
ECxgate

White Paper

Client Computing Utility AS

Index

1	INTRODUCTION	3
2	WHY CHOOSE ECXGATE?	4
3	FEATURES.....	5
4	MODULES	7
5	SOFTWARE REQUIREMENTS.....	7
6	SYSTEM DIAGRAM.....	8
7	CONFIGURATION WINDOW SAMPLE.....	9
8	TRANSACTION LOG WINDOW SAMPLE.....	10
9	CONTACT INFORMATION	11

1 INTRODUCTION

ECxgate is a next generation product from Client Computing, which incorporates the design philosophies used in our very successful product ECPower. ECxgate is a sophisticated, extremely flexible, yet easy-to-use solution, which facilitates enterprise application integration (EAI) as well as business-to-business (B2B) integration. ECxgate can be deployed in a stand-alone environment to address smaller B2B integration issues, or as the hub of a large data communications network. The module based design provides cost-efficient scalability, as only the required functionality and features need to be purchased. Regardless of the implementation method, ECxgate is easily configured and managed.

By using the extensive search capabilities of the ECxgate Control Center or the ECx-web user interface, users can effortlessly and quickly locate messages based on a wide variety of search criteria. Once located, the statuses of messages are immediately recognized based on a simple color scheme. The extensive logging that is connected to each message makes troubleshooting a breeze. Reprocessing of a message is as easy as a single mouse click.

The built-in features of ECxgate allow the handling of most file types and formats, including but not limited to; XML, CSV and ASCII. Conversion of data is handled with an exceptionally flexible mapping tool, which is basically capable of mapping anything-to-anything. As a successor to a traditional EDIFACT message handling system, ECxgate also incorporates complete message handling features based on the UN-standard UN/EDIFACT, and can exchange all messages which are derived from this standard. An example of these message types include: UTILMD, UTILTS, MSCONS, DELFOR, PRODAT, ORDERS, INVOIC, CONTRL and APERAK.

Exchanging secure encrypted or clear-text data and messages can be done with the standard communications modules available in ECxgate, which include SMTP, FTP, file-sharing and X.400.

2 WHY CHOOSE ECXGATE?

Integration

- ✓ You have several systems that must be synchronized
- ✓ You have subsidiary companies sharing data
- ✓ You are trading data with business partners
- ✓ You need to save time
- ✓ You need to convert data from one system to another

Flexibility

- ✓ You want a system that can deal with most formats used in an electronic world with electronic documents and data
- ✓ You require Module based scalability
- ✓ You want data traceability and easy reprocessing of data
- ✓ You want multiple message routing capabilities

Easy to use

- ✓ You would like functional simplicity which has been a goal from the early development stages of a product
- ✓ You want to use a system that is designed from an 'end-user' perspective

A system for the future

- ✓ We monitor the customer needs and gladly accept their input
 - ✓ We are represented in several industry user groups
 - ✓ We use a module based design, allowing easy scalability and expansion
 - ✓ Our Module based security allows new technologies to be easily implemented
 - ✓ We perform ongoing stress testing, making it very reliable
 - ✓ We use the latest development tools, making ECXgate fast
-

3 FEATURES

<i>Collecting external messages from multiple sources:</i>	<ul style="list-style-type: none"> ✓ POP3 ✓ File Share ✓ FTP/SFTP ✓ Web services ✓ AS2 ✓ X400, Database, , HTTP, HTTPS*
<i>Collecting internal messages from:</i>	<ul style="list-style-type: none"> ✓ File Share, with the possibility to logon over a network ✓ FTP/SFTP ✓ Web services ✓ HTTP ✓ POP3, X400, Database, HTTPS *
<i>Delivering/Sending</i>	<ul style="list-style-type: none"> ✓ SMTP ✓ File Share, with the possibility to logon over a network ✓ FTP ✓ Web services ✓ HTTP ✓ AS2 ✓ Database, HTTPS, *
<i>Priority</i>	<ul style="list-style-type: none"> ✓ All inbound and outbound channels have their individual priority. ✓ All inbound and outbound data routes have individual priorities
<i>Decryption/ Encryption</i>	<ul style="list-style-type: none"> ✓ RSA, DES, X500
<i>Un packing (unzip)</i>	<ul style="list-style-type: none"> ✓ Unzipping of files and treating the contents individually as unique messages
<i>Load balancing</i>	<ul style="list-style-type: none"> ✓ For load balancing, the database server, the web server and the ECxgate application server can be installed on separate hardware.
<i>One input, many destinations</i>	<ul style="list-style-type: none"> ✓ Files received from partners may easily be routed to multiple destinations with different formats
<i>User Friendly</i>	<ul style="list-style-type: none"> ✓ Easy to use Graphical interface for end users ✓ Complex configuration routines do not exist when compared to other systems with similar functionality ✓ Easy to use Transaction log to locate, view and reprocess messages
<i>Flexibility</i>	<ul style="list-style-type: none"> ✓ Extremely flexible mapping tool, Datastage TX from IBM ✓ Module based
<i>Performance</i>	<ul style="list-style-type: none"> ✓ High throughput ✓ Inbound and outbound data-flow are independent of each other ✓ High performance data conversions using Datastage TX from IBM
<i>Reliability</i>	<ul style="list-style-type: none"> ✓ On power failure / reboot, the system will start processing messages where it stopped ✓ On a load balanced system , the individual ECxgate modules will restart processing from where they stopped, in the event of a

power or network failure

Logs

- ✓ Every data route has individual log settings
- ✓ A user friendly Transaction log showing individual transactions as well as relation to other transactions in the case of the CONTRL message
- ✓ Navigation directly from Transaction log to the Partner configuration, the Company configuration, the Message definition, and the Mapping definition

Supported exchange formats

- ✓ A2A (Application to Application)
- ✓ A2B (Application to Business)
- ✓ B2B (Business to Business)
- ✓ B2C (Business to Customer)
- ✓ EAI (Enterprise Application Integration)
- ✓ M2M (Machine to Machine)
- ✓ EDIFACT (Electronic Data Interchange for Administration, Commerce, and Transport)
- ✓ EDIEL(EDI for the Electricity industry)
- ✓ ebiX (European forum for energy Business Information eXchange)
- ✓ UN/CEFACT (United Nations Centre for Trade Facilitation and Electronic Business)
- ✓ XML (eXtended Markup Language)
- ✓ ANSI X.12 (American National Standards Institute Accredited Standards Committee X12)
- ✓ ODETTE (**O**rganisation for **D**ata **E**xchange by **T**ele**T**ransmission in **E**urope) (EDI for the automotive industry)
- ✓ Flat files
- ✓ ASCII files (txt, csv, ini, etc)
- ✓ .CSV (comma separated format)
- ✓ .DOC (Word Document) (Future)
- ✓ .XLS (Excel document) (Future)

Contacts

- ✓ Companies may be registered with contacts
 - ✓ Contacts may be assigned as route responsible
-

* Future release

4 MODULES

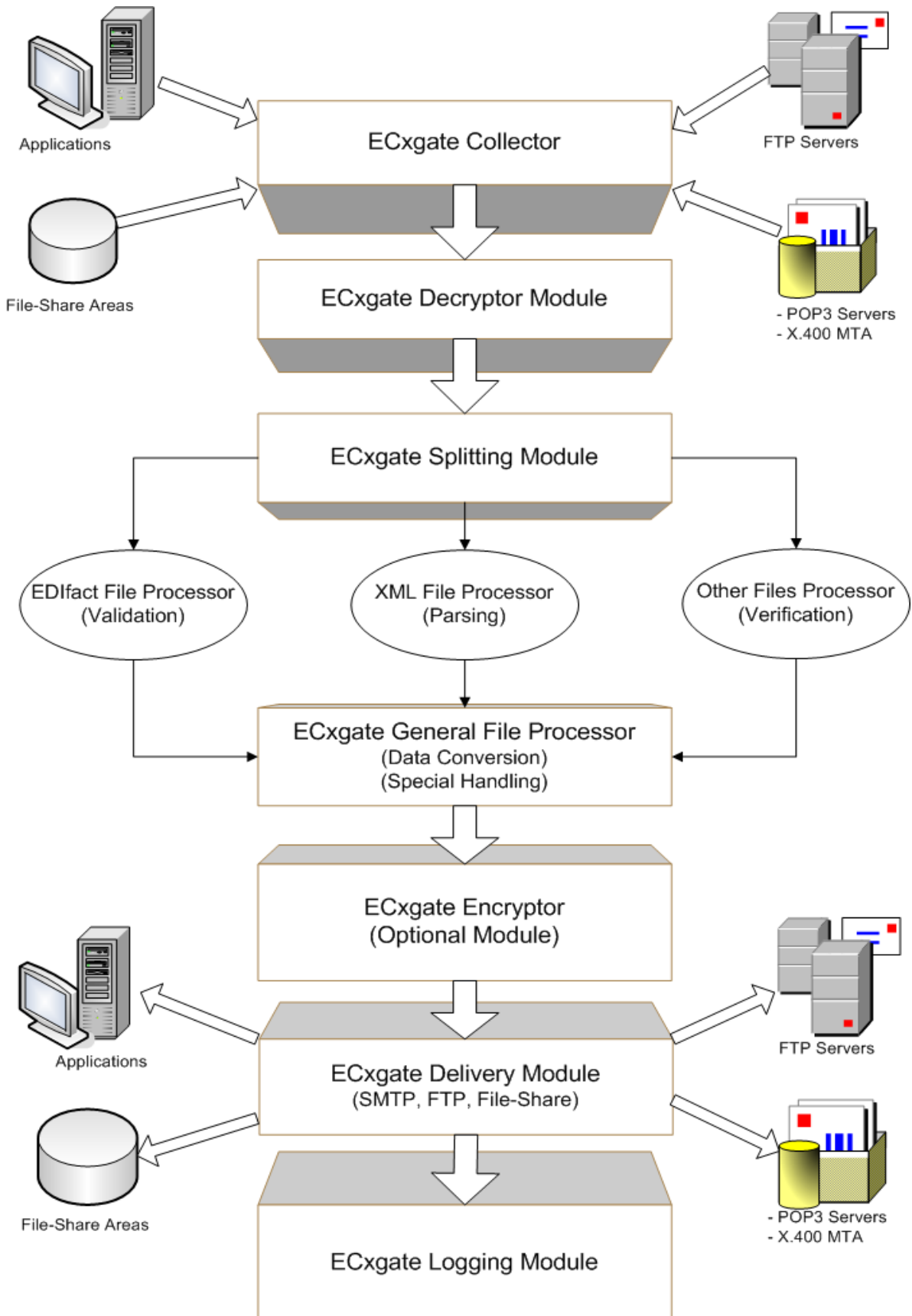
<i>SMTP</i>	✓ Enables communications with POP3 server accounts
<i>Web</i>	✓ Web based user interface
<i>Control Center (A part of ECxgate)</i>	<ul style="list-style-type: none"> ✓ Graphical User Interface providing complete configuration and monitoring capabilities. ✓ Unlimited use license available ✓ User access level logins
<i>Extended Message Types</i>	✓ Identify EDIFACT message types based on message content.
<i>Free text search</i>	✓ Ability to log and search any part of a file
<i>Alarms</i>	<ul style="list-style-type: none"> ✓ Notification of contacts on errors ✓ Notification on transaction events
<i>Security</i>	✓ Data encryption and decryption
<i>Extended logging</i>	<ul style="list-style-type: none"> ✓ Possibility of logging other type of data related to the message other than sender, receiver and message type. ✓ Search the extended data
<i>Event*</i>	✓ Notification on transactions that should have occurred

* Future release

5 SOFTWARE REQUIREMENTS

<i>OS</i>	<ul style="list-style-type: none"> ✓ Microsoft Win 2003/2008 Server with .NET framework ✓ 32 or 64 bit (load dependent, but 64 bit is recommended) ✓ Recommended– Microsoft Win2003 Server with .NET framework2.0 ✓ Latest service pack
<i>SQL Server</i>	<ul style="list-style-type: none"> ✓ Microsoft MS SQL server 2005/2008 ✓ Standard or Enterprise (Load dependent) ✓ 32 or 64 bit (load dependent) ✓ Latest servicepack
<i>IIS server (for ECxweb)</i>	✓ IIS supporting ASP .NET
<i>Ram</i>	<ul style="list-style-type: none"> ✓ 4 Gbyte (Minimum) ✓ Higher load might require increased the need or RAM.
<i>CPU</i>	✓ 2.6 Ghz
<i>Disk</i>	✓ 250 Gbyte (load dependent)

6 SYSTEM DIAGRAM



7 CONFIGURATION WINDOW SAMPLE

[FMS ECxgate v2.0] ECxgate Control Center - Per-Olav Pettersen

File Tools Modules Help

Companies

Disabled Reset
 Deleted Search

- 81300_-_Prodatt_Web
- 91200_-_Prodatt_Web_(Nodenett)
- Aurland
- Bane_Energi
- Bane_Energi_Nett
- CCU Invoice Sender
- CONTRL
- Customer_Alert
- DE - ENH_-_Energiehändler_-_Supplier
- DE - Semeco
- DE - SV_Quedlinburg
- DEMO Customer A - TEST
- DEMO Customer B - TEST
- DK_Elkraft
- Dragefossen
- Dragefossen_KRAFT
- Drangedal_B2B
- Dummy_Kraft
- Dummy_Nett
- EB_distribusjon
- EB_Nett_AS_-_Regional
- Edifact_UT
- ELIS
- Elkem_Bremanger
- Elverum
- EMS

Add Company

Transaction Search

Companies

System Configuration

Partners

Company Information

Enabled
 Name: Aurland
 E-Mail Address:
 Map Group: DEFAULT
 Default Channel:

Company ID's

Company ID	Enabled
102975332438	No
7080005050548	Yes
975332438	No

Routes

Name	Description	Enabled
Inbound Routes		
I APERAK D96A <DEFAULT>(Elis)		Yes
I MSCONS D96A <DEFAULT>(Elis)		Yes
I PRODAT D97A <DEFAULT>(Elis)		Yes
I UTILTS D02B <DEFAULT>(Elis)		Yes
Outbound Routes		
O MSCONS D96A <DEFAULT>(Elis)		Yes
O PRODAT D97A <DEFAULT>(Elis)		Yes
O UTILTS D02B <DEFAULT>(Elis)		Yes

Save

8 TRANSACTION LOG WINDOW SAMPLE

no-ccu-test-1 - Remote Desktop Connection
[FMS ECxgate v2.0] ECxgate Control Center - Per-Olav Pettersen

File Tools Modules Help

Transaction Search

Transaction Search filters:
 Date from: 13.10.09 - 00.00.00
 Date to: 13.10.09 - 23.59.59
 Direction: cAb
 Company: cAb
 Partner: cAb
 Message format: cAb
 Message type: cAb
 Spam: No spam
 Edifact: UNB Exchange ID, BGM Sub address, BGM Name coded, BGM Doc Ref.
 Status and state: Ok, Waiting, Failed, Show CTRL: Unprocessed.
 General: Max results: 100, Toggle tabbing: Open search in new tab

Status	#	M/C	Time	Direction	Company	Partner	Exchanged Type	UNB Exchange ID	BGM Document Reference
✓	1	M	13.10.2009 11:32:55	In	FMS(SE)_Elkraft_Sverige	Garnie_Energ_AB	MSCONS	200910131219	FD=edexp:14662315
✓	2	M	13.10.2009 11:32:46	In	Hallingdal_SDL	Ustehavika_Energ_AS	PRODAT	356417	386417120910131119
✓	3	M	13.10.2009 11:32:21	In	Powertrade_SDL	Elkem_Bremanger	UTILTS	0000028511AKQH	0000028511AKQH
⚠	4	M	13.10.2009 11:32:04	Out	Elkem_Bremanger	Berger_Energ_AS / Telenor	UTILTS	0000028515TEDO	0000028515TEDO
⚠	5	M	13.10.2009 11:32:04	Out	Elkem_Bremanger	Berger_Energ_AS / Statens	UTILTS	0000028514IQYL	0000028514IQYL
⚠	6	M	13.10.2009 11:32:03	Out	Elkem_Bremanger	SFE_KRAFT	UTILTS	0000028513WZUP	0000028513WZUP
⚠	7	M	13.10.2009 11:32:03	Out	Elkem_Bremanger	SFE_KRAFT	UTILTS	0000028512TKVM	0000028512TKVM
✓	8	M	13.10.2009 11:32:03	Out	Elkem_Bremanger	Powertrade_SDL	UTILTS	0000028511AKQH	0000028511AKQH
✓	9	M	13.10.2009 11:31:43	In	FMS(SE)_Sundsvall_Ener	Kalin_Kraft_Svenak_Filial	UTILTS	11048113	11048113120910131127
✓	10	M	13.10.2009 11:31:34	Out	Elkem_Bremanger	NorgesEnerg	UTILTS	0000028510NKOV	0000028510NKOV
✓	11	M	13.10.2009 11:31:33	Out	Elkem_Bremanger	NorgesEnerg	UTILTS	0000028509EJAI	0000028509EJAI
✓	12	M	13.10.2009 11:31:33	Out	Elkem_Bremanger	LOS_AS	UTILTS	0000028508THKJ	0000028508THKJ
✓	13	M	13.10.2009 11:31:33	Out	Elkem_Bremanger	Hallingkraft_AS	UTILTS	0000028507CMLB	0000028507CMLB
✓	14	M	13.10.2009 11:31:32	Out	Elkem_Bremanger	Fjordkraft	UTILTS	0000028506HBCX	0000028506HBCX
✓	15	M	13.10.2009 11:31:32	Out	Elkem_Bremanger	Fjordkraft	UTILTS	0000028505OWKB	0000028505OWKB
✓	16	M	13.10.2009 11:31:31	Out	Elkem_Bremanger	Talinst_Energ	MSCONS	0000028498EFP	0000028498EFP
✓	17	M	13.10.2009 11:31:31	Out	Elkem_Bremanger	Berger_Energ_AS / Telenor	MSCONS	0000028494QZD	0000028494QZD
⚠	18	M	13.10.2009 11:31:30	Out	Elkem_Bremanger	Berger_Energ_AS / Statens	MSCONS	0000028489VFF	0000028489VFF
✓	19	M	13.10.2009 11:31:30	Out	Elkem_Bremanger	SFE_KRAFT	MSCONS	0000028483AMB8	0000028483AMB8
✓	20	C	13.10.2009 11:31:20	In	Powertrade_SDL	Elkem_Bremanger	MSCONS	0000028486VLTE	0000028486VLTE
✓	21	M	13.10.2009 11:31:20	In	Powertrade_SDL	Elkem_Bremanger	MSCONS	0000028486VLTE	0000028486VLTE
✓	22	M	13.10.2009 11:31:03	Out	Elkem_Bremanger	SFE Prodskjaper AS / SFE_K	MSCONS	0000028482JHC	0000028482JHC
✓	23	M	13.10.2009 11:31:02	Out	Elkem_Bremanger	SFE_KRAFT	MSCONS	0000028474SVFA	0000028474SVFA
✓	24	M	13.10.2009 11:31:02	Out	Elkem_Bremanger	Markedskraft_NO / Powetra	MSCONS	0000028471ANJW	0000028471ANJW
✓	25	M	13.10.2009 11:31:02	Out	Elkem_Bremanger	Powertrade_SDL	MSCONS	0000028466VLTE	0000028466VLTE
✓	26	M	13.10.2009 11:31:01	Out	Elkem_Bremanger	NorgesEnerg	MSCONS	0000028459FEBG	0000028459FEBG
✓	27	M	13.10.2009 11:31:01	Out	Elkem_Bremanger	NorgesEnerg	MSCONS	0000028451KJFJ	0000028451KJFJ
✓	28	M	13.10.2009 11:31:01	Out	Elkem_Bremanger	NorgesEnerg	MSCONS	0000028444FUJOD	0000028444FUJOD
✓	29	M	13.10.2009 11:31:00	Out	Elkem_Bremanger	Hallingkraft_AS	MSCONS	0000028440YKPP	0000028440YKPP
✓	30	M	13.10.2009 11:31:00	Out	Elkem_Bremanger	Gulbrandsdal_Energ	MSCONS	0000028436RPSX	0000028436RPSX
✓	31	M	13.10.2009 11:31:00	Out	Elkem_Bremanger	Fjordkraft	MSCONS	00000284330MBY	00000284330MBY
⚠	32	M	13.10.2009 11:30:59	Out	Elkem_Bremanger	Elkem AS / Statnett_SF_(T	MSCONS	0000028431SDEC	0000028431SDEC
✓	33	M	13.10.2009 11:30:58	Out	Elkem_Bremanger	Fjordkraft	MSCONS	0000028429VPH	0000028429VPH
✓	34	M	13.10.2009 11:30:56	Out	FMS(SE)_Elkraft_Sverige	Linköping_Kraftnat_AB	APERAK	1712523	17125231200910120921
⚠	35	M	13.10.2009 11:30:55	Out	FMS(SE)_Elkraft_Sverige	Linköping_Kraftnat_AB	APERAK	1712524	17125241200910120921
✓	36	M	13.10.2009 11:30:55	Out	FMS(SE)_Elkraft_Sverige	Linköping_Kraftnat_AB	APERAK	1712525	17125251200910120921
✓	37	M	13.10.2009 11:30:55	Out	FMS(SE)_Elkraft_Sverige	Lunds_Energ_Elnet_AB	APERAK	1712526	17125261200910120921
✓	38	M	13.10.2009 11:30:54	Out	FMS(SE)_Elkraft_Sverige	Linköping_Kraftnat_AB	APERAK	1712527	17125271200910120921
✓	39	M	13.10.2009 11:30:54	Out	FMS(SE)_Elkraft_Sverige	Linköping_Kraftnat_AB	APERAK	1712528	17125281200910120921
✓	40	M	13.10.2009 11:30:54	Out	FMS(SE)_Elkraft_Sverige	Linköping_Kraftnat_AB	APERAK	1712529	17125291200910120921
✓	41	M	13.10.2009 11:30:54	Out	FMS(SE)_Elkraft_Sverige	Linköping_Kraftnat_AB	APERAK	1712530	17125301200910120921
✓	42	M	13.10.2009 11:30:54	Out	FMS(SE)_Elkraft_Sverige	Soda_Hallands_Kraftbrenn	APERAK	1712531	17125311200910120921
✓	43	M	13.10.2009 11:30:53	Out	FMS(SE)_Elkraft_Sverige	Halmstad_Energverk_Ena	APERAK	1712532	17125321200910120921
✓	44	M	13.10.2009 11:30:53	Out	FMS(SE)_Elkraft_Sverige	Linköping_Kraftnat_AB	APERAK	1712533	17125331200910120921
✓	45	M	13.10.2009 11:30:53	Out	FMS(SE)_Elkraft_Sverige	Vamanso_Elnet_AB	APERAK	1712534	17125341200910120921

Summary Log file Operations Original file Source file Target file Trigger file

```

UNB: +, 2 '
UNB+UNOC: 12+48700: 22+26900: 22+091012: 2045+1712526+23-DDQ-E66-T'
UNH+1+APERAK: D: 044: UN: E5929A'
BGM+312+17125261200910120921+9'
DTM+137: 200910120921: 203'
DTM+735: 740100: 406'
DOC+E66: : 269+1014962'
NAD+DDQ'
NAD+MS+48700: SVK: 260'
NAD+MR+26900: SVK: 260'
ERC+100: : 260'
FTX+&A0++OK'
RFF+ACW: 1014962_1'
RFF+DM: 171252613'
UNT+13+1'
    
```

100 rows loaded, 7810 rows found.

Transaction Search, Companies, Partners

9 CONTACT INFORMATION

Client Computing Utility AS:
Managing Director Eivind Wingsternæs
E-mail: ewi@clientcomputing.com
Phone: +47 33 42 13 00
Mobile: +47 97 72 95 95

Written by
Eivind Wingsternæs
Managing Director
Client Computing Utility AS