

Softshare ECS[®]

Real-time communications. Real-time data exchange. Real-time integration. Combine these capabilities into one software application and you have Softshare ECS, an incredibly powerful e-commerce server.

ECS supports today's prevalent Internet communications protocols, moving EDI, XML, and any other type of data into, out of, and across your enterprise in real time. In addition, ECS' advanced event rule system ensures that data is processed and routed according to its unique properties.

The result of ECS' real-time, hands-off data handling and routing capabilities is a seamlessly integrated e-commerce enterprise—and we speak from experience. Softshare relies on ECS to manage our e-commerce operations; no small feat considering that we have thousands of clients passing data over our network each day.

“ECS has proven a great tool to help schedule, execute, and monitor all of our translation and integration needs.”

select a tab to continue >>>

Utilities Overview

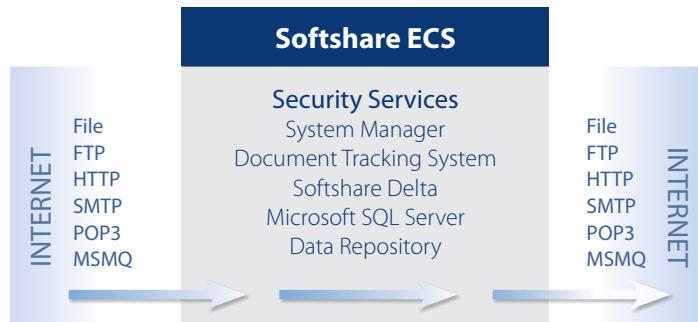
At the heart of Softshare ECS is its ability to route and process data. This core function happens at the server level, where ECS runs quietly in the background without user intervention.

At the client level, you have access to ECS' various desktop utilities. You'll use these utilities to configure how data moves through ECS, to view and track the data that's passing through, and to summarize the data. These utilities are available locally from your desktop or, if you're running ECS Standard or Enterprise, the majority of them are also available as parallel Web utilities from within WebECS.

ECS' client utilities are briefly highlighted next, but you'll find more detailed information for many of them as you explore the Features area of this brochure.

EDI Notepad FREE download

You don't have to be a Softshare client to enjoy EDI Notepad!
You can download it for free at our Web site:



Management Console

This utility governs data flow. You'll use it to configure where, when, and how ECS retrieves and delivers data as well as the events that are applied to the data as it travels through ECS.

Data Administrator

This utility presents a window to ECS' data repository. Your "window" of data can be filtered by a large number of criteria including date, trading partner, and data content type to name a few.

Trading Partner Manager

This utility stores trading partner information such as sender/receiver IDs, security settings, and EDI formatting requirements. You can use the information found in Trading Partner Manager to dynamically influence ECS' operations.

Log Viewer

This utility logs all system events that ECS initiates, including communications sessions, command and script executions, data translation events to name a few.

Management Reports

This utility generates a variety of reports for the documents that pass through ECS. You can run these reports on an as-needed basis or automate them.

ECS Status

This utility takes advantage of Web services communications to give you real-time insight into ECS' operations.

ECS Archive Viewer

This utility displays and, if desired, restores the contents of archived data.

EDI Notepad

This utility provides an intuitive interface for viewing and editing EDI documents.

Softshare ECS Versions

Softshare offers three versions of Softshare ECS: ECS Lite, ECS Standard, and ECS Enterprise.

Softshare ECS Standard & Softshare ECS Enterprise

ECS Standard is Softshare's most popular version of ECS. It's capable of fully automating your e-commerce operations and supports every ECS component, utility, and feature mentioned in this brochure.

What sets ECS Standard and ECS Enterprise apart is ECS Enterprise's intended role as a trading partner community hosting solution. In addition to the HTTP and SMTP servers that ECS Standard ships with, ECS Enterprise also ships with POP3 and FTP servers. The POP3 and FTP servers allow ECS Enterprise users to host their own trading partner communities, with each trading partner accessing a private POP3 or FTP mailbox on the ECS server.

Softshare ECS Lite

ECS Lite is the entry-level version of ECS. It's meant for those clients who need a modest communications application to pair with Softshare Delta, but don't require the advanced capabilities that come with ECS Standard.

This brochure uses ECS Standard as a baseline when highlighting features and components. However, you should refer back to this page to determine whether a described feature is available in ECS Lite.

Feature	ECS Lite	ECS Standard	ECS Enterprise
Delta Compatability	✓	✓	✓
WebECS		✓	✓
Management Reports	✓	✓	✓
Schedule Management Reports		✓	✓
Event Rule Chaining		✓	✓
Web Services		✓	✓
SMTP Server	✓	✓	✓
HTTP Server	*	✓	✓
POP3 Server			✓
FTP Server			✓

Data Transfer Method	ECS Lite	ECS Standard	ECS Enterprise
SMTP	✓	✓	✓
HTTP	*	✓	✓
POP3	✓	✓	✓
FTP	✓	✓	✓
MSMQ (Microsoft Message Queuing)		✓	✓
User-Defined (custom command or script)		✓	✓
Secure FTP	*	✓	✓
Secure HTTP	*	✓	✓
AS1/AS2/AS3	*	✓	✓

* ECS Lite can be enhanced with these items

Softshare WebECS

The Standard and Enterprise versions of Softshare ECS ship with WebECS, a Web component that lets you manage various aspects of ECS from your browser. Most of the ECS client utilities that are available locally from your desktop are also available as parallel Web utilities from within the WebECS interface. If you choose to install WebECS, you can configure, track, and summarize your ECS operations from any computer with a commonly used Web browser such as Microsoft Internet Explorer or Mozilla Firefox.

Secure Access

WebECS can be accessed from your browser via the HTTP or HTTPS protocol. Whether your connection to WebECS is secured via SSL is based on the configurations you establish for ECS' built-in HTTP listener.

Mobile Phone Compatibility

You can even access WebECS from a mobile phone or other compatible wireless device. WebECS supports the wireless application protocol (WAP).

The screenshot displays the Softshare WebECS web interface. At the top, there is a navigation bar with links for BACK, HOME, LOG OUT, and PREFERENCES, along with a 'Customize' button. A left sidebar contains icons for ECS Status, Log Viewer, Data Administrator, Management Reports, Trading Partners, and Management Console. The main content area features a 'Welcome to WebECS' message and an 'Enterprise Summary' section. The summary includes server time and location (6/14/06 11:11:16 AM UTC -7 hours), ECS service start time (6/6/06 7:30:10 AM), and statistics for log entries (932) and batches (4565) in the past 2 hours. Below this is a 'Recent Watchdog Alerts' section with an '[Edit Alerts]' link. A table lists three alerts with columns for Time, Context, and Event. The footer contains the Softshare logo, copyright information (© 1998-2006 Softshare), and the version number v1.0.125.

Time	Context	Event
6/14/06 10:16:52 AM	Sending data in queue "Data FTP Outbound (1x)" (206.117.58.140)	10061 connecting to server "206.117.21.140" on port 21 WSAECONNREFUSED
6/14/06 10:03:02 AM	Sending data in queue "Data FTP Outbound (1x)" (206.117.58.140)	10061 connecting to server "206.117.21.140" on port 21 WSAECONNREFUSED
6/14/06 10:02:31 AM	INOVMBOX	The mailbag (control# 8396) was rejected by the remote network due to the following error: Code W1 - Duplicate Mailbag Control Number for this Sender

Softshare ECS Server System Requirements

Component	Minimum
Computer	Pentium PC (500 MHz required; 1 GHz recommended).
Memory	512 MB of RAM required; 1 GB recommended.
Hard Disk Space	100 MB of available hard-disk space (20 MB for Softshare ECS, 20 MB for Softshare Delta if installed in conjunction with ECS, and at least 60 MB for the Microsoft SQL Server database). Additional hard disk space will be required as the ECS database grows.
Operating System	Microsoft Windows 2000 (Service Pack 1 or higher), Windows XP Professional, or Windows 2003. (Microsoft Windows Vista is not supported at this time.)
Additional Software	Microsoft SQL Server 2000 or 2005. Microsoft Internet Explorer 5.0 or higher.
Internet Connection	Full-time connection to the Internet via a dedicated data access line.

Softshare ECS Client System Requirements

Component	Minimum
Computer	Pentium PC (200 MHz or higher) with a network connection to the ECS server.
Memory	256 MB of RAM.
Hard Disk Space	30 MB of available hard-disk space.
Operating System	Microsoft Windows XP, 2000, or 2003. (Microsoft Windows Vista is not supported at this time.)
Additional Software	Microsoft SQL Server 2000 or 2005 client access license required for each machine on which utilities are installed. Microsoft Internet Explorer 5.0 or higher.

Softshare WebECS Server System Requirements

Component	Minimum
Computer	Pentium PC with 256 MB of RAM available.
Operating System	Any operating system that supports Java Runtime Environment and the Apache Tomcat Web server (both of these third-party applications are included with the WebECS installation).
Internet Connection	Full-time connection to the Internet via a dedicated data access line.

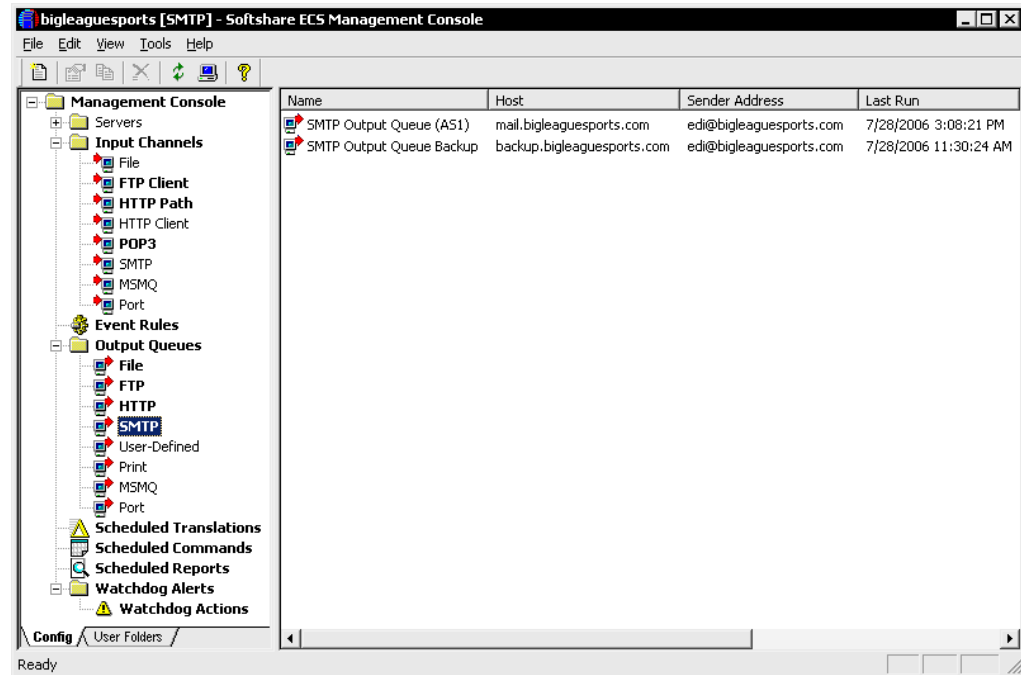
Data Transfer & Security Protocols

Softshare ECS is ideal for companies with high transaction volumes that require data reliability and security. ECS connects to your trading partners using a variety of Internet communications, data transfer, and security protocols. You can use ECS to connect directly with your trading partners or you can use Softshare's value-added network in conjunction with ECS.

Using the ECS Management Console utility, you can configure data to flow into and out of your enterprise using a variety of transfer methods, including:

- File System
- FTP & FTP/S
- HTTP & HTTPS
- POP3
- SMTP
- MSMQ (Microsoft Message Queuing)
- Printer (text)
- User-Defined (custom command or script)

In addition to supporting various Internet communications protocols, ECS supports three widely used forms of data security: EDIINT AS1, AS2, and AS3.



Management Console

Data Flow Management

Data flow in Softshare ECS is governed by input channels, output queues, and event rules. All three of these data flow components are configured from ECS' Management Console.

Input Channels

Input channels determine where, when, and how Softshare ECS retrieves data. You can configure as many input channels as necessary for your business operations.

Each input channel type has its own unique set of property pages that you will use to set the parameters for the retrieval and processing of data. These parameters, to name just a few, include where and how often ECS retrieves data, whether duplicate data should be processed, data authentication settings, and the actions that will be performed on arriving data.

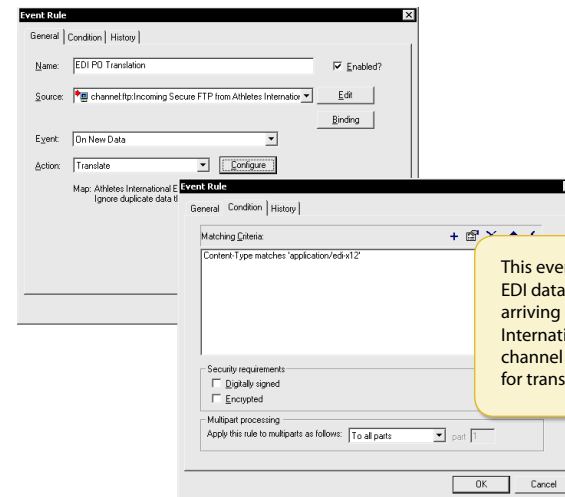
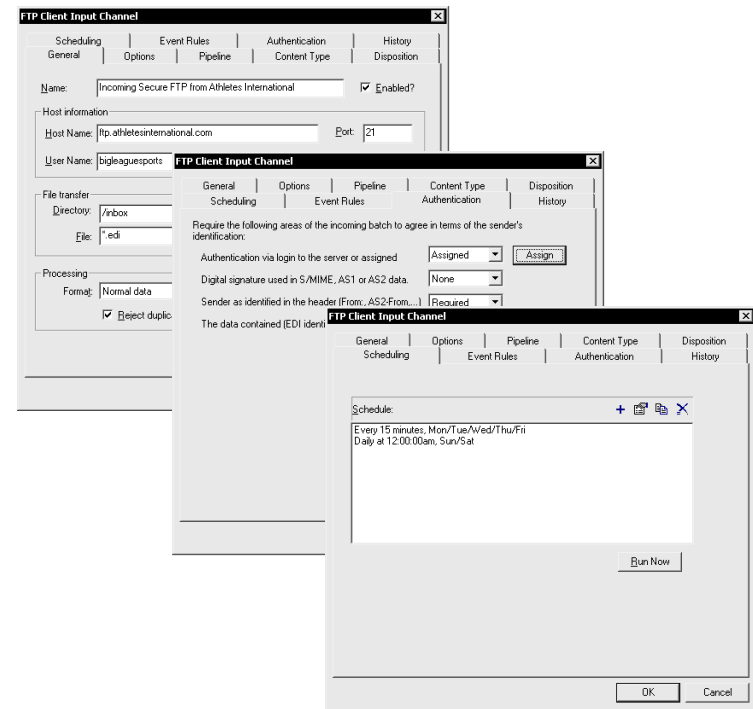
Output Queues

Output queues determine where, when, and how Softshare ECS delivers data to recipients and locations outside of ECS. ECS can deliver data as soon as it is queued or according to a schedule. As with input channels, each output queue type has a unique set of property pages that you will use to set the parameters for data delivery.

Event-Driven Processing

Event rules determine how data is processed. Typically, event rules are tied to input channels, telling Softshare ECS what to do with data when it arrives. But event rules can also be associated with output queues or even other event rules to initiate chains of events upon the completion or failure of deliveries or event rule actions.

Triggered in real time, event rules forward data to output queues, send e-mail messages, and run custom commands and scripts. If Softshare's data translator, Softshare Delta, is installed, event rules also pass data to Delta for translation and integration with your back-end systems.



This event rule will send all EDI data (ANSI X12 only) arriving on the Athletes International FTP input channel to Softshare Delta for translation into flat files.

Data Storage, Viewing & Retrieval

All data that passes through Softshare ECS is stored in the ECS data repository. You can view, copy, restage, archive, or purge this data using the Data Administrator utility that ships with ECS.

For your convenience, Data Administrator lets you search for data in the ECS repository by a number of criteria—used alone or in combination—including retrieval date, input channel, output queue, and delivery status. In addition, you can search for EDI data using EDI-specific criteria such as document type, interchange control number, and sending or receiving trading partner. When ECS is used in conjunction with Softshare Delta, Softshare's data translator, these same search options are also available for XML data.

The screenshot displays two windows from the Softshare software suite. The top window, titled "bigleaguesports - Data Administrator", shows a table of data batches. The bottom window, titled "Softshare EDI Notepad", shows a tree view of EDI data with a corresponding table of data fields.

Created	Source	Title	Batch Sender	Batch Receiver
7/30/2006 11:21:14 AM	Incoming Secure FTP from Athletes...	/inbox/850s.edi	Athletes International	Big League Sports
7/30/2006 11:21:21 AM	(Softshare Delta)	Data File Output	Big League Sports	(None)
7/30/2006 11:21:21 AM	(Softshare Delta)	EDI data	(None)	Athletes International

For each batch of received data, Data Administrator's upper pane displays up to ten properties including the batch's arrival date, retrieval method, sending/receiving trading partners, and, if Softshare Delta is run in conjunction with ECS, translation status. The lower pane displays the batch's deliveries, log entries, tracking details, and attachments.

Created	Target	Destination	Status
7/30/2006 11:21:14 AM	(Softshare Delta)	Athletes International EDI POs to Flat File.dtm	Successfully delivered

Name	Data
H.BEG	BEG^00^SA^AI1872^^040728
H.N1.N1	N1^BT^Athletes International Headquarters
H.N1.N3	N3^18 Stanley Drive
H.N1.N4	N4^Rochester^NY^14765
H.N1.N1	N1^MF^Big League Sports
B.PO1.PO1	PO1^00010^500^EA^1.25^^CB^428-FlashPink
B.PO1.PID.PID	PID^F^^^Acrylic Neon Laces
B.PO1.PID.PID	PID^F^^^Style: Pink
B.PO1.PO1	PO1^00020^500^EA^1.25^^CB^428-FlashAqua
B.PO1.PID.PID	PID^F^^^Acrylic Neon Laces
B.PO1.PID.PID	PID^F^^^Style: Aqua
B.PO1.PO1	PO1^00030^500^EA^1.25^^CB^428-FlashYellow
B.PO1.PID.PID	PID^F^^^Acrylic Neon Laces
B.PO1.PID.PID	PID^F^^^Style: Yellow
T.CTT	CTT^3

EDI batches are easily viewed and edited from Data Administrator using Softshare's EDI Notepad utility.

Data Security

Softshare ECS supports the key aspects of security including access control, data authentication, privacy, session security, and non-repudiation.

Access Control

Softshare ECS manages user access to its various utilities via predefined roles. These user roles give you control over who has access to ECS' setup features and the data stored in ECS.

- Administrators
- Power users
- Standard users
- Restricted (read-only) users

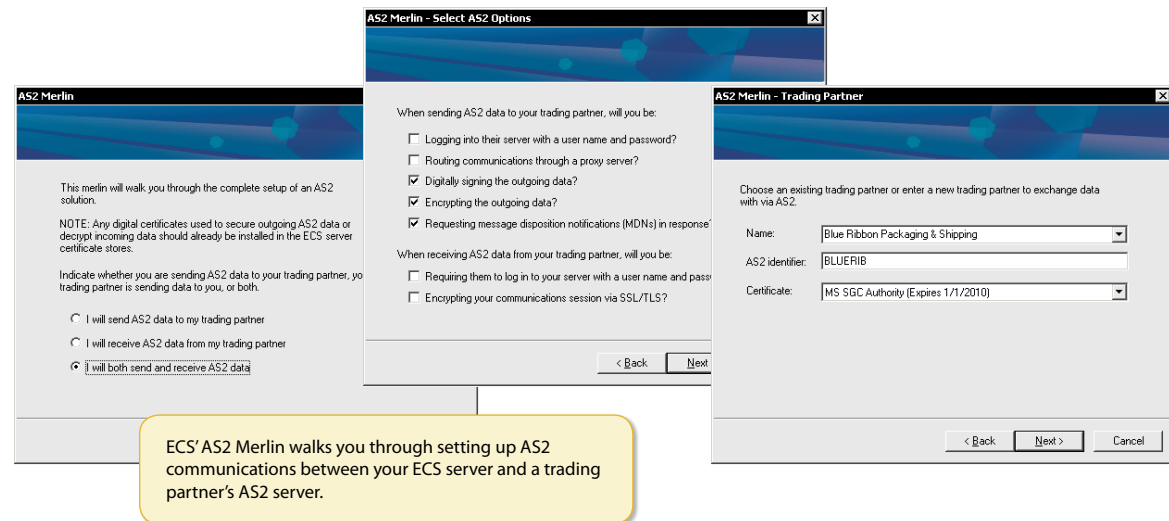
Data Security

To ensure the integrity and non-repudiation of your data, Softshare ECS fully supports S/MIME security, including certificate management, document encryption, digital signatures, and message disposition notifications (MDNs). ECS also fully supports the EDIINT AS1, AS2, and AS3 security specifications, which are built upon S/MIME security features. Throw in SSL/TLS session-level security for FTP and HTTP communications and your data is secure from every angle.

Data Authentication

By authenticating the data before it is processed, you can prevent invalid data from entering your system. Softshare ECS verifies arriving data using two or more of the following authentication levels:

- Login Information
- MIME headers
- X.509 certificates
- Data content



Error Tracking

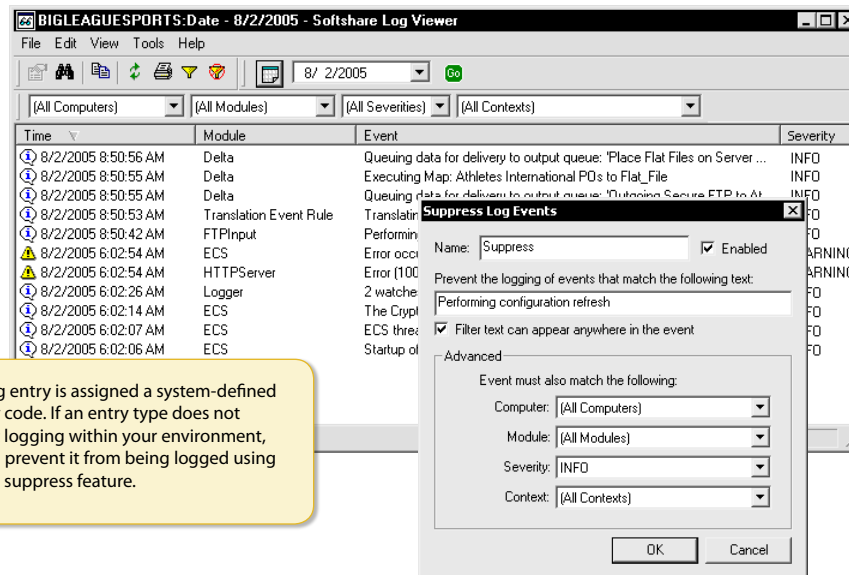
Softshare ECS diligently logs all system events that it initiates, including communications sessions, data retrievals and deliveries, command and script executions, and, if Softshare Delta is installed, data translation events. This comprehensive event logging makes it easy to track down errors that may occur.

Log Viewer

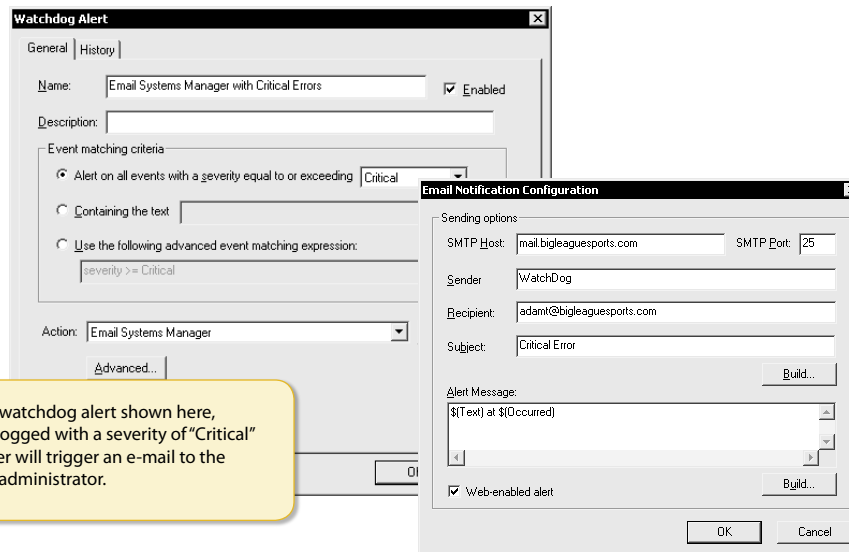
A detailed description of each logged event is available for review from the Log Viewer, a utility that ships with Softshare ECS. The data in Log Viewer can be filtered using a variety of criteria, including log date, event type, and event severity.

Watchdog Alerts

Some errors require immediate attention. For example, the failure of an important delivery could have a serious impact on your business operations if it goes unnoticed. To ensure that critical errors are brought to your attention in real time, you can configure Softshare ECS to notify you when a particular event occurs. Called watchdog alerts, these notifications can be sent as e-mails or display as pop-up messages on designated computers.



Each log entry is assigned a system-defined severity code. If an entry type does not warrant logging within your environment, you can prevent it from being logged using ECS' log suppress feature.



For the watchdog alert shown here, events logged with a severity of "Critical" or higher will trigger an e-mail to the system administrator.

Management Reports

Softshare ECS offers a wide variety of management reports to help you quickly organize information in the database. ECS' most notable management reports are its document reports which summarize various aspects of document exchange such as EDI documents that have not yet been acknowledged by your trading partners or all XML documents sent to a particular trading partner, to name just a couple.

Management reports can be generated from two places: the Management Reports desktop utility and the WebECS interface. Because it is able to take full advantage of HTML technologies, WebECS offers more reports than its counterpart and is able to hyperlink its report output to related documents or records in the ECS database.

You can manually run ECS' management reports on an as-needed basis or you can automate them using the scheduled reports feature. This feature lets you configure a report generation schedule, report delivery options, and output format.

The screenshot shows the WebECS interface with the 'Management Reports' section active. A dropdown menu is open, listing various report types such as '[Document] - Documents Unacknowledged', '[General] - Error Log', and '[Partner] - Delivery Method'. The 'View' is set to 'HTML'. There are checkboxes for filtering reports by trading partners, input channels, document types, and date. The number of records to return is set to 1000. A 'Submit' button is visible.

The resulting report, titled 'Documents Unacknowledged Report', is displayed in a table format. It includes a 'Print' button and a 'Customize' checkbox. The table has the following columns: Timestamp, Type, Reference, Envelope Control, Sender, Sender ID, Recipient, and Recipient ID. The report shows 10 records of unacknowledged documents.

Timestamp	Type	Reference	Envelope Control	Sender	Sender ID	Recipient	Recipient ID
8/7/06 1:30:45 PM	856	7928	000000914	Genus Medical	ZZ/9004	Cardinal Health	01/943561654
8/7/06 1:30:42 PM	856	207301	000004515	Blach Company	ZZ/8442	PACCAR Inc	01/137361736
8/7/06 1:30:38 PM	870		000001528	Arritor Telephone	01/006420087	Mitsui Steal, Inc.	ZZ/MISUI
8/7/06 1:30:37 PM	856	01117383	000001130	Arritor Telephone	01/006420087	Mitsui Steal, Inc.	ZZ/MISUI
8/7/06 1:30:33 PM	856	590FT/01	000028667	Power Supply Company	01/034788521	CenturyTel	01/069737697
8/7/06 1:30:33 PM	856	584HK/03	000028667	Power Supply Company	01/034788521	CenturyTel	01/069737697
8/7/06 1:30:33 PM	856	590KG/02	000028667	Power Supply Company	01/034788521	CenturyTel	01/069737697
8/7/06 1:30:33 PM	856	5958F/00	000028667	Power Supply Company	01/034788521	CenturyTel	01/069737697
8/7/06 1:30:33 PM	856	5953V/00	000028667	Power Supply Company	01/034788521	CenturyTel	01/069737697
8/7/06 1:30:33 PM	856	5953U/00	000028667	Power Supply Company	01/034788521	CenturyTel	01/069737697

10 records matched report criteria.

You can run general reports that apply to the ECS database as a whole or you can restrict report parameters to a specific trading partner, input channel, output queue, or date range.

Running Reports from WebECS

Trading Partner Manager

Using Trading Partner Manager (TPM), a utility that ships with Softshare ECS, you can store a wide variety of information for your trading partners such as sender and receiver IDs, security settings, and event watches.

By storing sender and receiver IDs in TPM, ECS is able to cross-reference the IDs found in incoming and outgoing data and substitute them for your trading partners' names when tracking the data in the Data Administrator utility or running management reports. In addition, ECS uses the sender and receiver IDs to watch for data that meets the criteria of any event rules that may be assigned to a trading partner's TPM record.

When Softshare Delta, Softshare's data translator, is run in conjunction with ECS, TPM determines the maps that are run against arriving data, functional acknowledgment generation procedures, the sender and receiver IDs that are applied to translated documents, and the ECS output queues that translated documents are destined for, to list a few of its roles in an ECS/Delta environment.

The image displays three screenshots of the Trading Partner Manager (TPM) interface for a trading partner named 'Pro Sports'. The top screenshot shows the 'Identification' tab with a table of identifiers:

Type	Identification	Comments
▶ X12	01.796423398T	
▶ X12	01.796423398	
▶ TRADACOMS	EDI3795501	
▶ EDIFACT	12.8058958528T	
▶ EDIFACT	12.8058958528	

A yellow callout box next to this screenshot states: "One trading partner can have multiple identifiers: one test and one production identifier for each type of data sent or received."

The middle screenshot shows the 'Security' tab with a table of security settings:

Type	Who	What	Action	Param
Arrival of data	To: (Any)	Interchange	Email operator(s)	adamt@bigleaguesports.com

A yellow callout box next to this screenshot states: "From TPM, you can configure ECS to notify you when an event such as data arrival or delivery occurs for a particular trading partner."

The bottom screenshot shows the 'Delivery' tab with configuration options for default and advanced delivery bindings. The 'Default delivery binding' section shows 'Send via' set to 'SMTP Output Queue (AS1)' and 'To:' set to 'acknowledgments@prosports.com'. The 'Advanced delivery bindings' section shows a table with one binding:

Binding	Send via
Acknowledgements	SMTP Output Queue (AS1):acknowledgments@prosports.com

A yellow callout box next to this screenshot states: "From TPM, you can configure which ECS output queue(s) will handle translated data destined for a particular trading partner."

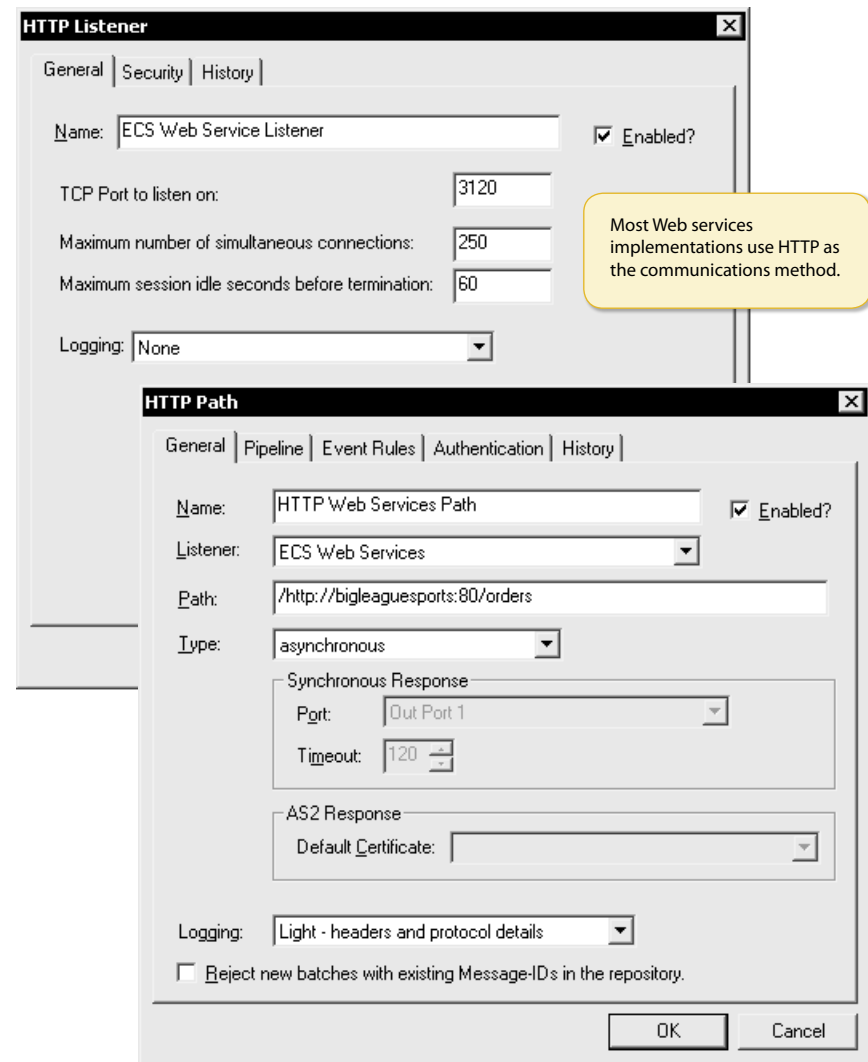
Web Services

When Softshare ECS and Softshare Delta Enterprise, Softshare's data translator, are run in tandem, you get a platform that keeps pace with the rapidly evolving world of Web services and business frameworks such as ebXML, RosettaNet, and ACORD. Working together, ECS and Delta Enterprise are extensible, supporting all current and future business frameworks as well as SOAP and SOAP with Attachments.

ECS handles the communications component of Web services with its built-in HTTP server, a specialized "Web server" that listens for incoming connections and synchronously responds to posted data based on its content. Via Delta Enterprise's identity model feature which provides business context to XML documents, ECS can identify key elements in XML business documents such as the sender, receiver, and control number, allowing it to track and act upon incoming and outgoing XML documents as it would EDI documents.

Implementing Web Services

Softshare's Web Services Toolkit provides additional guidance when implementing Web services. Click the link below to learn more about this add-on component.



Integration With Softshare Delta®

While Softshare ECS can be used as a stand-alone server application, it is most typically run in conjunction with Softshare Delta, Softshare's data translator. In combination, these two products comprise a complete data translation and integration solution, allowing data to be passed from ECS to Delta for translation and back to ECS for further routing—all without any user intervention.

The addition of Delta to your e-commerce server solution also automates EDI functional acknowledgment generation. Unless you specify otherwise, Delta will create functional acknowledgments for all arriving EDI data, using use data stored in the Trading Partner Manager utility to determine how they should be formatted.

There are many other capabilities that come with an ECS and Delta pairing including Web services, packaging and unpackaging of encapsulated data, XML data tracking, dynamic map selection, and more.

Data arriving in ECS can be handed off to Softshare Delta for translation into a variety of data formats including EDI, XML, flat file, text, and database table formats.

Find Out More

Visit Softshare Delta's Web pages for more information on this data translation application.



Softshare ECS Benchmarks

Each scenario was executed several times and the following tables represent the averages. These tests were performed on a Dell Dimension 3000 with a Pentium IV (2.8 GHz) processor running Softshare ECS and Softshare Delta, with 512MB of RAM.

EDI Translation

The following four translation scenarios feature EDI as source data. The times reported include receiving and recording the batches, and translation to data file. The specifications for the source EDI files that these tests were performed with are:

- ANSI X12 4010 version
- 1,000 individual batches/files, each with one EDI 850 (purchase order)
- 6,064 total line items
- 688,744 bytes of data

Data Source Protocol	Processing Time	Batches/Second	Time/Batch
HTTP Server (1,000 sessions)	8:36	1.97	0.52 seconds
SMTP Server (1,000 e-mails)	11:01	1.51	0.66 seconds
File (1,000 files)	9:53	1.69	0.59 seconds
FTP Client (single session with 1,000 files)	9:54	1.69	0.59 seconds

AS2 Processing

The times reported include receiving and recording the batches, and the return of signed MDNs. The specifications for the data that these tests were performed with are:

- ANSI X12 4010 version
- 1,000 individual batches/files, each with one EDI 850 (purchase order)
- 6,064 total line items
- 688,744 bytes of data
- Encryption: Triple DES
- Signature algorithm: SHA-1

Data Source Protocol	Processing Time	Batches/Second	Time/Batch
HTTP Server (AS2 protocol)	12:22	1.35	0.74 seconds