CDIS Manual

for the

Gas Storage Bergermeer Facility

VERSION_1.0

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1. CDIS COMMUNICATION MECHANISMS

In case provisions of the SSSA or the Operating Guidelines and the CDIS Manual contradict, the former shall prevail. The conditions of use of CDIS by the Customer are described in the SSSA and the Operating Guidelines. Some segments of this CDIS Manual marked grey may not be fully functional at the moment of release of version 1.0. Once they are, an updated version will be released.

Communication between a Customer and GSB will be done by sending and receiving CDIS Messages such as XML messages via the AS2/HTTP communication protocol which every shipper needs to have implemented to fulfil its shipper obligations towards the TSO.

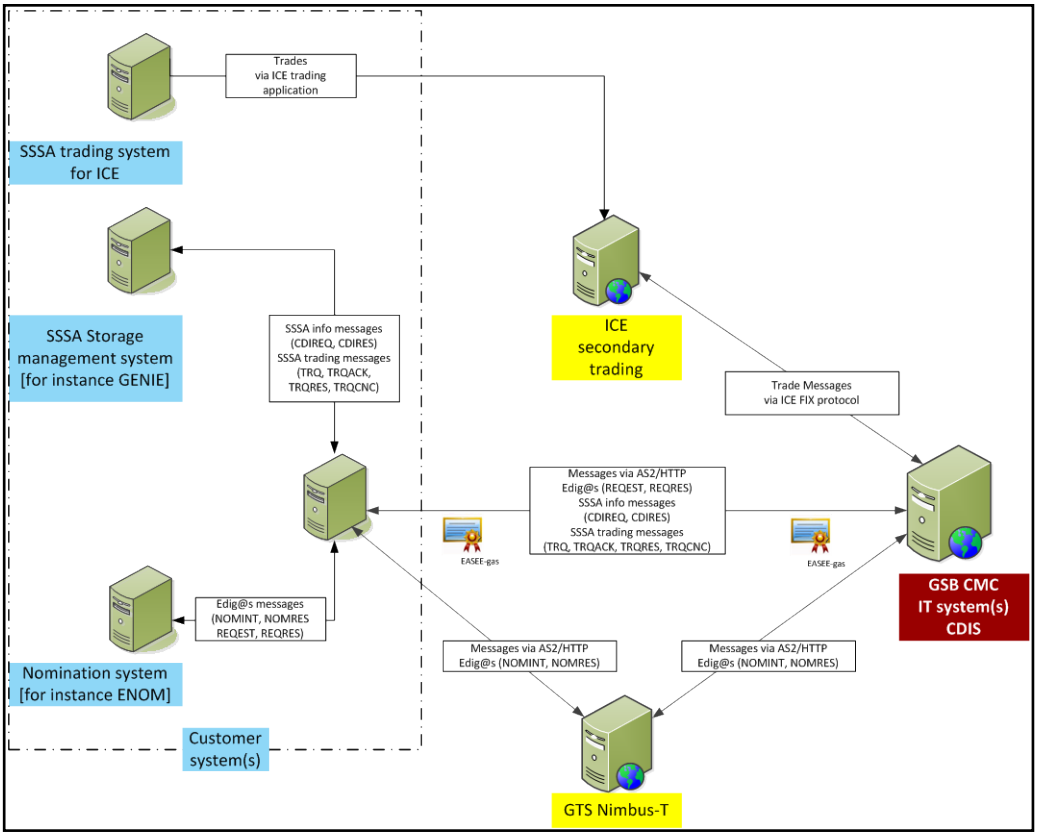

Figure 1, CDIS communication mechanisms

The standard Edig@s [1]REQEST, REQRES and ACKNOW XML messages as well as the specific CDIS XML messages and the Secondary Trading XML messages will be sent and received by the AS2/HTTP communication protocol as depicted in Figure 1, CDIS communication mechanisms.

This creates a secure connection between the Customer and GSB and allows the Customer to:

a) use its current Edig@s nomination system to process injection and withdrawal requests (REQEST) and their corresponding responses (ACKNOW and REQRES); and
b) operate the information exchange as described in: i) paragraph 8 and 11 of the SSSA and ii) paragraph 3, 4, 5, 6 and 8 of the Access Agreement in its current IT systems by extending these systems with the applicable message interfaces or operate these information exchange by using GSB's GENIE tool (see Appendix C).

[1] Website: http://www.edigas.org/

2. TECHNICAL DESCRIPTION AND SETUP OF THE CDIS COMMUNICATION MECHANISMS

CDIS is accessible via the internet, using the AS2/HTTP protocol, through the following links:

Test
URL:
http://acc.b2b.oasis.gasstoragebergermeer.com/<SSSA_shortname>AS2Receive/BTSHTTPReceive.dll

Production
URL:
http://b2b.oasis.gasstoragebergermeer.com/<SSSA_shortname>AS2Receive/BTSHTTPReceive.dll

<SSSA_shortname> is the Customer specific letter code which identifies the Customer.

To ensure proper confidentiality and integrity of the data communicated between GSB and the Customer the AS2 protocol is used. Public Key Infrastructure is provided by EASEE-Gas, via Quo Vadis[2]. GSB will encrypt the messages that it sends using the GSB private key provided by EASEE-Gas. These messages can be decrypted using the GSB public key. GSB will decrypt incoming messages using the EASEE-Gas public key of the Customer.

AS2 configuration to be used:

- AS-From: GSB EIC code (21X000000001120V)
- AS-To: Customer EIC code (<EIC code of Customer>)
- Message should be signed, compressed and encrypted using algorithm DES3.

GSB will request a synchronous MDN with signing algorithm SHA1[3].

Details for setting up the AS2/HTTP connection will be exchanged between the Customer and GSB by means of exchanging the IT connection details and the AS2 public key.

The Customer is required to:

- fill the required IT connection details into a standard GSB - SSSA IT connection details form, see Appendix A for the format, to ensure a quick and correct technical setup of the secure AS2/HTTP connection; and
- provide its public key to GSB.

GSB shall provide Customer with:

- filled in connection sheet with connection details to connect to GSB; and
- GSB's public key AS/2.

[2] EASEE-Gas is the most common certification mechanism for encrypting Edig@s messages, but it is also possible to use other certification mechanism to encrypt the Edig@s messages.
[3] SHA1 will be replaced with SHA2 in 2015 but Customers will be timely informed of any upcoming any change.

3. THE INJECTION/WITHDRAWAL REQUEST COMMUNICATION BETWEEN THE CUSTOMER AND GSB

The injection and withdrawal request communication between the Customer and GSB[4] consists of the following steps:

Step	Description
1	Customer issues an instruction for the injection and/or withdrawal of gas into/from its Space in the form of an Edig@s REQEST message;
2	GSB receives the Edig@s REQEST message, validates the REQEST message and generates an acknowledgement response, Edig@s ACKNOW message, which acknowledges the receipt and identifies the status of the REQEST message sent;
3	GSB sends the Edig@s ACKNOW message to the Customer so the Customer is informed about the initial receipt of the Edig@s REQEST message; which either confirms that the REQEST message is received correctly and will be processed or is rejected because of missing/incorrect content.
4 and 6	GSB calculates the allocation to the Customers each hour (30 minutes after each clock hour) or immediately following a change in a capacity reduction factor. GSB systems calculates which amounts of the requested injection and/or withdrawal flows will be assigned to the Customer. These calculations of injection and withdrawal allocations are fully compliant with the terms and conditions of the SSSA[1] and the results are stored in an Edig@s REQRES message.
5 and 7	GSB sends an Edig@s REQRES message to the Customer for current and next Gas Day if the values differ from the previous REQRES values. This may happen: - in an hourly cycle as a result of the Edig@s REQEST and REQRES sequence (see figure 2) - immediately after a firm capacity change; or - if there is a change in interruptible capacity allocations.
a and g	*GSB sends an Edig@s TTF NOMINT message to the TSO which values exactly matches the last sent Edig@s REQRES values which initiates the correct transfer of gas between the Customer and GSB at TTF.*
b and h	*TSO sends a TTF NOMINT ACKNOW message to GSB which confirms the receipt of the TTF NOMINT message;*
c and i	*The Customer must also send an Edig@s TTF NOMINT message to the TSO which values exactly match the last received Edig@s REQRES values, which nominates the transfer of gas between the Customer and GSB at TTF;*
d and j	*TSO sends an TTF NOMINT ACKNOW message to Customer which confirms the receipt of the TTF NOMINT message;*
e and k	*TSO sends a TTF NOMRES message to GSB which confirms the matching, or highlight a mismatch at TTF between a and c;*
f and l	*TSO sends an Edig@s NOMRES message to Customer which confirms the matching, or highlight a mismatch at TTF between messages a and c*

Please note the minimum lead time for injection/withdrawal request at GSB is 2,5 hour, whereas the minimum lead time to nominate at TTF is 30 minutes.

[1] If a Customer requests interruptible injection flows or interruptible withdrawal flows the allocation of these requested Interruptible flows may change up because of changing Injection or Withdrawal Capacity requests of other Customers up to 2.5 hours before delivery.

[4] Including, in italic, steps required for matching between GSB and the TSO.

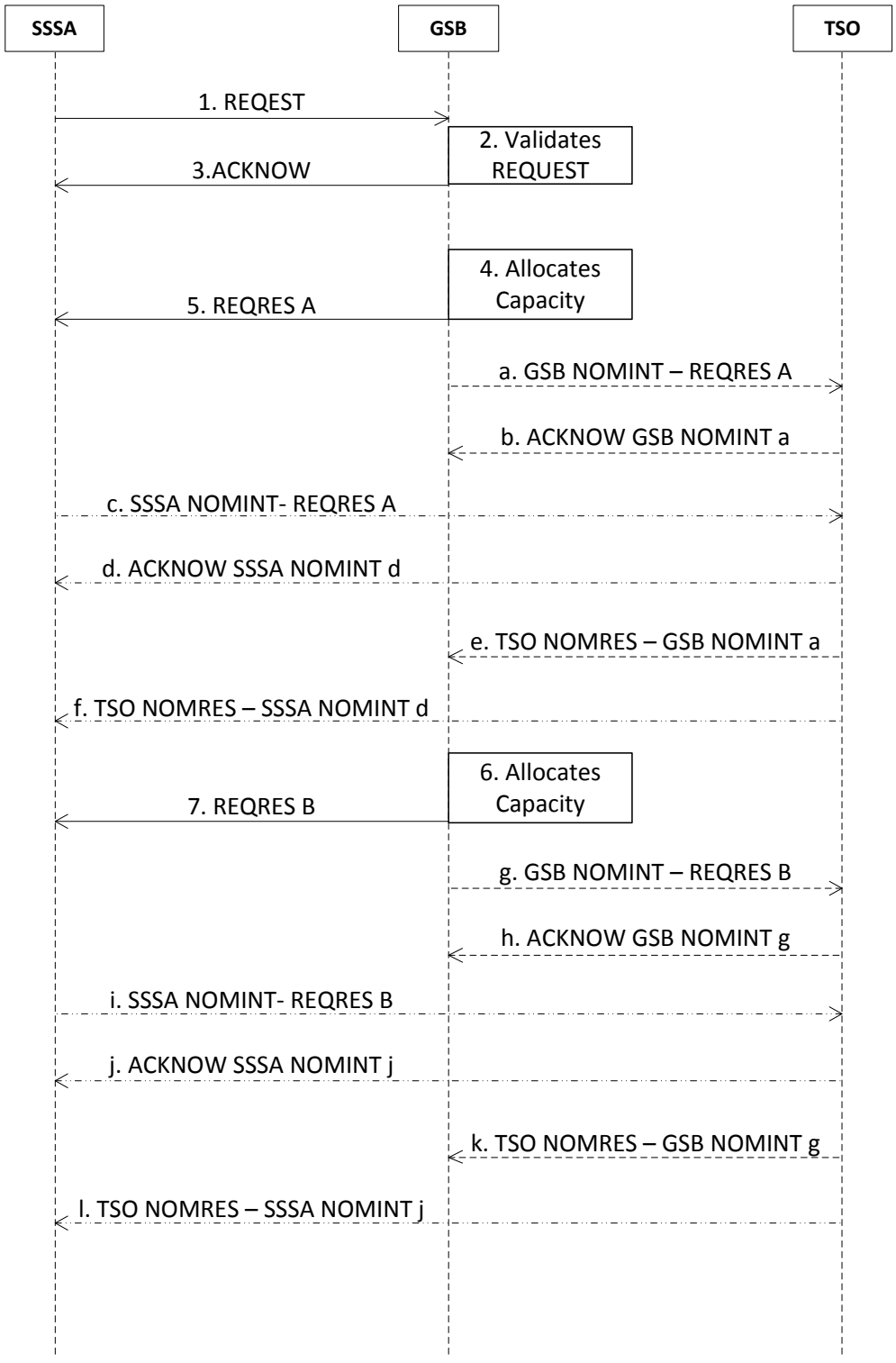

Figure 2, REQEST – REQRES message flow

4. THE INFORMATION REQUEST MECHANISM USED TO OBTAIN SSSA AND OTHER GSB INFORMATION

4.1 Introduction

Customers can obtain information on their own positions and the total GSB positions and other key data by using the CDIS request and response mechanism between the Customer and GSB, which consists of the following 2 message types:

- a request message type called CDIREQ where the Customer can request different data collections by selecting different request options; and
- a response message type called CDIRES where the Customer receives the requested information in.

All possible CDI request options and corresponding CDI responses are described in Appendix B, CDIREQ and CDIRES specifications.

The request and response mechanism consists of the following steps:

Step	Description
1	Customer issues a request for information in the form of a CDIREQ message;
2	GSB receives the CDIREQ message and validates the CDIREQ message;
3	GSB processes the CDIREQ message and queries for the requested data if available and generates the CDIRES message. If no data is available a CDIRES message is generated with status 'Data Not Found'.
4	GSB sends the CDIRES message to the Customer.

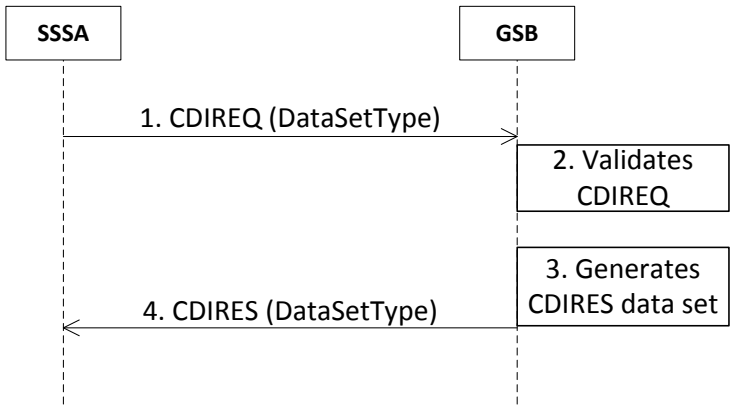

Figure 3, CDIREQ - CDIRES message flow

The following CDI dataset types can be requested by the Customer:

Dataset type	Dataset type description	Applicable DataSetPeriod (Maximum of months or days of data to select) and Data selection criteria if applicable
Dispatch	Relevant operational information, like firm, interruptible capacities, and gas in store for the Customer on its own position	60 days*
Dispatch_Totals	Relevant operational information, like firm, interruptible capacities, and gas in store for the Customer on the total position of GSB	60 days*
Capacity_Entitlement	Actual overview of the Registered Capacities Entitlements of the Customer	36 months*
Service_Restriction	Actual overview of the service restrictions like planned maintenance, unplanned maintenance, outages and force majeure events which are affecting the Customer	36 months*
Auction	Actual overview of the Auction results of the Customer	60 months* Starts_In or Active_In
Secondary_Trade	Actual overview of executed capacity and gas in store trades of the Customer with other Customers or Banks	60 months* Starts_In or Active_In
Maintenance	Actual overview of the maintenance events	60 months* Starts_In or Active_In
Invoice	Actual overview of invoices issued to the Customer	60 months* Starts_In or Active_In
Liquidated_Damages	Actual overview of the Liquidated Damages which are affecting the Customer	60 months* Starts_In or Active_In
Trading_Registry	Actual overview of Customers	

*The dataset periods above can be adjusted by GSB to maintain the CDIS performance.

The meaning of the above CDI dataset selection criteria (which is optional):

CDI Dataset selection criteria	Description
Starts_In	means that the selected Auction, Secondary Trade, Maintenance, Invoice or Liquidated Damages should start in the DataSetPeriod defined in the CDIREQ message
Active_In	means that the selected Auction, Secondary Trade, Maintenance, Invoice or Liquidated Damages should be active in the DataSetPeriod defined in the CDIREQ message

4.2 Automatic Audit Trail

All CDIS Messages sent and received by a Customer to or from GSB are recorded by GSB in audit folders. By doing this the date and time of such CDIS Messages are logged. GSB is able to provide these CDIS Messages in an XML format if necessary during office hours on the next Business Day following Customer's request.

5. TECHNICAL INSTRUCTIONS ON THE USE OF THE TSS[5]

5.1 Introduction

The TSS enables Customers to trade the following GSB products between themselves: SBUs, Injection capacities, Withdrawal capacities, Space and Gas-in-Store.

These can be traded in the following trade types:

- Screen Trades which are executed via the ICE trading platform where Customers, who are ICE-members, can trade the GSB products as standard ICE trading products. Customers can bid or offer one of the ICE products and any other Customer can lift or hit. The ICE trades are sent to GSB's TSS where final checks are executed before the ICE trades are confirmed as GSB trades.
- Register Transfers which are executed directly via GSB's TSS after agreement between the Customers on the transaction details.
- Notified Trades which are executed directly via GSB's TSS after agreement between the Customers on the transaction details.

The table below shows that all five GSB products could be traded via ICE or directly at GSB:

Products	Screen Trade	Register Transfer	Notified Trade
SBUs	V	V	V
Injection Capacity	V	V	V
Withdrawal Capacity	V	V	V
Space	V	V	V
Gas-in-Store (GIS)	V	V	V

The table below shows which periods can be traded with the three different trade types:

Periods	Screen Trade	Register Transfer	Notified Trade
Standard Exchange	V	V	V
Non-standard		V	V

The ICE Screen Trades only differ from Register Transfer and Notified Trades in the periods where ICE Screen Trades can be traded for. ICE Screen Trades have standard pre-defined periods whereas Register Transfers and Notified could be executed for any time period.[6]

[5] Not yet fully functional as of 1 July 2015.
[6] With the exeception of GIS trades which are always day ahead.

5.2 General working principle of the TSS

Step	Description
1.	All the trades are initiated by two Customers each sending a trade request message [TRDREQ] which specifies one leg of the agreed/desired trade.
2.	Once a trade request message [TRDREQ] is received by GSB it is validated by the CDIS TSS and a trade request acknowledgement message [TRDACK] is generated. The statuses of a TRDACK can be: • Accepted (a trade request response message [TRDRES] will follow) or • Rejected (for rejection the TRDACK always contains a reason, no trade request response message [TRDRES] will follow)
3.	If a trade request message [TRDREQ] is accepted it will wait for 30 minutes for a matching trade request message from the other Customer
4.a	If this matching trade request message is received within 30 minutes and both TRDREQs match than the trade is confirmed
4.b	If this matching trade request message is received within 30 minutes but the TRDREQs do not match than the trade is rejected
4.c	If no matching trade request is received within 30 minutes of the first received TRDREQ than the trade request will be set to expired or
4.d	Customer can send a cancellation for a trade request or a confirmed trade and if this cancellation is allowed then the trade request or confirmed trade will be cancelled

As a result of the matching process a trade request response message [TRDRES] is generated and can contain the following statuses:

- confirmed (trade is confirmed),
- rejected (trade is rejected because the matching result is negative),
- expired (trade request is expired when after 30 minutes no match is found); or
- cancelled (trade is cancelled when trade request for cancellation is confirmed).

Note: The Screen trades are processed in the same way as Register Transfers and Notified Trades with the difference that the Screen Trades are received from the ICE platform instead of being received from the Customer itself. ICE Endex sends the trade requests for both Customers.

5.3 Matching Screen Trades

Screen Trades are executed via the ICE platform. Products/markets that can be traded on Business Days include for example:

- GIS DA (next working day)
- GIS Saturday (if DA is a Saturday)
- Injection DA capacity
- Injection next Weekend capacity
- Withdrawal DA capacity
- Withdrawal next Weekend capacity
- Space

The ICE trading request and response mechanism consists of the following steps:

Step	Description
1	Customer A logs on to the ICE platform and enters a bid or offer[7]
2	Customer B logs on to the ICE platform and lifts an offer or hits a bid on the screen
3	ICE matches the trade
4 and 5	ICE sends trade confirmations to Customers A and B when the trade is matched
6 and 9	ICE sends 2 trade request messages directly to GSB, for both Customers A and B when the trade is matched by ICE
7 and 10	GSB receives the trade request messages and immediately validates the trade request messages
8 and 11	GSB processes the messages and sends acknowledgement messages, so called TRDACK messages, to both Customers A and B
12	GSB matches both trade requests when the status of both TRDACK messages is accepted
13 and 14	GSB sends trade request response messages, so called TRDRES messages, to ICE with the response the Screen Trades are confirmed
15 and 16	GSB sends trade request response messages, so called TRDRES messages, to both Customers A and B with the response the Screen Trades are confirmed

[7] For avoidance of the doubt when a trade is entered on the ICE platform a Customer does not need to send a Trade Request message to GSB.

If validation and matching are correct and the Screen Trades are confirmed, the message flow is as follows:

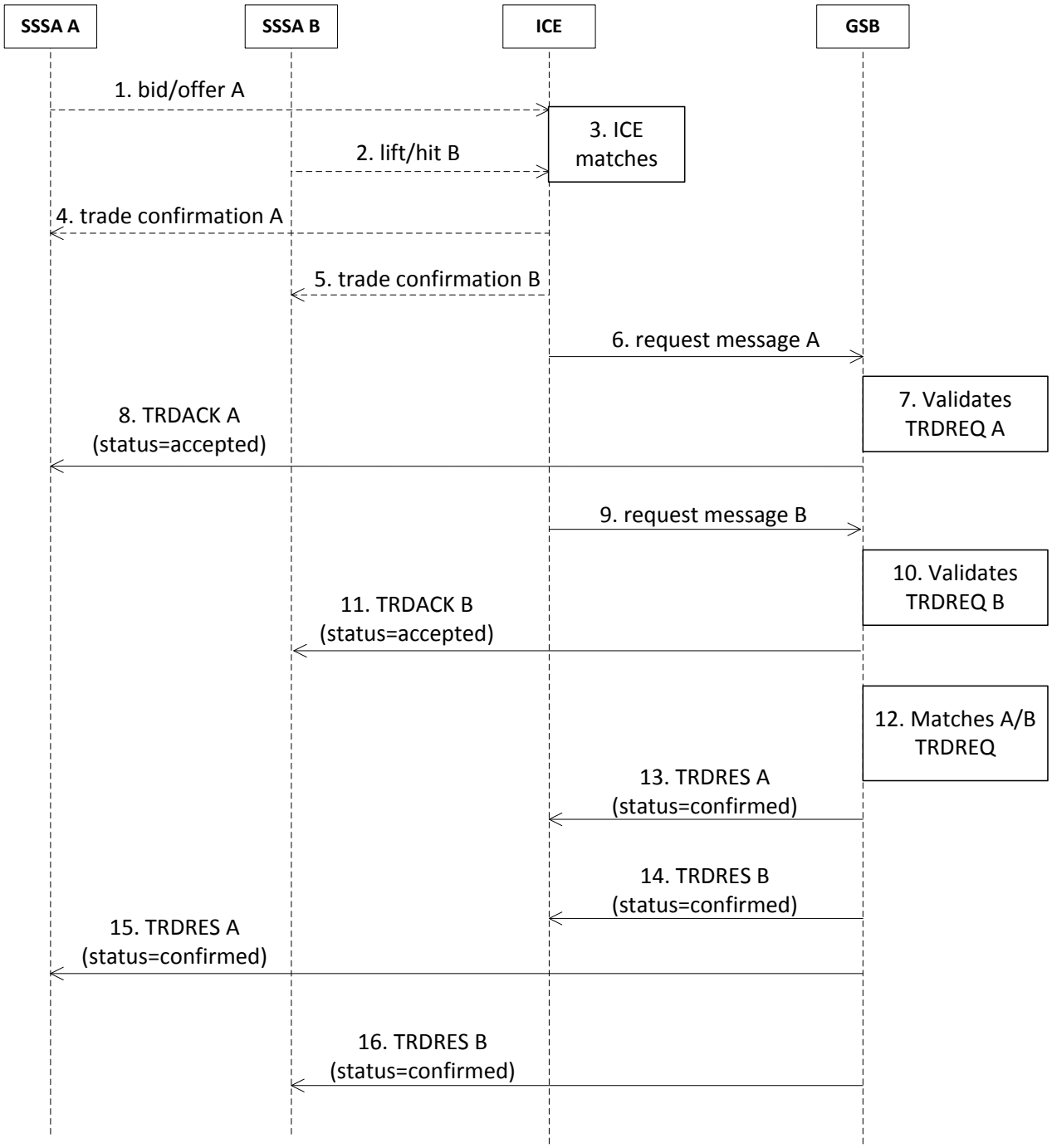

Figure 4, Screen Trade - TRDACK - TRDRES message flow via ICE

5.4 Rejected Exchange Trades

If there is no matching of Screen Trades, for example because the Customer who wants to sell does not have enough SBUs, Capacities, Space or GIS, the message flow is as follows:

Step	Description
1	Customer A logs on to the ICE platform and enters a buy or offer[8];
2	Customer B logs on to the ICE platform and lifts an offer or hits a buy or on the screen;
3	ICE matches the trade;
4 and 5	ICE sends trade confirmations to Customer A and B when the trade is matched
6 and 9	ICE sends 2 trade request messages directly to GSB, for both Customers A and B when the trade is matched and confirmed by ICE
7 and 10	GSB receives the trade request messages and immediately validates the messages
8 and 11	GSB processes the messages and sends acknowledgement messages, so called TRDACK messages, to both Customers A and B
12	GSB matches both trade requests when the status of both TRDACK messages is 'accepted' and generates the response messages which contain the matching result. *Confirmed* in case of a successful match, *Rejected* in case of an unsuccessful match and *Expired* in case no matching trade is found. In this case the result is *Rejected*.
13, 14,15 and 16	GSB sends trade request response messages [TRDRES], to both Customers A and B and ICE with status is 'ToBeBusted'
17 and 18	ICE sends request message to reject the trade requests from Customers A and B to GSB
19	GSB validates, matches and processes the request messages to reject the trade
20 and 21	GSB sends trade request responses [TRDRES] with the status rejected to both Customers A and B

[8] For avoidance of the doubt when a trade is entered on the ICE platform a Customer does not need to send a Trade Request message to GSB.

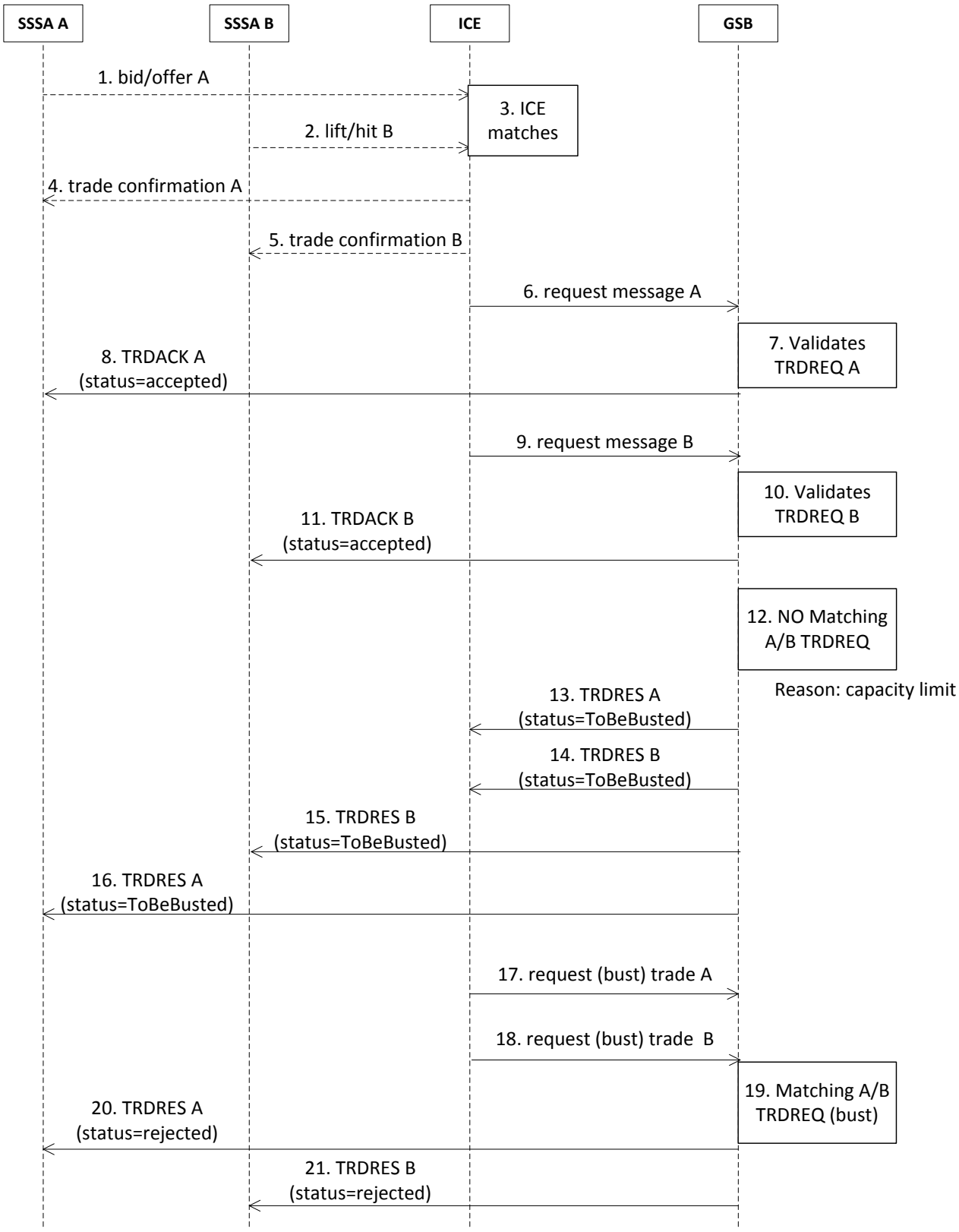

Figure 5, TRDACK - TRDRES message flow via ICE (rejected)

5.5 Matching Notified Trades and Register Transfers

In general the same process is followed as for the ICE Endex Screen Trades, as described above under article 5.3 except that there can be mismatches in timing (30 minute rule) and that the products do not match (e.g. the delivery periods do not match). GSB will send the messages directly to the Customers.

5.5.1 Confirmed trades via the TSS

The request and response mechanism itself consists of the following steps:

Step	Description
1 and 4	Customers A and B issue a trade request, a so called TRDREQ message via TSS within 30 minutes of each other
2 and 5	GSB receives the TRDREQ messages and immediately validates the TRDREQ messages and generates trade acknowledgement response, which identifies the receipt and receipt status of the TRDREQ message received
3 and 6	GSB sends the trade acknowledgement messages, so called TRDACK messages, to both Customers A and B
7	GSB matches both trade requests when the status of both TRDACK messages is 'accepted' and generates the response messages which contain the matching result. *Confirmed* in case of a successful match, *Rejected* in case of an unsuccessful match and *Expired* in case no matching trade is found. In this case the result is *Confirmed*
8 and 9	GSB sends trade request response messages, so called TRDRES messages, to both Customers A and B.

If validation and matching are correct and the trade is confirmed the message flow is as follows:

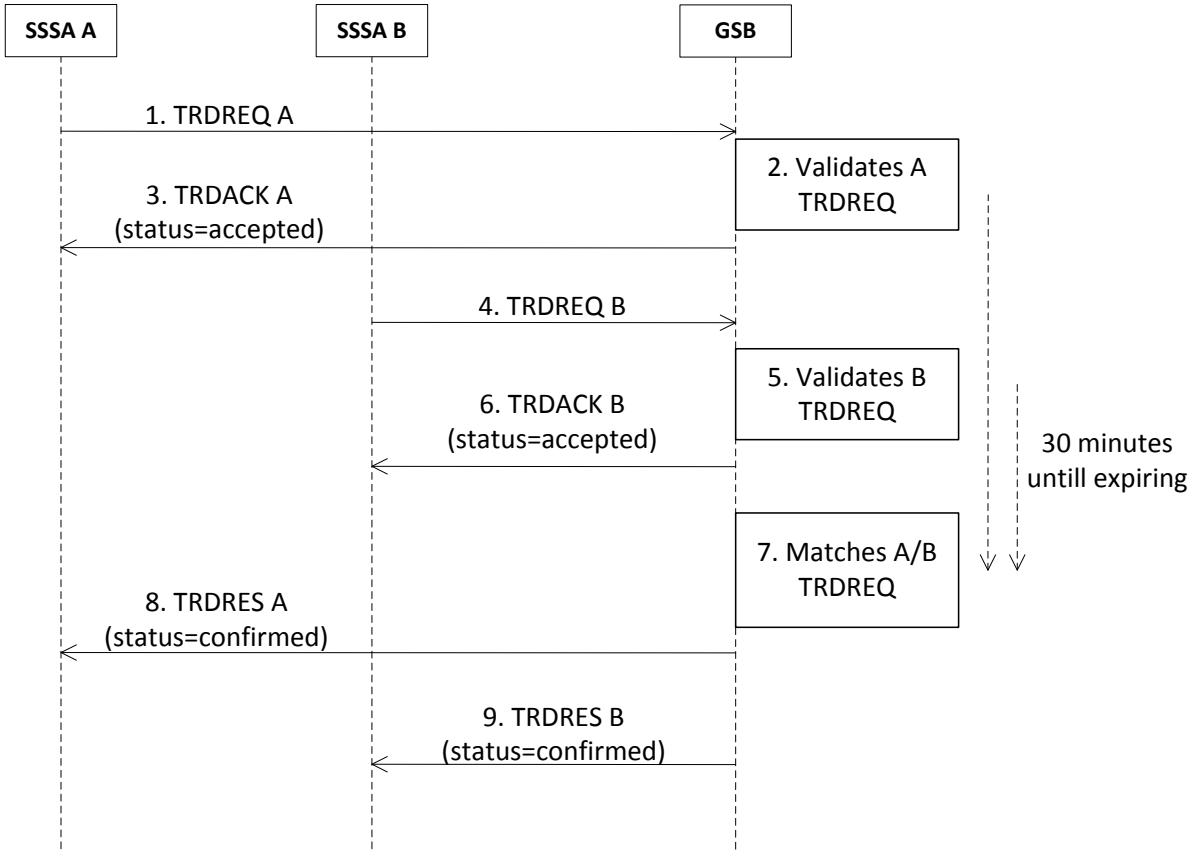

Figure 6, TRDREQ – TRDACK - TRDRES message flow via TSS

5.5.2 Rejected Notified Trades and Register Transfers

The request and response mechanism itself consists of the following steps:

Step	Description
1 and 4	Customers A and B issue a trade request, a so called TRDREQ message via TSS within 30 minutes of each other
2 and 5	GSB receives the TRDREQ messages and immediately validates the TRDREQ messages and generates acknowledgement response, which identifies the receipt and receipt status of the TRDREQ message received
3 and 6	GSB sends the trade acknowledgement messages, so called TRDACK messages, to both Customers A and B
7	GSB matches both trade requests when the status of both TRDACK messages is 'accepted' and generates the response messages which contain the matching result. *Confirmed* in case of a successful match, *Rejected* in case of an unsuccessful match and *Expired* in case no matching trade is found. In this case the result is *Rejected*
8 and 9	GSB sends trade request response messages, so called TRDRES messages, to both Customers A and B

If there is no matching for example because one Customer reaches its credit limit, the message flow is as follows:

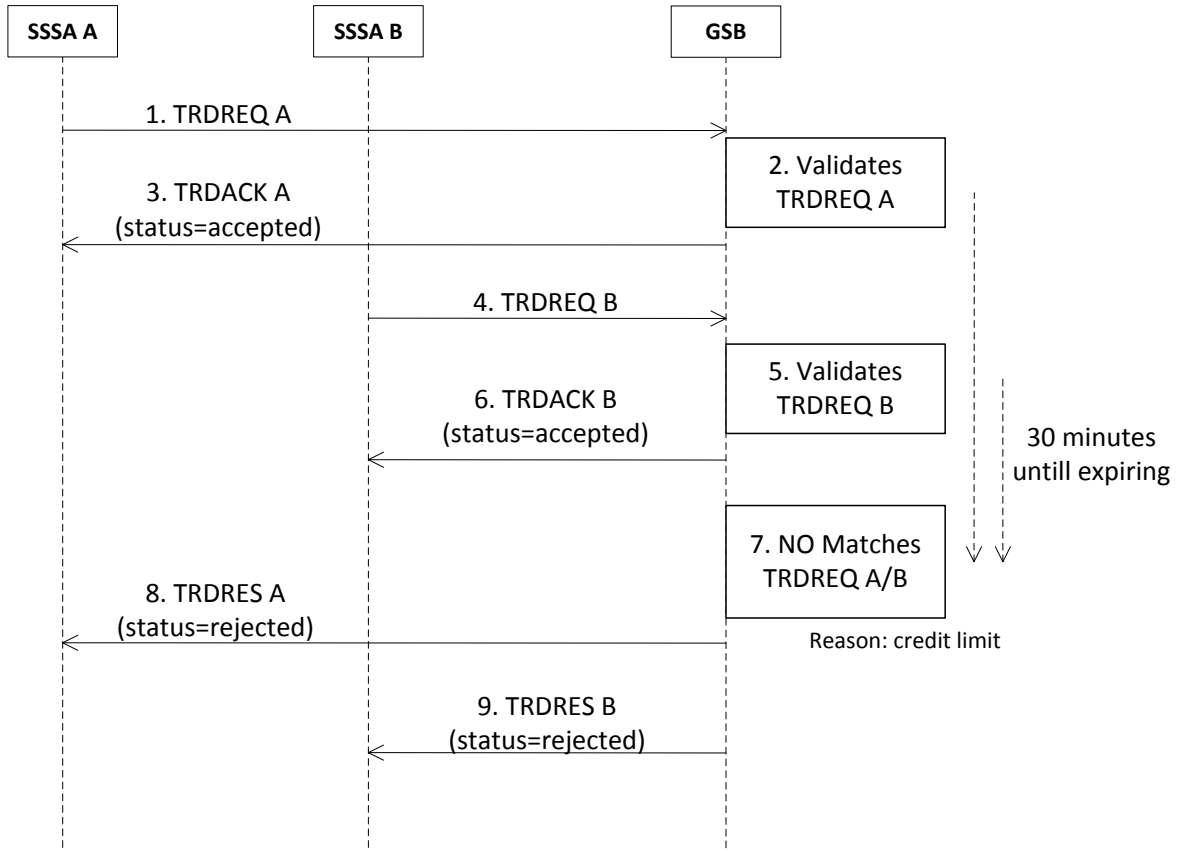

Figure 7, TRDREQ – TRDACK - TRDRES message flow via TSS

5.5.3 Expiry of Non Matching Trade Requests

The request and response mechanism may consist of the following steps:

Step	Description
1 and 4	Customers A and B issue a trade request, a so called TRDREQ message via TSS within 30 minutes of each other
2 and 5	GSB receives the TRDREQ messages and immediately validates the TRDREQ messages and generates acknowledgement responses, which identifies the receipt and receipt status of the TRDREQ message received (in this case the trade request for customer A was rejected)
3 and 6	GSB sends the trade acknowledgement messages, so called TRDACK messages, to both Customers A and B (in this case for customer A with status = Rejected and for customer B with status = accepted)
7	GSB matches both trade requests when the status of both TRDACK messages is 'accepted' and generates the response messages which contain the matching result. *Confirmed* in case of a successful match and *Expired* in case no matching trade is found. The result is *Expired (*in this case there were no trade requests that could be matched within 30 minutes)
8	GSB sends trade request response message, so called TRDRES message, to Customer B with status Expired.

If one of the trade request validations are not correct the message flow is as follows:

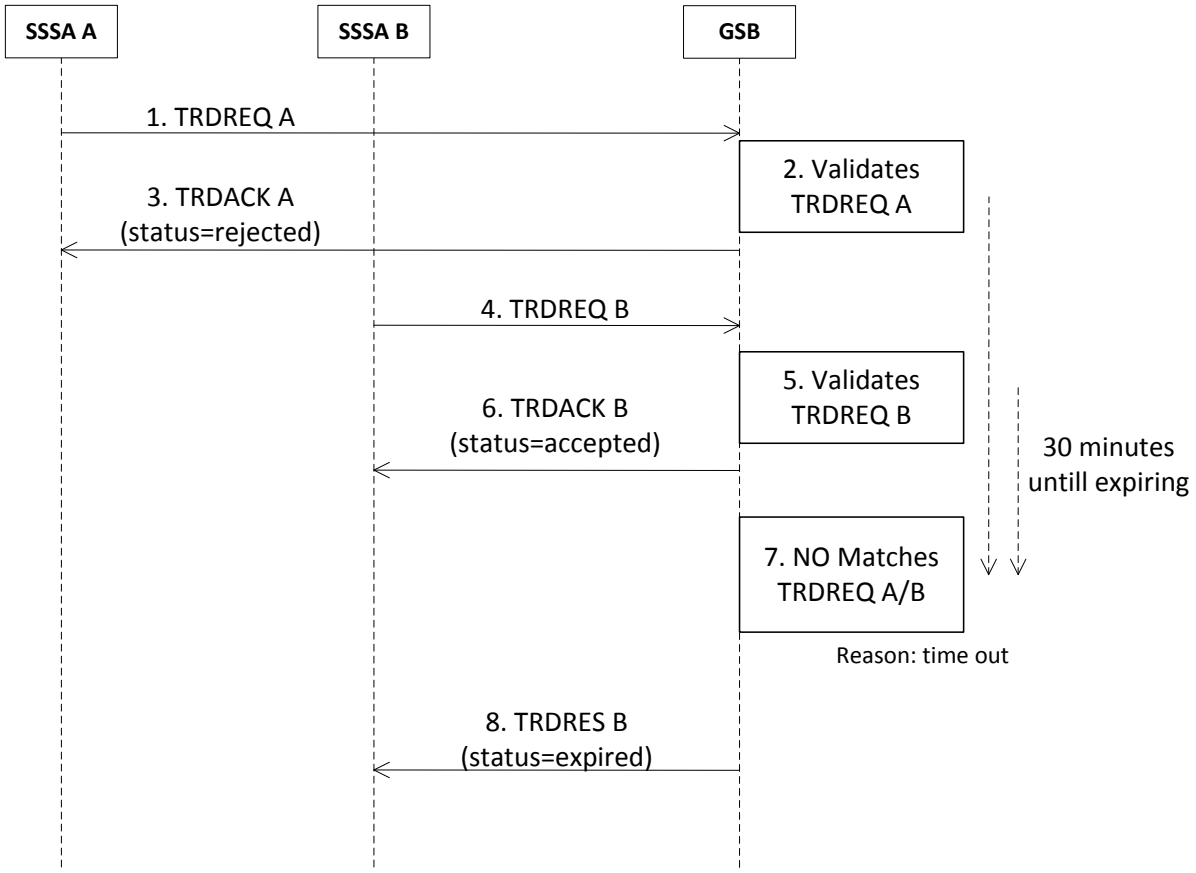

Figure 8, TRDREQ – TRDACK - TRDRES message flow via TSS

In case a trade cancellation request was not matched yet the message flow is as follows:

Step	Description
1	Customer A issues a trade request for cancellation, a so called TRDCNC message via TSS
2	GSB receives the TRDCNC messages and immediately validates the TRDCNC messages and generates acknowledgement response, which identifies the receipt and the receipt status of the TRDCNC message received
3	GSB sends the trade acknowledgement message, so called TRDACK message, to Customer A
4	GSB sends also a response message for the original trade request which now has the status *Cancelled*

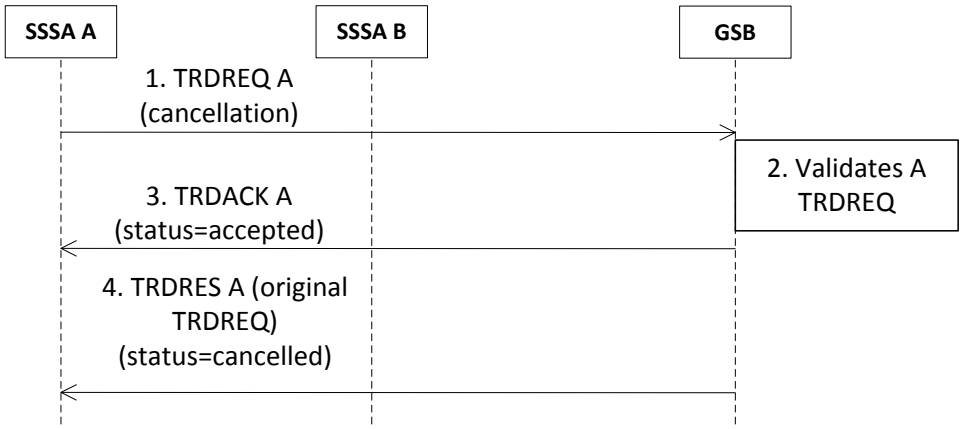

Figure 10, TRDREQ – TRDACK - TRDRES message flow for cancellation via TSS

6. THE TSS TRADE MECHANISM TO EXECUTE WORKING GAS BUNDLE TRADES

Working Gas Bundles (WGB) can be transferred only when an ACCESS agreement is signed by the Customer as well as a Bank. The execution of these WGB Transfers are executed via the TSS just like any other Secondary Trade but cannot be done via the ICE Endex screen.

When a Customer A and a Bank executed a WGB Transfer, there are 3 possible scenario's how this transfer can end. The WGB Transfer can be:

- Reversed, the WGB Transfer will be reversed, both the Customer A and the Bank have to send a WGB Reverse Notice trade request (any time between start date Transfer and last Business Day 18:00 LET before start Withdrawal Period)
- Sold, (only possible when in the signed ACCESS Agreement the possibility for Sale is checked) the WGB Transfer will be sold by the Bank to Customer B where the Registered Space and Gas In Store physically go from the Bank to Customer B, only the Bank and Customer B have to send a WGB Sale Notice trade request, Customer A only receives a response of this trade for information purposes
- Not Reversed or not Sold, if the WGB Transfer is still active the day before the start date of the Withdrawal Period at 18:00 LET, GSB shall deliver the WGB Contract Quantity at the TTF, and the Bank's shipper shall accept such at TTF starting at the first hour of the Withdrawal Period and as long as the entire WGB Gas-In-Storage has been so delivered. The Registered Withdrawal Capacity and Space will be Reversed from the Bank to Customer A after the Withdrawal Period that was set in the WGB Transfer.

6.1 WGB Transfer and Reverse

For the WGB Transfer and WGB Reverse, the request and response mechanisms consist of the following steps:

Step	Description
1 and 4	Customer A and the Bank issue a trade request, a so called TRDREQ message via TSS within 30 minutes of each other
2 and 5	GSB receives the TRDREQ messages and immediately validates the TRDREQ messages and generates acknowledgement response, which identifies the receipt and receipt status of the TRDREQ message received
3 and 6	GSB sends the trade acknowledgement messages, so called TRDACK messages, to both Customer A and the Bank
7	GSB matches both trade requests when the status of both TRDACK messages is 'accepted' and generates the response messages which contain the matching result. *Confirmed* in case of a successful match, *Rejected* in case of an unsuccessful match and *Expired* in case no matching trade is found. In this case the result is *Confirmed*
8 and 9	GSB sends trade request response messages, so called TRDRES messages, to both Customer A and the Bank

If validation and matching are correct and the trade is confirmed, the message flow is as follows:

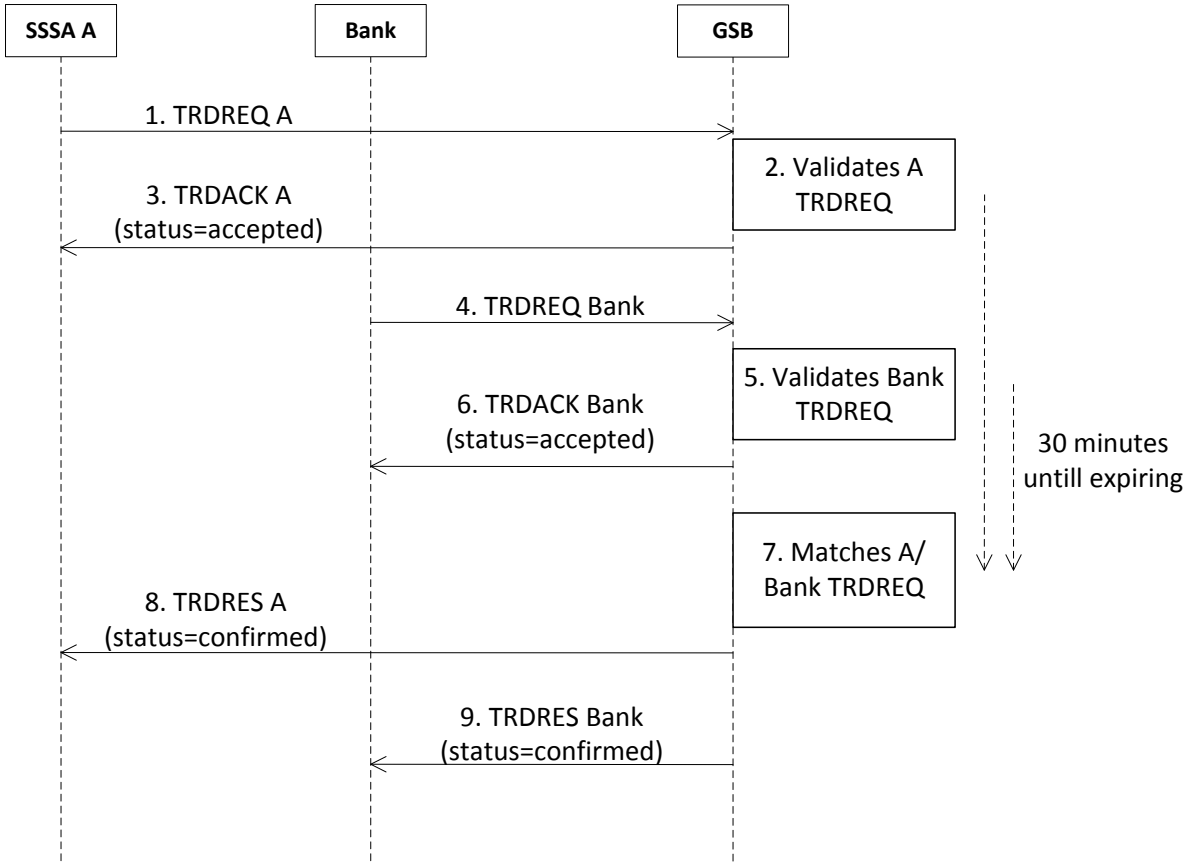

Figure 11, TRDREQ – TRDACK - TRDRES message flow for a WGB transfer and Reverse via TSS

6.2 WGB Sale

For the WGB Sale (only possible when in the signed ACCESS Agreement the possibility for Sale is checked) the request and response mechanisms consist of the following steps:

Step	Description
1 and 4	Customer B and the Bank issue a trade request, a so called TRDREQ message via TSS within 30 minutes of each other
2 and 5	GSB receives the TRDREQ messages and immediately validates the TRDREQ messages and generates acknowledgement response, which identifies the receipt and receipt status of the TRDREQ message received
3 and 6	GSB sends the trade acknowledgement messages, so called TRDACK messages, to both Customer B and the Bank
7	GSB matches both trade requests when the status of both TRDACK messages is 'accepted' and generates the response messages which contain the matching result. *Confirmed* in case of a successful match, *Rejected* in case of an unsuccessful match and *Expired* in case no matching trade is found. In this case the result is *Confirmed*
8, 9 and 10	GSB sends trade request response messages, so called TRDRES messages, to Customer B, the Bank and Customer A

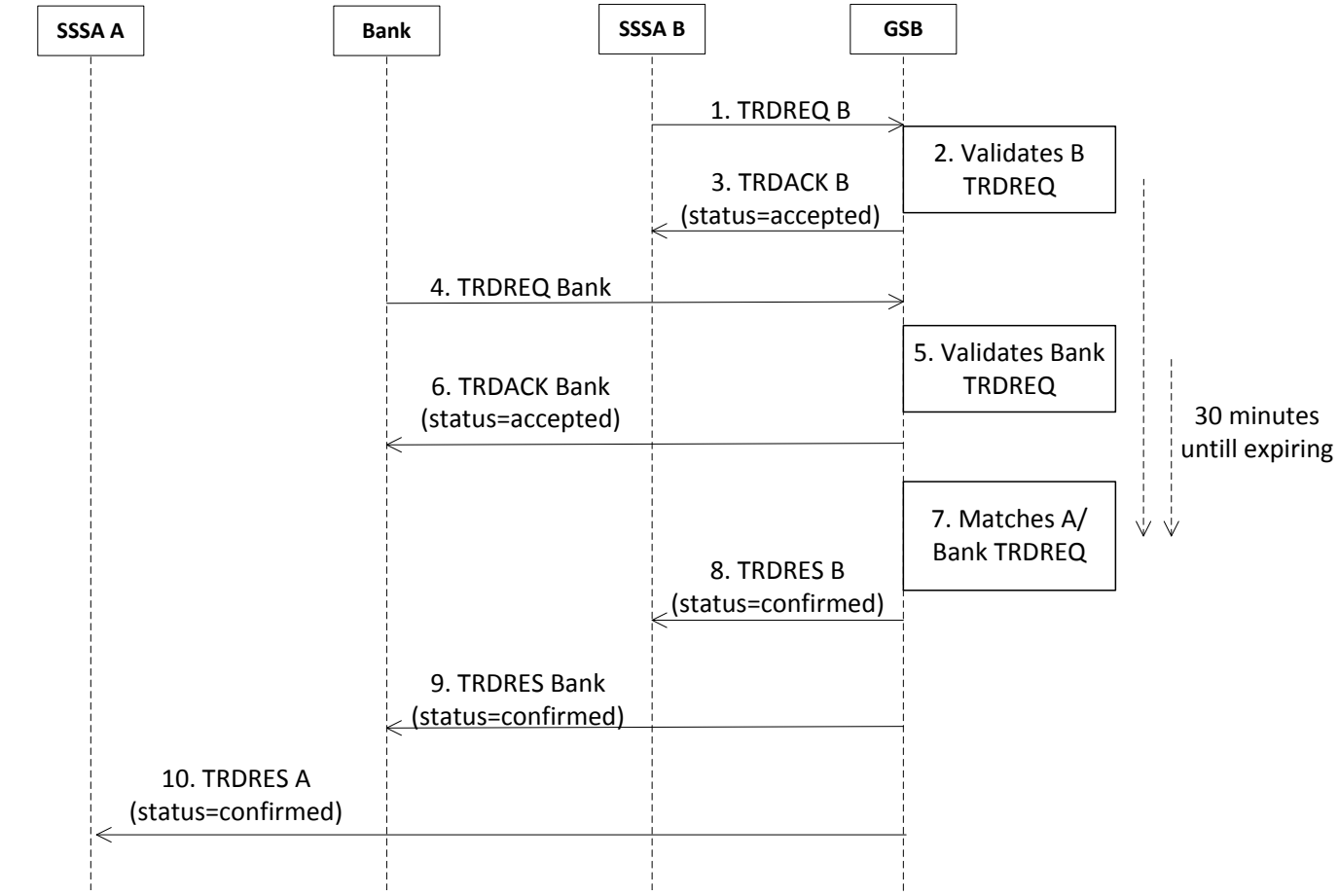

Figure 12, TRDREQ – TRDACK - TRDRES message flow for a WGB Sale via TSS

6.3 WGB withdrawal (in case of no reverse or no sale)

The WGB withdrawal is triggered as soon as the WGB transaction is still active when the Withdrawal Period Start is one day away and therefore no request is required.

The WGB withdrawal response mechanisms consist of the following steps, note that these steps are only for GSB internal purposes only and TRDRES messages send to the customer and Bank are only for information:

Step	Description
1	GSB initiates a WGB Gas In Storage trade between Customer A and the Bank (for GSB internal purposes only)
2	GSB initiates a Gas In Storage trade between Customer A and the Bank (for GSB internal purposes only)
3, 4, 5 and 6	GSB sends trade request response messages, so called TRDRES messages, to both Customer A and the Bank (for customer information purposes only)

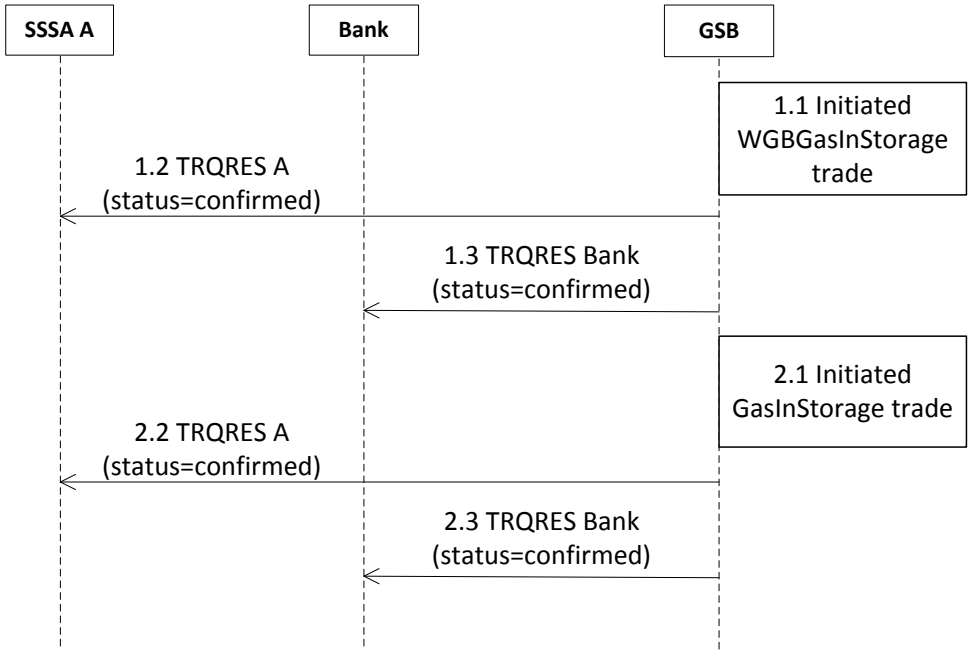

Figure 13, TRDRES message flow for a WGB No Reverse via TSS

7. CONTINGENCY PROCEDURE

7.1 Introduction

If the HTTP/AS2 communication link between the Customer and GSB or the CDIS is not working GSB will make all efforts to follow the Contingency Procedures in order to enable both the Customer and GSB to continue with their operations as normal as possible. Depending on the nature of the contingency, GSB may not be able to act fully in accordance with the procedure as set out below.

All messages exchanged via the Contingency Procedures described below must be in the XML formats defined in the CDIS Manual.

Creating the XML messages to be sent by E-mail to GSB as well as the processing of the XML messages received by E-mail from GSB is the responsibility of the Customer.

GSB will as part of the GENIE application provide a mechanism which:

- creates the REQEST and CDIREQ messages; and
- processes the ACKNOW, REQRES and CDIRES messages.

Where the following causes of the HTTP/AS2 communications and CDIS failures are identified:

#	Process step:	Scenario a:	Scenario b:	Scenario c:	Scenario d:
1	Receiving REQEST	Failed	Received	Received	Received
2	Sending ACKNOW	Not initiated	Failed	Sent	Sent
3	Sending REQRES	Not initiated	Not initiated	Failed	Sent
4	Sending REQRES after reallocation of Capacity	Not initiated	Not initiated	Not initiated	Failed

7.2 Contingency procedure for Scenario a and Scenario b

1.	Customer notifies GSB, a REQEST message has been sent but no ACKNOW and REQRES message have been received;
2.	GSB asks Customer to send REQEST message via E-mail;
3.	Customer sends REQEST message via E-mail to GSB;
4.	GSB processes received REQEST message in CDIS and creates ACKNOW message;
5.	GSB sends ACKNOW message via CDIS (if that is still working) and via E-Mail to Customer;
6.	Customer confirms receipt of ACKNOW message by E-mail;
7.	GSB processes received REQEST message if REQEST is validated as a proper REQEST;
8.	GSB sends REQRES message to Customer via CDIS (if that is still working) and via E-Mail to Customer;

9.	Customer confirms receipt of REQRES message by E-mail;

7.3 Contingency procedure for Scenario c and d

1.	GSB notifies Customer a REQRES message cannot be sent (or the Customer notifies GSB a REQRES message has not been received);
2.	GSB generates REQRES if this not has been generated yet;
3.	GSB sends REQRES message via E-mail to Customer;
4.	Customer confirms receipt of REQRES message by E-mail

#	Process step:	Scenario e:	Scenario f:
1	Receiving CDIREQ	Failed	Received
2	Sending CDIRES	Not initiated	Failed

7.4 Contingency procedure for Scenario e

1.	Customer notifies GSB a CDIREQ message has been sent but no CDIRES message has been received;
2.	GSB asks Customer to send CDIREQ message via E-mail;
3.	Customer sends CDIREQ message via E-mail to GSB;
4.	GSB processes received CDIREQ message in CDIS and creates CDIRES message;
5.	GSB sends CDIRES message to Customer via CDIS (if that is still working) and via E-Mail to Customer;
6.	Customer confirms receipt of CDIRES message by E-mail;

7.5 Contingency procedure for Scenario f

1.	GSB notifies Customer a CDIRES message cannot be sent (or the Customer notifies GSB a CDIRES message has not been received);
2.	GSB generates CDIRES if this not has been generated yet;
3.	GSB sends CDIRES message via E-mail to Customer;
4.	Customer confirms receipt of REQRES message by E-mail

8. PROCEDURE IN CASE OF UNAUTHORISED USE OF CDIS

GSB has a security validation in its systems to avoid unauthorised use of CDIS. This security validates the HTTP/AS2 connection for the correct EIC code of the Customer. This means no Customer is able to send messages on its HTTP/AS2 connection using a different EIC code then its own EIC code.

In case a Customer still sees that capacities, space, or GIS have changed, without the customer knowing about this change, this might be caused by unauthorised use of CDIS. In this case GSB needs to investigate this.

When a customer contacts GSB with this message, GSB will take the following steps:

1.	GSB will cut the AS/2 connection with the specific customer to avoid that more incidents can happen.
2.	GSB will trace what messages were send in name of this customer that caused the change in capacities, space or GIS.
3.	When the issue is solved, GSB contacts the customer and will reconnect the AS/2 connection with the customer.

9. NOTIFICATION OF CONTACT DETAILS

If the Authorized Representative of the Customer changes, GSB shall be informed. The Customer can send the updated contact details, as shown in the table below, to GSB. The updated information can be send by E-mail to the GSB contacts for IT Support (business hours).

If the contact details on the GSB side change, GSB will send an E-mail, providing the updated information in the same table, to the IT Support (Business Hours) of all Customers.

General information	**Gas storage Bergermeer (GSB)**	**Customer**
Contacts		
Business	Jody Strik +31 (0)888272617 Jody.Strik@taqaglobal.com	<Customer business contact details>
IT support (Business Hours)	Bergermeer IT Bergermeer.IT@taqaglobal.com	<Customer business hours IT support contact details>

APPENDIX A, STANDARD GSB - SSSA IT CONNECTION DETAILS FORM

General information	Gas storage Bergermeer (GSB)	Customer
Name	TAQA Gas Storage	<Customer name>
Role	Shipper	Shipper
AS2 product	BizTalk 2010 AS2 adapter	
Operating System	Windows	<Windows, other>
Service provider used	None	<If applicable the name of the service provider used to exchange messages>
Contacts		
Business	Jody Strik +31 (0)888272617 Jody.Strik@taqaglobal.com	<Customer business contact details>
Production Support (24/7)	Gas Storage Bergermeer Dispatching	<Customer dispatch contact details>
IT support (Business Hours)	Bergermeer IT Bergermeer.IT@taqaglobal.com	<Customer business hours IT support contact details>
IT support (24/7)	IBM NL support (located in China) nldisgsa@nl.ibm.com	<Customer 24/7 IT support contact details>
AS2 System		
AS2 identifier	21X000000001120V	<EIC code of Customer>
Preferred Protocol	HTTP	HTTP
URLs		
Production	URL: http://b2b.oasis.gasstoragebergermeer.com/<Customer_short_name>AS2Receive/BTSHTTPReceive.dll	URL: <URL of Customer's production environment>
Test	URL: http://acc.b2b.oasis.gasstoragebergermeer.com/<Customer_short_name>AS2Receive/BTSHTTPReceive.dll	URL: <URL of Customer's test environment>
Inbound IPs		
Production	212.108.13.149	<Inbound IP address link of Customer's production environment>
Test	212.108.13.150	<Inbound IP address link of Customer's test environment>
Disaster Recovery (DR)	212.108.9.203	<Inbound IP address link of Customer's DR environment>
Outbound IPs		
Production	212.108.13.149	<Inbound IP address link of Customer's production environment>
Test	212.108.13.150	<Inbound IP address link of Customer's test environment>
Disaster Recovery (DR)	212.108.9.203	<Inbound IP address link of Customer's DR environment>
Other		
Certificate Authority	Quo Vadis	Quovadis

General information	Gas storage Bergermeer (GSB)	Customer
Signature Algorithm	SHA1	SHA-1
Encryption Algorithm	3DES	3DES
Synchronous/Asynchronous MDN	Synchronous preferred	Synchronous preferred
Message/Document Types to be exchanged in Edigas XML format	Edigas XML V4	Edigas XML V4

APPENDIX B, CDIREQ AND CDIRES SPECIFICATIONS

From the above message flow the following message types can be identified:

Item	NAME	TYPE	LOCATION	FROM	TO	FROM SHIPPER	TO SHIPPER	DATA
1	REQEST	EDIGAS	TTF	<Customer>	SERVICE PROVIDER	<SSSA shipper code>	GSBERGERMEER	Requested Values Customer
2	ACKNOW REQEST	EDIGAS		SERVICE PROVIDER	<Customer>			REQEST Acknow.
3	REQRES	EDIGAS	TTF	SERVICE PROVIDER	<Customer>	GSBERGERMEER	<SSSA shipper code>	Approved values SSSA request (depends on available capacities, gas in store and availability of storage facility)
4	CDIREQ	CUSTOM		<Customer>	SERVICE PROVIDER	<SSSA shipper code>	GSBERGERMEER	Request information
5	CDIRES	CUSTOM		SERVICE PROVIDER	<Customer>	GSBERGERMEER	<SSSA shipper code>	Provide information
6	TRDREQ	CUSTOM		<Customer> or ICE	SERVICE PROVIDER	<SSSA shipper code>	GSBERGERMEER	Request for Trade or Cancellation
7	TRDACK	CUSTOM		SERVICE PROVIDER	<Customer>	GSBERGERMEER	<SSSA shipper code>	TRDREQ Acknow (accepted or rejected)
8	TRDRES	CUSTOM		SERVICE PROVIDER	<Customer>	GSBERGERMEER	<SSSA shipper code>	Trade response (confirmed, rejected, expired, cancelled)

The following EDIGAS (see http://www.edigas.org/) message formats will be used:

REQEST

REQEST XML field names	XML field name description and format
Identification	REQUESTyyyynnAnnnnnn [REQEST201418A00000]
Type	38G
CreationDateTime	yyyy-mm-ddThh:mm:ssZ [2014-10-24T11:38:41Z]
ValidityPeriod	yyyy-mm-ddThh:mmZ/yyyy-mm-ddThh:mmZ [2014-10-24T04:00Z/2014-10-25T05:00Z]
ContractReference	Customer Contract Reference [SSSA_Customer_Name]
ContractType	CT
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
BuyerRole	BY
SellerRole	SE
L1 Start of ConnectionPoint	
Connectionpoint	TTF
GasDeliverytype (injection)	Z01
L2 Start of DestinationShipperAccount	
DestinationShipperAccount	GSBERGERMEER [DestinationShipperAccount v="GSBERGERMEER" codingScheme="321"]
L3 Start of GasQuantityNature	
QuantityNature	Z06
L4 Start of Period	
TimeInterval	2014-12-04T05:00Z/2014-12-04T06:00Z
Quantity	0
MeasureUnit	KW1
L4 End of Period	
L3 End of GasQuantityNature	
L2 Endof DestinationShipperAccount	
L1 End of ConnectionPoint	
L1 Start of ConnectionPoint	
Connectionpoint	TTF
GasDeliverytype (withdrawal)	Z02
L2 Start of DestinationShipperAccount	
DestinationShipperAccount	SSSA shipper code [DestinationShipperAccount v="SSSA_Shipper_Code" codingScheme="321"]
L3 Start of GasQuantityNature	
QuantityNature	Z06

L4 Start of Period	
TimeInterval	2014-12-04T05:00Z/2014-12-04T06:00Z
Quantity	0
MeasureUnit	KW1
L4 End of Period	
L3 End of GasQuantityNature	
L2 Endof DestinationShipperAccount	
L1 End of ConnectionPoint	

REQEST File type	Example files
XML (Example of REQEST message)	 REQEST.xml (double click icon/logo to open example message)

ACKNOW

ACKNOW XML field names	XML field name description and format
DocumentIdentification	ACKNOWyyyymmddAnnnnn [ACKNOW20141024A00108]
CreationDateTime	yyyy-mm-ddThh:mm:ssZ [2014-10-24T09:04:50Z]
IssuerIdentification	GSB EIC code [IssuerIdentification v=”21X000000001120V” codingScheme=”305”]
IssuerRole	ZSO
RecipientIdentification	Customer EIC code [RecipientIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
RecipientRole	ZSH
ReceivingDocumentIdentification	REQUESTyyyynnAnnnnnn [2014102411_REQEST20141024A01307]
ReceivingDocumentDateTime	yyyy-mm-ddThh:mm:ssZ [2014-10-24T09:04:50Z]
ReasonCode	*Statuscode* [01G]
ReasonText	*Text description* [Success]

ACKNOW File type	Example files
XML (Example of message)	 ACKNOW.XML (double click icon/logo to open example message)

REQRES

REQEST XML field names	XML field name description and format
Identification	REQRESyyyynnAnnnnnn [REQRES20141024A00140]
Type	41G
CreationDateTime	yyyy-mm-ddThh:mm:ssZ [2014-10-24T07:33:41Z]
ValidityPeriod	yyyy-mm-ddThh:mmZ/yyyy-mm-ddThh:mmZ [2014-10-24T05:00Z/2014-10-25T05:00Z]
ContractReference	Customer Contract Reference [SSSA_Customer_01]
ContractType	CT
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerRole	SE
BuyerRole	BY
L1 Start of ConnectionPoint	
Connectionpoint	TTF, codingScheme=”ZSO”
GasDeliverytype (injection)	Z01
L2 Start of DestinationShipperAccount	
OriginShipperAccount	SSSA shipper code [DestinationShipperAccount v="SSSA_Shipper_Code" codingScheme="321"]
DestinationShipperAccount	GSBERGERMEER [DestinationShipperAccount v="GSBERGERMEER" codingScheme="321"]
L3 Start of GasQuantityNature	
QuantityNature	Z06
L4 Start of Period	
TimeInterval	2014-12-04T05:00Z/2014-12-04T06:00Z
Quantity	0
MeasureUnit	KW1
L4 End of Period	
L3 End of GasQuantityNature	
L2 Endof DestinationShipperAccount	
L1 End of ConnectionPoint	
L1 Start of ConnectionPoint	
Connectionpoint	TTF, codingScheme=”ZSO”
GasDeliverytype (withdrawal)	Z02
L2 Start of DestinationShipperAccount	
OriginShipperAccount	GSBERGERMEER [DestinationShipperAccount v="GSBERGERMEER" codingScheme="321"]
DestinationShipperAccount	SSSA shipper code

	[DestinationShipperAccount v="SSSA_Shipper_Code" codingScheme="321"]
L3 Start of GasQuantityNature	
QuantityNature	Z06
L4 Start of Period	
TimeInterval	2014-12-04T05:00Z/2014-12-04T06:00Z
Quantity	0
MeasureUnit	KW1
L4 End of Period	
L3 End of GasQuantityNature	
L2 Endof DestinationShipperAccount	
L1 End of ConnectionPoint	

REQRES File type	Example files
XML (Example of message)	 REQRES.XML (double click icon/logo to open example message)

The following custom XML message formats will be used:

CDIREQ

CDIREQ XML field names	XML field name description and format
Reference	[Customer_code_date]
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
RoutingReference	[GENIE_Internal]
TypeOfDataSet	Type of CDIDataSet requested [Dispatch; Dispatch_Totals; Registered_Capacity; Service_Restriction; Trading_Parties; Auction; Secondary_Trade; Maintenance; Invoice and Credit Note or Liquidated Damages]
DataSetPeriod	DataSetPeriod for which data is requested YYYY-MM-DDTHH:mmZ/YYYY-MM-DDTHH:mmZ [2014-10-24T04:00Z/2014-10-25T05:00Z] Optional: selectionCriteria="Starts_In" or “Active_In”
L1 Start of Contracts	
Contract	Customer Contract Reference

	[SSSA_Customer_01]
L1 End of Contracts	

File type	Example files
XML (Example of message)	 CDIREQ.xml (double click icon/logo to open example message)

CDIRES Dispatch (TTFScheduledRequestQuantity)

CDIRES Dispatch XML field names	XML field name description and format
Reference	CDIRESyyyynnAnnnnnn [CDIRES20141203A01881]
RoutingReference	GENIE_Internal
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
Status	Status of processing of the CDIREQ messages [Processed; No_Contract_Provided; DataSet_Period_Invalid; Type_Of_DataSetInvalid *or* Period_Selection_Criteria_Invalid]
L1 Start of CDIDataSet	
L2 Start of DataSetInformation	
Type	Dispatch
DataSetPeriod	DataSetPeriod for which data is found YYYY-MM-DDTHH:mm:ssZ/YYYY-MM-DDTHH:mm:ssZ [2014-10-24T04:00:00Z/2014-10-25T05:00:00Z]
Contract	Customer contract code SSSA_Customer_Contract_Ref [SSSA_Customer_01]
Status	Status of processing of the CDIREQ message [Contract_Not_Found; Data_Not_Found or Data_Found]
L2 End of DataSetInformation	
L2 Start of DispatchCDIDataSet	
L3 Start of CISNonContractData	

CDIRES Dispatch XML field names	XML field name description and format
CreationDateTime	Creation date and time of CDIREQ non contract data elements yyyy-mm-ddTHH:mm:ssZ [2014-10-23T10:30:00Z]
ValidityPeriod	Validity Period of the Non Contractual Data normally a Gas Day yyyy-mm-ddTHH:mm:ssZ/yyyy-mm-ddTHH:mm:ssZ [2014-10-24T04:00:00Z/2014-10-25T05:00:00Z]
FullStorageDay	Indication of Full Storage Day is reached during selected ValidityPeriod [NO or YES]
InterruptibleForwardCapacityFee	Capacity Fee payable for using the Interruptible Foward Capacity expressed in €/kWh/h [0.25] [Period v="0.25" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"/]
InterruptibleReverseCapacityFee	Capacity Fee payable for using the Interruptible Withdrawal Capacity expressed in €/kWh/h [0.00] [Period v="0.00" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"/]
InterruptibleSpaceFee	Capacity Fee payable for using the Interruptible Space Capacity expressed in €/kWh [0.00] [Period v="0.00" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"/]
RestrictionInjectionFactor	Total RestrictionInjectionFactor which includes the imf, iuf, iof and iff factors Hourly value between 0 (no restriction) and 1 (full restriction). [Period v="0.5" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"/]
RestrictionWithdrawalFactor	Total RestrictionWithdrawalFactor which includes the wmf, wuf, wof and wff factors Hourly value between 0 (no restriction) and 1 (full restriction). [Period v="0.5" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
L3 End of CISNONContractData	
Status	Accepted
ReasonText	Data Set Returned
L3 Start of Contract	

CDIRES Dispatch XML field names	XML field name description and format
ShipperCode	Customer shipper code SSSA_Customer_Shipper_Code [GSSSSA1]
L4 Start of CISContractData	
ContractCode	Customer contract code SSSA_Customer_Contract_Ref [SSSA_Customer_01]
ShipperCode	Customer shipper code SSSA_Customer_Shipper_Code [GSSSSA1]
CreationDateTime	Creation date and time of CDIREQ contract data elements yyyy-mm-ddTHH:mm:ssZ [2014-10-23T10:30:00Z]
ValidityPeriod	Validity Period of the Contractual Data normally a Gas Day yyyy-mm-ddTHH:mm:ssZ/yyyy-mm-ddTHH:mm:ssZ [2014-10-24T04:00:00Z/2014-10-25T05:00:00Z]
InjectionPressureFactor	Injection Pressure Factor as defined in the SSSA contract Value between 0 and 1 [Period v="0.75617355" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
WithdrawalPressureFactor	Withdrawal Pressure Factor as defined in the SSSA contract Value between 0 and 1 [Period v="0.99771517" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
FullStorageCustomer	Status if Customer has reached a full storage NO/YES value [Period v="NO" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
TimeStampOfLastAcceptedRequest	Timestamp of last accepted REQEST from Customer [Period v="2014-10-23T10:05:00Z" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
TimeStampOfLastReceivedRequest	Timestamp of last received REQEST from Customer [Period v="2014-10-23T10:05:00Z" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]

CDIRES Dispatch XML field names	XML field name description and format
TimeStampOfLastProcessedRequest	Timestamp of last processed REQEST from Customer [Period v="2014-10-23T10:05:00Z" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
TimeStampOfLastSentRequestResponse	Timestamp of last sent REQRES to Customer [Period v="2014-10-23T10:05:00Z" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
AcknowCodeOfLastReceivedTTFRequest	Acknowledgement code of last received REQEST from Customer EDIGAS ACKNOW codes [Period v="01G" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
LastAcceptedRequestProcessedYESNO	Indication if the last accepted REQEST from Customer REQEST has been processed. NO/YES value [YES] [Period v="YES" TimeInterval="2014-01-24T05:00:00Z/2014-01-24T06:00:00Z"]
RegisteredInjectionCapacity	The Registered Injection Capacity in kWh/h Hourly value Always positive or zero [Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
RegisteredWithdrawalCapacity	The Registered WithDrawal Capacity in kWh/h Hourly value Always negative or zero [Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
RegisteredSpace	The Registered Space in kWh Hourly value [Period v="250000000" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
GasInStorage	Gas in Store Level in kWh Hourly value [Period v="81366" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]

CDIRES Dispatch XML field names	XML field name description and format
WGBGasInStorage	Gas in Store Level in kWh that is transferred by a Working Gas Bundle Hourly value [Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
EffectiveGasInStorage	Gas in Store Level in kWh that is effective for the customer, this is the difference between the GIS and the GIS transferred by a Working Gas Bundle Hourly value [Period v="81366" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
FirmInjectionCapacity	The Firm Injection Capacity in kWh/h Hourly value [Period v="400000 " TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
FirmWithdrawalCapacity	The Firm Withdrawal Capacity in kWh/h Hourly value [Period v="-142720" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastAcceptedRequest	The quantities of the last accepted REQEST from the Customer in kWh/h Hourly value Positive (Injection), Negative (Withdrawal) or zero [Period v="-142720" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastProcessedRequest	The quantities of the last accepted and processed REQEST from the Customer in kWh/h Hourly value Positive (Injection), Negative (Withdrawal) or zero [Period v="-142720" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastProcessedRequestLeadTimeApplied	The quantities of the last accepted and processed REQEST from the Customer in kWh/h where the lead time is applied on Hourly value Positive (Injection), Negative (Withdrawal) or zero [Period v="-142720" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]

CDIRES Dispatch XML field names	XML field name description and format
LastRequestResponse	The quantities of the last generated REQRES from the Customer in kWh/h Hourly value Positive (Injection), Negative (Withdrawal) or zero [Period v="-142720" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastRequestResponseFirmInjection	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastRequestResponseFirmWithdrawal	[Period v="-142720" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastRequestResponseInterruptibleInjection	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastRequestResponseInterruptibleWithdrawal	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastRequestResponseInterruptibleForward	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
LastRequestResponseInterruptibleReverse	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
L4 End of CISContractData	
Status	Status of processing of the CDI contract data [Accepted]
ReasonText	Reason text of processing the CDI contract data [Success]
L3 End of Contract	
L2 End of DispatchCDIDataSet	
L1 End of CDIDataSet	

File type	Example files
XML (Example of message)	 CDIRESDispatch v3.xml (double click icon/logo to open example message)

CDIRES DispatchTotals Contents

CDIRES DispatchTotals XML field names	XML field name description and format
Reference	MessageId of CDIRES message CDIRES_ SSSA_Customer_Contract_Ref _yyyymmddTHH:mm:ssZ [CDIRES_SSSA_Customer_01_20141023T22:12:09]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
RoutingReference	SSSA

CDIRES DispatchTotals XML field names	XML field name description and format
Status	Status of processing of the CDIREQ messages [Processed; No_Contract_Provided; DataSet_Period_Invalid; Type_Of_DataSetInvalid *or* Period_Selection_Criteria_Invalid]
L1 Start of CDIDataSet	
L2 Start of DataSetInformation	
Type	Dispatch_Totals
DataSetPeriod	DataSetPeriod for which data is found YYYY-MM-DDTHH:mm:ssZ/YYYY-MM-DDTHH:mm:ssZ [2014-10-24T04:00:00Z/2014-10-25T05:00:00Z]
Contract	Customer contract code SSSA_Customer_Contract_Ref [SSSA_Customer_01]
Status	Status of processing of the CDIREQ message [Contract_Not_Found; Data_Not_Found or Data_Found]
L2 End of DataSetInformation	
L2 Start of DispatchTotalCDIDataSet	
CreationDateTime	Creation date and time of CDIREQ non contract data elements yyyy-mm-ddTHH:mm:ssZ [2014-10-23T10:30:00Z]
ValidityPeriod	Validity Period of the Non Contractual Data normally a Gas Day yyyy-mm-ddTHH:mm:ssZ/yyyy-mm-ddTHH:mm:ssZ [2014-10-24T04:00:00Z/2014-10-25T05:00:00Z]
TotalRegisteredInjectionCapacity	The total Registered Injection Capacity in kWh/h Hourly value [Period v="42000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]
TotalRegisteredWithdrawalCapacity	The total Registered WithDrawal Capacity in kWh/h Hourly value [Period v="59000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]

CDIRES DispatchTotals XML field names	XML field name description and format
TotalRegisteredSpace	The total Registered Space Capacity in kWh Hourly value [Period v="10000000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]
TotalContractualGasInStore	The total Contractual Gas In Storage of all Customers in kWh Hourly value [Period v="10000000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]
TotalPhysicalGasInStore	The total Physical Gas In Storage of all Customers in kWh Hourly value [Period v="10000000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]
TotalFirmInjectionCapacity	The total Registered Injection Capacity in kWh/h Hourly value [Period v="42000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]
TotalFirmWithdrawalCapacity	The total Registered WithDrawal Capacity in kWh/h Hourly value [Period v="59000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]
TotalLastProcessedRequestLeadTimeApplied	Total requested Injection or WithDrawal quantity from all Customers in kWh/h Hourly value Injection is positive and WithDrawal is negative. [Period v="-500000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]
TotalLastRequestResponse	The quantities of the last generated REQRES from all Customers in kWh/h Hourly value Positive (Injection), Negative (Withdrawal) or zero [Period v="-500000" TimeInterval="2014-01-24T02:00:00Z/2014-01-24T03:00:00Z"]
TotalLastRequestResponseFirmInjection	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
TotalLastRequestResponseFirmWithdrawal	[Period v="-142720" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]

CDIRES DispatchTotals XML field names	XML field name description and format
TotalLastRequestResponseInterruptibleInjection (no GSA)	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
TotalLastRequestResponseInterruptibleWithdrawal (no GSA)	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
TotalLastRequestResponseInterruptibleForward	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
TotalLastRequestResponseInterruptibleReverse	[Period v="0" TimeInterval="2014-12-03T05:00:00Z/2014-12-03T06:00:00Z"]
TotalNearRealTimePhysicalFlow	
L2 End of DispatchTotalCDIDataSet	
L1 End of CDIDataSet	

File type	Example files
XML (Example of message)	 CDIRESDispatchTotals v2.xml (double click icon/logo to open example message)

CDIRES Capacity Entitlement contents

CDIRES Capacity Entitlement XML field names	XML field name description and format
Reference	MessageId of CDIRES message CDIRES_ SSSA_Customer_Contract_Ref _yyyymmddTHH:mm:ssZ [CDIRES_SSSA_Customer_01_20141023T22:12:09]
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
RoutingReference	SSSA
Status	Status of processing of the CDIREQ messages [Processed; No_Contract_Provided; DataSet_Period_Invalid; Type_Of_DataSetInvalid *or* Period_Selection_Criteria_Invalid]
L1 Start of CDIDataSet	
L2 Start of DataSetInformation	
Type	Capacity_Entitlement
DataSetPeriod	DataSetPeriod for which data is found YYYY-MM-DDTHH:mmZ/YYYY-MM-DDTHH:mmZ [2014-10-24T04:00Z/2014-10-25T05:00Z]

CDIRES Capacity Entitlement XML field names	XML field name description and format
Contract	Customer contract code SSSA_Customer_Contract_Ref [SSSA_Customer_01]
Status	Status of processing of the CDIREQ Dispatch message [Contract_Not_Found; Data_Not_Found or Data_Found]
L2 End of DataSetInformation	
L2 Start of CapacityEntitlementCDIDataSet	
L3 Start of RegisteredCapacity	
CapacityType	[Registered_Withdrawal_Capacity; Registered_Injection_Capacity; Registered_Space; WGB_Space or WGB_GasInStorage]
L4 Start of Entitlement	
Period	Period of Entitlement YYYY-MM-DDTHH:mm:ssZ/YYYY-MM-DDTHH:mm:ssZ [2014-05-01T04:00:00Z/2015-05-03T04:00:00Z]
Quantity	Quantity of entitlement expressed in kWh [25]
L4 End of Entitlement	
L3 End of RegisteredCapacity	
L2 End of CapacityEntitlementCDIDataSet	
L1 End of CDIDataSet	

File type	Example files
XML (Example of message)	 CDIRESCapacityEntitlement.xml (double click icon/logo to open example message)

CDIRES ServiceRestriction contents

CDIRES ServiceRestriction XML field names	XML field name description and format
Reference	MessageId of CDIRES message CDIRES_ SSSA_Customer_Contract_Ref _yyyymmddTHH:mm:ssZ [CDIRES_SSSA_Customer_01_20141023T22:12:09]
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]

CDIRES ServiceRestriction XML field names	XML field name description and format
RoutingReference	SSSA
Status	Status of processing of the CDIREQ messages [Processed; No_Contract_Provided; DataSet_Period_Invalid; Type_Of_DataSetInvalid *or* Period_Selection_Criteria_Invalid]
L1 Start of CDIDataSet	
L2 Start of DataSetInformation	
Type	Service_Restriction
DataSetPeriod	DataSetPeriod for which data is found YYYY-MM-DDTHH:mmZ/YYYY-MM-DDTHH:mmZ [2014-10-24T04:00Z/2014-10-25T05:00Z]
Status	Status of processing of the CDIREQ Dispatch message [Contract_Not_Found; Data_Not_Found or Data_Found]
L2 End of DataSetInformation	
L2 Start of ServiceRestrictionCDIDataSet	
L3 Start of ServiceRestriction	
CapacityType	Registered_Withdrawal_Capacity or Registered_Injection_Capacity
L4 Start of Restrictions	
L5 Start of Restriction	
Period	Period of Restriction YYYY-MM-DDTHH:mm:ssZ/YYYY-MM-DDTHH:mm:ssZ [2014-05-01T04:00:00Z/2015-05-03T04:00:00Z]
Factor	Value between 0 (no restriction) and 1 (full restriction). [0.5]
L5 End of Restriction	
L4 End of Restrictions	
L3 End of ServiceRestriction	
L2 End of ServiceRestrictionCDIDataSet	
L1 End of CDIDataSet	

File type	Example files
XML (Example of message)	 CDIRESServiceRestriction.xml (double click icon/logo to open example message)

CDIRES Auction contents

CDIRES Auction XML field names	XML field name description and format

CDIRES Auction XML field names	XML field name description and format
Reference	MessageId of CDIRES message CDIRES_ SSSA_Customer_Contract_Ref _yyyymmddTHH:mm:ssZ [CDIRES_SSSA_Customer_01_20141023T22:12:09]
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
RoutingReference	SSSA
L1 Start of CDIDataSet	
L2 Start of DataSetInformation	
Type	Auction
DataSetPeriod	DataSetPeriod for which data is found and Selection Criteria YYYY-MM-DDTHH:mmZ/YYYY-MM-DDTHH:mmZ [2014-10-24T04:00Z/2014-10-25T05:00Z] [Starts_In]
Contract	Customer contract code SSSA_Customer_Contract_Ref [SSSA_Customer_01]
Status	Status of processing of the CDIREQ Dispatch message [Contract_Not_Found; Data_Not_Found or Data_Found]
L2 End of DataSetInformation	
L2 Start of AuctionCDIDataSet	
L3 Start of AuctionBundledTrade	
Name	Name of the auction [LC_Auction2]
Reference	Reference of the Auction [Auction Reference]
ExternalReference	External Reference of the Auction
Date	Auction date [2014-05-01T05:00:00Z]
Period	Validity period of auctioned capacity [2014-05-01T05:00Z/2015-05-01T05:00Z]
Start of SBU (is not repeated in AuctionBundledTrade)	
NumberOfSBUs	Number of Standard Bundled Units (SBUs) [1000000]
InjectionCapacity	SBU Injection Capacity in kWh/h [InjectionCapacity v=".427" measureUnit="KW1”]

CDIRES Auction XML field names	XML field name description and format
WithdrawalCapacity	SBU Withdrawal Capacity in kWh/h [WithdrawalCapacity v="-.579" measureUnit="KW1”]
Space	SBU Space Capacity in kWh [Space v="1000” measureUnit="KWH"]
End of SBU	
Start of SBUCapacityFee (is not repeated in AuctionBundledTrade)	
Fixed	Fixed price expressed in €/SBU (EPS) [Fixed v="0.45" measureUnit="EPS"]
Index	Indexation used in combination with AnnualSpread to determine price per SBU [Index v="1.17”]
End of SBUCapacityFee	
L3 End of AuctionBundledTrade	
L2 End of AuctionCDIDataSet	
L1 End of CDIDataSet	

File type	Example files
XML (Example of message)	 CDIRESAuction.xml (double click icon/logo to open example message)

CDIRES SecondaryTrade contents

CDIRES SecondaryTrade XML field names	XML field name description and format
Reference	MessageId of CDIRES message CDISRES_ SSSA_Customer_Contract_Ref _yyyymmddTHH:mm:ssZ [CDISRES_SSSA_Customer_01_20141023T22:12:09]
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
RoutingReference	SSSA
L1 Start of CDIDataSet	
L2 Start of DataSetInformation	
Type	Secondary_Trade
DataSetPeriod	DataSetPeriod for which data is found and Selection Criteria YYYY-MM-DDTHH:mmZ/YYYY-MM-DDTHH:mmZ [2014-10-24T04:00Z/2014-10-25T05:00Z] [Starts_In]

CDIRES SecondaryTrade XML field names	XML field name description and format
Contract	Customer contract code SSSA_Customer_Contract_Ref [SSSA_Customer_01]
Status	Status of processing of the CDIREQ Secondary_Trade message [Contract_Not_Found; Data_Not_Found or Data_Found]
L2 End of DataSetInformation	
L2 Start of SecondaryTradeCDIDataSet	
L3 Start of SecondaryTrade	
Name	Name of the Secondary Trade [Secondary Trade 1]
TradeRequestIdentifier	Trade Request Identifier from GSB, used for cancellation [TRDREQ20150212A00012]
ExternalTradeIdentifier	Identifier given by customer in Trade Request
ExternalTradeRequestIdentifier	Identifier given by customer in Trade Request
BuyerContract	[Buyer-SSSAContractCode]
SellerContract	[Seller-SSSAContractCode]
TradeRequestType	[RegisterTransfer; NotifiedTrade; ScreenTrade; WGB]
TradeType	[Bundled; Commodity (GIS); Unbundled_Injection; Unbundled_Withdrawal; Unbundled_Space; WGBTransfer; WGBSale or WGBReverse]
AgreedDate	Trade date for Secondary Trade [2015-03-31T10:00:00Z]
TradeStart	[2015-03-31T10:00:00Z]
TradeEnd	[2015-03-31T10:00:00Z]
Quantity	[100000]
Price	[10.56] in Euro's
Status	[Confirmed; Rejected; Accepted; Expired or Cancelled]
Reason	
TransactionFee	[10.50] in Euro's
L3 End of SecondaryTrade	

CDIRES SecondaryTrade XML field names	XML field name description and format
L2 End of SecondaryTradeCDIDataSet	
L1 End of CDIDataSet	

File type	Example files
XML (Example of message)	 CDIRESSecondaryTrade.xml (double click icon/logo to open example message)

CDIRES Maintenance contents

CDIRES Maintenance XML field names	XML field name description and format
Reference	MessageId of CDIRES message CDIRES_ SSSA_Customer_Contract_Ref _yyyymmddTHH:mm:ssZ [CDIRES_SSSA_Customer_01_20141023T22:12:09]
BuyerIdentification	Customer EIC code [BuyerIdentification v=”SSSA_Customer_EIC_code” codingScheme=”305”]
SellerIdentification	GSB EIC code [SellerIdentification v=”21X000000001120V” codingScheme=”305”]
RoutingReference	SSSA
Status	Status of processing of the CDIREQ messages [Processed; No_Contract_Provided; DataSet_Period_Invalid; Type_Of_DataSetInvalid *or* Period_Selection_Criteria_Invalid]
L1 Start of CDIDataSet	
L2 Start of DataSetInformation	
Type	Maintenance
DataSetPeriod	DataSetPeriod for which data is found YYYY-MM-DDTHH:mmZ/YYYY-MM-DDTHH:mmZ [2014-10-24T04:00Z/2014-10-25T05:00Z]
Contract	Customer contract code SSSA_Customer_Contract_Ref [SSSA_Customer_01]
Status	Status of processing of the CDIREQ message [Contract_Not_Found; Data_Not_Found or Data_Found]
L2 End of DataSetInformation	
L2 Start of MaintenanceCDIDataSet	

CDIRES Maintenance XML field names	XML field name description and format
L3 Start of MaintenanceEvent	
ID	
Type	Type of Maintenance Event in accordance with SSSA contract. [Planned_Maintenance; Unplanned_Maintenance; Outage or Force Majeure]
Name	Description of the maintenance event
Period	Period of when the maintenance event is applicable YYYY-MM-DDTHH:mmZ/YYYY-MM-DDTHH:mmZ [2014-05-01T04:00Z/2015-05-03T04:00Z]
WithdrawalFactor	Value between 0 (no restriction) and 1 (full restriction). [.5]
InjectionFactor	Value between 0 (no restriction) and 1 (full restriction). [0.9]
L3 End of MaintenanceEvent	
L2 End of MaintenanceCDIDataSet	
L1 End of CDIDataSet	

File type	Example files
XML (Example of message)	 CDIRESMaintenance.xml (double click icon/logo to open example message)

APPENDIX C - THE GENIE MANUAL

1. INTRODUCTION TO GENIE

The conditions of use of the GENIE application by the Customer are that the GENIE application is delivered as “as is” software, which means that GSB does not guarantee the correct operation of the software and is also not responsible for the maintenance and upgrades of the software.

GENIE is an example of a communications software tool for the Customers which enables the Customer to retrieve information on its own and total position of GSB, and execute secondary trading activities as described in the CDIS Manual.

GENIE may be used as the communication tool for the Customer to interact with CDIS. Alternatively the CDIS messaging structure can be integrated into the Customer’s own IT system, at the election of the Customer.

Without prejudice to the above, and given that the GENIE tool is an illustration of how the CDIS Messages can be processed, GSB will only support the tool as follows:

- GSB will occasionally release new versions which contain new or improved functionality for all Customers;
- no special or customized versions will be provided on demand; and
- all operational support will be on a reasonable effort basis, which means GSB will respond to any query and reported issue as soon as possible but only during office hours. GSB cannot guarantee any response times or solutions.

1.1 GENIE structure

GENIE is an Excel VBA application which contains the send and receive mechanisms of all messages needed between the Customer and GSB. It can be installed on any computer of the Customer as long as the following requirements are fulfilled:

- Computer which runs Microsoft Excel 2007 or later;
- File directories which are connected to the HTTP/AS2 (Edig@s) messaging tool of the Customer and where users are allowed:
  - to write to, to send a XML (Edig@s) message; and
  - to read from, to receive a XML (Edig@s) message.

Figure 14 shows the possible setup of GENIE in the Customers’ IT environment.

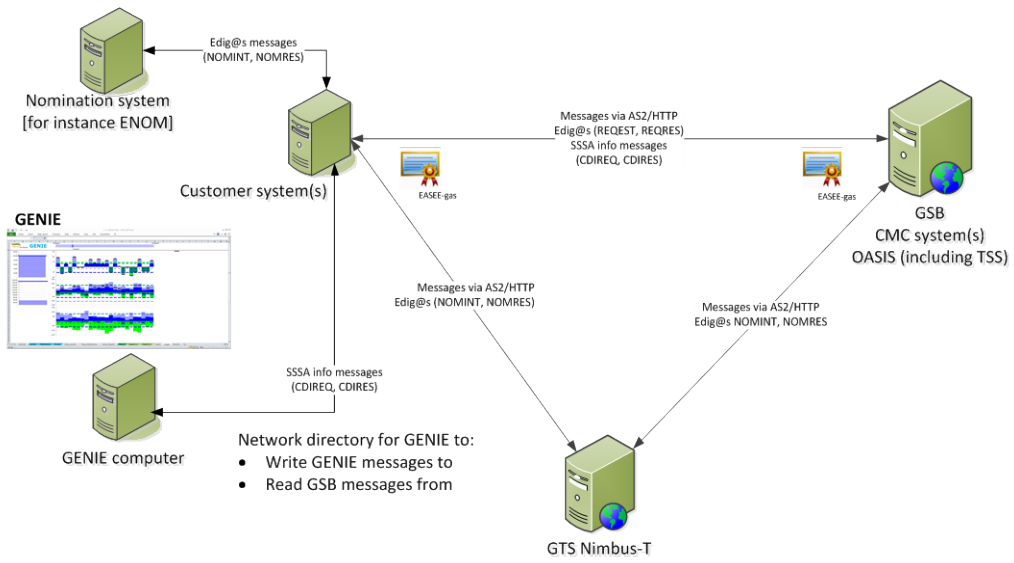

Figure 14, Possible implementation of GENIE

1.2 GENIE functionality

GENIE is able to execute the following functions:

Function	Relevant worksheet / tab
Send Customer Data Information Requests (CDIREQ messages)	In the **Setup** tab of GENIE the various customer data requests could be defined by selecting which information should be retrieved for which time periods. After the specification of these requests the requests could be sent via the *Send CDI Request(s)* button.
Process Customer Data Information Responses (CDIRES messages)	The data information responses are captured in: 1. **Disptach_D** and **Dispatch_H** tabs for the daily and hourly dispatch data described by the CDIRES Dispatch and Dispatch_Totals message formats 2. **Capacity Entitlement** tab for the entitlement data described by the Capacity Entitlement message format 3. **Service_Restriction** tab for the service restriction data described by the Service_Restriction message format 4. **Auction** tab for the auction data described by the Auction message format 5. **Invoice** tab for the invoice data described by the Invoice message format 6. **Liquidated_Damages** tab for the liquidated damages data described by the Liquidated_Damages message format
Create and send Notified Trade, Register Transfer Secondary Trade requests (TRDREQ messages)	
Process Notified Trade and Register Transfer acknowledgement (TRDACK) and trade response messages (TRDRES)	

Process Screen Trades acknowledgement (TRDACK) and trade response messages (TRDRES)	
Create and send Working Gas Bundle trade requests (TRDREQ) messages	
Process Working Gas Bundle acknowledgement (TRDACK) and trade response messages (TRDRES)	

Once GENIE is installed the user needs to configure GENIE in the following screen:

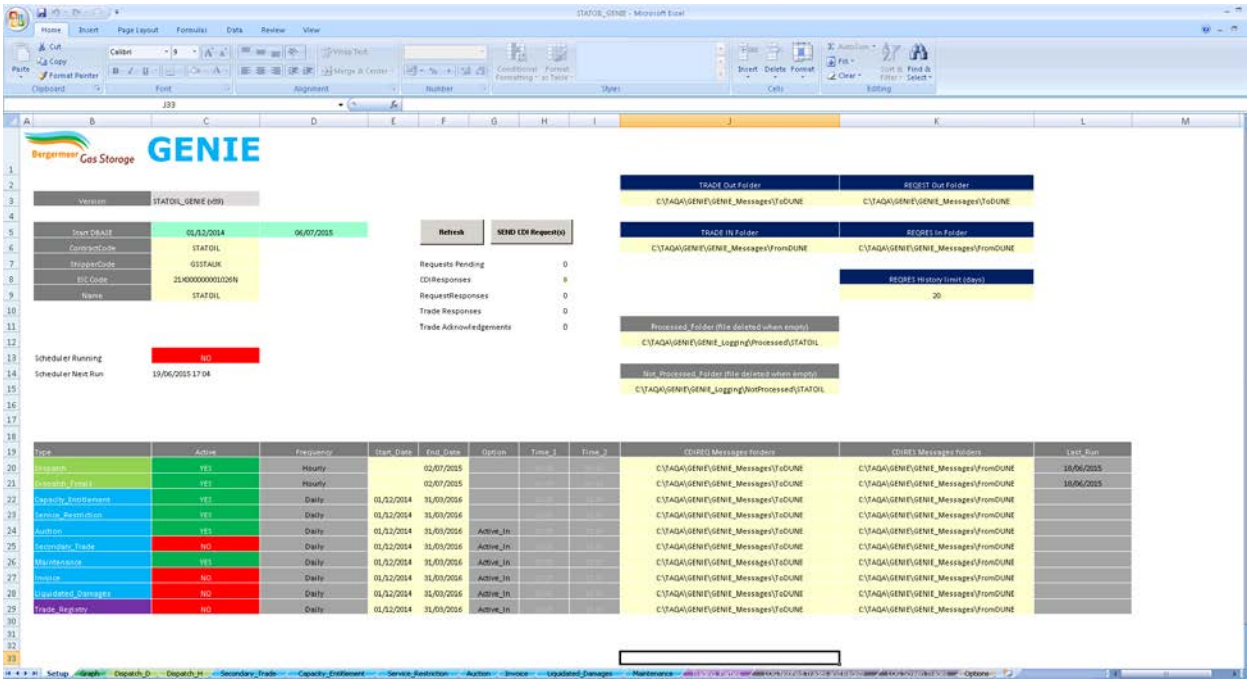

Figure 15, GENIE configuration sheet

2. SETTINGS

2.1 General:

GENIE field name	Description	Cell location	Comment
Start DBASE	Start date of data which will be stored in GENIE	Setup!C12	Data retrieved for the Start DBASE date will not be captured in GENIE

GENIE field name	Description	Cell location	Comment
ContractCode	Contract code of SSSA customers as supplied by TAQA GSB	Setup!C13	This field is prepopulated for each Customer
ShipperCode	Shipper code of Customer	Setup!C14	This field is prepopulated for each Customer
EIC Code	Shipper code of Customer	Setup!C15	This field is prepopulated for each Customer
Processed folder	File folder where GENIE stores messages which are successfully processed	Setup!J12	Processed files will be deleted if left empty. Subdirectories will automatically be created under this folder
Not Processed folder	File folder where GENIE stores messages which are not successfully processed	Setup!J15	Processed files will be deleted if left empty. Subdirectories will automatically be created under this folder

2.2 CDIREQ and CDIRES messages:

GENIE field name	Description	Cell location	Comment
Dispatch	Selection if Dispatch data has to be retrieved or not	Setup!C20	
Dispatch_Totals	Selection if Dispatch_Totals data has to be retrieved or not	Setup!C21	
Capacity_Entitlement	Selection if Capacity_Entitlement data has to be retrieved or not	Setup!C22	
Service_Restriction	Selection if Service_Restriction data has to be retrieved or not	Setup!C23	
Auction	Selection if Auction data has to be retrieved or not	Setup!C24	
Secondary_Trade	Selection if Secondary_Trade data has to be retrieved or not	Setup!C25	
Maintenance	Selection if Maintenance data has to be retrieved or not	Setup!C26	
Invoice	Selection if Invoice data has to be retrieved or not	Setup!C27	

GENIE field name	Description	Cell location	Comment
Liquidated_Damages	Selection if Liquidated_Damages data has to be retrieved or not	Setup!C28	
Trade_Registry	Selection if Trade_Registry data has to be retrieved or not	Setup!C29	

For each of the above CDI messages send and receive location need to be specified

GENIE field name	Description	Cell location	Comment
CDIREQ Messages folders	Destination file folder where CDIREQ messages are written to	Setup!J20..J29	Should be a network directory which is connected to the HTTP/AS2 messaging system of the Customer.
CDIRES Messages folders	Source folder where CDIRES messages are read from	Setup!K20..K29	Should be a network directory which is connected to the HTTP/AS2 messaging system of the Customer.

2.3 Secondary Trading:

GENIE field name	Description	Cell location	Comment
TRADE out folder	Destination file folder where trade messages like TRDREQ and TRDCNC are written to	Setup!J3	Should be a network directory which is connected to the HTTP/AS2 messaging system of the Customer.
TRADE IN Folder	Source folder where trade messages like TRDACK and TRDCNC are read from	Setup!J6	Should be a network directory which is connected to the HTTP/AS2 messaging system of the Customer.

3. USING GENIE

After installing and configuring GENIE the Customer can use GENIE to:

- Send information requests and process their response;
- Monitoring trades results (not yet in place)

3.1 Sending information requests (CDIREQ) and processing their response (CDIRES)

The Customer is able to obtain information from GSB on its own and/or the total position with GENIE following CDIREQ and CDIRES logic.The information request mechanism used to obtain SSSA and other GSB information, of this document by:

3.2 Pressing the Send CDI Request(s) button of the Worksheet Setup. GENIE creates the CDIREQ messages based on the configuration of GENIE and places them in the CDIREQ Messages folders specified. The messages are then send to TAQA GSB, processed and replied to in the form of CDIRES messages which are then placed in the CDIRES Messages folders specified.

3.3 Pressing the Refresh button of the Worksheet Setup. Genie reads the CDIRES messages based on the configuration of GENIE from the folders specified and stores the information in the following work sheets:

GENIE worksheet	Description
Dispatch_D	Results of Dispatch and Dispatch_Totals CDIREQ messages displayed on a daily level, where each column represents a dispatch related variable and each row represents a Gas Day.
Dispatch_H	Results of Dispatch and Dispatch_Totals CDIREQ messages displayed on an hourly level, where each column represents a dispatch related variable and each row represents a Gas Day hour.
Capacity_Entitlement	Results of Capacity_Entitlement CDIREQ messages displayed on an hourly level, where each column represents a capacity entitlement related variable and each row represents a Gas Day hour.
Service_Restriction	Results of Service_Restriction CDIREQ messages displayed on an hourly level, where each column represents a service restriction related variable and each row represents a Gas Day hour.
Auction	Results of Auction CDIREQ messages, where each column represents an auction related variable and each row a trade.
Secondary_Trade	Results of Secondary_Trade CDIREQ messages, where each column represents a secondary trade related variable and each row a secondary trade.
Maintenance	Results of Maintenance CDIREQ messages, where each column represents a maintenance related variable and each row a maintenance event.
Invoice	Results of Invoice CDIREQ messages, where each column represents an invoice related variable and each row a month.
Liquidated_Damages	Results of Liquidated_Damages CDIREQ messages, where each column represents a liquidated damages related variable and each row a month.
Trade_Registry	Retrieve a list of all active GSB customers

3.4 Trading Capacities and Gas-In-Store (non -ICE)

A Customer is able to execute non-ICE secondary trades like Register Transfers and Notified Trades via GENIE by making use of the Trade Request functionality on the Trade Request worksheet.