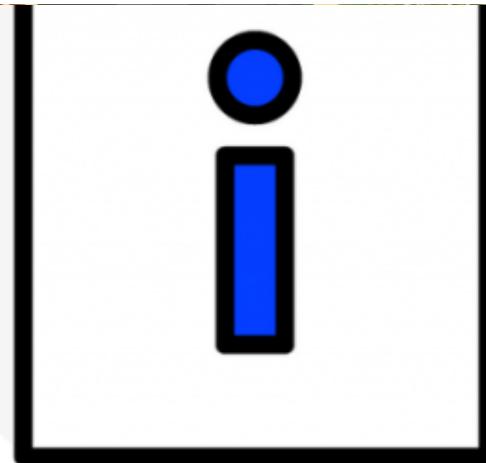


[ALE/IDOC](#)

# Outbound IDoc Configuration with Output Determination in SAP – Techno-functional Guide

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In this article, we will look at an end-to-end EDI transmission that utilizes outbound iDocs and Output Determination. Not only will we examine Outbound iDoc and Output Determination configuration steps in detail, but also discuss different outbound iDoc generating methods in SAP, as well as how to troubleshoot and test an outbound iDoc scenario.

Moreover, we will look at some common error messages of iDoc and Output control.

## Outbound iDoc Triggering Methods in SAP

## Generating Outbound iDocs using Change Pointers

To transfer **master data** between different systems we can use the ALE/iDoc framework and, particularly, its **Change Pointers** functionality. In most organizational system landscapes, SAP is the central system that manages master data such as Customer master, Vendor master, Materials master, etc. Using iDocs issued by Change Pointers you can transfer master data from the central SAP system to other systems in the landscape and other integrated systems.

You can configure Change Pointers to **flag master data changes** (Create/Update/Delete) in SAP. Using these flags, outbound iDocs generated in SAP can be directed to different receiving systems. The flagged master data changes are stored in [Change Pointers table](#) BDCP2 in SAP S4 HANA.

With the help of program **RBDMIDOC**, entries stored in the BDCP2 table can be processed to [generate outbound iDocs](#).

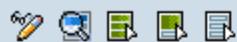
## Creating Outbound iDocs via Output Determination

Similar to how we use Change Pointers for master data distribution, the **Output determination** technique can be used to [generate iDocs for transactional data](#). To send transactional data such as sales orders, Purchase Orders, Delivery, Shipment Confirmations, etc., to partners and their systems, output types can be configured in SAP.

In certain business processors every time a Purchase Order is created in SAP, the PO should be sent to the vendor of the Purchase Order. Output determination can be configured to trigger an EDI Output Type to vendor when a Purchase Order is created in SAP. Outbound iDocs generated from these EDI Output Types can be transferred to the vendor or external system.

In this article, we will look at how to configure the **Output Determination in Condition Record technique** and how to trigger **Outbound iDocs** from the generated outputs.

CREATE IDOCS.

**Display View "IDoc: Assignment of FM to Log. Message and IDoc Type": O**

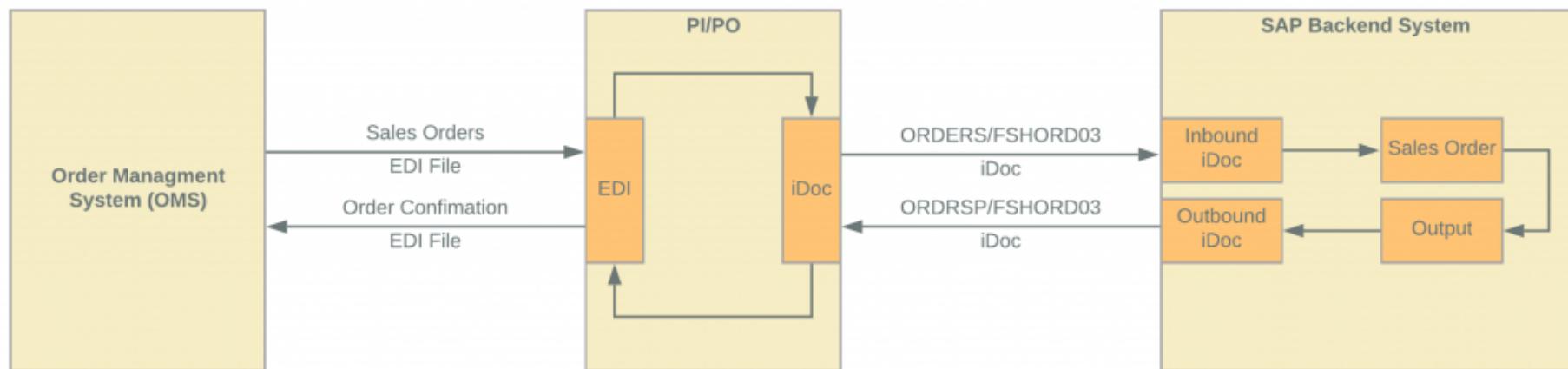
IDoc: Assignment of FM to Log. Message and IDoc Type

FM Name	F...	BasicType	Enhanc.	Msg. Type	+	Descriptn
IDOC_OUPUT_ORDRSP	F...	FSHORD01		ORDRSP	Outbound	Purchase ord
IDOC_OUPUT_ORDRSP	F...	FSHORD02		ORDRSP	Outbound	Purchase ord
IDOC_OUPUT_ORDRSP	F...	FSHORD03		ORDRSP	Outbound	Purchase ord
IDOC_OUPUT_ORDRSP	F...	ORDERS05		ORDRSP	Outbound	Purchase ord
IDOC_OUTPUT_ACTNOM	F...	OILNOM01		ACTNOM	Outbound	Transport Plz
IDOC_OUTPUT_DELVRY	F...	/STTPEC/D...		DESADV	Outbound	Delivery: Ship
IDOC_OUTPUT_DELVRY	F...	FSHDLV01		DESADV	Outbound	Delivery: Ship
IDOC_OUTPUT_DELVRY	F...	FSHDLV02		DESADV	Outbound	Delivery: Ship

Use the Function Module 'IDOC\_OUPUT\_ORDRSP' in your custom ABAP program to generate ORDRSP iDocs.

If the outbound iDoc is a master data iDoc, use the FM 'MASTER\_IDOC\_DISTRIBUTE' in the ABAP program to create iDocs.

Order confirmations should be sent back to the OMS system.

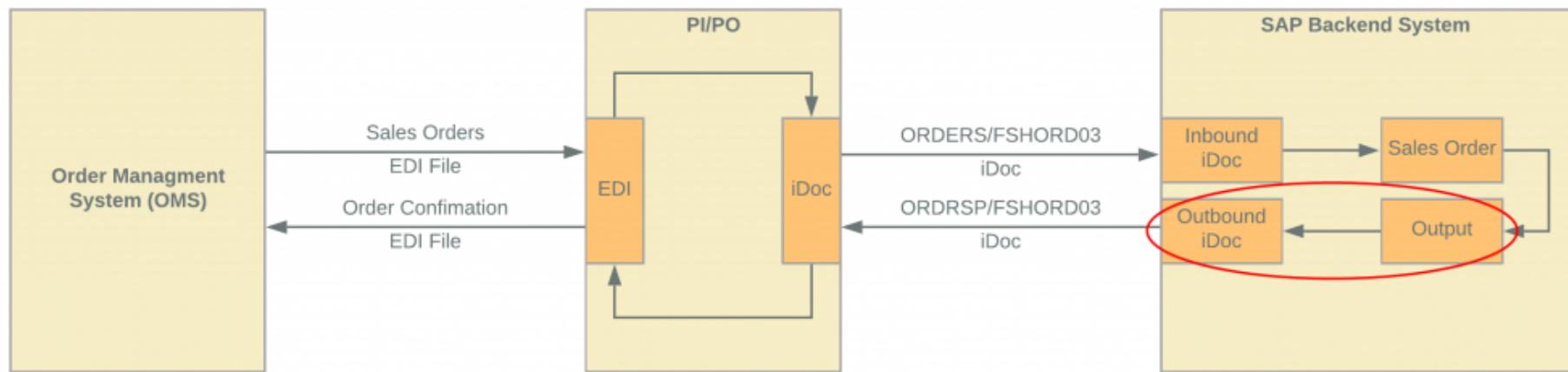


## B2B Sales EDI Flow Overview

Orders sent from OMS system are created by using standard **ORDERS inbound iDoc**, while Order Confirmation back to OMS is sent using **ORDRSP outbound iDoc**. As we discussed previously, there are multiple ways to generate outbound iDocs in SAP. But the standard practice for EDI sales order process integration is to use **Output Determination** that generates **Order Confirmation iDocs** from the created sales orders. More specifically, the **Condition Record technique** of the **Output Determination** is used.

In our example, we will generate a new Output type **ZOOC** from all sales orders created in SAP under sales order type **XSTA**. use standard order confirmation iDoc Message Type **ORDRSP**. The output should generate the iDoc to Logical System OMS. response iDoc is sent to OMS system via **SAP Process Orchestrator (SAP PI/PO)**.

**Overview Diagram:** We will look at the highlighted processors of the EDI integration.



The EDI Flow and Sections Covered by the article

## Object names used in the integration scenario:

Sales Order Type

XSTA

[Privacy - Terms](#)

RFC DESTINATION TO SAP PI/PO

SAPPOD

Receiver Port to SAP PI/PO

SAPPOD

All sales orders created for Sales Organization **X401** and customer **BP001** should be transferred immediately to OMS when saving the sales order application.

## Outgoing iDoc and Output Determination Configuration Steps:

### 1. Pre-requisites

- Create a Logical System or Partner
- Identify the Output Procedure of Sales Order Type

### 2. Output determinationConfiguration

- Define a new Output Type (NACE > Output Types)
- Configure General Data and Access Sequence of Output Type
- Maintain the Default Values of the Output type, Transmission Medium, Dispatch Time and Partner Function
- Configure Processing Routine (ABAP program and form)

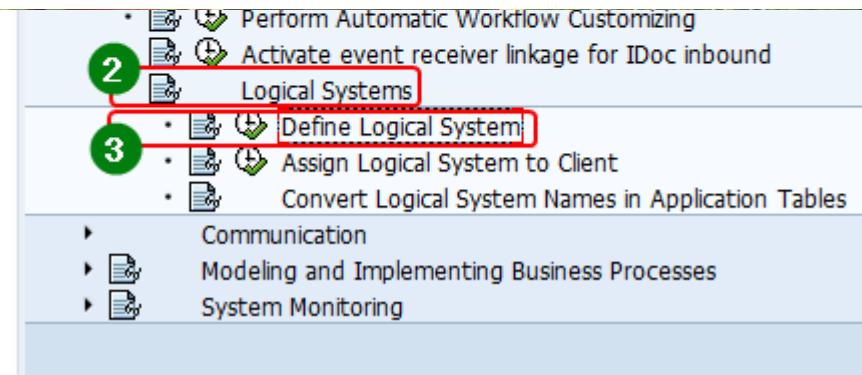
Additional steps for a custom message type and custom iDoc basic type

- Create Segments – we31
- Generate iDoc Basic Type – we30
- Create Message Type – we81
- Assign message type to iDoc type – we82
- Define iDoc processing FM se37
- Assign iDoc processing FM to message type and iDoc type we57
- Create and Configure RFC Destination
  - Register RFC Program ID
  - Create a new RFC destination – sm57
- Create iDoc Port
- Configure Outgoing parameters of Partner
  - Define Outbound options receiver port, package size, iDoc type
  - Configure message control

as a **Logical System** in SAP. We need the Logical System for both Output Determination, Outbound iDoc configuration, and Partner Profile configuration.

To create a Logical System, go to transaction **Sale** and navigate to “**Define Logical System**” node under “**Basic Settings**”>“**Logical Systems**”.

---



SPRO configuration node for Logical Systems

You can also access the same functionality via transaction bd54.

Whichever method you use, add a new entry to the list of Logical Systems and define it.

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

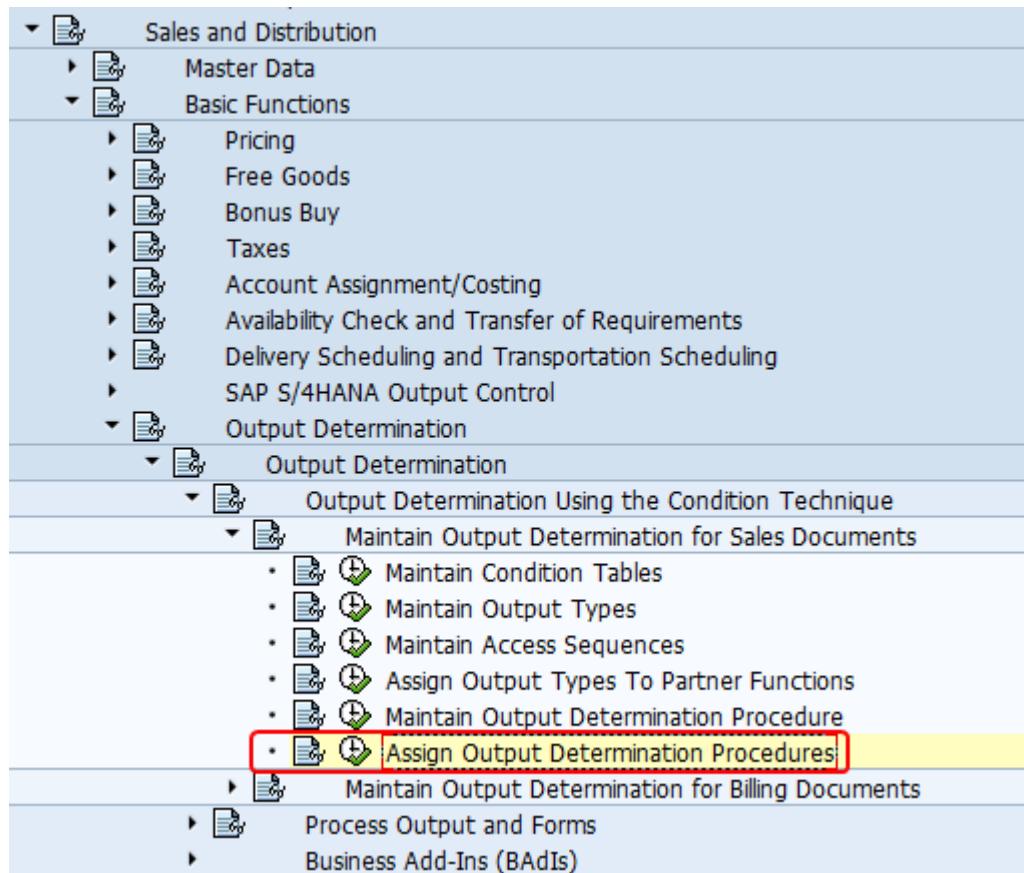
Add a new Logical System in bd54

Hit "Save".

## Prerequisite 2 – Identify the Output Procedure of Sales Order Type

In this example, we will use the existing sales order type XTRA instead of creating a new Document Type. Hence, we need to identify the **Output Procedure** configured in the **sales order Document Type**.

To identify the Output Procedure assigned to the sales order Document Type (in our example, XTRA), go to transaction SPRO and navigate to **Sales and Distribution > Basic Functions > Output Determination > Output Determination Using the Condition Technique > Maintain Output Determination for Sales Documents > Assign Output Determination Procedure**.



The screenshot shows a hierarchical menu structure for SAP Sales and Distribution configuration. The path selected is:

- Sales and Distribution
- Master Data
- Basic Functions
  - Pricing
  - Free Goods
  - Bonus Buy
  - Taxes
  - Account Assignment/Costing
  - Availability Check and Transfer of Requirements
  - Delivery Scheduling and Transportation Scheduling
  - SAP S/4HANA Output Control
  - Output Determination
    - Output Determination
      - Maintain Output Determination for Sales Documents
        - Maintain Condition Tables
        - Maintain Output Types
        - Maintain Access Sequences
        - Assign Output Types To Partner Functions
        - Maintain Output Determination Procedure
        - Assign Output Determination Procedures** (highlighted with a red border and yellow background)
      - Maintain Output Determination for Billing Documents
    - Process Output and Forms
    - Business Add-Ins (BAdIs)

SPRO configuration Node – Assign Output Determination Procedure

XSTA	Standard Order	X10000	Order Output
			output procedure

Output Procedure of Sales Document Type in SPRO

The **Output Procedure of sales order** Document Type **XSTA** is **X10000**. We will use this in the Output Determination procedure configuration.

## Output Determination Configuration

Now that we have all prerequisites covered, we can move to the next step of the outbound iDoc configuration using Output Determination.

In this step, we will create a **new EDI Output Type (ZOOC)**. Then we will fully configure the Output Determination procedure to trigger the EDI order output when a **sales order of Document Type XTRA is created in Sales Org X401 for customer BP0001**.

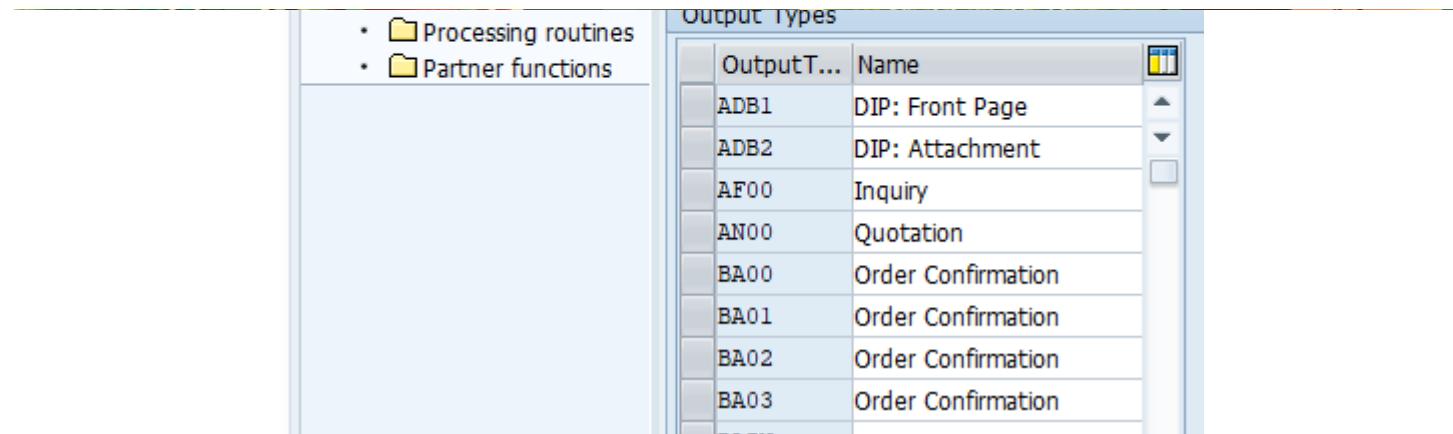
### Step 1: Define a New Output Type

If you are configuring Output Determination from scratch, the first step is to **create the new Output Type**. In our example, the Output Type is ZOOC.

To create a new Output Type under sales, go to transaction NACE and select the **application area as Sales (V1)**, then click Output Type in the top menu.

Conditions for Output Control	
Condition records	Procedures
<b>Output types</b>	Access sequences
Application	Description
RE	DBM Putaway Manager
RS	Automotive
RV	Vehicle
RW	DI - Warranty
V1	Sales
V2	Shipping
V3	Billing
V5	Groups
V6	Handling Units
V7	Transport
VL	Visit List

Output Type configuration – Sales (V1)



OutputT...	Name
ADB1	DIP: Front Page
ADB2	DIP: Attachment
AF00	Inquiry
AN00	Quotation
BA00	Order Confirmation
BA01	Order Confirmation
BA02	Order Confirmation
BA03	Order Confirmation

Add a new Output Type under Sales (V1)

You can also access this configuration screen directly using transaction code **V/30**.

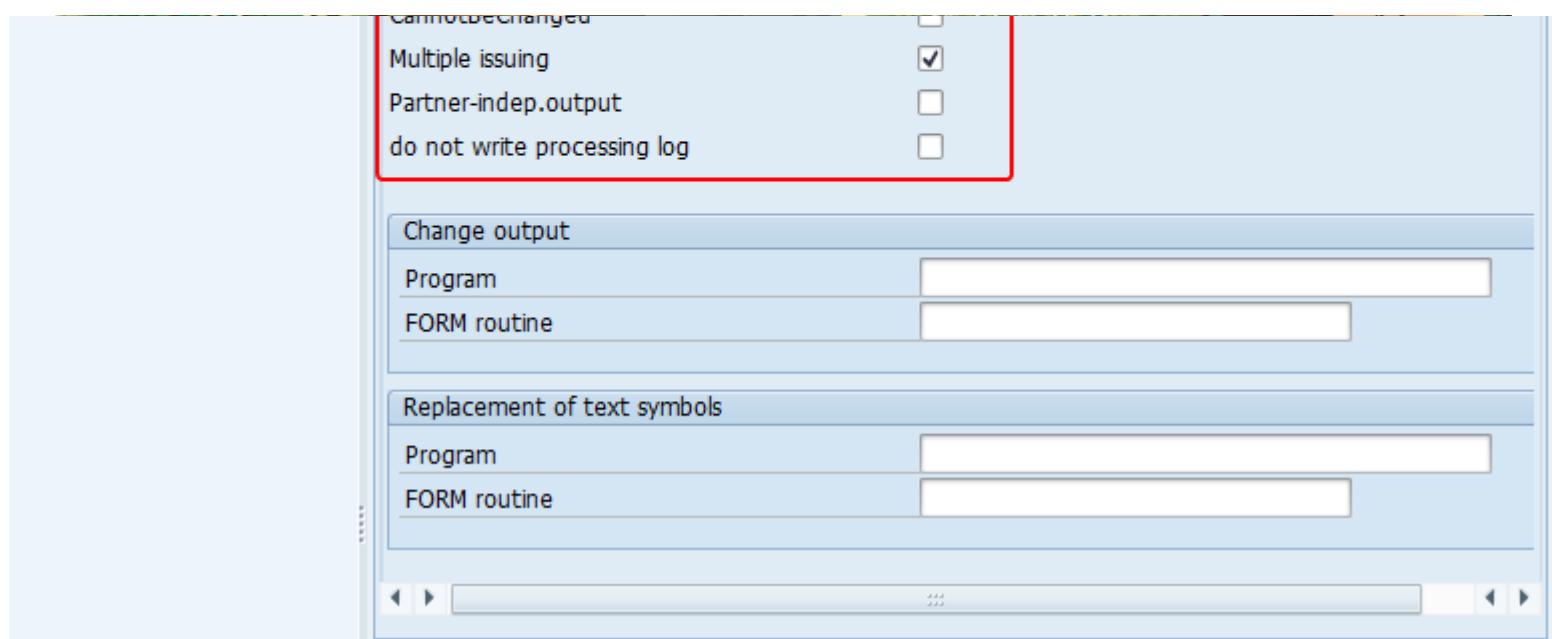
## Step 2: Configure General Data and Access Sequence of Output Type

In this step, we will configure the General Data of the new Output Type ZOOC.



PROCESSING RULES

X



Cannot be categorized

Multiple issuing

Partner-indep.output

do not write processing log

Change output

Program

FORM routine

Replacement of text symbols

Program

FORM routine

Output Type General Data Parameters

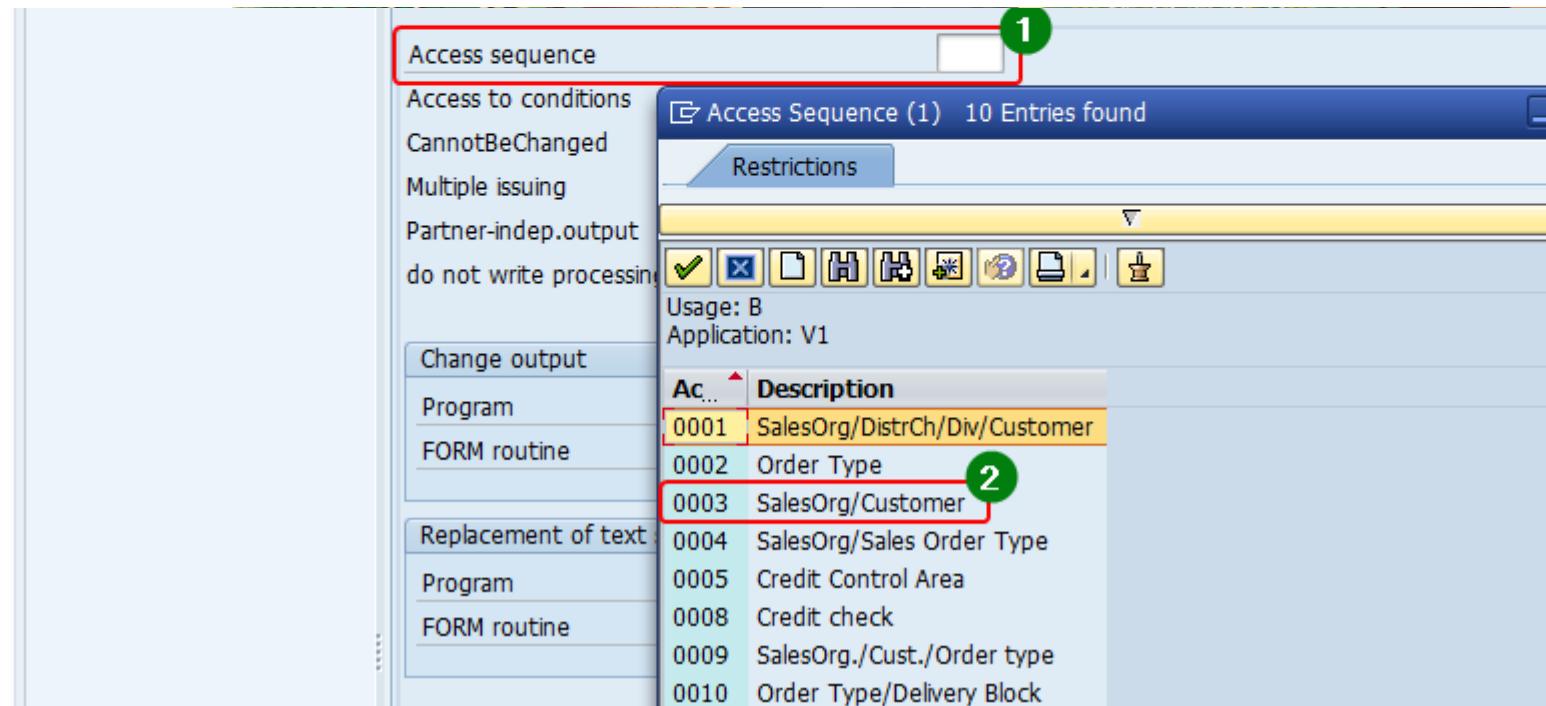
These are some of the most important parameters of Output Type with their functionalities,

### Access Sequence:

This is the main parameter that determines the condition tables and sequence of the condition tables.

In other words, when a sales order is created, the system will check records maintained in these access sequence tables to determine whether to trigger the output or not.

Therefore, we will use the standard **Sales Org/Customer access sequence 003**.



Access sequence   1

Access to conditions  
CannotBeChanged  
Multiple issuing  
Partner-indep.output  
do not write processing

Change output  
Program  
FORM routine

Replacement of text  
Program  
FORM routine

**Access Sequence (1) 10 Entries found**

Ac...	Description
0001	SalesOrg/DistrCh/Div/Customer
0002	Order Type
0003	SalesOrg/Customer
0004	SalesOrg/Sales Order Type
0005	Credit Control Area
0008	Credit check
0009	SalesOrg./Cust./Order type
0010	Order Type/Delivery Block

Standard Access Sequence 0003 (Sales Org/Customer)

**Tip:** You can find the underline DDIC transparent table of the access sequence in tables **T685** and **T682I**. To find the access sequence table, go to transaction **se11** or **se16n** and filter the entries of table **T682I** based on the **access sequence** and **application area**.

Usage	Application	AcSq	Access	Table	KInd	E	ModPl	Reqt	Head	ACat	Details
B	V1	0003	10	001	0	X			X		

B001

Determine the Access Sequence table via T682I

Then, combine the values of fields "Usage" (KVEWE) and "Table" (KOTABNR) to find the exact name of the condition table. In this case, table of Access Sequence 0003 is B001.

Table	B001	Sales Organization/Customer Number
Text table	<input type="checkbox"/> No texts	
Layout	<input type="checkbox"/> Maintain entries	
Maximum no. of hits	500	
Selection Criteria		
Fld name	O. Fr.Value	To value
Client		
Application		<input type="checkbox"/>
Output Type		<input type="checkbox"/>
Sales Org.		<input type="checkbox"/>
Customer		<input type="checkbox"/>
Cond.record no.		<input type="checkbox"/>

## Multiple Issuing:

If “Multiple Issuing” is marked, the system allows the same Output to be triggered to the same partner multiple times from the same SAP document (sales order).

You can mark this parameter, for example, if you want to trigger the iDoc/Output to the external partner for each change of sales order, or if you want users to be able to manually trigger the same output multiple times.

## Do not write a processing log:

If you have system storage restrictions and disk space issues, you can mark this parameter. If it's flagged, output determination and iDoc log won't be saved in the database. The recommended method is to save the processing log, hence we will leave it blank.

Output

St...	Output Type	Description	Medium	Fu...	Partner
OO	zooC	EDI Order Conf.-OMS	EDI	LS	OMS

1

Output Processing analysis for proc. Order Output

Type	Message text	LTxt
[green square]	Object 1000000348	
[green square]	Output type: EDI Order Conf.-OMS	
[green square]	Processing log for program RSNASTED routine EDI PROCESSING	
[green square]	IDoc '00000000000001008' was added and passed for output	3
[green square]	Error occurred while IDoc '00000000000001008' was being sent	[yellow question mark icon]

Example Processing Log of ZOOC Output



### Step 3: Maintain Default Values, Transmission Medium, and Partner Function

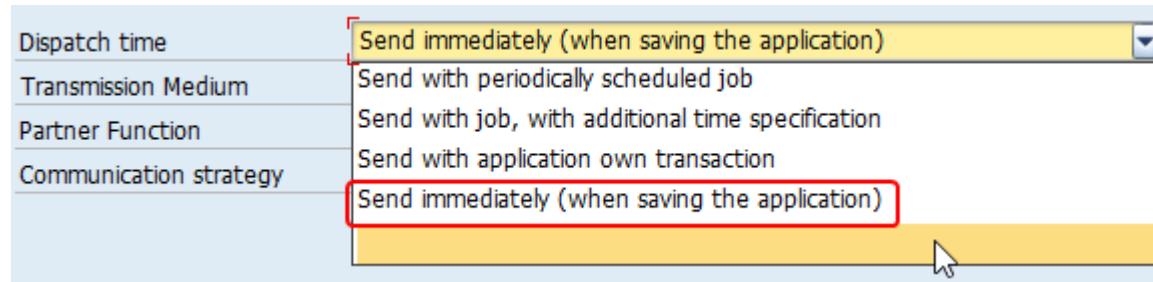
In this step, we will define the Dispatch time and Transmission medium of the output type.



Default values of Output Type

## Dispatch Time

The dispatch time parameter defines when the output is sent to the external system. In other words, when the output should be processed from yellow (Not yet Processed) status to green (Output Sent).



Different Dispatch Time options of Output Type

If you want to send the **output immediately when the application document is created or changed** (in this example, when a sales order is created or changed), select the Dispatch Time as “Send immediately (when saving application)”. With this configuration, when the sales order changes are saved to the database, the output is generated and sent to partner OMS immediately.

But keep in mind that this does not mean the iDocs are sent to OMS immediately since you can control outbound iDoc processing the same way. You can either send the iDocs immediately or via an [iDoc processing background job](#). We will look at this outbound Partner Profile configuration in the next step.

But if you want to collect all the outputs generated for a certain time period and periodically send them to the external system(s) at a certain time, you can select "**Send with the periodically scheduled job**". With this configuration, the output will be in yellow status till the batch job picks it up and processes it. Schedule **RSNAST00** program as a background job to process outputs in status "Ready to be processed".

## Transmission Medium

There are multiple transmission mediums you can use in SAP to send output documents to partners. To transfer documents to partners as iDocs use Transmission Medium EDI.

## Step 4: Configure Processing Routine (ABAP program and form)

From the left-hand-side menu, select "**Processing Routine**". Then, add a new entry to configure Transmission Medium EDI.

## Define Processing Routines of Output Type

On the next screen maintain the **Transmission Medium** as EDI, ABAP **program** as "RSNASTED", and processing routine (**form routine**) as "EDI\_PROCESSING".

Processing Routine configuration for Transmission Meidum EDI

Click "Save".

RSNASTED is the output processing program for different output mediums. EDI\_PROCESSING is the ABAP processing routine for EDI output types.

## Step 5: Set Partner Functions

Now select "**Partner Function**" from the left-hand-side menu and configure a partner function of the Output Type. This configuration defines the **type of partner** to which the output will be triggered. In our example, we want to send the ZOOC EDI output to OMS Logical System. Hence, configure Meidum as **EDI** and Function as "**LS**" (Logical System).

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## Partner functions of Output Type

Click "Save" and go back to the main screen of transaction NACE.

### Step 6: Configure Output Procedure

Select the application area Sales (V1) and select "**Procedure**" from the top menu.

## Access Procedures of Output Types

Now select the **Output Procedure** of the **sales order Document Type** we determined in the Prerequisites step. In our example, the Output Procedure of the Sales Document Type XSTA is X10000.

## Output Procedure of Application Area Sales (V1)

After selecting the correct Procedure, click **Control** from the left-hand-side menu.

Then add the Output Type ZOOC as a new step to Output Procedure X10000.

## Add a new step to Output Procedure

Assign the **next available sequence number** to “Step” of the **Output Procedure**. In Procedure X10000, there were two steps (10 and 20) already assigned. Hence, I have selected step number 30 to assign the new Output Type.

Add a new step to Order Output Procedure

Here we will add “Requirement” as **Order Confirmation** that is denoted by “2”.

### The Requirement of the Output Procedure

**Requirement** is a **special ABAP code** that validates if the SAP document (in this example the sales order) meets certain criteria from a business perspective to trigger the output.

Requirement routine 2 (Order Confirmation) validates if the sales order is “Complete”. If the sales order is **incomplete** or a **credit block is set**, the order confirmation output is not triggered by the sales order.

Routine 2 (Order Confirmation) is a **standard SAP routine**. You can view the executed **ABAP routine** by selecting the option “**Source text**”.

View the ABAP code of Requirement Routine “2”

## ABAP Code of Requirement Routine 2

You can create your own **custom requirement routines** in SAP. If the requirement routine returns the **value 4** from system variable **SY-SUBRC**, it restricts the output from being issued from the sales order.

Condition records of Application Area Sales (V1)



organization/customer entries in the access sequence table B001.

After selecting application area Sales (V1), select “**Control Records**”. In a pop-up window, system will display a list of Output Types under the application, select your Output Type.

Condition records of Application Area Sales (V1)

Select the sales organization X401.

Maintain the customer ID BP001 and Logical System OMS.

#### Maintain Condition Records for Output Determination

Now output determination is ready to issue EDI outputs from the sales orders of type ZXRE under sales organization X401 and customer BP001 to Logical System OMS.

## Outbound iDoc Configuration

Now that we have completed the Output determination, let's look at Outbound iDoc configuration steps in detail. In these steps, not only will we configure the OMS Logical System with ORDRSP/FSHORD03 iDoc, but also build a link between the Output ZOOC and the iDoc ORDRSP.

- 
4. Assign custom Message type and iDoc Basic type – we82
  5. Define the iDoc processing Function Module (FM) – se37
  6. Assign iDoc processing FM to Message Type and iDoc Basic type – we57

Since we are using the standard Message Type ORDRSP and iDoc Basic type FSHORD03, all of the above configurations are already in place. But you can follow the transactions in this sequence to make sure the configuration is maintained as expected.

## Step 2 – Create and Configure RFC Destination

In this step, we will create an **RFC destination to SAP PO system**. If you are using a different integration method (for example, HTTP) create another appropriate RFC destination type.

In this example, since we are connecting to **SAP PI/PO** system, we will create a **TCP/IP destination of connection type T**.

Creation of the RFC destination is done in two steps,

1. Register the **external program ID**
2. Create the **RFC destination** via transaction sm59

### Register RFC Program ID

This step is usually performed by the BASIS team when setting up the system. Program ID is registered either in **saprfc.ini** file or using the **program interface in rfclib**. Get assistance from your BASIS team for this task. Learn how to register the program ID **saprfc.ini** file [here](#).



TOP MENU



Create new RFC destination in sm59

Provide a name for the RFC destination. We are connecting to [SAP PI/PO](#) system POD, therefore, we will name the RFC destination as SAPPOD.

Maintain Technical Settings, Program and Activation Type

Under the “Technical Settings” tab of TCP/IP destination parameters, configure the **Program ID registered** in the previous step.

Also, configure the **Gateway Options**, **Gateway Host** and **Gateway Service**.

- 
- Transactions RFC or tRFC
  - File
  - ABAP-PI
  - XML File
  - XML HTTP

Since we use a TCP/IP RFC destination to connect to SAP PI/PO system we need to create a tRFC port



To create a Port, go to transaction we21 and select the appropriate port type from the left-hand-side menu.

Create new tFC Port – we21

Click on “Create”.

In the next screen, provide the Port name, description, as well as the RFC destination we created in the previous step.

tRFC Port Configuration – RFC Destination

## Step 4 – Configure Partner Profile and Outbound Parameters

This is the final step of outbound iDoc configuration.

At this point we will,

1. Create a Partner in transaction we20
2. Configure outbound parameters of ORDER

Create a new Logical System Partner – we20

Next, assign the partner name and Partner Type. The partner name should be the same as the logical system name we defined in transaction bd64/SALE.

In this example, therefore, we will name the partner as OMS. Partner type is LS (Logical System).

New Partner OMS created in we20

Under "Post Processing: Valid Processors" tab we can configure the agent who should be notified when iDoc errors occur. An agent can be of different types: Work Center, Job, Organizational unit, Person, Position, User.

Click "Save".

I have assigned my user ID as the agent for this example. But this does not mean my SAP inbox will be flooded with iDoc error messages. A special workflow should be configured if you want the agent to be notified, however, agent and agent types are mandatory parameters when defining partners in SAP.

## Configure Outbound iDoc Parameters of Partner Profile

Here we will assign the **outbound iDoc parameters** and **Output Type details** to partner profile.

In the previous step we have already created all the parameters required to configure the partner profile:

- iDoc Message Type/iDoc Basic type
- Reciever Port
- Output type

## Partner Profile's Outbound Profile – we20

In the next screen, define mandatory parameters Partner Role, Message Type, Receiver Port, and Basic Type.

## Outbound Options of outbound profile

In this example, Message Type is ORDRSP and the iDoc Basic Type is FSHORD03.

- [Collect iDOCS](#)

We will discuss the functionalities of these modes in detail under the "Outbound iDoc Processing Methods" section.

Click "Save".

## iDoc Message Control Configuration

In this step, we link the Output Type (ZOOOC) with the ALE Outbound iDoc processing.

To set up Message Control of the Partner profile, go to the tab "Message Control" and click "Add". Then maintain the configuration for **Application**, **Message Type** and **Process Code**.

Message type: ORDRSP Purchase order / order confirmation

Message code:  Message function:   Test

Outbound Options Message Control Post Processing: Valid Processors Tele... Buttons

**Application:** V1 : Sales  
**Message Type:** ZOOC : EDI Order Conf.-OMS  
**Process Code:** SD10 : ORDRSP: Sales order confirmation

Message Control		
Application	Message type	Process code
V1	ZOOC	<u>SD10</u>

2

1

### Message Control Configuration of Partner Profile

- **Application:** This is the application area the Output belongs to.
- **Message Type:** Output Type defined in NACE.
- **Process Code:** Outbound iDoc process code of the Message Type/iDoc type. Click on the “Process Code” drop-down menu to find a list of valid Process Codes for the Message Type. You can also use transaction **we42** to find the Outbound iDoc Pro

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Outbound iDoc Process Codes – we42

Tip: In my experience we42 is not an ideal way to find the Process Code because the function "Position" might act strange



iDoc Process Code table TMSG1

## Test the iDoc Configuration and Output Determination

To test the scenario we built, go to sales order creation transaction va01 and create a new sales order of Document Type XSTA for Customer BP0001 under Sales Organization X401.

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Create new Sales Order – va01

Save the sales order.

## **View the Output Generated from Sales Order**

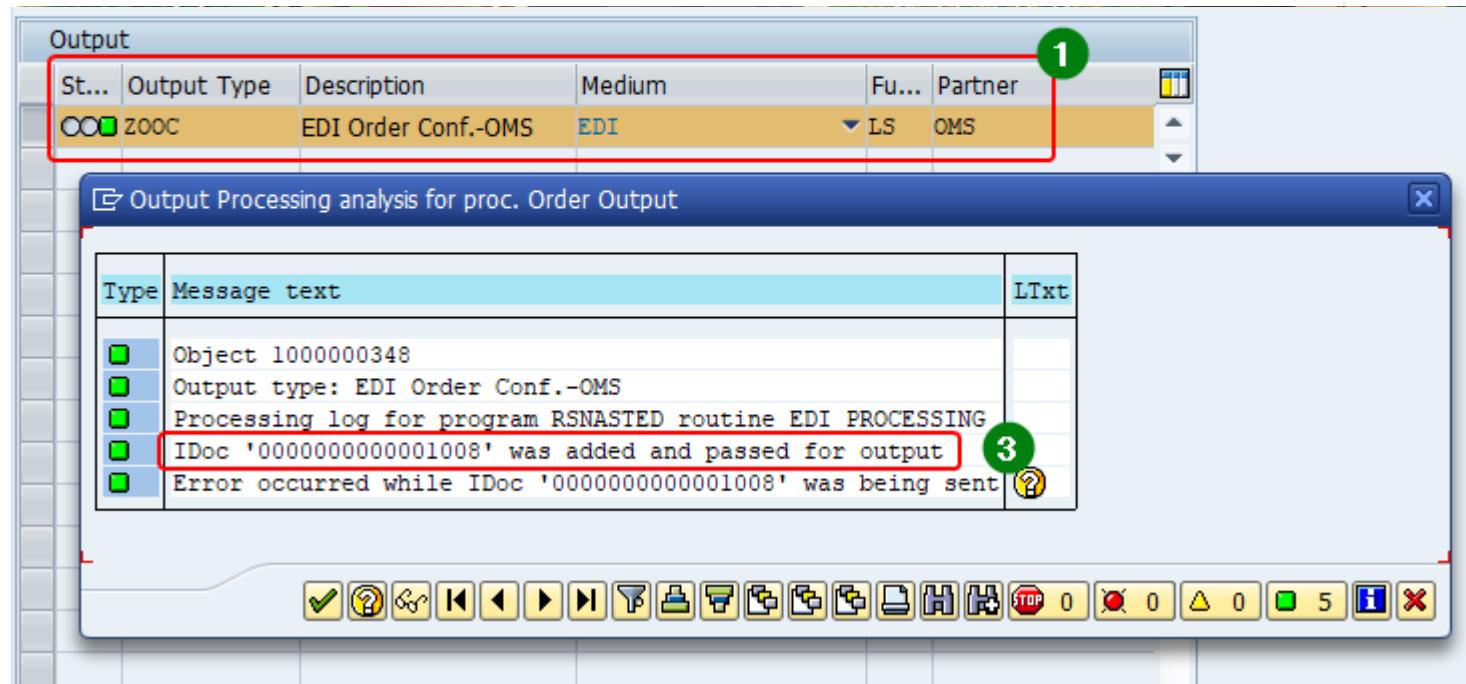
Go to transaction va03 to view the sales order we just created.

From the main menu, select **Extras > Output > Header > Edit** to view the outputs generated from the sales order.

Access Sales Order Outputs from Extras menu option

You will notice that the Output ZOOC is generated and transferred to partner OMS.

Sales Order output ZOOC (Order Confirmation) successfully generated



The screenshot shows the SAP Integration Hub interface. At the top, there is a table titled "Output" with columns: St..., Output Type, Description, Medium, Fu..., and Partner. A row is selected, highlighted with a red box and circled with a green number 1. The row contains values: Z00C, EDI Order Conf.-OMS, EDI, LS, and OMS. Below this table is a dialog box titled "Output Processing analysis for proc. Order Output". This dialog contains a table with two columns: Type and Message text. The "Message text" column lists several log entries. One entry, "IDoc '0000000000001008' was added and passed for output", is highlighted with a red box and circled with a green number 3.

Output					
St...	Output Type	Description	Medium	Fu...	Partner
Z00C	EDI Order Conf.-OMS	EDI	LS	OMS	

Output Processing analysis for proc. Order Output

Type	Message text
[green square]	Object 1000000348
[green square]	Output type: EDI Order Conf.-OMS
[green square]	Processing log for program RSNASTED routine EDI PROCESSING
[green square]	IDoc '0000000000001008' was added and passed for output
[green square]	Error occurred while IDoc '0000000000001008' was being sent

Processing Log of Output

## Monitor the Outbound iDoc via we02

Go to transaction we02 and monitor the status of the outbound iDoc.

Monitor Outbound iDoc status – we02

Observe the flow of the iDoc from Status 01 to 30 to 03.

## Outbound IDoc Processing Pipeline, Statuses and Techniques

Outbound iDocs are created in the Application Layer and then passed to ALE layer for processing and transmitting to the target system. When an iDoc passes these layers, it goes through certain **milestones** also known as **iDoc statuses**.

An outbound iDoc generated from the application layer first goes into status **01 (IDoc created)**. If there are no errors in processing, the iDoc is then transferred to ALE layer in status **30 (IDoc ready for dispatch – ALE service)**. Finally, if there are no further errors, the iDocs are passed to Outbound Port to be sent to the receiver system. Outbound iDocs passed to the external system successfully from receiver Port will be in status **03 (Data dispatched to port ok)**.

Outbound IDoc processing happy scenario:

You can configure these modes in **Output Mode of the Partner Profile**. We have already configured them in Step 4 of the Outbound iDoc configuration.

Output Modes of Outbound iDocs in Partner Profile

## List of Outbound iDoc Statuses

- 20 Error triggering EDTS subsystem
- 21 Error passing data for test
- 25 Processing despite syntax error (outbound)
- 26 Error during syntax check of IDoc (outbound)
- 27 Error in dispatch level (ALE service)
- 28 IDoc sent to ALE distribution unit retroactively
- 29 Error in ALE service
- 30 IDoc ready for dispatch (ALE service)
- 31 Error – no further processing
- 32 IDoc was edited
- 33 Original of an IDoc which was edited
- 34 Error in control record of IDoc
- 35 IDoc reloaded from archive
- 37 Error when adding IDoc
- 38 IDoc archived
- 39 IDoc is in the target system (ALE service)
- 40 Application document not created in target system

---

iDoc passes different processing stages **01** (iDoc created) > **30** (IDoc ready for dispatch – ALE Service) > **03** (Data dispatched to port ok) immediately.

This is **not the ideal Outbound iDoc processing technique** for an SAP productive system. As each iDoc created in the system is passed to the tRFC port individually, this process puts a lot of strain on the system performance.

## Collect iDoc and Process via Background Job

["Collect iDocs"](#) method allows us to park the iDocs created in status "iDoc ready for dispatch" (30). Collected iDocs are transferred to Port (03) using program [RSEOUT00](#). You can configure the amount of iDocs that are transferred to Port at a time using the parameter "Pack Size".

If Pack Size is set to 50, 50 iDocs in status 30 will be transferred to tRFC port at a time from the program RSEOUT00.

The standard practice is to set the partner profile to "Collect iDocs" and setup RSEOUT00 as a [periodic background job](#).

But notice there is another parameter called "**Maximum number of iDocs**" in the selection screen of program RSEOUT00. This parameter defines the number of iDocs added to the Port before "commit work". It is important to assign a reasonable number of iDocs to this selection option to avoid runtime errors and timeouts due to performance issues.

---

## Issues Faced While Configuring Outbound iDoc/Output and How to Troubleshoot

## Output generation in sales order

iDoc error "Maintain outgoing EDI-connection  
data for partner"

This error message is shown when generating the Output if you have not configured the Message Control in the Outbound profile of the partner.

Message type ORDRSP Purchase order / order confirmation

Message code  Message function   Test

Outbound Options Message Control Post Processing: Valid Processors Tele... Buttons

**Application:** V1 : Sales  
**Message Type:** ZOOC : EDI Order Conf.-OMS  
**Process Code:** SD10 : ORDRSP: Sales order confirmation

Message Control		
Application	Message type	Process code
V1	ZOOC	<u>SD10</u>

1 2

### Message Control of iDoc Partner Profile

Maintain the Message Control configuration as shown in Step 4 of the Outbound iDoc Configuration section.

## E0342 – Maintain a Valid Partner Number

You will get this error when creating a new partner in the transaction we20 if you have not maintained the partner as a Logic System in bd54 (sale).

---

we20.

## E0266 – Could not find code page for receiving system

This is an iDoc error that could occur when passing the iDoc to Receiver Port. If the Program ID of the RFC destination is not registered correctly, this issue can occur.

The outbound iDoc will terminate with the error in status 02 (Error passing data to port). You can request your BASIS team to troubleshoot this error.

---

## How to Debug Outbound iDocs

We can debug the iDoc generation Process Code of an Outbound iDoc configured via Output Control in four easy steps:

1. Set the Output Type Dispatch Time to Option 1 (Send with a periodically scheduled job)
2. Set a break-point in iDoc processing FM (process code)
3. Issue the output from SAP application document
4. Execute program RSNAST00

INITIATELY WITH SAVING THE APPLICATION).

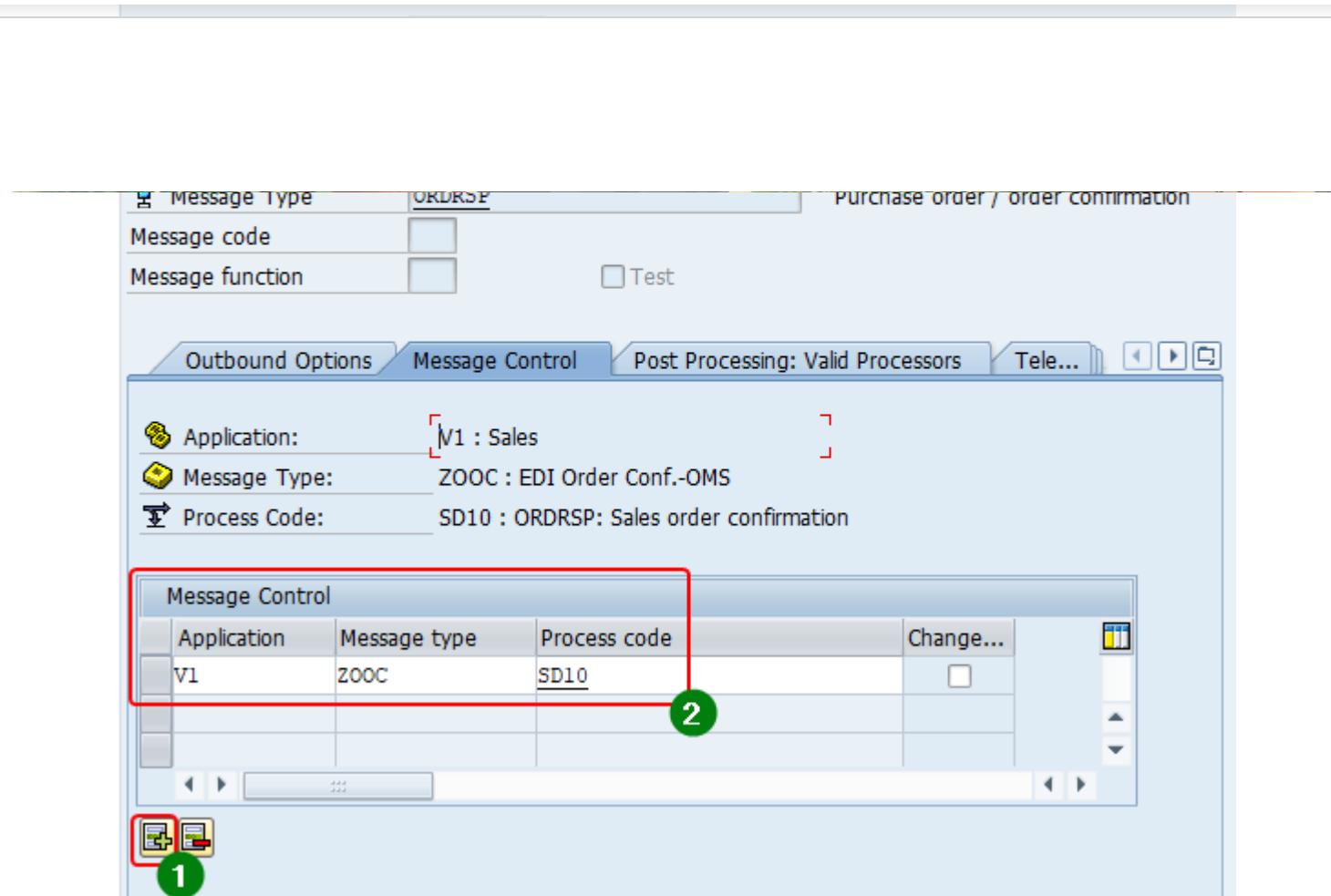


Set the Dispatch Time of the output to "Send with Schedule Job"

Click "Save".

## Step 2 – Assign a Break-point in iDoc Processing FM (Process Code)

First, find the Process Code under Message Control of Partner Profile.



The screenshot shows the SAP Integration Hub interface for configuring an iDoc. The top navigation bar includes the SAP Integration Hub logo, a menu icon, and search/filter icons.

The main area displays a configuration screen for a specific message type:

- Message Type:** ORDRSP (Purchase order / order confirmation)
- Message code:** [Empty field]
- Message function:** [Empty field]
- Test:**

The **Message Control** tab is selected, showing the following details:

- Application:** V1 : Sales
- Message Type:** ZOOC : EDI Order Conf.-OMS
- Process Code:** SD10 : ORDRSP: Sales order confirmation

A red box highlights the **Message Control** table, which contains the following data:

Application	Message type	Process code	Change...
V1	ZOOC	SD10	<input type="checkbox"/>

Two green circles with numbers indicate specific points of interest:

- 1** Points to the **Add** button () at the bottom left of the table.
- 2** Points to the **SD10** value in the **Process code** column of the table.

Identify the Process Code of the Outbound iDoc

Then, go to transaction we57 and find the iDoc processing FM. Or you can directly go to transaction se16n or se11 to find the FM using table EDIFCT.

IDOC_OUTPUT_ORDERSP	F... ▾	ORDERS05	ORDRSP	Outbound ▾	Purchase ord
IDOC_OUTPUT_ACTNOM	F... ▾	OILNOM01	ACTNOM	Outbound ▾	Transport Pla
IDOC_OUTPUT_DELVRY	F... ▾	/STTPEC/D...	DESADV	Outbound ▾	Delivery: Ship
IDOC_OUTPUT_DELVRY	F... ▾	FSHDLV01	DESADV	Outbound ▾	Delivery: Ship
IDOC_OUTPUT_DELVRY	F... ▾	FSHDLV02	DESADV	Outbound ▾	Delivery: Ship

Identify the iDoc processing FM of the Process Code

Alternative method to find the iDoc processing FM – Table EDIFCT

Finally, go to transaction se37 and set a break-point in iDoc creation Function Module “IDOC\_OUPUT\_ORDERSP”.

---

ABAP Source Code of iDoc Processing FM. – IDOC\_OUPUT\_ORDRSP

(Ready to be dispatched).



Issue a new output from sales order header

When you save the sales order, output entry should be stored in NAST table. The output will be in a status 01 (Not yet processed).

Output entry created in NAST table



## iDoc generation FM in Debug Mode

Now you can debug the FM that generates the iDoc from application data.



## ISURU FERNANDO

Hi, I am Isuru Fernando, Senior SAP Integration Consultant with 10 years of SAP full-cycle implementation and support project experience. From the early days, I had a passion for coding, software development, and everything tech-related. I started my carrier as an ABAP developer and soon found my love for system integration when I learned SAP XI 3.0 in 2008. Playing a variety of roles from an offshore technical consultant (ABAP, PI/PO, BW, BOBJ) at the beginning of my career to a technical lead managing a team of consultants in different countries, I have gained immense experience in SAP project implementation life cycle. Having the opportunity to work on SAP implementation projects in USA, EU, and Asia, I learned valuable ins and outs of global business processors in Sales and Distribution (SD), Material Management, Retail, Customer Relationship Management (CRM), and Finance and Controlling (FICO). Through this blog, I want to share my expertise in SAP technical areas such as SAP ABAP, PI/PO, AIF, and Basis. I also want to provide a platform for others with similar ambitions who would like to share their SAP technical expertise with the world!

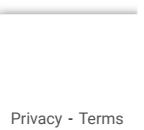
◀ [Change Pointer Table in SAP \(ALE\)](#)

[iDoc Collection and Package Size – S4 HANA and PI/PO Configuration](#) ➤

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## 16 THOUGHTS ON “OUTBOUND IDOC CONFIGURATION WITH OUTPUT DETERMINATION IN SAP – TECHNO-FUNCTIONAL GUIDE”

*Gaurav Agrawal* says:

Excellent stuff Isuru! Hats off to your work...keep going..Cheers!!!

[OCTOBER 31, 2019 AT 9:13 PM](#)

[REPLY](#)

*Isuru Fernando* says:

Thank you, Gaurav!

[NOVEMBER 2, 2019 AT 5:39 PM](#)

[REPLY](#)

*Chandra* says:

Very Detailed..Great work!!..I configured similarly Output type determination for PO..But Idocs are failing with ME Error Code on PO change with respect to a custom field scenario.We are triggering Idocs to two different system

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NOVEMBER 18, 2019 AT 2:12 PM

REPLY

*Isuru Fernando* says:

Hi Chandra, Is the iDoc failing after getting created or output does not get triggered when you change the custom field?

NOVEMBER 22, 2019 AT 12:51 PM

REPLY

---

*Peter Danilovic* says:

Thank you, well done!

NOVEMBER 25, 2019 AT 9:53 AM

REPLY

*Isuru Fernando* says:

Thank you Peter!

NOVEMBER 27, 2019 AT 1:40 PM

REPLY

---

*Rais Ahmed* says:

Hi Isuru Fernando,

Firstly thank you for the detailed explanation. I am working in IS-Retail environment, could you please help me understand what is the difference between Partner Type KU and Partner Type LS.

DECEMBER 23, 2019 AT 1:33 PM

REPLY

*Isuru Fernando* says:

Hi Rais,

Cheers!  
Isuru

DECEMBER 23, 2019 AT 5:03 PM

[REPLY](#)

---

***mahabooba shaik*** says:  
Hi Isuru,

Great, Thanks much for sharing more valuable. keep sharing. Thanks! Mahabooba

FEBRUARY 26, 2020 AT 11:03 AM

[REPLY](#)

***Isuru Fernando*** says:  
Thank you, Mahabooba!

FEBRUARY 26, 2020 AT 12:10 PM

[REPLY](#)

---

***Jayasri*** says:  
Hi Isuru,  
Thank you so much for sharing this, I have configured Invoice outbound Idoc , IDoc has been triggered without any issue, however missing few fields In Segment E1EDP01 like PEINH, LGORT, MATNR.  
Kindly help.  
Thank you,  
Jayasri

JUNE 9, 2020 AT 10:44 AM

[REPLY](#)

***Sirisha Reddy*** says:  
Hi Isru, Excellent explanation. Thanks.

*Isuru Fernando* says:

Thank you very much, Sirisha!

NOVEMBER 25, 2020 AT 8:34 AM

REPLY

---

*Ramamurthy* says:

Hi ISURU FERNANDO, this is an excellent explanation, While I am doing the same thing with a Purchase order (BASIC TYPE: ORDERS04, Message type: ORDERS), the output is triggering at Purchase order but in we20 Status is 02. How to solve it, please explain to me.

Mail id: [ramamurthyapatnaik@gmail.com](mailto:ramamurthyapatnaik@gmail.com)

APRIL 20, 2021 AT 4:53 AM

REPLY

*Nila* says:

Hai. Such a nice work. Great explanation. Can u please help me with asn outbound idoc process

JULY 6, 2021 AT 7:19 PM

REPLY

*vana* says:

thank you very much , very clear explanation, and very informative.

AUGUST 27, 2021 AT 4:08 PM

REPLY

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