendsPromoEMail to Friend. With appropriate setup, their system generates an event record every time a customer sends an email (which somehow promotes the client) through the social networking site to a friend. The object is a friend, who may be represented by an email address or other ID.

The goal is to track customers who generate name recognition for the client through the social network.

The master value may or may not be applicable. The event may or may not have a reversal.

Clients can feed the data to TIBCO Reward via API or batch. In batch files, the client needs to provide the following data for each instance:

- Event reference tag

- Event ID – Optional: Client can provide a unique identifier for the event. If the client does not provide this, TIBCO Reward will automatically assign its own unique event ID for internal processing purposes.

- Subject - Customer ID (email or other standard customer ID of the subject, as specified during on-boarding)

- Date of event

- Object - Use standard customer ID if the object is a person; use SKU if the object is product or reward. See also the note on Record Validation based on event subject.

The client will be able to target on the number of event occurrences in a given time frame.

Web Analytics Data Use Case

TIBCO Reward can now accept data from web analytics companies: data such as product browsing history and cart abandonment files.

To use this data in TIBCO Reward's Generic Event framework, the client sets up the events they want to track, both by defining the event in the CRMS, and by completing the necessary data integration set up and the required setups work with the selected web analytics vendor.

The client sets up data feeds from their web analytics system to TIBCO Reward, working with TIBCO Reward and their analytics partner to ensure that any necessary file transforms are set up. TIBCO Reward accepts data in xml format that follows our published format as standard operating procedure. However, TIBCO Reward can also perform file

transformation for clients who require it. Contact your TIBCO Reward account representative for information about file transforms.

Standard XML Sample File and XSD Schema

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<BulkEventInstance
xmlns="http://www.instorecard.com/schema/v1/RetailIntegration/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://www.instorecard.com/schema/v1/RetailIntegration/

http://www.instorecard.com/schema/v1/RetailIntegration/ISCEventInstance.xsd">
<EventInstance>
<EventDate>02/12/2018</EventDate>
<RetailerEventId>1001</RetailerEventId>
<EventReferenceTag>AddToWishList</EventReferenceTag>
<Subject>customer1@loyaltylab.com</Subject>
<Object>productSKU1</Object>
<MasterValue></MasterValue>
</EventInstance>
</BulkEventInstance>
```

File Usage Guidelines, Data Elements and Formats

Purpose and Usage

TIBCO Reward encourages clients to provide the Event file in the standard, supported .xml file format. However, if the client cannot support .xml files, then the necessary file transforms will be established during the on-boarding process.

Clients can provide one file for each event or a common event file that includes data for multiple events. Common examples include a daily update file that includes web analytics data (product browsing and cart abandonment data, for example) and a separate daily file for product reviews. A generic event file includes one record for each event occurrence

(that is, for each instance of an event). The same file can include records that refer to instances of different events, and there is no required order for the instance records within a file.

The EventReferenceTag is used to identify the Events in the file and in the CRMS. The reference tag text for an event in the file must exactly match the reference tag text specified when the event was defined in CRMS.

An event subject must be a customer, and an object can be a customer, a product, a reward inventory item, a store, or a geolocation. In a Generic Event import file, the Subject is identified by using the retailer-provided identifier for the event's subject (the customer). Similarly, the Object corresponds to the retailer-provided identifier for the event's object with default option none and other options as another customer,a product,a reward inventory item, a store, or a geolocation. If the subject does not already exist in the system, the event record will be ignored during the import process. A valid object Id is required to process the file correctly. If the object Id does not already exist in the system, TIBCO Reward imports the record, but the ObjectId is nulled, that is, the object ID is ignored.

Supported subject identifiers are:

- Email address (default)

- Registered Card

- Loyalty Card ID

- Retailer Shopper ID

- Phone number

- Mobile Device Identifier

Only one of the above subject identifiers can be used, and the same identifier must be used across all events. This identifier must be setup during the initial configuration of the client -- retailer (during the on-boarding process). The customer email address is the default identifier.

Regarding Object Ids: Products and reward products are matched based on SKU.

Importing Event History

Just as clients can, during their on-boarding process, import up to two years of past transactions for use in profiling, clients can also import past event history that enables you to start event- based profiling from the beginning. For example, clients can import product reviews completed in the past six month along with product and customer information.

Note that while transaction file imports can be used to create customer records, event file imports cannot create or update customer accounts. To allow for matching the imported event data, a client's Generic Event import file must use the same customer identifier present in the Transaction import file, such as the customer email address or the registered card. When TIBCO Reward receives event data, its processes will check whether the customer exists. If customer does not exist, the record will fail.

In the most common scenario, the Generic Event import file includes the subject's email address. This is true if the client has already populated the customer data in the TIBCO Reward system and provided email. In another viable scenario, both the Transaction file and Generic Event file would use the Retailer Shopper ID as the identifier.

> **Note:** TIBCO Reward can collect event data for both members and non-members of the loyalty program.

Record Validation Based on Event Subject and Object Validation

TIBCO Reward attempts to match an object's Id to a shopper or a SKU to a product, but if there is no match, we import the record with ObjectId as null. Note that this Object data is not currently stored by the TIBCO Reward system, nor is it used, except as an indication that some object data was provided, which allows TIBCO Reward to log the event.

Field Name	Description	Data Type	Size	Sample Data	Notes
EventDate	The date/time when the event occurred	DateTime	20	2/12/2018 10:11:12	Format: MM/DD/YYYY HH:MI:SS. TIBCO Reward highly recommends that clients provide this date. However, if omitted, it defaults to

Field Name	Description	Data Type	Size	Sample Data	Notes
					midnight. All times are in EST (Eastern Standard time).
RetailerEventId	Client's identifier for the event instance, if available	String	100	12345	Optional
EventReferenceTag	Text string used to refer to the event in the Event import file and in the CRMS.	String	100	AddToWishList	Must match the reference tag specified when the event definition was created.
Subject	Client's identifier of the event's subject	String	200	test@foo.com	
Object	Client's identifier of the event's object	String	200	SKU100	In the example of a wishlist, the object is a product SKU.
MasterValue	Master value of the event	Integer	4	10	Applicable only if Master Value is enabled for the event.

* Required

Generic Event File Import Failures

The following table includes the error codes that apply to Store file imports.

Error Code	Error Type	Error Reason	Suggested Action
11	File failed.	This file is a duplicate of a previously sent file.	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be a duplicate, ignore this notice.
12	File failed.	The file failed to import because it does not include any records.	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be empty, ignore this notice.
13	File failed.	The file failed to import because of a general error.	Contact TIBCO Reward for diagnosis.
14	File failed.	The file failed to import because of a data format error.	You can correct the file by fixing data format errors. Common problems include having an alphanumeric value in a date field.
15	File failed.	The file failed to import because the file type is incorrect.	This file was not recognized by our process. Common reasons for this issue include misnaming the file or accidentally sending a different file. You can correct this issue by sending the correct file.
17	File failed.	The file failed to import because it failed a validation rule.	Contact TIBCO Reward for diagnosis.

On Demand File Exchange

This chapter provides information and specifications required to perform different types of on-demand data exchanges.

Topics

- List Import
- List Export
- Profile Export
- Email Statistics Export
- Reward Catalog Import
- Custom Questions Import

From TIBCO Reward's Customer Relationship Management Suite (CRMS), you can import or export the following files:

- List Import – The List import file enables clients to import lists of customers in a self service fashion from their desktop, using the CRMS system. Once imported, lists can be used for additional segmentation and targeting.

- List Export – List export allows clients to export the list of customers in a list at any time from the CRMS.

- Profile Export – Profile export enables clients to export a profile of customers at any time from the CRMS.

- Email Statistics Export – Clients can export up-to-date email data for any email communication using the CRMS. Data includes all customers who were sent the email with email status.

- Catalog Import – Clients can import the current selection of products for the rewards catalog at any time using the CRMS.

Each of these files is described in more detail below.

While these files are formatted as batch files, they are not imported or exported according to a regular schedule. These file transfers are available to clients "on demand." A client

identifies and/or defines the data collection in one of these files, and uses the CRMS to set up the transfer of the file.

For example, a client may decide to import into TIBCO Reward a list of shoppers who have opted in to receive email. The client prepares this list of data in an appropriate file format and imports the file to TIBCO Reward using List import. Thereafter, the list data is available in CRMS, where the client can use and manipulate the data in many ways. This List Import file is an example of an On Demand file exchange.

You should already be familiar with the general purpose of on-demand file transfers. For a basic introduction to the subject and its context, refer to section Data Exchange Methods, and specifically the subheading about on-demand file transfers.

All exports are delivered to the FromInstorecard directory described in Appendix B, Setting Up FTP File Directories. Refer to this section to learn more about setting up the SFTP file transfer location and retrieving files from this location.

All on-demand imports and exports allow you to work with files from your desktop. That is, you can specify files to be uploaded from your computer, and you can access the files that are downloaded, assuming that your computer has appropriate access to the network resources.

Note also that many reports are available through the CRMS. Though not classified as exports, these reports include significant data.

File exchange constraints and processing limitations

Import File	File Size	Number of Records
List Import File	25 MB	
List Export File		200,000
Profile Export File		200,000
Email Statistics Export	NA	
Reward Catalog Import	NA	
Custom Questions	NA	

Note that on demand downloads are not intended to handle "dumps", (that is, downloads comprising a client's complete collection of customer records). If you believe you may have

processing requirements exceeding these limits, contact your TIBCO Reward Account Management representative ahead of time.

Importing List

The List Import file is a fixed list of customer email addresses Because TIBCO Reward uses the email address field as a unique identifier for each customer, an email address matching an existing customer email address in the database effectively provides access to the rest of that existing customer's data.

Procedure

1. Find the file to be imported, use a text editor to open it, and verify that the file follows the proper format. If you do not need to reformat the file, close the file without changing it.

2. Log into the CRMS and navigate to the list page. (Open the **Target > Lists** page.)

3. Click **Create New List** from File Import.

4. Enter the list name and browse to locate the file.

5. Agree to terms of use by checking the "**I agree**" check box.

6. Review current settings.

7. Click **Next step**.

8. When the next (Request Status) appears, verify that the information is correct, then click **Done**.

   The List is uploaded. Once the import is complete, verify the success of the import.

File Format and Sample File

The content of the list to be imported consists solely of one data element: email addresses (no headers). The list can be in comma separated or tab separated format, although the simplest format, one email address per line, is recommended.

Sample File Content:

- charles@example.com

- karen@example.com

- mars@example.com

- josh@example.com

- amy@example.com

- inderpreet@example.com

If you need to import more complete customer profiles, including names, addresses and phone numbers, contact your TIBCO Reward PSG Representative to verify your current data integration prior to importing the list.

Exporting List

The List Export file consists of Customer Export list data (also known as the Customer Export list). Be aware that data in the List Export file format also appears in the Customer Export file, and in the Profile Export file, and that the fields common to these files have the same meaning and format. These files do not include column headings (field labels).

Procedure

1. Log into the CRMS and navigate to the **List** page.

   The CRMS displays "export list" links for all lists.

2. Locate the list to export, and click on the **export list** link.

   The CRMS displays a pop-up window, which states that the data is being exported and provides the name of the file that will be created. The CRMS moves the file to the FromInStorecard directory.

3. Log into the SFTP server using a pre-arranged username / password and download the file.

File Format

Field#	Field Description	Type	Notes
1	FileId	Integer	TIBCO Reward internal file identifier

Field#	Field Description	Type	Notes
2	RegistrationDate	DateTime	If the customer has signed up on the client's microsite, this value will be the date the customer completed signup. Otherwise, this value will be equivalent to the CreationDate. This is also known as "Member Since Date."
3	CreationDate	DateTime	If the client provided a historical transaction feed, this value will be the date of the first transaction appearing for the customer.
4	ShopperStatus	String	"A" – Active; "I" – Inactive ; When a customer opts out of the loyalty program, this value will be "I". Otherwise, the value will be "A".
5	LoyaltyMember	Bit	"1" – Member; "0" – Non-member;
6	SourceOfChange [Note: Deprecated field!]	String	"Retailer", "Shopper", "CSR", or "Other" Note: This field is deprecated. Although the field may still exist, the data values are not used.
7	ShopperId	String	Client's identifier for this customer
8	InStorecardShopperID	Integer	TIBCO Reward's unique identifier for a customer.
9	FirstName	String	
10	MiddleName	String	
11	LastName	String	
12	AddressLine1	String	
13	AddressLine2	String	

Field#	Field Description	Type	Notes
14	City	String	
15	State	String	
16	PostalCode	String	
17	Email	String	Email address.
18	EmailOptIn/Bulk email	Bit	EmailOptIn="1" maps to a value of "OptedIn" in the CustomerPrivacy XML element. If the customer has opted out of receiving marketing emails, this value will be "0".
19	PhoneNumber	String	
20	LoyaltyCardNumber	String	If a client assigns a loyalty program card ID/number, it can be recorded here.
21	TierName	String	If a client uses tiers, then tier data appears, otherwise no data appears.
22	TierJoinDate	DateTime	If client uses tiers, then tier data appears, otherwise no data appears.
23	StatusUpdateDateTime	DateTime	Customer record update timestamp
24	PointBalance	Integer	Customer's current point balance, as of time of report.

A sample record file:

```
1229,2018-12-29 12:45:41.693,2018-12-29 12:45:41.693,"A",0,"Other","452566743
",49602261, "John","","Brown","200 Main Street",,"San
Francisco","CA","94114","john@example.com",1,"415-555-5555","1113456","Gold
Member",2018-12-29 12:45:41.693, 2018-12-29 12:45:41.693,1300
```

Creating Profile Export File

The Profile Export file corresponds to a profile defined in the CRMS. This file consists of the Customer/Shopper list generated by the application of that profile. That is, the file format of the profile export file and the Customer (shopper) list file are the same.

Procedure

1. Log into the CRMS and navigate to the **target > customer profiles** page.

   The CRMS displays **export email** links for all customer profiles.

2. Locate the profile to export, and click on the "**export email**" link.

   The CRMS displays a pop-up window, which states that the data is being exported and provides the name of the file that will be created. The CRMS moves the file to the FromInStorecard directory.

3. Log into the SFTP server using a pre-arranged username/password and download the file.

Creating Email Statistics Export Report

CRMS users generate this export file (as needed, on a self-service basis) to obtain communication statistics. For each email communication, the system generates a file containing information such as deliveries, opens, clicks, and bounces.

Procedure

1. Log into the CRMS and navigate to the **email > communications** tab.

   The CRMS displays "**extract stats**" links for all communications that were ever live at any point in the past, including emails that are currently live.

2. Locate the email for which you wish to receive statistics.

   Use the sorting options provided to reduce the number of communications that are listed.

3. Click the "**extract stats**" link.

   The CRMS displays a pop-up window, which states that the data is being exported and provides the name of the file that will be created. The CRMS moves the file to

the FromInStorecard directory.

4. Log into the SFTP server using a pre-arranged username/password and download the file.

File Format

The exported file includes the data described in the table below.

Field Name	Type	Length	Description
CommunicationInternalName	nvarchar	1000	Communication Name
CommunicationId	int	4	Unique Identifier
CustomerEmailAddress	nvarchar	200	ShopperKey.EmailAddress
CustomerNumber	nvarchar	200	ShopperKey.RetailerShopperId
CommunicationSentDate	datetime	16	Email Sent Date
Delivered	int	4	1=Yes/0=No
Opened	int	4	1=Yes/0=No
OpenDateTime	datetime	16	Open Time. Only provided if the email was opened
Clicked	int	4	1=Yes/0=No
ClickedDateTime	datetime	16	Click Time. Only provided if a link in the email was clicked
Bounced	int	4	1=Yes/0=No
BounceDateTime	datetime	16	Bounce Time. Only provided if email bounced

Here is an excerpt from an Email Statistics Export File.

PRS: Send email 1 (exclude not sent email 3)|1723|joe_moore@example.com||2018-01-02

12:50:40.477|1|0||0||0|

PRS: Send email 1 (exclude not sent email 3)|1723|donald_bartlett@example.com||2018-01-02

12:50:40.490|1|0||0||0|

PRS: Send email 1 (exclude not sent email 3)|1723|mike@example.com||2018-01-02

12:49:38.350|1|1|2018-01-02 20:55:05.390|0||0|

Uploading the Reward Catalog File

CRMS users import their current reward catalog in CRMS. Using this feature, clients can upload their items and then edit and manipulate the catalog directly into the CRMS.

Procedure

1. Log into the CRMS and navigate to **rewards > reward items**.

2. Click **Upload Rewards File**.

3. Browse to locate and select the file to import.

4. Verify that the file format is acceptable.

   - Note that your file must be in either comma separated value (CSV) or tab delimited format.

   - Links to sources of help on file and data format are provided on the screen.

   - If the files are not correct, make changes as necessary. Use the appropriate editor application to change and save the file.

   - You may need to use the Browse button again.

   - After selecting the file, click on upload.

5. Once the upload is complete, navigate to the **rewards > reward items** tab to see the items listed.

File Format

Supported formats are .txt and .csv. Column headers are optional in the file.

Your Rewards Items file must include the following columns, in this exact order:

Field Name	Required	Description
Reward ID	Yes	Reward ID for internal use
Reward Name	Yes	Reward Display Name
Reward Description	No	Reward Description used for display
Redeem Value	Yes	Points required to redeem the item
Image URL	Yes	URL of the image for the item

Custom Questions Import

CRMS users can import a file containing custom question records. The unique contents of the file are bulk uploaded and added to the list of available custom questions in the CRMS. CRMS users can then in turn use these custom questions and answers in questionnaires.

Once imported, questions (and their answers) are added to the pool of all Custom Questions. CRMS users can edit and work with uploaded questions exactly as they do with questions created within the CRMS, using the Create a New Custom Question page.

As a general rule, you must use the CRMS Questionnaire Setup procedure to add questions and associated data (for example, formatted answers) to a questionnaire.

You can also use the file import method to make certain type of changes to existing custom question records. (Details below.)

> **Note:** Imported custom question records are not automatically added to a CRMS questionnaire, except in the case of an imported question that exactly duplicates the text characters of an existing question. In this case only, the associated elements of the record replace those same elements that exist in the questionnaire.

For specific instructions for upload the Custom Questions file, refer to the online help for the CRMS. See under the Target>Custom Questions heading in the Online Help System's Table of Contents.

Custom Question File Details and Requirements

Your Custom Questions file must be a CSV (comma separated value) file. Column headers should not be specified in the file. Every line in the file represents a question and its associated answers, including formatting parameters.

Every line must include all the following columns (field values) in this exact order:

1. Question text (required).

2. Question category (optional - leave blank if unspecified).

3. Answer format (required), as follows:

    - Specify "single" to set up the format so that the user can select only one answer by clicking a radio button.

    - Specify "multiple" to set up the format so that the users can select more than one answer by selecting multiple checkboxes.

    - If format is unspecified, "multiple" will be selected by default.

4. Answer layout (required), as follows:

    - Specify "list" to present answers in a list layout.

    - Select "column" to present answers in a multi-column layout (better for one-word and very short answers).

    - If unspecified, "list" will be selected by default.

5. One or more columns containing the answer choices for this question.

See the sample CSV file below for examples or answer records that apply these requirements. In text format, each column-value must be followed by a comma. Two commas with no text between them indicate that a value has been omitted.

File formatting technical note: If question or answer text contains a comma, you must enclose that text in quotation marks to prevent the comma from being read as a value separator.

Sample CSV File

Sample CSV File (displayed as text):

```
What are your dietary preferences/restrictions?,Food
habits,multiple,list,No restrictions,Ovo- lactarian,Dairy-
free,Gluten/Wheat-free,Low carbohydrate,Low calorie,Low sugar,Low
fat,Diabetic, Vegetarian,Vegan,Organic,Adjusted for allergies not
specified here

What strongly influences your buying decisions of electronic
products?,,multiple,column,Advertising,Word of mouth,Reviews,Brand
recognition,Brand Reputation,Conscience factors/Political Correctness,
immediate need

How do you prefer to be contacted?,,single,list,Email,Instant
Message,Home phone,Cell phone,Mail,Carrier pigeon

How did you learn about our product?,Advertising,multiple,list,Magazine
ad,Newspaper ad,Internet advertisement,Internet search,Acquaintance or
associate - word of mouth,Radio,Television,Telephone book,Multiple print
media,Don't know
```

Preparing a New Custom Question File for Bulk File Upload Process

Procedure

1. Refer to the sample CSV file and instructions above, or to the equivalent information in the CRMS Help system for the **Target > Import Custom Questions** page.

2. Use Excel or a generic text editor (such as Notepad) to open the sample file. Use this as a reference when you create your own file.

3. Create a CSV file that contains your Question and Answer text and formatting instructions, and store the CSV file in a location on your computer.

4. Locate and upload the CSV file by using the Browse and Upload options in the CRMS **Target > Import Custom Questions** page.

To Make Changes in Existing Custom Questions Using the Bulk File Upload Process

Be aware that you cannot change existing answer-responses with an uploaded file. However, you can upload additional answers.

The question text is the key data in each record: it must be an exact duplicate of the existing question text in the record to be changed.

You can specify different Category, Answer Format, and Answer Layout data in a record, and when these are uploaded, the changes will be implemented. If you leave blanks where existing Category, Answer Format, and Answer Layout data already exists, the blanks will be treated as errors and the upload will fail.

After you have created a CSV file that contains your modified Question records, store the CSV file in a location on your computer. You can then use the CRMS to locate and upload the CSV file.

> **Note:** If you want to make corrections to an existing custom question record by using the file upload method, the best practice is to start with an exact copy of the existing record and then make changes and additions to it.

File Failures

The Custom Question file upload will fail if the file size exceeds 1 MB.

If one answer record fails, the entire file upload (import) fails. After making repairs to the file, you repeat the upload process for the entire file.

If the upload fails, an error report appears. The report is designed to help locate and identify any errors at the individual record level. The report identifies a faulty record by

number (where the first record in the file is number 1, the second is 2, etc.). In many cases, the error reporting will specify the problem to be solved in the record.

Post-integration Maintenance and Monitoring

The topic explains post-integration maintenance and monitoring.

Client Support Contact

Clients must assign a point of contact to provide system support when the system goes into production. This point of contact shall assist in the resolution of all data validation issues and errors. This primary point of contact should have back-up contacts, as necessary, to provide for support during normal business hours.

System Maintenance and Support Guidelines

TIBCO Reward's self-service support is always available from our support website, the Client Extranet, which also provides documentation and announcements. Using the self-service portal, a client can file a case, and define the importance of a timely response. One feature of the self- service portal is a set of automated escalation rules that move the case to the appropriate team and queue. Responses are determined by these rules. For instance, if a customer-facing component is reported offline, responses typically come in less than an hour.

The TIBCO Reward Account Management team provides initial support. In this team, your assigned account manager is the lead, and several other persons provide service and backup. There is also an extensive operational-level support team for more serious conditions.

Availability of TIBCO Reward Staff for Maintenance and Monitoring

In brief, the availability of TIBCO Reward staff for maintenance and monitoring is as follows:

- San Francisco, CA; standard business hours; full staff.

- TIBCO Reward Account Managers are available 24x7 for P1 issues, via phone. For all other issues, standard support is available during normal business hours, PST.

- For P1 issues: response within three hours; for all other issues, response within one-two business days.

- All issues remain open with cases, visible to all participants. No case is left unattended or without response for more than three business days.

- A full online support center is provided for self service, and communication with the TIBCO Reward Account Management team is available.

Appendix A - ARTS/IXRetail

International XML Retail Cooperative (IXRetail) builds on the ARTS Data Model to develop XML schemas and message sets to ease Application to Application (A to A) integration within a retail enterprise. (See https://nrf.com/who-we-are/retail-communities/technology/arts).

Appendix B - FTP File Directories Setup

To get access to the secure directories used to transfer files, you need access to an FTP client application that supports SFTP or FTPS, and you need a username and password associated with this application. A TIBCO Reward Account Management representative will provide you with the required information.

TIBCO Reward and each of its clients test the secure file transfer system by sending and receiving sample files using the new secure client account.

An excellent introduction to secure FTP protocols and technologies is available at the South River Technologies' WebDrive site: https://webdrive.com/.

Platform Specific Constraints to Access Secure File Transfer Directories

To securely transfer files between systems running a Windows OS, TIBCO Reward typically sets up an SFTP file directory and a corresponding secure account for each client. Some legacy platforms will only support the FTPS protocol, therefore any TIBCO Reward client that needs to transfer files from these devices will need to install an FTPS product.

About Webdrive SFTP and FTPS

TIBCO Reward recommends WebDrive (http://www.webdrive.com/) as an SFTP and FTPS client for Windows for the support and documentation that it provides.

Filezilla (http://filezilla-project.org/) and many other acceptable FTP solutions are also available. The example provided in this appendix, based on the Webdrive user interface, should provide enough guidance to get one started with the process of setting up a secure file transfer provider.

TIBCO Reward sets up an SFTP or FTPS user account on its server. Webdrive is a Windows application that can be used to upload files to the TIBCO Reward server and to download

files from it. Each client sets up a separate account with WebDrive to provide a secured, password- protected, convenient location to be used for file transfers.

Other secure account service options are feasible. If you have a strong preference for an alternative, please contact your Account Management representative.

TIBCO Reward complies with Payment Card Industry (PCI) and Visa Cardholder Information Security Principles (CISP) data security standards and requirements. These guidelines require passwords to be transmitted verbally or via secure, encrypted email with precautions taken to eliminate copies of the email being saved. Passwords must not be transmitted in writing or unsecured email.

During the initial integration we encourage our clients to test the secure file transfer system by sending and receiving sample files using the new secure client account. It is recommended to test early in the onboarding process in case you encounter any security or firewall issues.

Both parties must adhere to the guidelines for password distribution established by industry standard Information Security policies as defined in PCI and CISP data security standards and requirements.

Prerequisites for Secure Client Setup

Your ClientShortName. Your company chooses this character string to use as a unique ID. Typically, your company defines and records this ID as it completes the Onboarding Questionnaire from TIBCO Reward.

> ℹ️ **Note:** This unique ClientShortName is used for several purposes, and this unique value must be used consistently or your client application will not work.

The drive letter that will map your path to the secure FTPS directory. Use this drive letter (for example, W:) for TIBCO Reward file transfers. Select a drive letter that is not assigned to another purpose in your organization. TIBCO Reward often recommends W.

Downloading a Secure Client Application like WebDrive

TIBCO Reward currently recommends WebDrive (http://www.webdrive.com) as a secure FTP client application. The following procedure assumes that you do not have WebDrive installed already. If you already have WebDrive installed, skip the Download WebDrive process. Download WebDrive.

Procedure

1. Go to the WebDrive download site: http://www.webdrive.com/download/index.html.

2. Download the appropriate version: Windows 32-bit, Windows 64-bit, or Mac OS X.

   The respective executable (.exe) file is downloaded.

3. Double-click the executable file to start the installation.

   The Welcome to InstallShield Wizard page opens.

4. Click **Next**.

5. If you accept the terms in the license agreement, click **I accept the terms in the license agreement**.

6. Select the destination folder to install WebDrive.

7. Click **Next**.

   The Ready to Install the Program page opens.

8. Click **Install** to begin the installation.

   The Installing WebDrive dialog box shows progress, and is replaced at the finish of the processing by the final dialog box.

9. Click **Finish**.

10. Click **Yes** or **No** to restart your computer immediately or later.

11. Check your programs for the WebDrive application (webdrive.exe). TIBCO Reward recommends that you create a shortcut to the WebDrive application (webdrive.exe) so you can start it easily.

What to do next

Next, use WebDrive to set up either an SFTP client or an FTPS client. If you are not sure which to use, see Platform-Specific Constraints.

Setting Up an SFTP Client

Before you begin

Ensure that you want to use an SFTP client (rather than an FTPS or command line client).

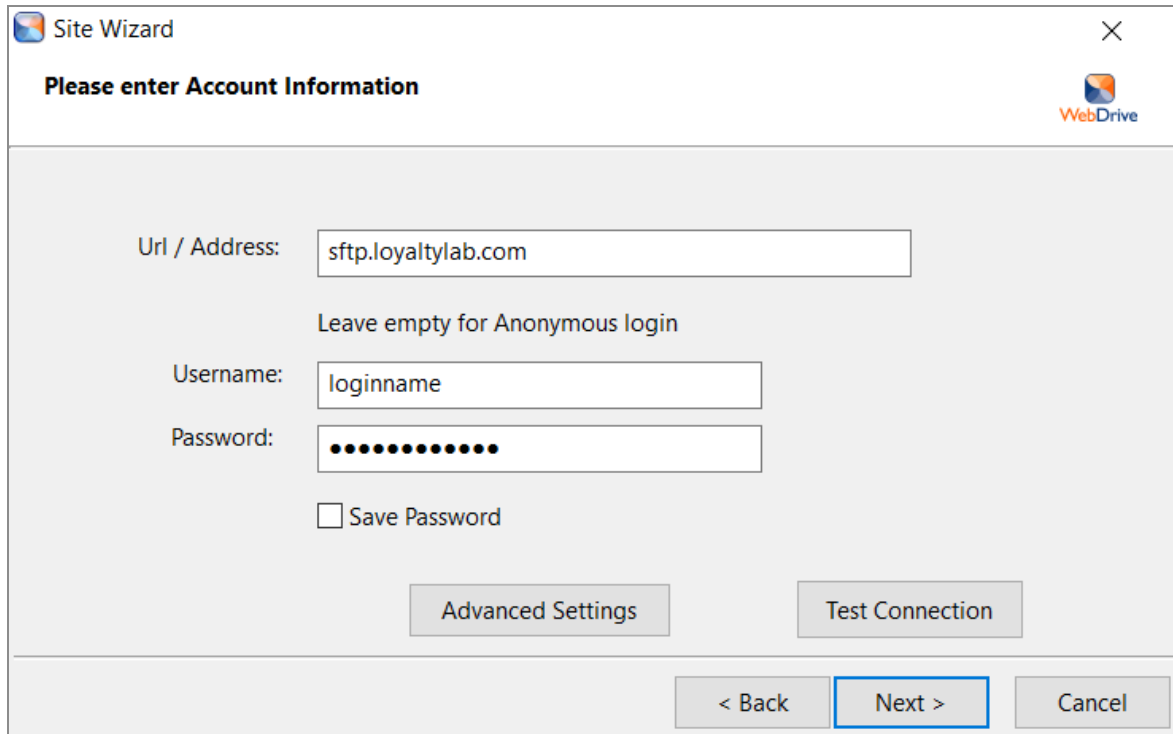If you want to use an FTPS client, see Setting Up an FTPS Client.
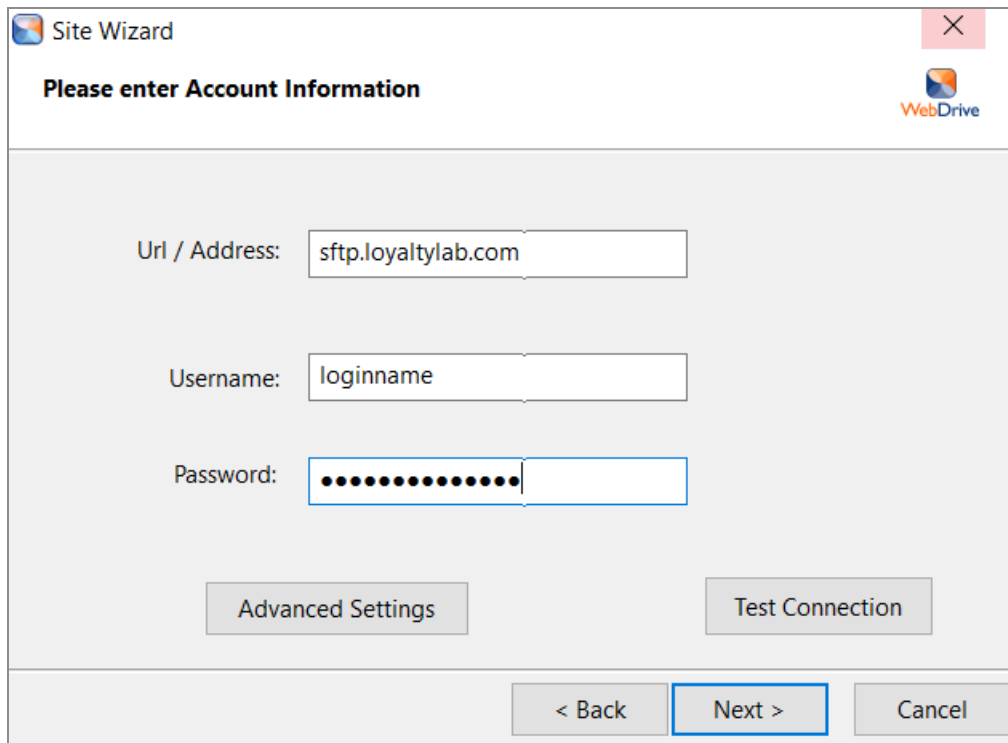
Procedure

1. Start WebDrive (webdrive.exe).
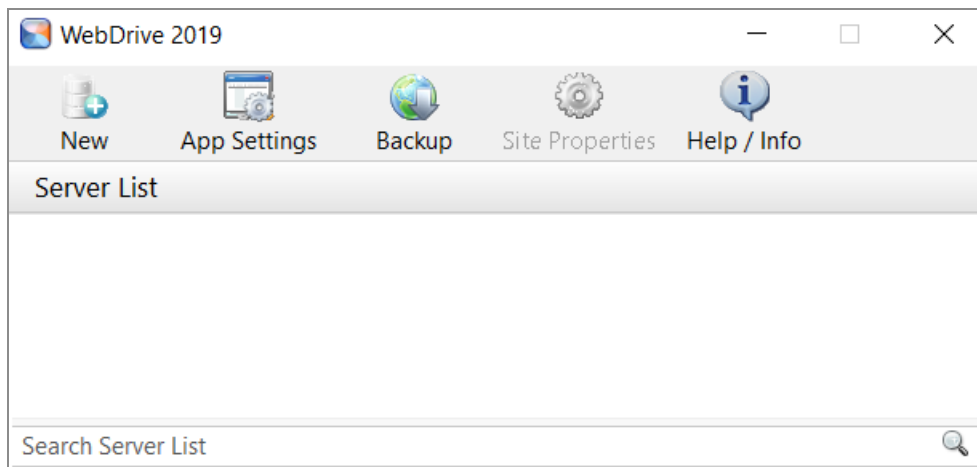
2. Click **New**.

   A dialog box What type of server will you connect to? opens.

3. Select **SFTP** from the drop-down list.

4. Enter the username and password provided by the TIBCO Reward Account Management representative.

> **Note:** The Account Management representative gets the login credentials from the TIBCO Reward data integration team.

5. Click **Next**.

6. Select the drive name as W: (or any other name that does not conflict with an existing drive assignment letter). Uncheck **Connect at login/startup**.
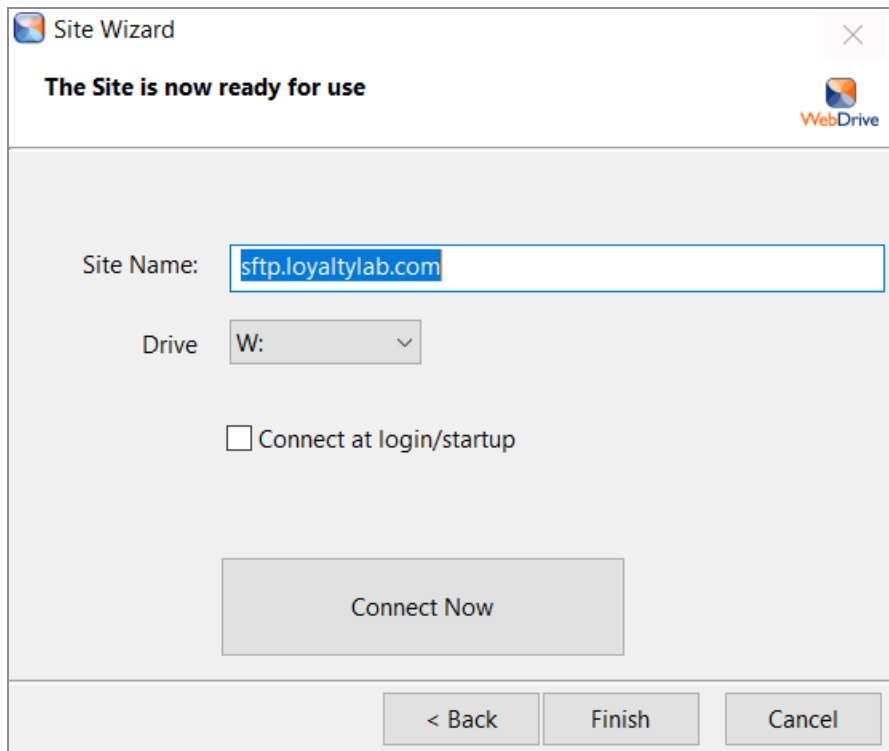
7. Click **Finish**.

   The FTP server is added to the list and the WebDrive main window appears again.
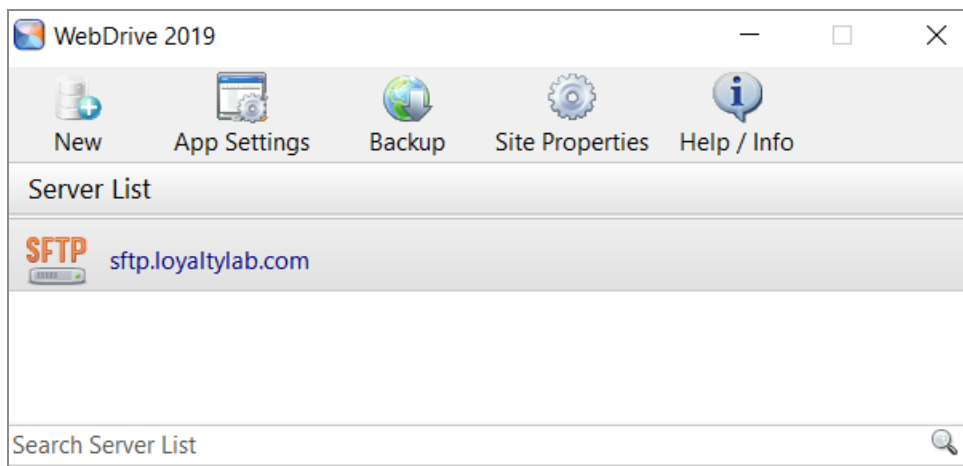
Reconnecting to the SFTP Client

Procedure

1. Start WebDrive, right-click on the sftp.loyaltylab.com site, and click **Connect**.
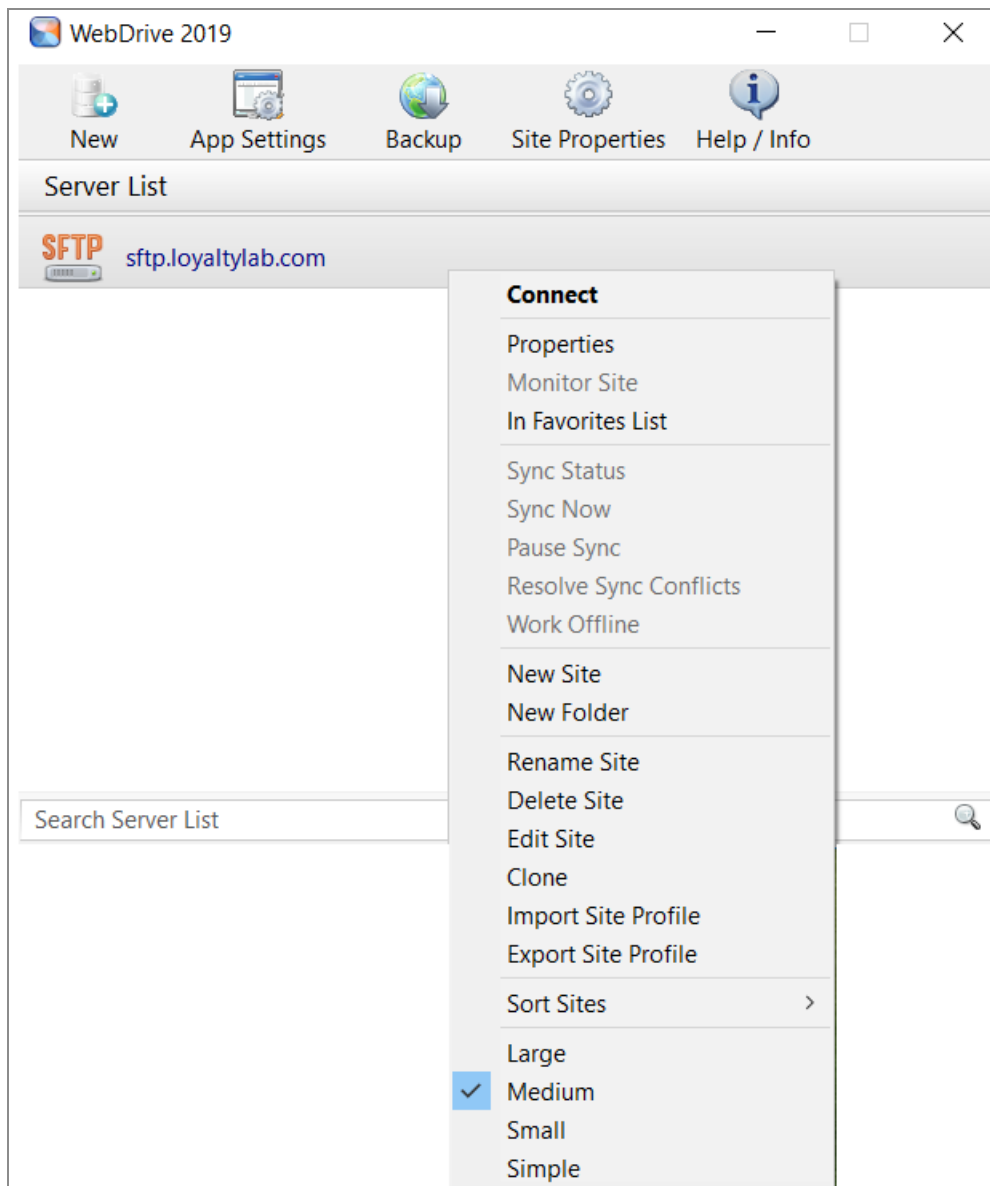
2. Enter your password when prompted.

Setting Up an FTPS Client

Before you begin

Ensure that you want to use an FTPS client (rather than an SFTP or command line client).

If you want to use an SFTP client, see Setting Up an sFTP Client.

Procedure

1. Start WebDrive (webdrive.exe).
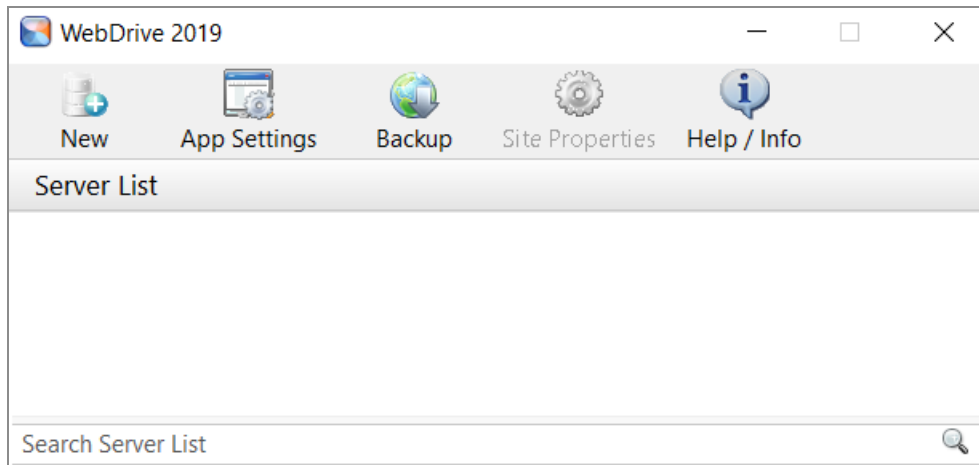
2. Click **New**.

   A dialog box What type of server will you connect to? opens.

3. Select **FTP** from the drop-down menu.

4. Click **Next**.

   A dialog box opens, asking, "What type of Server will you connect to?"

5. Select **FTP** from the drop-down menu.

6. Enter your username and password, provided by the TIBCO Reward's Account Management representative.

   > ℹ️ **Note:** Account Management gets the login credentials from the TIBCO Reward data integration team.

7. Click **Next**.

8. Select the drive name as W: (or any other name that does not conflict with an existing drive assignment letter). Uncheck **Connect at login/startup**.
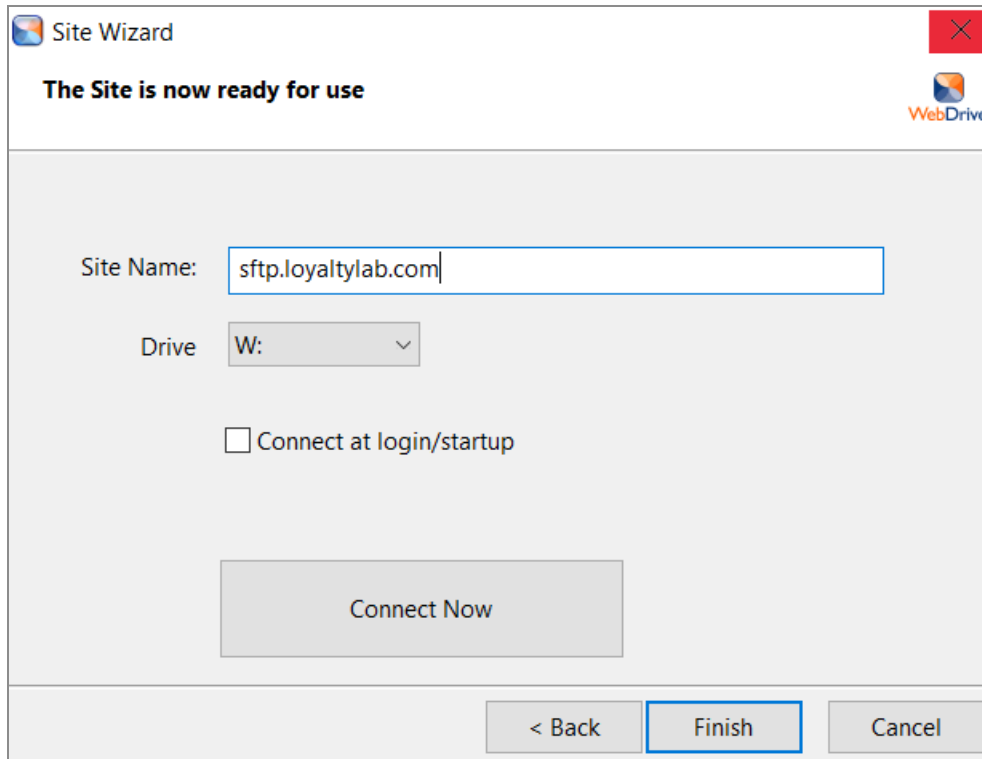
9. Click **Finish**.

The FTP server is added to the list and the WebDrive main window appears again.
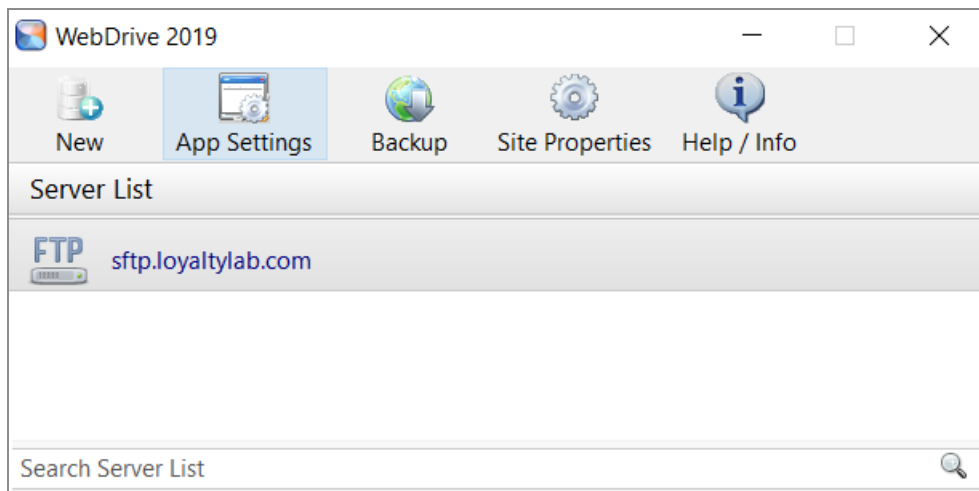
Appendix C - Flat File Formats with Examples

If your Company is not using the standard XML format files to transmit data to TIBCO Reward, but is instead using flat files (non-XML files in which the values are separated by commas, tabs, spaces, or bars, or in which values are positionally defined), refer to the flat file examples in this appendix. If TIBCO Reward has specified that a flat file is the standard format (rather than XML), then the standard flat file format is presented in Batch File Integration, and is not included in this appendix.

Fundamental information about the content of files is provided in Batch File Integration. Also note that much information about the data elements and data hierarchy prescribed for each batch file can be obtained from the XML schema documentation. See TIBCO Reward's XML namespace: http://www.instorecard.com/schema/v1/RetailIntegration.

Import Files

As explained previously, clients agree to send Transaction files to TIBCO Reward in a format that is strictly defined. This format is the result of a careful needs analysis and a corresponding data mapping effort that identifies which of the client's available data fields will be included in the transaction file supplied to TIBCO Reward.

Transaction and Customer Sample Files

The preferred format is an XML file corresponding to the requirements of the XSD schema (ISCLog.xsd).This file format is based on ARTS/IXRetail data model, and this is the preferred format for the Transaction files received from clients. TIBCO Reward can also transform Transaction files sent in other formats so that they can be used to supply the necessary transaction data. TIBCO Reward has extensive experience in performing such transformations.

Samples of some transaction files appear below. Each sample is followed by a corresponding table that shows the sample file format and its data formatting parameters.

Typically, a client company provides a sample file and a formatting table to indicate the data and formatting it will provide in its transactions files. The file format samples and tables convey information about the fields in their native file format. The client and TIBCO Reward must formally agree on the information provided in these tables, and TIBCO Reward must be able to use the sample files (after any agreed-upon transformations).

When a live Transaction file is imported by TIBCO Reward, any required transformations are performed automatically, based on the understanding that each transaction file will always follow the formatting guidelines established and documented in the tables. Each live file is transformed (as necessary) and ultimately processed as part of a TIBCO Reward ISCLog file.

> **Note:** A client must notify TIBCO Reward any time there is a change in the format of this file.

Sample XML File Format

See the sample of a transaction file in TIBCO Reward's XML format at http://www.instorecard.com/schema/v1/samples/ISCLogSample.xml.

See http://www.instorecard.com/schema/v1/docs/ISCLog for a detailed description of Reward's xsd schema for its XML transaction file format.

Sample Fixed Width File Format

Fixed Width File Format - Sample

```
12345678911234567892123456789312345678941234567895123456789612345678971
23456789812345678991234567890


26030034870052006041270116        1        2012      87653095
0000003487000DONALD     BARTLETT


CA94609130520081015200509150      0A


37040032370052006041270121        1        4735      30958765
1003003487000VERONA     LMARTINEZ


CA92609250520081015200611150      0A


27052034870052006041204107        1        13603     95308795
0081003487795PAULA      MDECRISTOFARO


CA94609640520081015200509160      0A


43030034870052006041270116        1        4043      87653095
0520063487345ROBERT     GRAVEST


MA02138130520081015200509280      0A


26030034870052006041280235        1        2012      54284023
6530903452006LILLIAN    BOSWAINE


MA02138130520081015200509280      0A
```

Sample Fixed Width File Format Table

The following table conveys information about the fields to be included in a Transaction data file in their native file format. A table such as this enables TIBCO Reward's engineers to set up an automated process for transforming the file every time it is sent.

Fixed Width File Format

Field#	Field Description	Type	Length	Decimal	Location	Notes
1	Transaction ID	A	9		1	
2	Store number	S	4	0	10	
3	Date	S	8	0	14	CCYYMMDD
4	Time	S	6	0	22	HHMMSS
5	Line item	S	6	0	28	1
6	Line item amount	S	9	2	34	Money (for example, 2000)
7	SKU	A	10		43	for example, 8765309
8	Line item quantity	S	6	0	53	
9	Account number	S	13	0	59	
10	Name, first	A	16		72	
11	Name, middle initial	A	1		88	
12	Name, last	A	20		89	

Field#	Field Description	Type	Length	Decimal	Location	Notes
13	State/province	A	2		109	
14	Zip + four	A	9		111	
15	Expiration date	S	8	0	120	CCYYMMDD
16	Contract date	S	8	0	128	CCYYMMDD
17	Reward amount allowed	S	9	2	136	Money - 10% of dues amount paid
18	Shopper status	A	1		145	"A"=Active, "I"=Inactive

Sample Comma Separated Value File

```
0009200618053,00012,2012-09-06 00:14:21,JANE@DOE.COM,002, 001469,000001,
000004.40,1111222233334444

0009200618053,00006,2012-09-06 01:36:43,JOHN@DOE.COM,001,462031,000001,
000012.65,2111222233334444

0009200618053,00070,2012-09-06 01:44:29,ZEBEDIAH@DOE.COM,001,896953,000001,
000037.40,3111222233334444

0009200618053,00024,2012-09-06 03:14:51,ATHENA@DOE.COM,001,876464,000001,
000034.64,4111222233334444
```

Sample Comma Separated Value Format Table

This table conveys information about the fields to be included in a Transaction data file in their native file format. A table such as this enables TIBCO Reward's engineers to set up an automated process for transforming the file every time it is sent.

Field#	Field Description	Type	Length	Sample Data	Notes
1	TransactionID	String	13	0009200618053	
2	RetailLocID	String	5	00072	
3	ReceiptDateTime	DateTime	19	2018-09-06 00:14:21	
4	CustomerEMail	String	Varies	JANE@DOE.COM	Optional
5	LineNumber	Numeric	3	002	
6	ItemSKU	Numeric	6	001469	
7	Quantity	Numeric	6	000001	
8	ExtendedAmount	Numeric	9	000004.40	Includes decimal
9	CardNumber	Numeric	16	1111222233334444	

Sample of Product File from Clients

Field Name	Field Description	Data Type	Size	Sample Data	Notes
product_container	Product Information				
caption*	Name or heading for a product.	String	255	"Great Product!"	This is the value that appears throughout the CRMS, wherever a user sees product

Field Name	Field Description	Data Type	Size	Sample Data	Notes
					information.
department*	Client defined department (category) hierarchy.				TIBCO Reward supports at most five department levels. These categories are used for targeting, reporting, and offer qualificatio n.
departmen t_level_1*	Top-level product category	String	100	"Books" "DVDs" "CDs" "Software" "Toys"	The range of values for this field across all products are the categories available in the Shopper Application for the "What I Like" functionalit y. These same values appear in the "Preferred Category

Field Name	Field Description	Data Type	Size	Sample Data	Notes
					Breakdown" report.
department_level_2	Second-level product category	String	100	"Fiction", "Books", "DVDs", "CDs", "Periodicals" "Fantasy" "Educational"	If Department_Level_2 is specified, Department_Level_1 is required.
department_level_3	Third-level product category	String	100	"Mysteries", "Fantasy" "Financial" "Cooking" "Jazz" "automotive"	If Department_Level_3 is specified, Department_Level_2 is required.
description*	Human Readable Description				
image_url	URL to an image of the product.	String	100	http://example.com/image.gif	This image is available when creating new offers and when adding rewards to the Reward Catalog.
sku*	Required, must be	String	100	"S100000123"	Catalog managemen

Field Name	Field Description	Data Type	Size	Sample Data	Notes
	unique. SKU, stock keeping unit, or product number.				t (additions, removal) is done on SKU, which must be unique. This appears in most of the application where product name (caption) does. This SKU does not correspond to the SKU used in the Rewards Catalog.
list_price*	List price of product. i.e. The manufacturer's suggested retail price.	Decimal		15.23, 34.78	
sale_price	Sale price of product. This is the price the customer should pay for the product.	Decimal		15.23, 34.78	

Field Name	Field Description	Data Type	Size	Sample Data	Notes
brand	brand	String	100	Maytag	Brand used for targeting.

Sample Tab Separated Value Format of Product Catalog File

Caption		DeptLevel1	DeptLevel2	DeptLevel3	Description
	ImageURL			SKU	List_Price
	Sale_Price	Brand			
Yan Can Cook!		DVD	Educational	Cooking	Great Chefs Teach
http://ourcompany.com/image100.gif				S100000123	34.99
	30.99	EduData			
Wynton Marsalis Live		CD	Music	Jazz	Jazz legend at Monterey
http://ourcompany.com/image200.gif				S100003223	14.99
	10.99	Vibe			
TortureTax!		Software	Educational	Financial	TaxProcessingSoftware
http://otherweb.com/image31231230.gif				S100456123	49.99
	44.99	Dodobucks			
Fix Your Ride		Software	Educational	automotive	CarRepair
http://ottoweb.com/image42231420.gif				S100654123	49.99
	44.99	GreaseBooks			

Format and Sample of Store File

Sample Format Table

The format table below is set up with column headings for a CSV file format. A column of sample data has been added to provide clarification.

Field	Field Description	Data Type	Length	Sample Data	Notes
1	StoreID	String	5	00010	
2	StoreName	String	Varies	Zirconia Hill	
3	StoreAddress1	String	Varies	234 Zirconia Mall	
4	StoreCity	String	Varies	Woonsocket	
5	StoreState	String	2	RI	
6	StorePostalCode	String	Varies	02895	
7	StorePhoneNumber	String	Varies	401-555-3439	

Sample Data File

STOREID	STORENAME	STOREADDRESS	STORECITY	STORESTATE	STOREPOSTALCODE	STOREPHONENUMBER
00010	PA STORE #1	WESTCENTER MALL #344	KING OF PRUSSIA	PA	19406	610-555-3439
00011	MD STORE #1	SOUTH-DALE MALL #45	COLUMBIA	MD	21044	410-555-2344
00013	CT STORE #1	TOWN CENTER #5	STAMFORD	CT	06901	203 555 9099

Appendix D - File Import Reports

TIBCO Reward's File Import Report provides TIBCO Reward staff and clients with information about the processing status of individual files.

The File Import report tells you which files were successfully imported by TIBCO Reward, which report imports failed, and which reports were partially successful. (Be aware that some files cannot be "partially successful"; either the entire file is imported or the entire file fails). The File Report also provides details and failure reasons for the records in a file that failed processing.

About the File Import Report

To set up this report, you use the controls at the top of the report. Among other things, these controls allow you to specify what period of time the report should cover.

For each file that was imported within the time frame that you specify, the File Import Summary report lists the following fields:

- **File Import ID**: This is a file ID assigned by the system in accession order. Each new file is assigned the next number, so higher numbers indicate a more recent file. Files are listed from highest ID to lowest (within the specified time frame for the report).

- **File Name**: Name composed of standard filename elements, including date.

- **Start Date**: The start-date of the file generation.

- **End Date**: The end-date of the file generation.

- **File Type**: The type of file that was imported, for example: TransactionImport, StoreImport, ProductImport, etc.

- **Status**: Successful or Failed.

- **Details link**: Click this link in the File Import Summary report to see the File Import Details report for the associated file.

The File Import Details report has two variations:

- If the file import failed, the File Import Details report lists information in fields titled

"Failure Reason and Suggested Action".

- If the file import succeeded, then the File Import Details report lists file data and statistics, including the record type, the number of records in the file, and the number of records that were successfully transmitted.

> **ⓘ** **Note:** In the case of certain files, a file import may partially succeed (some records are transmitted but others are not) and the file import is considered a success. In this case this report will specify the number of records successfully transmitted, and the number of records that failed to be transmitted.

Creating a File Report

The File Import report provides status updates and other useful information about the results of batch imports or list file uploads. It also provides access to details about each import file. Use the CRMS to set up and generate this report, as follows:

Procedure

1. Click **Reports > Specialized > File Import Report**.

2. Click **File Import Report** link.

   The File Import Report opens.

3. Use the controls at the top of the report to set up this report.

   If the time period specified by default is not the time period that you want the report to cover, select a new date range or period immediately. Do not wait for the default report to compile if it is not what you want to see. To select a time frame for the report, choose from the drop-down list of standard options, or customize the time frame by specifying a range of dates. If you change the time frame, click the button labeled View Report to be sure that the report is regenerated.

4. Navigate through the report by using the arrow controls. You can also find data by searching for strings that occur in the report: use the data entry box in front of the Find control.

What to do next

To create another copy of the report with a different format such as XML, CSV, PDF, MHTML, Excel, TIFF, Word, select a formatting option from the **Select a Format** drop-down box, then click **Export**.

Click the printer icon to initiate the printing of the current report.

Appendix E - Email Update Import File

For special circumstances, TIBCO Reward provides an Email Update Import File. This is not a standard file import option.

The Email Update Import file allows clients to update email addresses in the TIBCO Reward database. This batch process is used when TIBCO Reward does not maintain the "system of record", that is, when the "master version" of each customer's email address is maintained in another, non-TIBCO Reward application. In this case, the updated record is imported to update TIBCO Reward's database.

Email Update Import File Overview

This Import is included because the email address is TIBCO Reward's primary means of identifying customers, and there is not a way to update email addresses using the Transaction and Customer Import File.

Contact TIBCO Reward for information and advice about using this file.

General Description

The email update file is simply a file that includes the old email address and the updated email address. If TIBCO Reward can successfully identify a record based on the email address, it will update the email to the new address provided in the file.

Initial Integration Notes

This integration is optional. The Email Update Import file is used only when TIBCO Reward is not the system of record (that is, the definitive, "master version" of the customer's records are maintained by the client) and when the email address on file with TIBCO Reward must be identical to the address maintained by the client.

Email Update Import File Use Cases

The Email Update Import file is typically used in the following cases:

- The client maintains its customer records and wants to synchronize that data with TIBCO Reward's corresponding data on a periodic basis.

- Customers update their information on the client's website or system, including their email addresses.

These scenarios require data integration to enable the creation and transfer of the Email Update Import File.

Standard XML Sample File and XSD Schema

At present, because of its simplicity, the Email Update file is processed as a flat file. There is no XML schema for this file. See Email Update Import File Usage Guidelines, Email Update Import File Data Elements and Formats, and Email Update Import File Samples and Formats from Clients for details.

Email Update Import File Usage Guidelines

If the client maintains the "master list" of customer email addresses, then it can send TIBCO Reward a list of email addresses to be changed in the TIBCO Reward database.

In this file, each record consists of a pair of email addresses: the first email is the old "previous" email address; the second address is the new "replacement" email address. Each old email address is used to identify a customer record in the TIBCO Reward system. If a record with a matching old email address is found, the record is updated by replacing the old address with the new address.

Email Update Import File Data Elements and Formats

The data elements and formats for Email Update Import File are as follows:

Email Update Import File Data Table

TIBCO Reward Field Name	Description	Data Type	Size	Sample Data
OldEmailAddress	Previous Email Address: Use this field to populate the source email address	String	100	mstone@example.com
NewEmailAddress	Current Email Address: Use this field to populate the updated email address	String	100	michaelstone@example.com

Email Update Import File Samples and Formats from Clients

Sample Email update file in CSV format

```
old_email_address@wahoo.com, new_email_address@sool.com,
Test1@wahoo.com, Test2@wahoo.com
```

Email Update Import File Errors and Error Notes

The following table includes the error codes that apply to Email Update file imports:

Email Update File Errors and Error Notes

Error Code	Error Type	Error Reason	Suggested Action
1	Invalid E-mail address	Email address format is invalid	Fix the email address and resend the file. An Email address cannot include spaces and has to include the following elements:<alphanumeric>@<alphanumeric>.<alpha> For additional, more specific details, see the "Email Address Validation Criteria " section.
2	Record failed to update	Old Email address duplicates in dropped file	No action necessary. Records with errors are skipped.
3	Record failed to update	New Email address duplicates in dropped file	No action necessary. Records with errors are skipped.
4	Record failed to update	New Email address exists as old email address for another record	No action necessary. Records with errors are skipped.
5	Record failed to update	New Email Address already exists in the system	No action necessary. Records with errors are skipped.
6	Record failed to update	Old Email Address does not	No action necessary. Records with errors are skipped.

Error Code	Error Type	Error Reason	Suggested Action
		exist in the system	
11	File failed	This file is a duplicate of a previously sent file	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be a duplicate, ignore this notice.
12	File failed	The file failed to import because it does not include any records	Check the file sending process to ensure it is working properly and sending the correct file. If this file is expected to be empty, ignore this notice.
13	File failed	The file failed to import because of a general error	Contact TIBCO Reward for diagnosis.
14	File failed	The file failed to import of a data format error	You can correct the file by fixing data format errors. Common issues include having an alphanumeric value in a date field.
15	File failed	The file failed to import because the file type is incorrect	This file was not recognized by our process. Common reasons for this issue include misnaming the file or accidentally sending a different file. You can correct this issue by sending the correct file.

Error Code	Error Type	Error Reason	Suggested Action
17	File failed	The file failed to import because it failed a validation rule	Contact TIBCO Reward for diagnosis.

Descriptions for Email Update Import File Errors and Error Notes

Some of the above error types are described below with more specific information and examples.

Email Update File Error Descriptions and Related Notes

New Email address duplicates in dropped file	A file failure will occur if the client's file includes multiple entries with the same new email address, for example:
	• `oldemailaddress@example.com,newemailaddress@example.com`
	• `Ye_` `oldemailaddress@example.com,newemailaddress@example.com`
	• `exampleabc@exampleabc.com,exampledef@exampledef.com`
	• `exampleefg@exampleefg.com,exampledef@exampledef.com`
	The records are not processed and the file is rejected with an error: "New Email address duplicates in dropped file".
Old Email address duplicates in dropped file	A file failure will occur if the client's file includes multiple entries with the same old email address, for example:
	• `oldemailaddress@example.com,newemailaddress@example.com`
	• `oldemailaddress@example.com,even-neweremailaddress@example.com`

- `exampleabc@exampleabc.com,exampledef@exampledef.com`

- `exampleabc@exampleabc.com,examplexyz@examplexyz.com`

The records are not processed and the file is rejected with an error: "Old Email address duplicates in dropped file".

New Email address exists as old email address for another record	A file failure will occur if the client's file includes an updated email address that is used as an old email address in another record, for example: • `oldemailaddress@example.com,newemailaddress@example.com` • `newemailaddress@example.com,even-neweremailaddress@example.com` • `exampleabc@abc.examplecom,exampledef@exampledef.com` • `exampledef@exampledef.com,examplexyz@examplexyz.com` The records are not processed and the file is rejected with an error: "New Email Address exists as old email address for another record".

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

Documentation for TIBCO® Reward is available on the TIBCO® Reward Product Documentation page.

To directly access documentation for this product, double-click the following file:

TIBCO_HOME/release_notes/TIB_loyalty_22.3.0_docinfo.html where *TIBCO_HOME* is the top-level directory in which TIBCO products are installed. On Windows, the default *TIBCO_HOME* is C:\tibco. On UNIX systems, the default *TIBCO_HOME* is /opt/tibco.

The following documents for this product can be found in the TIBCO Documentation site:

- *TIBCO® Reward Release Notes*
- *TIBCO® Reward User Guide*
- *TIBCO® Reward User Guide V3*
- *TIBCO® Reward CSR User Guide*
- *TIBCO® Reward Integration Guide*
- *TIBCO® Reward API Reference Guide*
- *TIBCO® Reward Analytics User's Guide*

How to Contact TIBCO Support

Get an overview of TIBCO Support. You can contact TIBCO Support in the following ways:

- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support website.

- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to TIBCO Support website. If you do not have a user name, you can request one by clicking **Register** on the website.

How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature requests from within the TIBCO Ideas Portal. For a free registration, go to TIBCO Community.

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