





Configuration of Trading Partner with AS2 Communication method.

Author Sharukh Khan Darvesh





Contents:

- 1. Common Terminologies
- 2. Introduction
- 3. Types of Keys used in AS2
- 4. Requirements for AS2 implementation
- 5. Benefits of AS2 file transfer
- 6. Practical Implementation in Boomi
- 7. Monitoring Transaction
- 8. References







Common Terminologies:

EDI:- EDI stands for Electronic Data Interchange. It is a standard electronic format that replaces paper-based documents such as Purchase orders and Invoices. In EDI transactions information moves directly from a computer application in one organization to a computer application in another organization.

B2B:- B2B stands for Business to Business refers to transactions and interactions that occur between two or more businesses or organizations.

Vendor: Vendor refers to a Business or organization that supplies goods or services to another business.

Partner:- Partners are any organizations engaged in Electronic data exchange using EDI technology.

Inbound:- Inbound refers to flow of electronic documents and data from trading partner or vendor into our organization(My Company).

Outbound:- Outbound refers to flow of electronic documents and data from Our Organization(My Company) to Trading partner or Vendor.

MDN:- MDN(Message Disposition Notification) is an acknowledgement sent to the sender that the receiver got the data. The verifies that the message was received & successfully decrypted.

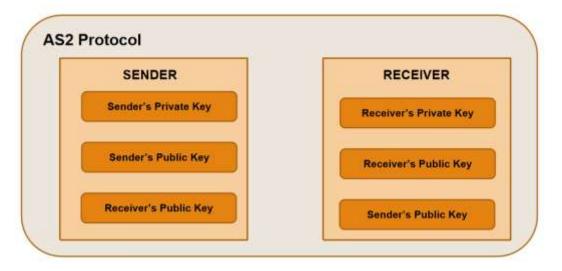
Introduction:

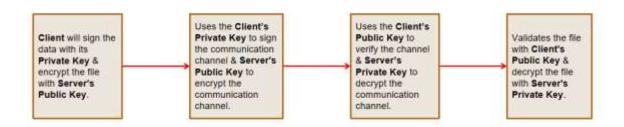
- AS2 (Applicability Statement 2) is a popular protocol to transmit data securely and reliably over the internet.
- AS2 supports the encryption of messages that are exchanged with trading partners and vendors via HTTPS.
- These messages are built using the S/MIME format. Mainly, AS2 is used to exchange different data such as EDI, XML, or Custom documents between partners.





Types of keys used in AS2:





Requirements for AS2 implementation:

Sender Need below info from the receiver:

- URL of the receiver's AS2 server.
- Public SSL server certificate used by receiver's AS2 server, if applicable (if the URL is HTTP, then no need for a certificate).
- Receiver's AS2 ID.
- Receiver's public AS2 certificate.
- Any specific algorithms for signing and encrypting and any specific MDN options.





Receiver Need below info from Sender:

- URL of your AS2 server to send back the MDN.
- Public SSL server certificate of your AS2 server.
- Your AS2 ID.
- Your public AS2 certificate.

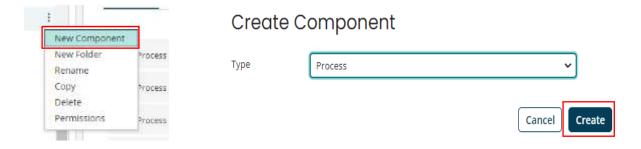
Benefits of AS2 file transfer:

- Complete encryption for sensitive files.
- File integrity verification with successful transfer confirmation.
- Capable of transferring files of any volume or size.
- Support for synchronous or asynchronous MDN receipts.
- Using digital signatures to authenticate senders and recipients.

Practical Implementation in Boomi:

Let us see how to implement AS2 communication method in Trading Partner.

Step 01: Create a new process component.

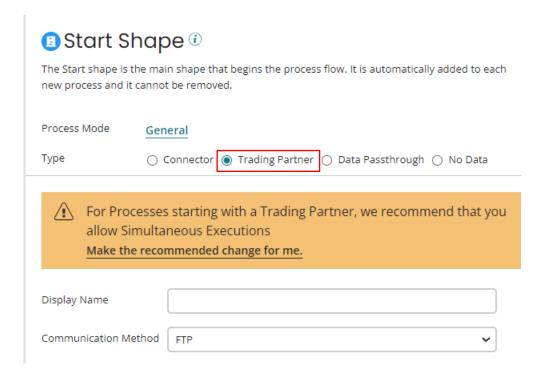


Step 02: As we know we can configure start shape in 4 ways i.e no-data, connector, data pass-through & trading partner. Here we are using start shape with Trading Partner. And disable capture run dates and enable allow simultaneous executions.

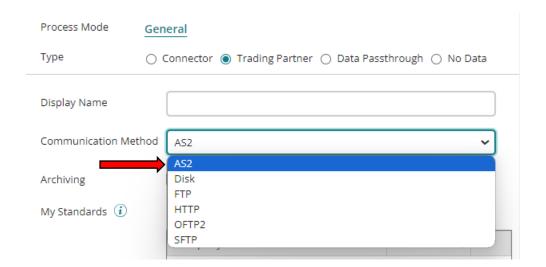








Step 03: There are different communication method like Disk, FTP, HTTP, AS2, SFTP, OFTP2. Select AS2 and click OK.

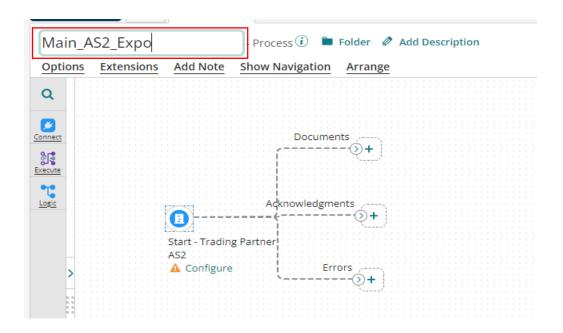








Step 04: Rename the Process name and save it.



Note:

For Inbound transaction: My Company will be the Receiver & Trading Partner will be the Sender

For Outbound transaction: My Company will be the Sender & Trading Partner will be the Receiver.

Sender-ISA05, ISA06 & GS02.

Receiver-ISA07, ISA08 & GS03.





This is the EDI document we are referring in this use-case(Inbound).

ISA*00* *00*

*12*14147844480*12*PARTNERID*180112*1136*U*00401*600000001*0*P*>

GS*PO*14147844480*PARTNERID*20180112*1136*600000001*X*004010VICS

ST*850*999999999

BEG*00*SA*12345678**20180322

REF*DP*999

REF*ZZ*BULK

CSH*P4

SAC*A*E750***3780*3*5*****02

SAC*N**VI*OHNS

ITD*02*2*3**15**15

DTM*037*20180330

DTM*001*20180408

PO1**40*EA*5**UP*1111111111111*VA*55555*CB*9998877*BO*002*IZ*56789

CTP*RS*RES*14

PID*F*08***FASHION

PID*F*75***BLACK

PID*F*91***SMALL

PO4*5*2*EA

SDQ*EA*92*00810*20*00840*20

PO1**50*EA*9**UP*111111122222*VA*55555*CB*9998877*BO*002*IZ*79431

CTP*RS*RES*14

PID*F*08***FASHION

PID*F*75***BLACK

PID*F*91***MEDIUM

PO4*5*2*EA

SDQ*EA*92*00810*30*00830*20

CTT*2

SE*22*999999999

GE*1*600000001

IEA*1*600000001

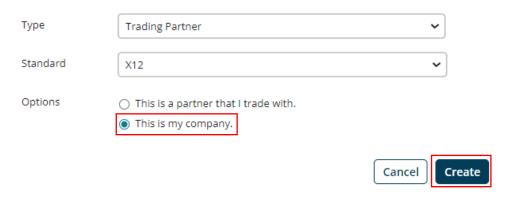






Step 05: Now we will configure My Company. Create a new Trading Partner component select standard as X12 & Options as This is my company.

Create Component



Step 06: Rename the Trading partner component and populate the ISA Identification Options by referring the EDI document.

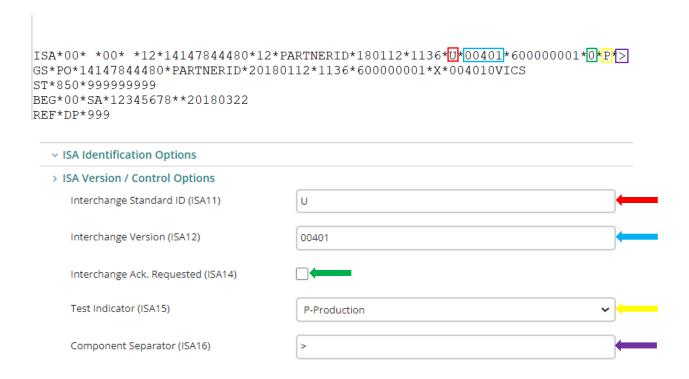




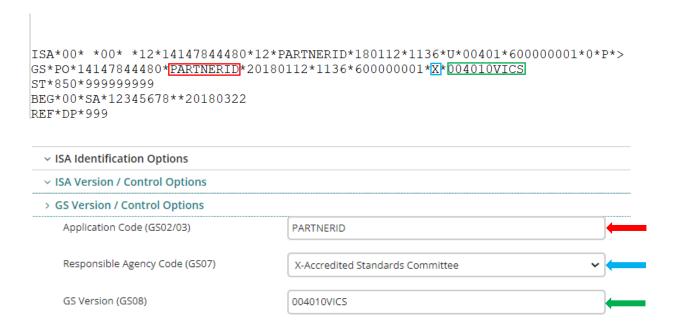




Step 07: Populate the ISA Version/control Options by referring the EDI document.



Step 08: Populate the GS Version/control Options by referring the EDI document.

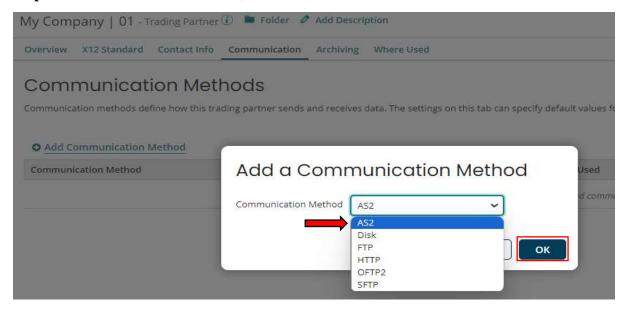








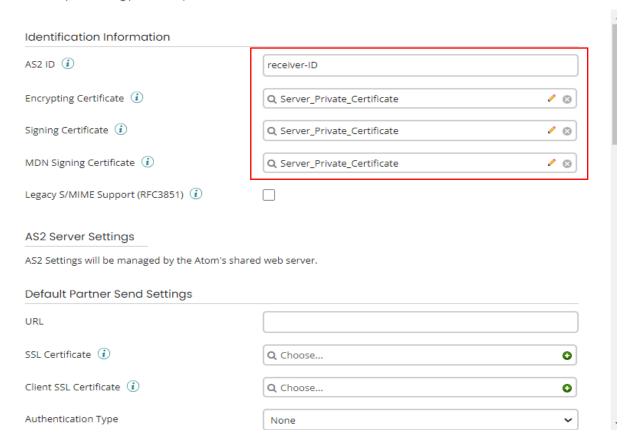
Step 09: In the Communication tab, select AS2 as communication method & click ok.



Step 10: New tab will appear here we need to do AS2 configuration.

Edit AS2 Configuration

Configure this partner's AS2 settings. These settings can be used as default settings for other partners that appear in the same start shape or trading partner shape that uses AS2.









Identification Information:

AS2 ID: AS2 ID will identify this partner in an AS2 Receiver.

Encrypting Certificate: Server's private certificate that is used for data decryption.

Signing Certificate: Server's private certificate that is used to sign data.

MDN Signing Certificate: Server's private certificate that is used to sign MDN.

Legacy S/MIME Support (RFC3851): By default Boomi encodes messages using the latest RFC5751 specification. Select this option to enable backwards compatibility for partner systems that use the legacy RFC3851 specification.

Step 11: We need to provide some client related information like AS2 ID that indicates sender & client public key to validate the data signed.

Default Partner Identification Information		
AS2 ID (i)	sender-ID	
Encrypting Certificate (i)	Q Choose	0
Signing Certificate (i)	Q Client public Key Certificate	/ ⊗
MDN Signing Certificate (i)	Q Choose	•

Step 12: We need to provide Message option value.

Content Type: Set a Content Type that matches the data being sent.

Sign message: If selected, signed messages are sent to this trading partner.

Encrypt Message: If selected, messages sent to this trading partner are encrypted.

Compress Message: If selected, data sent to or received from your trading partner is compressed or zipped.





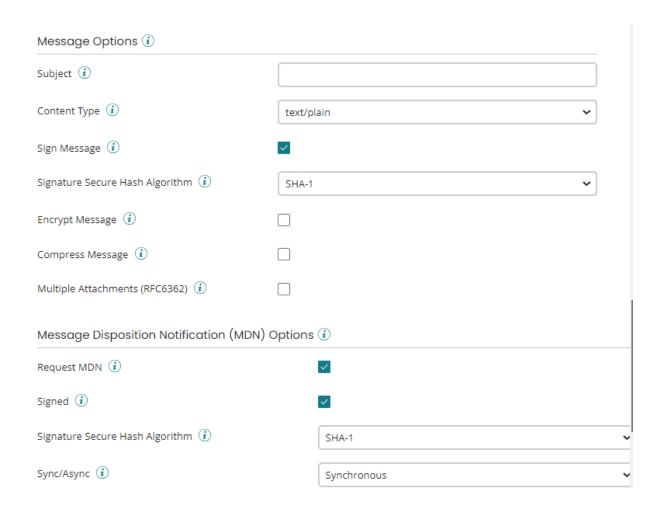


Request MDN: If selected, you receive MDN (Message Disposition Notification) acknowledgments for messages sent to this trading partner. MDNs acknowledge successful delivery of a message and include any errors from the received message. MDNs are generated automatically for incoming AS2 data on the AS2 Server.

Signed: If selected, you request that this trading partner sign the MDNs that they return.

Signature Secure Hash Algorithm: Select the cryptographic hash function to use. (MD5, SHA-1, SHA-224, SHA-256, SHA-384, SHA-512).

Sync/Async: Sets the method your trading partner uses to send you MDNs. Typically, Synchronous is used so that MDNs are received from the trading partner during the same connection on which you sent data to the trading partner.









Step 13: Once this all fields are populated then save it.

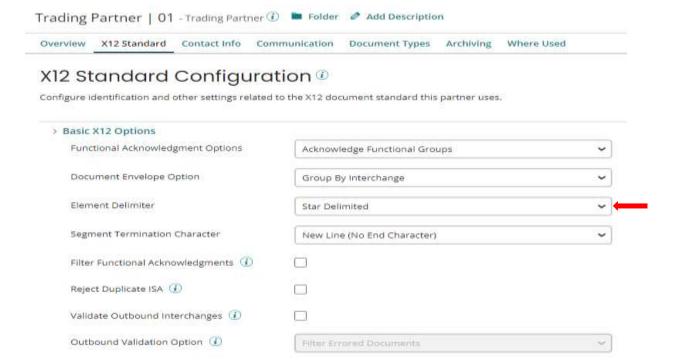
Step 14: Now we will configure Trading Partner. Create a new Trading Partner component select standard as X12 & Options as This is a partner I trade with.

Create Component

Туре	Trading Partner	~	
Standard	X12	~	
Options	This is a partner that I trade with.This is my company.		
		Cancel	Create

Step 15: Rename the Trading Partner and fill the Basic X12 options by referring the EDI document.

ISA*00* *00* *12*14147844480*12*PARTNERID*180112*1136*U*00401*600000001*0*P*>
GS*PO*14147844480*PARTNERID*20180112*1136*600000001*X*004010VICS
ST*850*99999999
BEG*00*SA*12345678**20180322
REF*DP*999



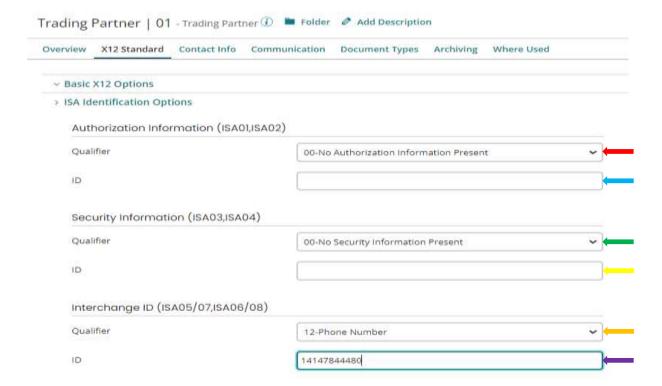






Step 15: Populate the ISA Identification Options by referring the EDI document.

ISA*00* *00* *12* 14147844480*12* PARTNERID*180112*1136*U*00401*600000001*0*P*> GS*PO*14147844480* PARTNERID*20180112*1136*600000001*X*004010VICS ST*850*999999999 BEG*00*SA*12345678**20180322 REF*DP*999







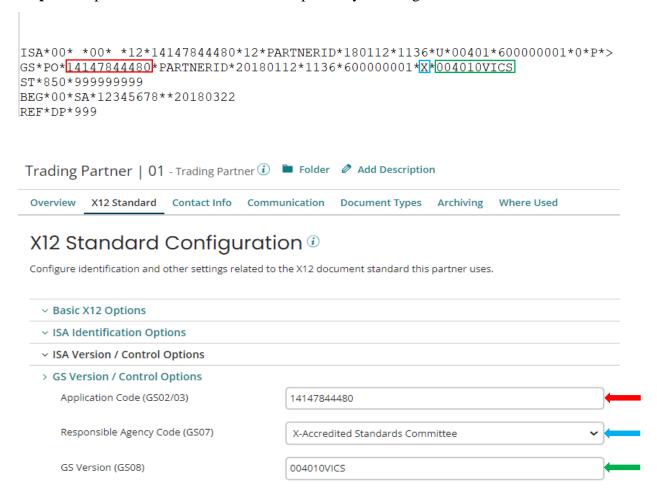
Step 16: Populate the ISA Version/control Options by referring the EDI document.

	2*PARTNERID*180112*1136* <mark>U</mark> *00401*600000001* <mark>0*P*</mark> > 180112*1136*60000001*X*004010VICS
Trading Partner 01 - Trading Partner	Folder Add Description
Overview X12 Standard Contact Info Co	ommunication Document Types Archiving Where Used
X12 Standard Configure Configure identification and other settings relate Basic X12 Options ISA Identification Options	d to the X12 document standard this partner uses.
> ISA Version / Control Options	
Interchange Standard ID (ISA11)	U
Interchange Version (ISA12)	00401
Interchange Ack. Requested (ISA14)	
Test Indicator (ISA15)	P-Production •
Component Separator (ISA16)	
∨ GS Version / Control Options	

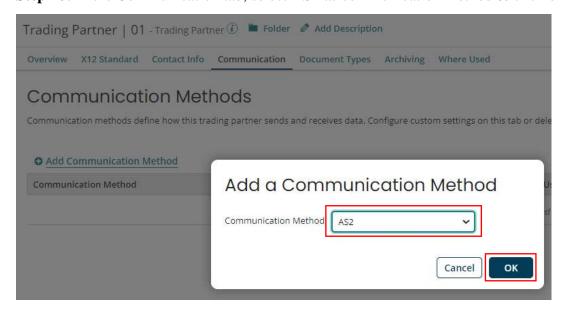




Step 17: Populate the GS Version/control Options by referring the EDI document.



Step 18: In the Communication tab, select AS2 as communication method & click ok.









Step 19: Let the communication settings be use all defaults.

Edit AS2 Configuration

Configure this partner's AS2 settings. These settings will be used whenever this partner appears in a start shape or trading partner shape that is set to use AS2. You can also choose to use My Company default settings or a shared communication channel.

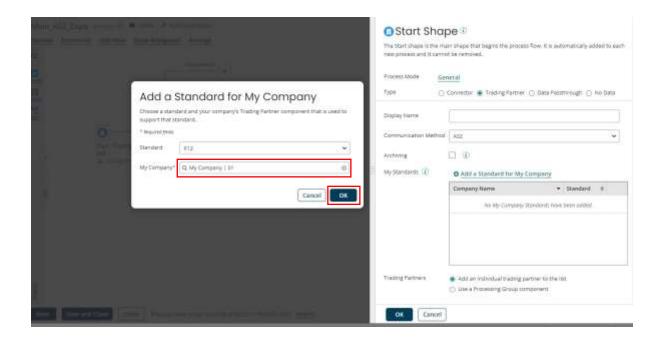


(i)

This partner will use the settings configured in whichever My Company it is paired with on a start or trading partner shape.

Step 20: Close the communication settings & save the Trading Partner component.

Step 21: In the main process's start shape click on <u>Add a standard for My Company</u> & select the My company component and click OK.

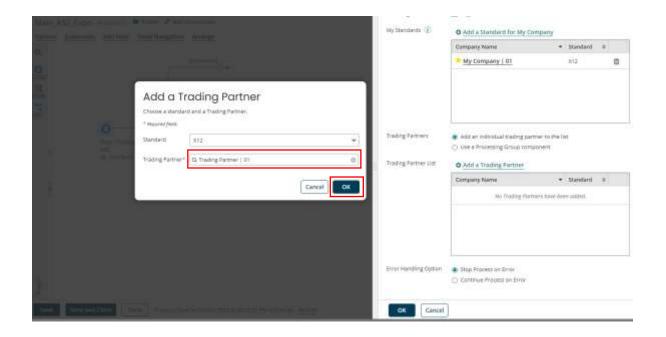




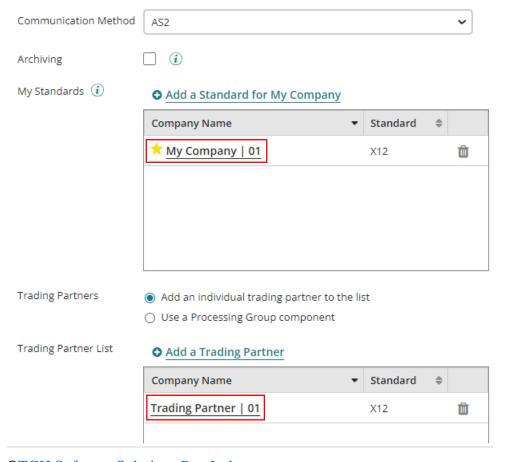




Step 22: Click on Add a Trading Partner & select the Trading Partner and hit OK.



Step 23: Here we can see both the My Company & Trading Partner has been added click OK.

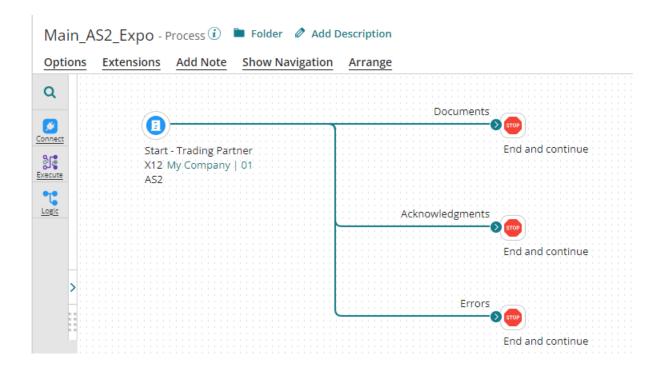




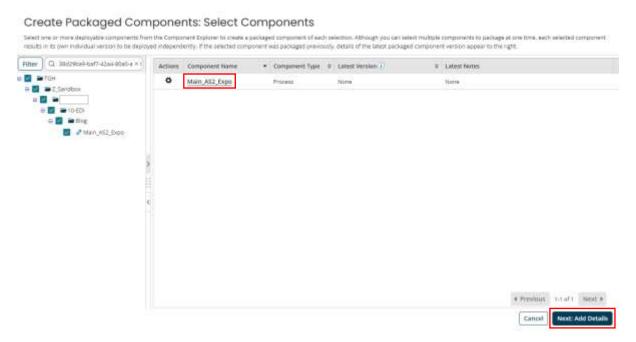




Step 24: Attach stop shape to all the Three paths and save it.



Step 25: Create a packaged component.

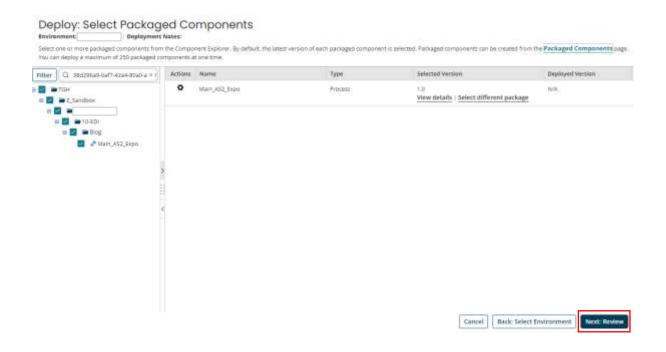






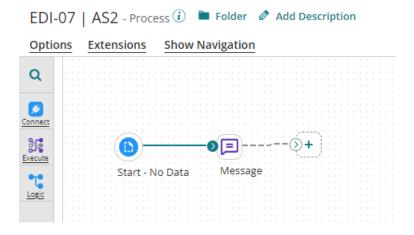


Step 26: Deploy it to an environment.



Here's a process to send data using the AS2 client.

Step 27: Create a new process and Add a message shape & paste the EDI data.



Step 28: Now attach a AS2 client connector after message shape & configure connection component.





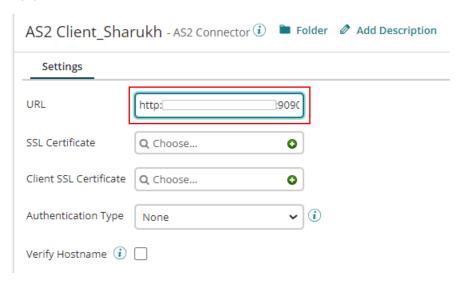


Step 29: Rename the connection component, add the URL and save it.

 $AS2 URL = \{Base URL path\}/as2$

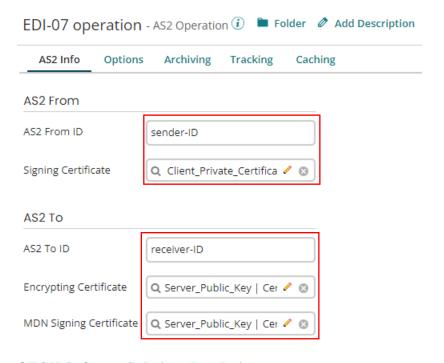
Base URL path* => Atom Mangement -> Shared web server -> Base URL for API Requests.

The AS2 client connection will define the AS2 server information. The AS2 server URL will go into the URL field. If the server has an SSL certificate, we'll use the public server certificate here



Step 30: Now configure the Operation Component.

The AS2 client operation will define AS2 specific information. The AS2 From ID is sender-ID. The signing certificate will be sender's private certificate. The AS2 To ID is the receiver-ID (trading partner). The encrypting and MDN signing certificate is the receiver's public certificates.







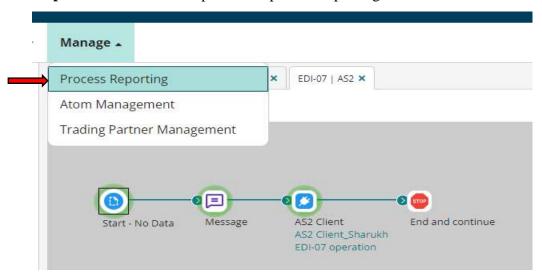


- **Step 31:** Now attach a stop shape, save it and test the process.
- **Step 32:** The process has been executed successfully.
- ← Process: EDI-07 | AS2 ▼

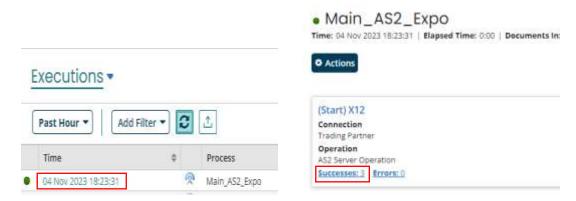


Monitoring Transaction:

Step 33: Lets monitor the process in process reporting.



Step 34: Click on timestamp & on successes.

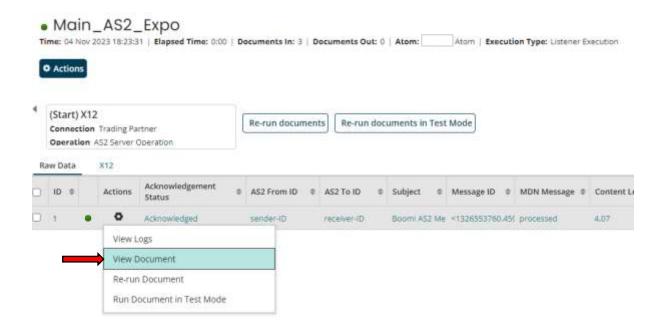








Step 35: Here we can see the raw data which we have passed through AS2 client connector.



Document Viewer



Download Original Document

Size 713 bytes

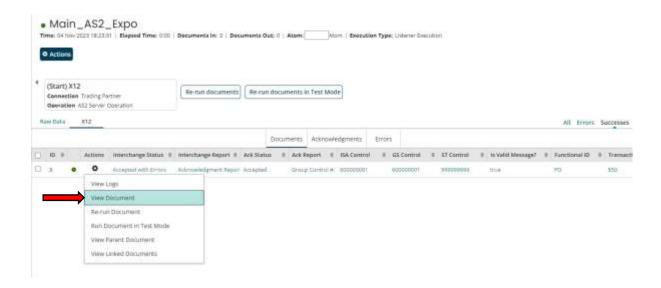
Close Document Viewer







Step 36: In the X12 tab we can see all the 3 paths which are present in Start shape with Trading Partner. And in the Document section we can see the processed document.



Document Viewer



Download Original Document

Size 540 bytes

Close Document Viewer



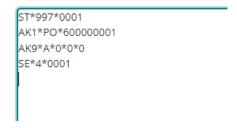




Step 37: In the Acknowledgement section we can see the acknowledgement which is going to be send to the client.

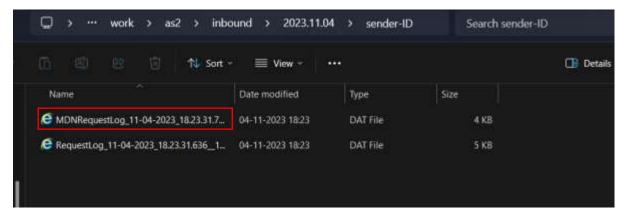


Document Viewer



Step 38: As we have requested for the MDN, lets check whether we have got it or not.

Local runtime engine directory->work->as2->inbound->Folder with today date->MDN file.









Step 39: This is the MDN we have got as the receiver has got the document & decrypted successfully.

```
Date: Sat, 4 Nov 2023 12:53:31 GMT
From: receiver-ID
To: sender-ID
Message-Id: <1501625848.464.1699102411737.JavaMail.SHARUKHKHANDARV$@SharukhKhanDarvesh>
Subject: Boomi AS2 Message
MIME-Version: 1.0
Content-Type: multipart/signed; protocol="application/pkcs7-signature"; micalg=shal;
       boundary="---=_Part_462_1927063300.1699102411736"
AS2-From: receiver-ID
AS2-To: sender-ID
AS2-Version: 1.1
User-Agent: Boomi AS2 Connector
 ----=_Part_462_1927063300.1699102411736
Content-Type: multipart/report; report-type=disposition-notification;
        boundary="---=_Part_460_1945118681.1699182411734"
   ---=_Part_460_1945118681.1699102411734
Content-Type: text/plain
Content-Transfer-Encoding: binary
The message sent on Sat, 4 Nov 2023 12:53:31 GMT
       [sender-ID] to [receiver-ID]
with subject [Boomi AS2 Message] and
message ID of [<1326553760.459.1699102411579.JavaMail.SHARUKHKHANDARV$@SharukhKhanDarvesh.32>]
has been [processed]
------Part_460_1945118681.1699102411734
Content-Type: message/disposition-notification
Content-Transfer-Encoding: binary
Reporting-UA: receiver-ID (boomi.server)
Original-Recipient: rfc822; receiver-ID
Final-Recipient: rfc822; receiver-ID
Original-Message-ID: <1326553760.459.1699102411579.JavaMail.SHARUKHKHANDARV$@SharukhKhanDarvesh.32>
Disposition: automatic-action/MDN-sent-automatically; processed
Received-Content-MIC: BXqJlNCn3k6ZjuMXbPeAms4IKvM=, sha1
```







References:

- https://help.boomi.com
- https://help.boomi.com/docs/atomsphere/integration/process%20building/r-atmas2_communication_method_configuration_72a8923f-f787-48ca-84a6-b5d939be9832/









TGH Software Solutions Pvt. Ltd.

www.techygeekhub.com

At TGH, we specialize in driving digital transformation through seamless Integration Technologies.

Operating as an INTEGRATION FACTORY, we serve as a one-stop shop for all your integration needs. Our expert team is well-versed in enterprise software and legacy system integration, along with leading iPaaS technologies like Boomi, MuleSoft, Workato, OIC, and more.

We're committed to enhancing business processes and solving problems through our integration expertise.



Email address

connect@techygeekhub.com



Phone number

- + 011-40071137
- + 91-8810610395



Our offices

Noida Office

iThum Plot No -40, Tower A, Office No: 712, Sector-62, Noida, Uttar Pradesh, 201301

Hyderabad Office

Plot no: 6/3, 5th Floor, Techno Pearl Building, HUDA Techno Enclave, HITEC City, Hyderabad, Telangana 500081

