SupplyOn

SupplyOn EDI

Information for Suppliers about communication types, EDIFACT format and connection process

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List of abbreviations

AS2	Applicability Statement 2 (= specification for data exchange)
ANSI	American National Standards Institute
EDI	Electronic Data Interchange
EDIFACT	EDI for Administration, Commerce and Transportation
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
ISDN	Integrated Services Digital Network
MDN	Message Disposition Notification
Odette	Organization for Data Exchange by Teletransmission in Europe
OFTP	Odette File Transfer Protocol
OFTP2	ODETTE File Transfer Protocol version2
SSL	Secure Socket Layer
VDA	Association of the Automotive Industry

1 Communication types

After registration with SupplyOn the connection to SupplyOn EDI can be alternatively set up via two communication types:

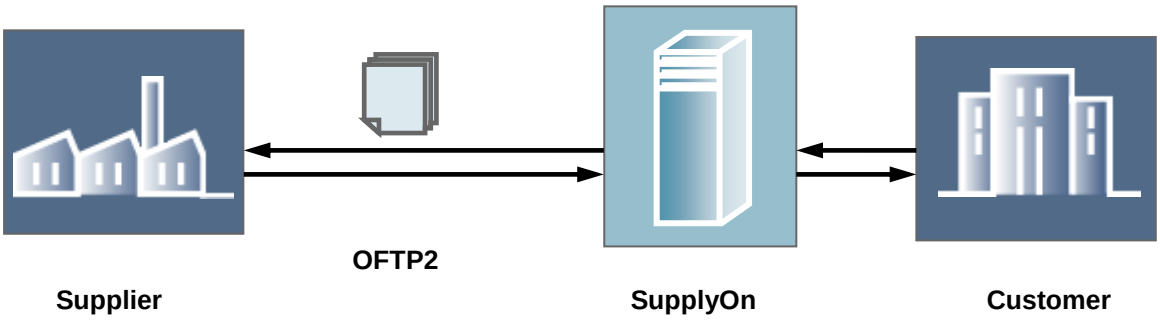
- OFTP2 via TCP/IP
- AS2 via HTTPS

1.1 OFTP2 via TCP/IP

OFTP2 (= ODETTE File Transfer Protocol version 2)

OFTP2 is a further development of the ODETTE File Transfer Protocol.

OFTP2 can be set up on different transport layers: ISDN, X.25, TCP/IP. SupplyOn supports OFTP2 via TCP/IP (Internet).



1.1.1 Process of the communication

The communication is initiated by one of the partners. After exchange of Odette IDs and passwords, files can be exchanged in both directions. The files receive a pre-configured virtual file name for the transmission. Files can be transmitted via OFTP2 either encrypted or unencrypted***. After the transmission a confirmation in form of an *End to End Response* (EERP = positive acknowledgment of receipt, EERN = negative acknowledgment) takes place. This *End to End Response* can take place either immediately after the transmission within the same connection, or the receiver dials in independently to the original sender for transmission.

******Hint: SupplyOn allows only an encrypted transmission.***

1.1.2 Strength of OFTP2

- OFTP2 allows a restart to the connection after abort. It is not necessary to send the entire file again.
- The implicit *End to End Response* guarantees correct transmission and processing of the file through the receiver.
- Secure data and connection due to encryption.

1.1.3 SupplyOn OFTP parameter sheet

Should you have decided to transmit your EDIFACT messages with OFTP2, and we have received the contract for this service, you will receive the OFTP parameter sheet with the SupplyOn OFTP parameters. Please fill out this parameter sheet carefully and send it to EDI-Connect@SupplyOn.com.

1.1.4 OFTP2 encryption

SupplyOn uses with OFTP2 the maximal security settings, including the latest cryptographic algorithms:
A symmetrical encryption using the AES/256 algorithm, the SHA1 digital signature algorithm, data compression and only a signed and encrypted receipt.

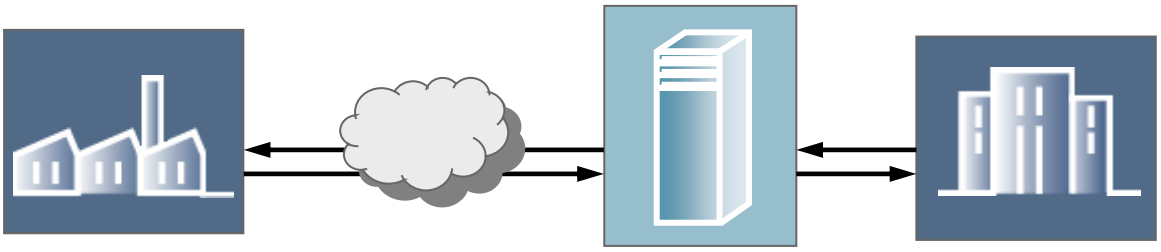
1.1.5 OFTP2 parameter & explanations

OFTP2 Parameter		SupplyOn Communication	Explanation
Security	Communication Certificate	trusted	**One certificate for communication and signature** **Trusted:** Certificate Authority assigns, administrates and controls certificates. There are Class 2 and Class 3 certificates. **Certificates have to be updated at least after 5 years.**

	Digital signature	SHA1	Before the data is dispatched a signature is generated and attached to the transmission. With the receipt of the message the receiver verifies the signature. This guarantees that the message really comes from the sender. SHA1 is an option of the signature algorithm and is recommended.
	Encryption	AES/256	Advanced Encryption Standard is a symmetrical encryption method that is considered to be the new encryption standard. It is used to encrypt data and the transmission connection.
Transport layer	Internet connection	- permanent internet connection - fixed and public URL or IP address mandatory	A permanent Internet connection has to be granted.
	Transport Protocol	OFTP2 via HTTPS	HTTPS is a special form of the HTTP Protocol offering increased security via SSL (128 Bit encryption). HTTPS is used to prevent the „monitoring“ during the transmission of sensitive data.
Client Authentication	Authentication	HTTPS Basic authentication with username and password	Authentication of the sending interface system during the receipt.

1.2 AS2 via Internet (HTTPS)

AS2 (Applicability Statement 2) is a new communication protocol for secure data transfer via the Internet. Electronic business documents of any format that are sent to the business partners are compressed and if necessary provided with an electronic signature..



1.2.1 Process of the communication

AS2 works with an "envelope" in which the EDI data is embedded. The data is transmitted with the Hypertext Transfer Protocol (HTTP), the core technology of the World Wide Web.
The server of the receiver waits for messages that are addressed to it. As soon as the server recognizes that a message addressed to it "knocks", the server examines the certificates/Authorization of the message. After the examination it lets the message enter.

Similarly as a telephone without a mailbox, the server acquires the message only if the server is available. Therefore the server has to keep a permanent connection to the internet.

1.2.2 Strength of AS2

The implementation of AS2 enables the user to send and receive data securely and reliably with the Internet protocol HTTPS. The cost advantage, which results from the use of the Internet, is passed on directly to the AS2 user. If you have decided to use an AS2 software solution, no additional costs will arise, even when sending a larger data volume. By the rising number of EDI messages this is, apart from the security aspect, for many companies the decisive factor to implement AS2.

Digital certificates ensure for example, that messages only reach the desired receiver and that the sender can be verified. AS2 works with encryption and signature algorithms, so that the security of the documents is ensured.

1.2.3 Conditions for the AS2 communication

A condition for the data exchange with other AS2 compatible companies is an Internet access and AS2 compliant software. Please pay attention that your AS2 software has to support HTTP Basic Authentication for data transmission to SupplyOn (see 1.2.5).

1.2.4 SupplyOn AS2 parameter sheet

Should you have decided to transmit your EDIFACT messages via AS2, and we have received the contract for this service, you will receive the AS2 parameter sheet with the SupplyOn AS2 parameters. Please fill out this parameter sheet carefully and send it to EDI-Connect@SupplyOn.com.

1.2.5 AS2 Header – Message Subject

The AS2 Client from SupplyOn does not open the EDI messages but only reads information from the HTTP header.
Important for our AS2 Client and the Partner / Entity Finding is the AS2 message subject (depending on the process, e.g.: SO_ORDRSP, SO-DESADV-D07A).
Please populate the AS2 message subject of your respective AS2 client configuration with the agreed values for "Message Subject / Subject".

1.2.6 AS2 parameter & explanations

AS2 Parameter		SupplyOn Communication	Explanation
Security	Communication Certificate	- trusted or self-signed - maximum validity 5 years	**One certificate for communication and signature** **Trusted:** Certificate Authority assigns, administrates and controls certificates. There are Class 2 and Class 3 certificates. **Self-Signed:** Self-Signed certificates reduce the administration effort. **Certificates have to be updated at least after 5 years.**
	Digital signature	SHA1	Before the data is dispatched a signature is generated and attached to the transmission. With the receipt of the message the receiver verifies the signature. This guarantees that the message really comes from the sender. SHA1 is an option of the signature algorithm and is recommended.
	Encryption	–	No additional encryption of the data is necessary, since the communication is already SSL encrypted (HTTPS)!
Transport layer	Internet connection	- permanent internet connection - fixed and public URL or IP address mandatory	A permanent Internet connection has to be granted.
	Transport Protocol	AS2 via secure HTTP (HTTPS)	HTTPS is a special form of the HTTP Protocol offering increased security via SSL (128 Bit encryption). HTTPS is used to prevent the „monitoring“ during the transmission of sensitive data.

Client Authentication	Authentication	HTTP Basic authentication with username and password	Authentication of the sending interface system during the receipt.
Message Disposition Notification=MDN	MDN	Mandatory	The MDN is an instrument for transaction security. The MDN is sent back by the recipient. It confirms the message receipt and provides proof that the correct recipient was reached, since he was in the possession of the private key.
	MDN signed	Synchronously signed if necessary	Signing of the message receipt
	MDN encryption	_	No additional encryption of the data is necessary, since the communication is already SSL encrypted (HTTPS)!
AS2 Header	Message Subject / Subject	Mandatory	Please check, if your AS2 Client is compatible to send the AS2 message subject in the subject line, e.g. SO_ORDRSP

2 SupplyOn EDIFACT marketplace format

SupplyOn acts as marketplace and therefore agreed with all customers on a standardized EDIFACT marketplace format for the individual business processes.
All buy-side companies attached to the SupplyOn marketplace have been using this uniform format for a long time. Due to the marketplace effect it is therefore necessary also for all sell-side companies to follow the standardized marketplace format.
For you as a sell-side company, the major advantage is that you send and receive always the same format for a business process, regardless to which of your customers you exchange data with via SupplyOn.

You receive the EDIFACT format guideline for the respective business process of your customer from SupplyOn and implement this in your internal IT system in a mapping.
If a further customer would like to transmit data with you via SupplyOn EDI, the multiplier effect takes place: that means a new maintenance work of the format guidelines in your inhouse system is no longer necessary.

2.1 EDIFACT versions and format guideline

In order to transmit messages to SupplyOn, the messages have to correspond with the SupplyOn EDIFACT marketplace format. Messages that SupplyOn transmits to the supplier correspond to the SupplyOn EDIFACT marketplace format as well.
The format guideline for the respective business process is attached with this info package.

The following EDIFACT versions are used on the SupplyOn marketplace:

Delivery instruction:	DELFOR D10.A
Delivery receipt	DESADV D07 A
Purchase order:	ORDERS D99.B
Order change	ORDERS D99.B
Order response:	ORDRSP D99.B
Invoice:	INVOIC D07.A, based on VDA4938
Self billing invoice:	INVOIC D07.A, based on VDA4938
Credit note	INVOIC D07.A, based on VDA4938
Invoice/Order attachments	VDA Container VDA4983
ASN (Advanced shipping notification):	DESADV D07.A based on VDA4987
Inventory Report	INVRPT D99.B
VMI OUT-data package	DELFOR_IMO D98.B
VMI planned deliveries	DELFORP D97.A

2.2 EDIFACT Routing and syntax check, error emails

If you send EDIFACT message to SupplyOn, these are checked first for the routing information needed for the SupplyOn market place (see table 2.2.3). Afterwards the message is checked for the correct syntax analog to the SupplyOn EDIFACT format guideline.

If your message contains a routing or a syntax error an automatically generated email with the appropriate error description is sent to you by SupplyOn (sender: WebEDIAdmin@SupplyOn.com). The original message that caused the error is attached to this email. The message was not processed in this case and was not transmitted to the customer.

SupplyOn uses the recipient email address for routing and syntax errors you mentioned together with the UNB sender ID in the parameter sheet (see also 1.1.4 and/or. 1.2.4).

2.2.1 Routing check

Due to the SupplyOn marketplace it is necessary that you transmit certain routing information in certain segments in the EDIFACT message, so that we can identify your customer and transmit the message to the correct recipient.

We identify your customer with the help of the following 4 segments (see table 2.2.3):

- Recipient ID of the customer in UNB
- Customer organization code NAD+BY
- Customer plant code in NAD+CN resp. NAD+ST
- Supplier number in NAD+SU resp. NAD+SE

Example of a Routing error email due to wrong recipient ID:

Von: *WebEDIadmin@SupplyOn.com*
Betreff: *Routing Error SO_DESADV; P: WerksCode; S: 4711*
Wichtigkeit: *Hoch*

Fehleranalyse DESADV-UN-D07A
lfd.Segmentnr:0072 Kein Routingeintrag in der Tabelle PO_EMAILUPD für Empfaenger [BUYER002], ORGCode [Buy01]gefunden.

Example of a Routing error email due to wrong organization code:

Von: *WebEDIadmin@SupplyOn.com*
Betreff: *Routing Error SO_DESADV; P: WerksCodefalsch; S: 4711*
Wichtigkeit: *Hoch*

Fehleranalyse DESADV-UN-D07A
lfd.Segmentnr:0072 Es konnte keine CP-Buyer-ID mit ORGCode

[Buy01] und Plant [WerksCodefalsch] in der Tabelle tControlPoint_SCD gefunden werden.

Example of a Routing error email due to wrong plant code:

Von: *WebEDIadmin@SupplyOn.com*
Betreff: *Routing Error SO_DESADV; P: WerksCodefalsch; S: 4711*
Wichtigkeit: *Hoch*

Fehleranalyse DESADV-UN-D07A
lfd.Segmentnr:0072 Es konnte keine CP-Buyer-ID mit ORGCode [Buy01] und Plant [WerksCodefalsch] in der Tabelle tControlPoint_SCD gefunden werden

Example of a Routing error email due to wrong supplier number:

Von: *WebEDIadmin@SupplyOn.com*
Betreff: *Routing Error SO_DESADV; P: WerksCode; S: 4711falsch*
Wichtigkeit: *Hoch*

Fehleranalyse DESADV-UN-D07A
lfd.Segmentnr:0072 Es konnte keine CP-Seller-ID mit CP-Buyer-ID [10000842], Lieferantennummer [4711falsch] und SellerPlant [] in den Tabellen tNetworkLink_SCD_NEW und tNetworkSupplierInfo_SCD gefunden werden.

2.2.2 Syntax check

Due to the standardized message format on the SupplyOn market place the messages are checked for correct syntax analog to the SupplyOn format guideline, before they are transmitted to your customer. This syntax check takes place also in reverse direction, i.e. customer messages are also checked for correct syntax before they are transmitted from SupplyOn to the supplier.

Example of a syntax error email due to incorrect date format in DTM+137:

Von: *WebEDIadmin@SupplyOn.com*
Betreff: *Syntax Error SO_DESADV; P: WerksCode; S: 4711*
Wichtigkeit: *Hoch*

Fehleranalyse DESADV-UN-D07A
lfd.Segmentnr:0005 UNB.UNH.DTM Überlauf im Feld UNB.UNH.DTM:C507.2380 [2003100300] , nur 8 Zeichen erlaubt. Zugehöriger Qualifier UNB.UNH.DTM:C507.2379 [102]. Zugehöriger Qualifier UNB.UNH.DTM:C507.2005 [137].

2.2.3 Segments for message routing

In order to ensure a correct message flow to your customer, the following EDIFACT segments have to be considered for the routing of the messages:

! IMPORTANT segments for message routing !	
Sender ID (UNB.S002.0004) + Recipient ID (UNB.S003.0010)	The Sender ID of the customer has to be copied out of the inbound message and be sent back as Recipient ID in the outbound message to SupplyOn (see example). From SupplyOn to supplier: UNB+UNOC:3+BUYER-XY+RecipientID+031003:1947+0471104812' From supplier to SupplyOn: UNB+UNOC:3+SenderID+BUYER-XY+031003:1947+0471104812'
SupplyOn's organisation Code (NAD.C058.3124#1)	The SupplyOn organization code has to be copied out of the inbound message and be sent back in the outbound message to SupplyOn (see example). From SupplyOn to supplier: NAD+BY+00700800::91+Buy01:Buyer GmbH+Buyer GmbH & Co.KG+Schlossallee 100+Neustadt++12345+DE' From supplier to SupplyOn: NAD+BY+00700800::91+Buy01:Buyer GmbH+Buyer GmbH & Co.KG+Schlossallee 100+Neustadt++12345+DE'
Number of customer's plant (NAD.C082.3039)	The number of customer's plant has to be copied out of the inbound message and be sent back in the outbound message to SupplyOn (see example). From SupplyOn to supplier: NAD+CN+2222::92+Buy01:Buyer GmbH+Buyer GmbH & Co.KG+Schlossalle 100+Neustadt++12366+DE' From supplier to SupplyOn: NAD+CN+2222::92+Buyer GmbH+Buyer GmbH & Co.KG+ Schlossalle 100+Neustadt++12345+DE' NAD+ST+2222 (for message type invoice)

Supplier number (NAD.C082.3039)	The supplier number has to be copied out of the inbound message and be sent back in the outbound message to SupplyOn (see example). From SupplyOn to supplier: NAD+SU+009999875::92++Supplier GmbH & Co.KG+Kastanienweg 12+Bremen++45678+DE' From supplier to SupplyOn: NAD+SU+009999875::92++Supplier GmbH & Co. KG+Kastanienweg 12+Bremen++45678+DE' NAD+SE+009999875 (for message type invoice)

2.3 Structure of EDIFACT messages

Please take notice of the following references to the EDIFACT structure if you send messages to SupplyOn:

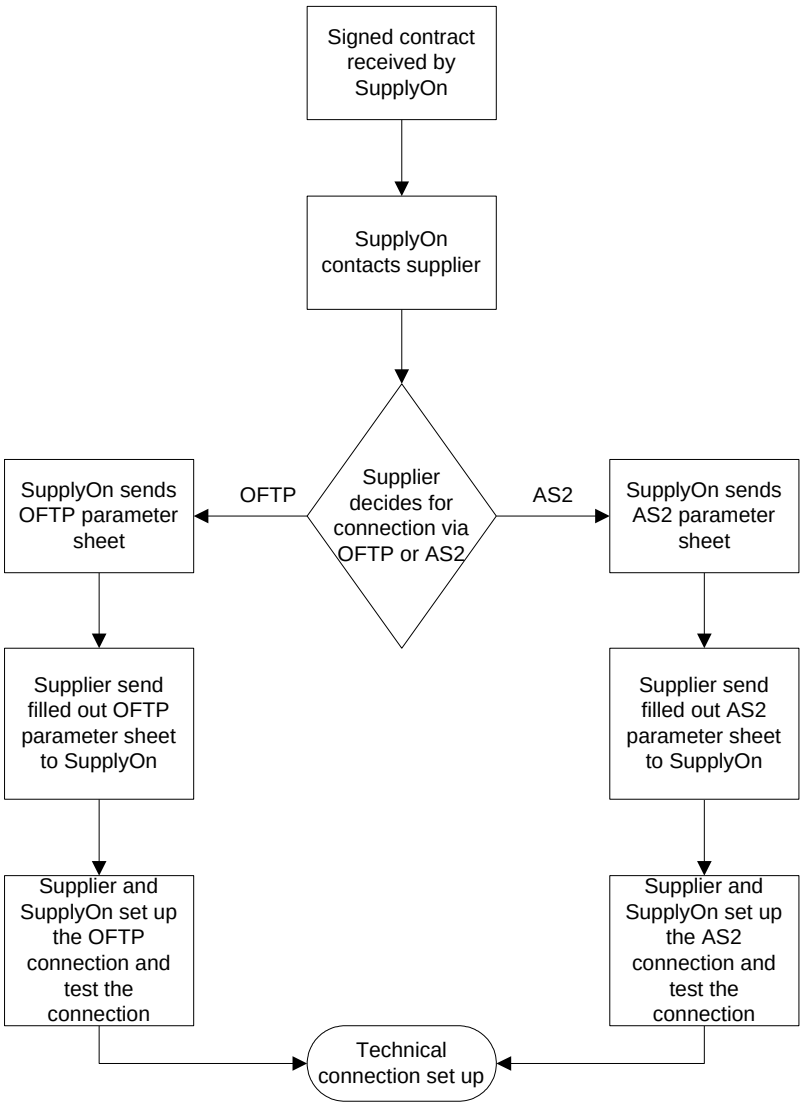
Line breaks (CRLF = Carriage Return Line Feed) at the end of segments:
You can send EDIFACT messages with or without CRLF to SupplyOn. In case of use CRLF, CRLF has to be used at the end of every segment.
SupplyOn transmits the messages with CRLF

Multiple messages within one transmission file:
You can send multiple messages within one transmission file. Please take notice the single messages match one UNH-UNT. SupplyOn does not support functional groups.

UNA
UNB
- UNH
  ....segments
  ....segments
- UNT
- UNH
  ....segments
  ....segments
- UNT

UNZ

3 Technical connection



4 Test process

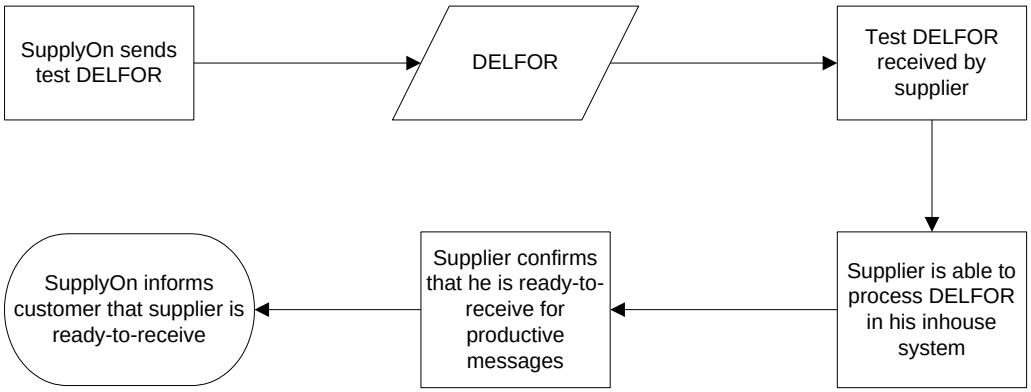
After the successful establishment of the technical connection test messages between SupplyOn and the supplier will be exchanged. During the test phase a SupplyOn test customer will transmit and receive test messages. After completion of the test phase SupplyOn will productively switch the connection to your customer.

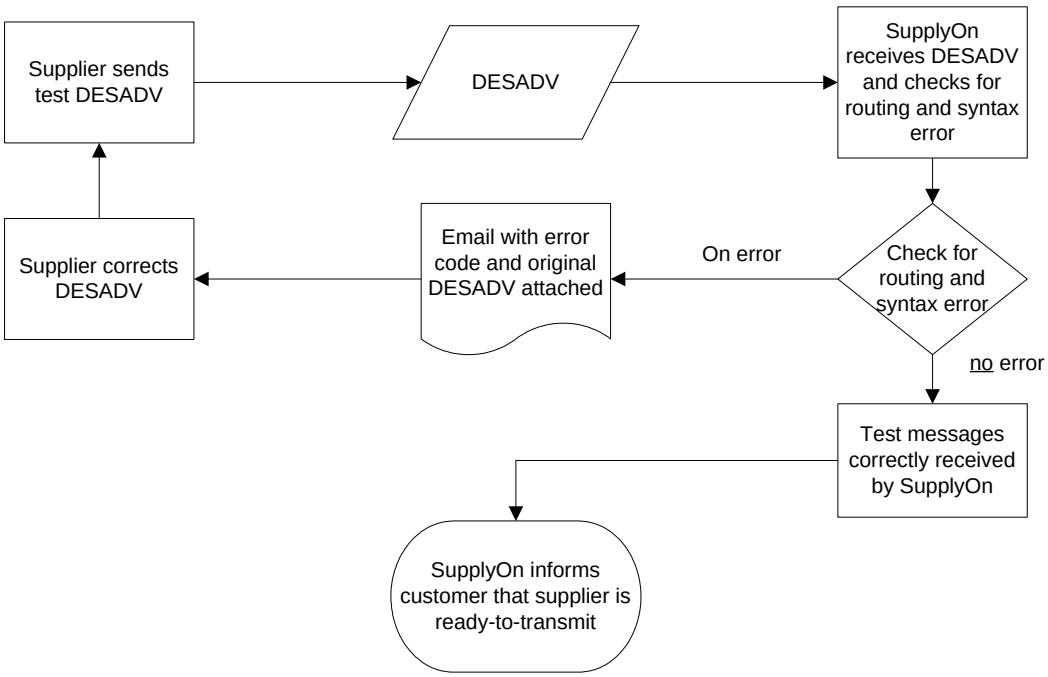
Please note that the test messages have to correspond to the SupplyOn EDIFACT guideline.

Usually the following test runs will be relevant for you. It naturally depends on the process your customer has registered you and/or the process you would like to use with SupplyOn EDI.

1. Test: SupplyOn transmits EDIFACT messages to supplier

Example: DELFOR



2. Test: Supplier transmits EDIFACT messages to SupplyOn

Example: DESADV