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What is idocs

SAP’s robust enterprise resource planning (ERP) solutions streamline business operations across various industries. At the heart of SAP’s data exchange mechanism is the IDoc (Intermediate Document), a standardized format essential for seamless data communication both within SAP systems and between SAP and external platforms. This article dives into the fundamentals of IDoc, its structure, and its role in automating processes within an SAP environment. We’ll also highlight how modern tools like CData Arc enhance the IDoc's functionality for efficient data flow.What is an IDoc in SAP?An IDoc (Intermediate Document) in SAP is a structured data container used to facilitate the electronic exchange of information between different systems. SAP uses IDocs to transfer data such as sales orders, invoices, and delivery notices between SAP modules and external systems. These documents function similarly to traditional EDI (Electronic Data Interchange) standards but are tailored to SAP’s environment.IDocs adhere to EDI standards like X12 and EDIFACT, defining how specific transactions and data segments are formatted, and ensuring consistent and efficient communication between systems.The Structure of an IDocAn IDoc is composed of three primary structural components:Control Record: This part contains metadata that describes the IDoc, such as its type, the document number, sender, and receiver information. It essentially governs the message flow and provides the necessary routing and status data.Data Record: This is the core content of the IDoc, where the actual business data is stored. Depending on the document type (such as a purchase order), it will contain all relevant details like customer information, prices, dates, and other key transactional data.Status Record: This section tracks the processing status of the IDoc. It includes historical statuses, allowing users to monitor its progression from creation to completion.Types of IDocsIDoc Basic TypesSAP provides IDoc Basic Types out of the box, designed to handle a wide variety of business scenarios. These standard templates allow businesses to automate processes by exchanging structured data through predefined formats. Each Basic Type corresponds to a specific transaction or business activity. Some common IDoc Basic Types include:ORDERS: Manages purchase orders, transmitting order details like items, pricing, and quantities.INVOIC: Facilitates the exchange of invoice-related information, including payment terms and amounts.DELFOR: Used for delivery forecasts, enabling suppliers to receive scheduling information.DESADV: Handles shipping notifications, conveying shipping details, including packaging and carrier information.IDoc Extension TypesIn scenarios where the standard Basic Types don’t fulfill unique business needs, companies can create IDoc Extension Types. These extensions allow businesses to add custom segments or fields to an existing IDoc without modifying the original structure. This customization offers flexibility while maintaining compatibility with SAP’s standard processes.For example, if a business wants to include specific environmental compliance information with its purchase orders, it can extend the standard ORDERS IDoc to accommodate this extra data. This ensures that the specific business requirements are met without disrupting standard processing.SAP EDI IntegrationsKey Processes in IDoc CommunicationOutbound IDoc ProcessThe Outbound IDoc process initiates when an event within SAP, such as the creation of a sales order, triggers the need to send information to an external system. The process typically follows these steps:Event Trigger: A specific action (e.g., a sales order) creates the need for an IDoc.IDoc Generation: The system generates an IDoc based on the predefined Basic or Extended Type, populating it with the necessary data.Partner Profile: The system checks the partner profile and determines how the IDoc should be transmitted (e.g., via EDI or file transfer).Data Transfer: The IDoc is sent to the designated system through the configured communication port.Inbound IDoc ProcessThe Inbound IDoc process deals with receiving data from external sources into SAP. For example, an IDoc containing a purchase order from a customer may be received and processed by the system:IDoc Reception: The system receives the IDoc through the defined communication channel (e.g., EDI, RFC).Parsing and Posting: SAP parses the IDoc and uses the data to update records, such as creating a new order or updating inventory levels.Acknowledgment: Optionally, SAP can send an acknowledgment back to the originating system, confirming that the IDoc was processed successfully.Common IDoc Transaction CodesSAP provides several transaction codes (T-codes) to manage, monitor, and troubleshoot IDocs. Some of the most frequently used include:WE01: Typically used for custom development scenarios involving IDoc creation scripts.WE02: Allows users to display IDoc status and analyze trends.WE05: Offers a list view of IDocs for monitoring and error handling, making it easier to track the flow of data through the system.ConclusionSAP IDocs are critical for ensuring that data flows smoothly between systems, both internal and external to SAP. By understanding the structure and types of IDocs, businesses can leverage them to automate processes, integrate external data, and optimize workflow efficiency. Moreover, tools like CData Arc enhance the IDoc’s capabilities, providing robust solutions for seamless data exchange within the SAP ecosystem.With a solid grasp of IDoc processes and types, businesses can harness the power of SAP’s integration capabilities while keeping pace with modern data management needs. IDOC is simply a data container used to exchange information between any two processes that can understand the syntax and semantics of the data. In other words, an IDOC is like a data file with a specified format which is exchanged between 2 systems which know how to interpret that data. IDOC stands for ” Intermediate Document” When we execute an outbound ALE or EDI Process, an IDOC is created. In the SAP System, I DOCs are stored in database. Every IDOC has a unique number(within a client). Key Features IDOCs are independent of the sending and receiving systems.(SAP-to-SAP as well as Non-SAP) IDOCs are based on EDI standards, ANSI ASC X12 and EDIFACT. In a case of any conflict in data size, it adopts one with greater length. IDOCs are independent of the direction of data exchange e.g. ORDERS01: Purchasing module: Inbound and Outbound IDOCs can be viewed in a text editor. Data is stored in character format instead of binary format. Structure of an IDOC The I doc structure consists of 3 parts – The administration part(Control Record)- which has the type of idoc, message type, the current status, the sender, receiver etc. This is referred to as the Control record. The application data (Data Record) – Which contains the data. These are called the data records/segments. The Status information (Status Record)- These give you information about the various stages the idoc has passed through. You can view an I-DOC using transaction WE02 or WE05 As seen the screenshot above IDOC record has three parts Control, Data and Status. Let’s look into them in detail – Control Record All control record data is stored in EDIDC table. The key to this table is the IDOC Number It contains information like IDOC number, the direction(inbound/outbound), sender, recipient information, channel it is using, which port it is using etc. Direction ‘1’ indicates outbound, ‘2’ indicates inbound. Data Record Data record contains application data like employee header info, weekly details, client details etc All data record data is stored in EDID2 to EDID4 tables and EDIDD is a structure where you can see its components. It contains data like the idoc number, name and number of the segment in the idoc, the hierarchy and the data The actual data is stored as a string in a field called SDATA, which is a 1000 char long field. Status Record Status record is attached to an I-DOC at every milestone or when it encounter errors. All status record data is stored in EDIDS table. Statuses 1-42 are for outbound while 50-75 for inbound IDOC Types An I DOC Type, (Basic) defines the structure and format of the business document that is to be exchanged. An IDOC is an instance of an IDOC Type , just like the concept of variables and variables types in programming languages. You can define IDOC types using WE30 What is a Segment? A Segment defines the format and structure of a data record in I-DOC. Segments are reusable components. For each segment SAP creates Segment Type (version independent) Segment Definition (version dependent) Segment Documentation The last 3 characters is the version of the segment Definitions keep changing as per the version but the segment type remains the same. Transaction:WE31 What is Extension IDOC type? An IDOC is of 2 types:- SAP provides many a pre-defined Basic IDOC Types which can not be modified. In case you want to add more data to these restricted basic type you may use an extension type. Most of the times you will NOT use extension. Documentation Each IDOC are thoroughly documented in transaction WE60 Message Type A message represents a specific type of document that is transmitted between two partners Ex. Orders, orders responses, invoices etc An idoc type can be associated with many message types Also, a message type can be associated with different idoc types. Transaction WE81 IDOC Views An IDOC type can be used for more than one message type, which results in IDOCs containing more fields than required for a particular message type. IDOC views are used to improve performance in generating IDOCs to ensure only the relevant segments are filled with data. IDOC Views are important only for Outbound Processing. Partner Profiles A partner is defined as a business partner with whom you conduct business and exchange documents In the partner profile of a partner that we exchange Idocs with, we maintain the parameters that are necessary for exchanging the data. The transaction used is WE20. Port The port defines the technical characteristics of the connection between your SAP system and the other system you want to transfer data with (subsystem). The port defines the medium in which data is exchanged between the 2 systems. There are different types of ports. The 2 most commonly used are the TRFC ports used in ALE and File ports which EDI uses. For TRFC ports we have to give the name of the logical destination created using SM59. When using file port you can specify the directory where the IDOC file should be placed. The other system or the middleware will pick up the file from here. The Function module can be used to generate a file name for the idoc. While Testing you can use “Outbound file” to specify a constant file name. The tab “outbound trigger” can be used to supply information if we want to trigger some processing on the subsystem when an idoc is created at this location. We have to specify the command file name and the directory which has to be run. This is so CONFUSING! Let’s understand the process of creating an IDOC with an example – Whenever a Purchase Order (PO) is created we want to send the IDOC to a vendor. The PO is sent in the form of an IDOC to the vendor (partner). That partner has to be EDI enabled in that system. SAP should realize that it could send doc to this vendor electronically. The PO sent as an outbound idoc by the customer will be inbound idoc for the vendor. The SAP system on the vendor’s side can process this to create an application document (a sales order) on their system. Quotation, RFQ, PO, SO, Invoice, delivery note etc are some of the commonly exchanged documents through IDOC The process of data transfer out of your SAP system is called the Outbound process, while that of data moving into you SAP system is called Inbound process. As a developer or a consultant who will be involved in setting up theses process for your organization. Here are the steps how to set them up- The Outbound Process Steps Involved – Create segments(WE31) Create an idoc type(WE30) Create a message type (WE81) Associate a message type to idoc type(WE82) Create a port(WE21) If you are going to use the message control method to trigger idocs then create the function module for creating the idoc and associate the function module to an outbound process code Otherwise, create the function module or stand-alone program which will create the idoc Create a partner profile(WE20) with the necessary information in the outbound parameters for the partner you want to exchange the idoc with.Trigger the idoc. The Inbound Process Steps Involved- Creation of basic Idoc type (Transaction WE30) Creating message type (Transaction WE81) Associating the Message type to basic Idoc type (Transaction WE82) Create the function module for processing the idoc Define the function module characteristics (BD51) Allocate the inbound function module to the message type(WE57) Defining process code (Transaction WE42) Creation of partner profile (Transaction WE20) Today IDocs are used in most SAP applications for transfer of message(information) from SAP system to other systems and vice versa. Though lot of documentation is available on IDocs it is difficult for a functional consultant to understand such documents due to their technical nature. While a functional consultant is not expected to know the IDoc concepts in its entirety, an effort has been made to capture the minimum necessary information that one needs to be aware of in order to handle project/support issues on IDocs.OVERVIEWIDoc is an SAP object that carries data of a business transaction from one system to another in the form of electronic message. IDoc is an acronym for Intermediate Document. The purpose of an IDoc is to transfer data or information from SAP to other systems and vice versa. The transfer from SAP to non-SAP system is done via EDI (Electronic Data Interchange) subsystems whereas for transfer between two SAP systems, ALE is used. IDoc can be triggered in SAP system or in EDI subsystem. This depends on the direction in which IDoc is sent and is called as Inbound IDoc and Outbound IDoc accordingly. In case of outbound flow, IDoc is triggered in SAP through document message control which is then sent to EDI subsystem. EDI converts the data from IDoc into XML or equivalent format and then sends the data to partner system through Internet.For inbound flow, EDI converts partner data and IDoc is created in SAP. After successful processing of this IDoc, Application Document is posted in SAP.EDI STANDARDS AND IDOC“EDI is electronic exchange of business document between the computer systems of business partners, using a standard format over a communication network”. EDI stands for Electronic Data Interchange.For transmission of information electronically, two widely used standards are ANSI ASC X12 and EDIFACT. ANSI ASC X12 is a committee formed by representatives of major organizations, government bodies and EDI software companies which defines standards and guidelines for information interchange over EDI. UN/EDIFACT stands for United Nations EDI for Administration, commerce and Transport and was formed in 1985 using ANSI X12 and UNTDI (United Nations Trade Data interchange) as base standards. ANSI X12 describes business document as transactions and each transaction is represented by three digit number e.g. 850 – Purchase Order, 855 - Purchase Order Acknowledgement. EDIFACT describes business document as messages, represented by standard names e.g. ORDERS for purchase order.IDOC TERMINOLOGIESIDOC (BASIC) TYPEIDoc Types are based on the EDI standards and mostly on EDIFACT standards. Basic Types (or IDoc Type) defines the structure of an IDoc. Each basic type describes standard IDoc segments, format of data fields and their size. Basic Type also defines number of segments and fields in an IDoc. All the fields that are necessary for transmission of message for a particular business transaction are mapped in different segments. It also defines the structure and relationship of IDoc segments along with mandatory and optional segments.IDOC EXTENSIONBasic type contains all the standard fields that are necessary for carrying out a business transaction. However, if any additional values are to be sent to the partner then we can make use of the IDoc Extension feature. IDoc extension is extension of basic type and contains additional custom IDoc segments and fields that are not available in standard basic type.IDOC SEGMENTSIDoc segments contain the actual data that is sent to or received from a partner. These segments contain the actual values that are sent as part of IDoc transmission. PARENT AND CHILD SEGMENTSIDoc segment is termed as Parent segment if it contains its own segments. The dependent segments are called as child segments. INBOUND/OUTBOUND IDOCSIDocs sent outside the system are termed as Outbound IDocs and the ones that are received into the system, are called as Inbound IDocs. IDOC DIRECTIONThis signifies the direction is which information is sent and is similar to terminology used in mails. If information is sent outside the system then the direction is outbox when it is received into the system then direction is inbox. In SAP Outbox direction is represent by “1” i.e. outbox and Inbox direction is represented by “2”.PARTNERPartner is the Business Partner with which the exchange of information is to take place using IDoc. It can be a vendor or customer or any other system. Depending on the direction of information in which the information is sent it plays a role of either a “sending partner” or a “receiving partner”. PARTNER TYPEPartner type/role is used to identify partners within the sap systems. Partner type is KU for customer, LI for vendor and LS for Logical System.MESSAGE TYPEIDoc processing involves transmission or receipt of document in the form of a message, each of which represents a document in SAP. These documents can be Order, Shipment Confirmation, Advance Shipping Notification, Goods Receipt, or Invoice. Message type is associated with Basic IDoc Type (Basic Type) and defines the kind of data or document that is exchanged with the partner. PROCESS CODE The process code contains the details of the Function Module that are used for IDoc processing. Message Type can be linked to the Process code.PORTIDoc Port contains the information about the way data is sent between the source or target system. The type of port defines the information contained within the port. For port type “Internet” Port will contain IP address of the target system. For port type “file”, directory or file name information is maintained. “tRFC” port contains information about the RFC destination of the target system. For IDoc transmission using ALE “tRFC” ports are used.PARTNER PROFILE MAINTENANCEPARTNER PROFILE (WE20)Partner profile must be maintained for all the business partners to whom we want to send or receive the IDocs. The TCODE for maintaining the partner profile is WE20. Double clicking on the Partner will show the following screen:Partner profile contains parameters for Inbound and Outbound processing of IDocs. For each message type we can maintain, inbound/outbound options, message control, post processing options and contact information within Inbound and outbound parameters.OUTBOUND OPTIONS (OUTBOUND PARAMETERS)This involves sender/receiver port, Output mode and relation to IDoc type i.e. Basic Type and extension.MESSAGE CONTROL (OUTBOUND PARAMETERS)This contains application for which IDoc will be created e.g. EF for Purchase order, the message type of the application that will trigger the IDoc and Process Code that will convert SAP document to an IDoc. For example, if PO is to be sent to the Vendor AXXXXZ, then in the outbound option of the partner AXXXXZ we need to maintain the message type ZXX1 and link it to the Process Code ME10. So when message type ZXX1 is triggered in the PO then an IDoc will be created for the partner vendor AXXXXZ.Process Code is linked to the Function Module in SAP that converts application data into an IDoc. Standard function modules are provided by SAP for this conversion however these can also be customized as per business needs. Change Message Indicator indicates whether the IDoc is sentas a notification of change. For example, Purchase Order change messages are sent to vendor using EDI standard message type 860. Separate message type should be triggered in the purchase order for PO change. Additional line with change message type must be added in the Message control tab with change message indicator on.INBOUND OPTIONS (INBOUND PARAMETERS)For inbound options process code is maintained in the Inbound screen only. IDoc processing can be triggered by background program and triggered immediately.POST PROCESSING (INBOUND/OUTBOUND PARAMETERS)In the post processing option we can maintain the workflow details of the users or positions to which an error notification will be sent if an IDoc processing fails.TELEPHONY (INBOUND/OUTBOUND PARAMETERS)We can also maintain the contact details in the telephony option.EDI STANDARD (OUTBOUND PARAMETERS)EDI standard screen contains the details of the Standard EDI terminology used for the IDoc transmission.For example, Message Type 850 is an EDI standard for Purchase Order IDoc and is linked to IDoc Message Type Orders.IDOC STRUCTURE AND RECORDSSTRUCTUREIDoc structure is divided into Control Record, Data Records and Status records. These records are stored in the transparent tables in SAP. These are EDIDC, EDID4 and EDIDS.CONTROL RECORD (EDIDC)It contains information such as IDoc number, direction, IDoc Status, Basic Type, Message Type, Partner (Sender/Receiver), date and time of creation/update, Interchange File or ISA number,etc.DATA RECORD (EDID4)It contains the details of the IDoc segments. IDoc segment has fields that contain the data necessary for posting the documents.STATUS RECORDS (EDIDS)IDoc Status defines the processing status of the IDoc. IDoc statuses are used to track the IDoc and its various processing states. Status Numbers represents IDoc status. Current status of the IDoc is present in Control record.Initial Status numbers are 64 for inbound and 03 for outbound. Successful status is 53 for inbound and 16 for outbound IDocs. SENDING AND RECEIVING IDOCSTRIGGERING AN OUTBOUND IDOCOutbound IDocs can be triggered from the output message types of Purchase Orders, deliveries, Material Documents, invoices, etc. The following figure shows that once the output ZXX1 of PO XXXXXXX1 is processed an IDoc “000000XXXXXXXXX1” is added/created.The relationship between the IDoc and the application document can be found in two ways: 1. Relationship tab of IDoc2. Relationship tab of Application Document, e.g. PO, SO, Material Document, etc.The initial status of this IDoc will be 30, which after successful processing will convert into status 16.A successful outbound IDoc will pass through all the above statuses in reverse order (01-03-18-06-12-16). Each status represents an IDoc validation step. If an IDoc passes all the validations it would reach status 16. These different validation steps for outbound IDocs are explained below:01: IDoc generation successful30: IDoc is ready to be processed by IDoc Processing job03: IDoc data is passed to the Port18: IDoc successfully triggered EDI subsystem06: IDoc data translated to EDI format12: IDoc is dispatched successfully to the partner16: Partner has received the IDoc successfullyIDoc can possibly fail at any of the above steps during validation.RECEIVING AN INBOUND IDOCThe initial status of an inbound IDoc is 64 and successful status is 53. Different validation steps for inbound IDocs are explained below:50: IDoc received successfully in the system64: IDoc is ready to be processed by IDoc processing job53: Application document created and saved successfully. The document number can be found by expanding the status node 53An inbound IDoc goes through all the above statuses in reverse order (50-64-53).IDOC PROCESSINGAUTOMATIC/IMMEDIATE PROCESSINGIn this case, IDoc are processed immediately as they generated or added in the system. The check “Transfer IDoc immediately” is selected in Outbound Options and “Trigger Immediately” is selected in Inbound Option. These checks are generally used when the real time information exchange is necessary between two systems.MANUAL PROCESSINGIDocs can also be manually processed using the TCODE BD87 in SAP. PROCESSING VIA BACKGROUND JOBIDoc processing by background is the most preferred way of processing the IDocs. Following Programs are used from processing the IDocs using background job:RBDAPP01 - Inbound IDocsRSEOUT00 - Outbound IDocsREPROCESSING IDOCSOn the basis of IDoc statuses different programs can be used for reprocessing of failed IDocs. These are given below:TESTING AND EDITING IDOCSIf an IDoc contains error in the data then such IDocs can be edited using TCode WE02 or WE05. When an IDoc is edited the original IDoc information(backup) is saved in a New IDoc under status 70 (for inbound) / 33 (for outbound). These IDoc stays in the system for reference only and cannot be processed. The status of the edited IDoc becomes 69 (inbound) and 32 (outbound). These IDocs can then be processed using BD87 transaction or batch jobs. Debugging of IDocs can be done using by copying the IDocs using TCode WE19. WE19 is a test tool for Idocs processing. WE19 copies the existing idoc and creates a new IDoc which can then be modified as per testing needs. The newly generated IDoc can also be processed using BD87.CONVERTING IDOC STATUSReport RC1_IDOC_SET_STATUS can be used to change the status of IDoc. Status changes are generally needed to move an IDoc to status 68 – no further processingSEARCHING IDOCS IN SAPTCODE WE02/WE05: GENERAL SEARCHIDocs can be displayed in system via TCODE WE02 and WE05. If IDoc number is not known then search can be made on the basis of IDoc Date, Direction, BASIC TYPE, MESSAGE TYPE, and PARTNER NUMBER. Partner number can be found in the Output Messages of the documents.IDoc search can also be made on the basis of ISA or Transfer file Reference.TCODE WE09: SEARCHING DATA IN IDOC SEGMENTSIf we are looking for specific information within the IDocs Segments then this can be found using TCODE WE09. This is useful if you are searching for a particular information in similar kind of IDoc within IDoc segments. For example, if you want to search a particular Purchase Order number e.g. 100000001 in multiple IDocs which lies in Segment E1EDK01 of an IDoc under field BELNR. Then the search can be executed in the following manner. IDOC VALIDATIONS, COMMON IDOC ERRORS AND SOLUTIONThough, the IDoc failure may not be related to any of the above mentioned reasons, the best way to find the IDoc error is to compare the existing IDoc with the good example. Good example IDoc can be easily searched with any of the IDoc search methods as described above.DOCUMENTATION FOR IDOC TYPESIDoc documentation can be found using TCODE WE60 and can be helpful to obtain information of the IDoc Type or its particular segment. It also provides information such as mandatory and optional segments, minimum and maximum number of segments, etc. GENERAL INFORMATION FOR COMMON IDOC MESSAGE TYPESThe following list gives the Basic Type and Message Type combination for common idocsARCHIVING/DELETION OF IDOCS FROM DATABASEAs IDocs grow older they are archived and deleted from the database. Archived IDocs can be viewed using TCODE SARI in Achieve Explorer using archiving object as IDoc. Following are the few programs that are used for archiving and deletion of IDocs from database.Page 2Today IDocs are used in most SAP applications for transfer of message(information) from SAP system to other systems and vice versa. Though lot of documentation is available on IDocs it is difficult for a functional consultant to understand such documents due to their technical nature. While a functional consultant is not expected to know the IDoc concepts in its entirety, an effort has been made to capture the minimum necessary information that one needs to be aware of in order to handle project/support issues on IDocs.OVERVIEWIDoc is an SAP object that carries data of a business transaction from one system to another in the form of electronic message. IDoc is an acronym for Intermediate Document. The purpose of an IDoc is to transfer data or information from SAP to other systems and vice versa. 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Status changes are generally needed to move an IDoc to status 68 – no further processingSEARCHING IDOCS IN SAPTCODE WE02/WE05: GENERAL SEARCHIDocs can be displayed in system via TCODE WE02 and WE05. If IDoc number is not known then search can be made on the basis of IDoc Date, Direction, BASIC TYPE, MESSAGE TYPE, and PARTNER NUMBER. Partner number can be found in the Output Messages of the documents.IDoc search can also be made on the basis of ISA or Transfer file Reference.TCODE WE09: SEARCHING DATA IN IDOC SEGMENTSIf we are looking for specific information within the IDocs Segments then this can be found using TCODE WE09. This is useful if you are searching for a particular information in similar kind of IDoc within IDoc segments. For example, if you want to search a particular Purchase Order number e.g. 100000001 in multiple IDocs which lies in Segment E1EDK01 of an IDoc under field BELNR. Then the search can be executed in the following manner. IDOC VALIDATIONS, COMMON IDOC ERRORS AND SOLUTIONThough, the IDoc failure may not be related to any of the above mentioned reasons, the best way to find the IDoc error is to compare the existing IDoc with the good example. Good example IDoc can be easily searched with any of the IDoc search methods as described above.DOCUMENTATION FOR IDOC TYPESIDoc documentation can be found using TCODE WE60 and can be helpful to obtain information of the IDoc Type or its particular segment. It also provides information such as mandatory and optional segments, minimum and maximum number of segments, etc. GENERAL INFORMATION FOR COMMON IDOC MESSAGE TYPESThe following list gives the Basic Type and Message Type combination for common idocsARCHIVING/DELETION OF IDOCS FROM DATABASEAs IDocs grow older they are archived and deleted from the database. Archived IDocs can be viewed using TCODE SARI in Achieve Explorer using archiving object as IDoc. Following are the few programs that are used for archiving and deletion of IDocs from database.Page 3Today IDocs are used in most SAP applications for transfer of message(information) from SAP system to other systems and vice versa. Though lot of documentation is available on IDocs it is difficult for a functional consultant to understand such documents due to their technical nature. While a functional consultant is not expected to know the IDoc concepts in its entirety, an effort has been made to capture the minimum necessary information that one needs to be aware of in order to handle project/support issues on IDocs.OVERVIEWIDoc is an SAP object that carries data of a business transaction from one system to another in the form of electronic message. IDoc is an acronym for Intermediate Document. The purpose of an IDoc is to transfer data or information from SAP to other systems and vice versa. The transfer from SAP to non-SAP system is done via EDI (Electronic Data Interchange) subsystems whereas for transfer between two SAP systems, ALE is used. IDoc can be triggered in SAP system or in EDI subsystem. This depends on the direction in which IDoc is sent and is called as Inbound IDoc and Outbound IDoc accordingly. In case of outbound flow, IDoc is triggered in SAP through document message control which is then sent to EDI subsystem. EDI converts the data from IDoc into XML or equivalent format and then sends the data to partner system through Internet.For inbound flow, EDI converts partner data and IDoc is created in SAP. After successful processing of this IDoc, Application Document is posted in SAP.EDI STANDARDS AND IDOC“EDI is electronic exchange of business document between the computer systems of business partners, using a standard format over a communication network”. EDI stands for Electronic Data Interchange.For transmission of information electronically, two widely used standards are ANSI ASC X12 and EDIFACT. ANSI ASC X12 is a committee formed by representatives of major organizations, government bodies and EDI software companies which defines standards and guidelines for information interchange over EDI. UN/EDIFACT stands for United Nations EDI for Administration, commerce and Transport and was formed in 1985 using ANSI X12 and UNTDI (United Nations Trade Data interchange) as base standards. ANSI X12 describes business document as transactions and each transaction is represented by three digit number e.g. 850 – Purchase Order, 855 - Purchase Order Acknowledgement. EDIFACT describes business document as messages, represented by standard names e.g. ORDERS for purchase order.IDOC TERMINOLOGIESIDOC (BASIC) TYPEIDoc Types are based on the EDI standards and mostly on EDIFACT standards. Basic Types (or IDoc Type) defines the structure of an IDoc. Each basic type describes standard IDoc segments, format of data fields and their size. Basic Type also defines number of segments and fields in an IDoc. All the fields that are necessary for transmission of message for a particular business transaction are mapped in different segments. It also defines the structure and relationship of IDoc segments along with mandatory and optional segments.IDOC EXTENSIONBasic type contains all the standard fields that are necessary for carrying out a business transaction. However, if any additional values are to be sent to the partner then we can make use of the IDoc Extension feature. IDoc extension is extension of basic type and contains additional custom IDoc segments and fields that are not available in standard basic type.IDOC SEGMENTSIDoc segments contain the actual data that is sent to or received from a partner. These segments contain the actual values that are sent as part of IDoc transmission. PARENT AND CHILD SEGMENTSIDoc segment is termed as Parent segment if it contains its own segments. The dependent segments are called as child segments. INBOUND/OUTBOUND IDOCSIDocs sent outside the system are termed as Outbound IDocs and the ones that are received into the system, are called as Inbound IDocs. IDOC DIRECTIONThis signifies the direction is which information is sent and is similar to terminology used in mails. If information is sent outside the system then the direction is outbox when it is received into the system then direction is inbox. In SAP Outbox direction is represent by “1” i.e. outbox and Inbox direction is represented by “2”.PARTNERPartner is the Business Partner with which the exchange of information is to take place using IDoc. It can be a vendor or customer or any other system. Depending on the direction of information in which the information is sent it plays a role of either a “sending partner” or a “receiving partner”. PARTNER TYPEPartner type/role is used to identify partners within the sap systems. Partner type is KU for customer, LI for vendor and LS for Logical System.MESSAGE TYPEIDoc processing involves transmission or receipt of document in the form of a message, each of which represents a document in SAP. These documents can be Order, Shipment Confirmation, Advance Shipping Notification, Goods Receipt, or Invoice. Message type is associated with Basic IDoc Type (Basic Type) and defines the kind of data or document that is exchanged with the partner. PROCESS CODE The process code contains the details of the Function Module that are used for IDoc processing. Message Type can be linked to the Process code.PORTIDoc Port contains the information about the way data is sent between the source or target system. The type of port defines the information contained within the port. For port type “Internet” Port will contain IP address of the target system. For port type “file”, directory or file name information is maintained. “tRFC” port contains information about the RFC destination of the target system. For IDoc transmission using ALE “tRFC” ports are used.PARTNER PROFILE MAINTENANCEPARTNER PROFILE (WE20)Partner profile must be maintained for all the business partners to whom we want to send or receive the IDocs. The TCODE for maintaining the partner profile is WE20. Double clicking on the Partner will show the following screen:Partner profile contains parameters for Inbound and Outbound processing of IDocs. For each message type we can maintain, inbound/outbound options, message control, post processing options and contact information within Inbound and outbound parameters.OUTBOUND OPTIONS (OUTBOUND PARAMETERS)This involves sender/receiver port, Output mode and relation to IDoc type i.e. Basic Type and extension.MESSAGE CONTROL (OUTBOUND PARAMETERS)This contains application for which IDoc will be created e.g. EF for Purchase order, the message type of the application that will trigger the IDoc and Process Code that will convert SAP document to an IDoc. For example, if PO is to be sent to the Vendor AXXXXZ, then in the outbound option of the partner AXXXXZ we need to maintain the message type ZXX1 and link it to the Process Code ME10. So when message type ZXX1 is triggered in the PO then an IDoc will be created for the partner vendor AXXXXZ.Process Code is linked to the Function Module in SAP that converts application data into an IDoc. 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The transfer from SAP to non-SAP system is done via EDI (Electronic Data Interchange) subsystems whereas for transfer between two SAP systems, ALE is used. IDoc can be triggered in SAP system or in EDI subsystem. This depends on the direction in which IDoc is sent and is called as Inbound IDoc and Outbound IDoc accordingly. In case of outbound flow, IDoc is triggered in SAP through document message control which is then sent to EDI subsystem. EDI converts the data from IDoc into XML or equivalent format and then sends the data to partner system through Internet.For inbound flow, EDI converts partner data and IDoc is created in SAP. After successful processing of this IDoc, Application Document is posted in SAP.EDI STANDARDS AND IDOC“EDI is electronic exchange of business document between the computer systems of business partners, using a standard format over a communication network”. EDI stands for Electronic Data Interchange.For transmission of information electronically, two widely used standards are ANSI ASC X12 and EDIFACT. ANSI ASC X12 is a committee formed by representatives of major organizations, government bodies and EDI software companies which defines standards and guidelines for information interchange over EDI. UN/EDIFACT stands for United Nations EDI for Administration, commerce and Transport and was formed in 1985 using ANSI X12 and UNTDI (United Nations Trade Data interchange) as base standards. ANSI X12 describes business document as transactions and each transaction is represented by three digit number e.g. 850 – Purchase Order, 855 - Purchase Order Acknowledgement. EDIFACT describes business document as messages, represented by standard names e.g. ORDERS for purchase order.IDOC TERMINOLOGIESIDOC (BASIC) TYPEIDoc Types are based on the EDI standards and mostly on EDIFACT standards. Basic Types (or IDoc Type) defines the structure of an IDoc. Each basic type describes standard IDoc segments, format of data fields and their size. Basic Type also defines number of segments and fields in an IDoc. All the fields that are necessary for transmission of message for a particular business transaction are mapped in different segments. It also defines the structure and relationship of IDoc segments along with mandatory and optional segments.IDOC EXTENSIONBasic type contains all the standard fields that are necessary for carrying out a business transaction. However, if any additional values are to be sent to the partner then we can make use of the IDoc Extension feature. IDoc extension is extension of basic type and contains additional custom IDoc segments and fields that are not available in standard basic type.IDOC SEGMENTSIDoc segments contain the actual data that is sent to or received from a partner. These segments contain the actual values that are sent as part of IDoc transmission. 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PARTNER TYPEPartner type/role is used to identify partners within the sap systems. Partner type is KU for customer, LI for vendor and LS for Logical System.MESSAGE TYPEIDoc processing involves transmission or receipt of document in the form of a message, each of which represents a document in SAP. These documents can be Order, Shipment Confirmation, Advance Shipping Notification, Goods Receipt, or Invoice. Message type is associated with Basic IDoc Type (Basic Type) and defines the kind of data or document that is exchanged with the partner. PROCESS CODE The process code contains the details of the Function Module that are used for IDoc processing. Message Type can be linked to the Process code.PORTIDoc Port contains the information about the way data is sent between the source or target system. The type of port defines the information contained within the port. For port type “Internet” Port will contain IP address of the target system. For port type “file”, directory or file name information is maintained. “tRFC” port contains information about the RFC destination of the target system. For IDoc transmission using ALE “tRFC” ports are used.PARTNER PROFILE MAINTENANCEPARTNER PROFILE (WE20)Partner profile must be maintained for all the business partners to whom we want to send or receive the IDocs. The TCODE for maintaining the partner profile is WE20. Double clicking on the Partner will show the following screen:Partner profile contains parameters for Inbound and Outbound processing of IDocs. For each message type we can maintain, inbound/outbound options, message control, post processing options and contact information within Inbound and outbound parameters.OUTBOUND OPTIONS (OUTBOUND PARAMETERS)This involves sender/receiver port, Output mode and relation to IDoc type i.e. Basic Type and extension.MESSAGE CONTROL (OUTBOUND PARAMETERS)This contains application for which IDoc will be created e.g. EF for Purchase order, the message type of the application that will trigger the IDoc and Process Code that will convert SAP document to an IDoc. For example, if PO is to be sent to the Vendor AXXXXZ, then in the outbound option of the partner AXXXXZ we need to maintain the message type ZXX1 and link it to the Process Code ME10. So when message type ZXX1 is triggered in the PO then an IDoc will be created for the partner vendor AXXXXZ.Process Code is linked to the Function Module in SAP that converts application data into an IDoc. 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EDI stands for Electronic Data Interchange.For transmission of information electronically, two widely used standards are ANSI ASC X12 and EDIFACT. ANSI ASC X12 is a committee formed by representatives of major organizations, government bodies and EDI software companies which defines standards and guidelines for information interchange over EDI. UN/EDIFACT stands for United Nations EDI for Administration, commerce and Transport and was formed in 1985 using ANSI X12 and UNTDI (United Nations Trade Data interchange) as base standards. ANSI X12 describes business document as transactions and each transaction is represented by three digit number e.g. 850 – Purchase Order, 855 - Purchase Order Acknowledgement. EDIFACT describes business document as messages, represented by standard names e.g. ORDERS for purchase order.IDOC TERMINOLOGIESIDOC (BASIC) TYPEIDoc Types are based on the EDI standards and mostly on EDIFACT standards. Basic Types (or IDoc Type) defines the structure of an IDoc. Each basic type describes standard IDoc segments, format of data fields and their size. Basic Type also defines number of segments and fields in an IDoc. All the fields that are necessary for transmission of message for a particular business transaction are mapped in different segments. It also defines the structure and relationship of IDoc segments along with mandatory and optional segments.IDOC EXTENSIONBasic type contains all the standard fields that are necessary for carrying out a business transaction. However, if any additional values are to be sent to the partner then we can make use of the IDoc Extension feature. IDoc extension is extension of basic type and contains additional custom IDoc segments and fields that are not available in standard basic type.IDOC SEGMENTSIDoc segments contain the actual data that is sent to or received from a partner. These segments contain the actual values that are sent as part of IDoc transmission. PARENT AND CHILD SEGMENTSIDoc segment is termed as Parent segment if it contains its own segments. The dependent segments are called as child segments. INBOUND/OUTBOUND IDOCSIDocs sent outside the system are termed as Outbound IDocs and the ones that are received into the system, are called as Inbound IDocs. IDOC DIRECTIONThis signifies the direction is which information is sent and is similar to terminology used in mails. If information is sent outside the system then the direction is outbox when it is received into the system then direction is inbox. In SAP Outbox direction is represent by “1” i.e. outbox and Inbox direction is represented by “2”.PARTNERPartner is the Business Partner with which the exchange of information is to take place using IDoc. It can be a vendor or customer or any other system. Depending on the direction of information in which the information is sent it plays a role of either a “sending partner” or a “receiving partner”. PARTNER TYPEPartner type/role is used to identify partners within the sap systems. Partner type is KU for customer, LI for vendor and LS for Logical System.MESSAGE TYPEIDoc processing involves transmission or receipt of document in the form of a message, each of which represents a document in SAP. These documents can be Order, Shipment Confirmation, Advance Shipping Notification, Goods Receipt, or Invoice. Message type is associated with Basic IDoc Type (Basic Type) and defines the kind of data or document that is exchanged with the partner. PROCESS CODE The process code contains the details of the Function Module that are used for IDoc processing. Message Type can be linked to the Process code.PORTIDoc Port contains the information about the way data is sent between the source or target system. The type of port defines the information contained within the port. For port type “Internet” Port will contain IP address of the target system. For port type “file”, directory or file name information is maintained. “tRFC” port contains information about the RFC destination of the target system. For IDoc transmission using ALE “tRFC” ports are used.PARTNER PROFILE MAINTENANCEPARTNER PROFILE (WE20)Partner profile must be maintained for all the business partners to whom we want to send or receive the IDocs. The TCODE for maintaining the partner profile is WE20. Double clicking on the Partner will show the following screen:Partner profile contains parameters for Inbound and Outbound processing of IDocs. For each message type we can maintain, inbound/outbound options, message control, post processing options and contact information within Inbound and outbound parameters.OUTBOUND OPTIONS (OUTBOUND PARAMETERS)This involves sender/receiver port, Output mode and relation to IDoc type i.e. Basic Type and extension.MESSAGE CONTROL (OUTBOUND PARAMETERS)This contains application for which IDoc will be created e.g. EF for Purchase order, the message type of the application that will trigger the IDoc and Process Code that will convert SAP document to an IDoc. For example, if PO is to be sent to the Vendor AXXXXZ, then in the outbound option of the partner AXXXXZ we need to maintain the message type ZXX1 and link it to the Process Code ME10. So when message type ZXX1 is triggered in the PO then an IDoc will be created for the partner vendor AXXXXZ.Process Code is linked to the Function Module in SAP that converts application data into an IDoc. Standard function modules are provided by SAP for this conversion however these can also be customized as per business needs. Change Message Indicator indicates whether the IDoc is sentas a notification of change. For example, Purchase Order change messages are sent to vendor using EDI standard message type 860. Separate message type should be triggered in the purchase order for PO change. Additional line with change message type must be added in the Message control tab with change message indicator on.INBOUND OPTIONS (INBOUND PARAMETERS)For inbound options process code is maintained in the Inbound screen only. IDoc processing can be triggered by background program and triggered immediately.POST PROCESSING (INBOUND/OUTBOUND PARAMETERS)In the post processing option we can maintain the workflow details of the users or positions to which an error notification will be sent if an IDoc processing fails.TELEPHONY (INBOUND/OUTBOUND PARAMETERS)We can also maintain the contact details in the telephony option.EDI STANDARD (OUTBOUND PARAMETERS)EDI standard screen contains the details of the Standard EDI terminology used for the IDoc transmission.For example, Message Type 850 is an EDI standard for Purchase Order IDoc and is linked to IDoc Message Type Orders.IDOC STRUCTURE AND RECORDSSTRUCTUREIDoc structure is divided into Control Record, Data Records and Status records. These records are stored in the transparent tables in SAP. These are EDIDC, EDID4 and EDIDS.CONTROL RECORD (EDIDC)It contains information such as IDoc number, direction, IDoc Status, Basic Type, Message Type, Partner (Sender/Receiver), date and time of creation/update, Interchange File or ISA number,etc.DATA RECORD (EDID4)It contains the details of the IDoc segments. IDoc segment has fields that contain the data necessary for posting the documents.STATUS RECORDS (EDIDS)IDoc Status defines the processing status of the IDoc. IDoc statuses are used to track the IDoc and its various processing states. Status Numbers represents IDoc status. Current status of the IDoc is present in Control record.Initial Status numbers are 64 for inbound and 03 for outbound. Successful status is 53 for inbound and 16 for outbound IDocs. SENDING AND RECEIVING IDOCSTRIGGERING AN OUTBOUND IDOCOutbound IDocs can be triggered from the output message types of Purchase Orders, deliveries, Material Documents, invoices, etc. The following figure shows that once the output ZXX1 of PO XXXXXXX1 is processed an IDoc “000000XXXXXXXXX1” is added/created.The relationship between the IDoc and the application document can be found in two ways: 1. Relationship tab of IDoc2. Relationship tab of Application Document, e.g. PO, SO, Material Document, etc.The initial status of this IDoc will be 30, which after successful processing will convert into status 16.A successful outbound IDoc will pass through all the above statuses in reverse order (01-03-18-06-12-16). Each status represents an IDoc validation step. If an IDoc passes all the validations it would reach status 16. These different validation steps for outbound IDocs are explained below:01: IDoc generation successful30: IDoc is ready to be processed by IDoc Processing job03: IDoc data is passed to the Port18: IDoc successfully triggered EDI subsystem06: IDoc data translated to EDI format12: IDoc is dispatched successfully to the partner16: Partner has received the IDoc successfullyIDoc can possibly fail at any of the above steps during validation.RECEIVING AN INBOUND IDOCThe initial status of an inbound IDoc is 64 and successful status is 53. Different validation steps for inbound IDocs are explained below:50: IDoc received successfully in the system64: IDoc is ready to be processed by IDoc processing job53: Application document created and saved successfully. The document number can be found by expanding the status node 53An inbound IDoc goes through all the above statuses in reverse order (50-64-53).IDOC PROCESSINGAUTOMATIC/IMMEDIATE PROCESSINGIn this case, IDoc are processed immediately as they generated or added in the system. The check “Transfer IDoc immediately” is selected in Outbound Options and “Trigger Immediately” is selected in Inbound Option. These checks are generally used when the real time information exchange is necessary between two systems.MANUAL PROCESSINGIDocs can also be manually processed using the TCODE BD87 in SAP. PROCESSING VIA BACKGROUND JOBIDoc processing by background is the most preferred way of processing the IDocs. Following Programs are used from processing the IDocs using background job:RBDAPP01 - Inbound IDocsRSEOUT00 - Outbound IDocsREPROCESSING IDOCSOn the basis of IDoc statuses different programs can be used for reprocessing of failed IDocs. These are given below:TESTING AND EDITING IDOCSIf an IDoc contains error in the data then such IDocs can be edited using TCode WE02 or WE05. When an IDoc is edited the original IDoc information(backup) is saved in a New IDoc under status 70 (for inbound) / 33 (for outbound). These IDoc stays in the system for reference only and cannot be processed. The status of the edited IDoc becomes 69 (inbound) and 32 (outbound). These IDocs can then be processed using BD87 transaction or batch jobs. Debugging of IDocs can be done using by copying the IDocs using TCode WE19. WE19 is a test tool for Idocs processing. WE19 copies the existing idoc and creates a new IDoc which can then be modified as per testing needs. The newly generated IDoc can also be processed using BD87.CONVERTING IDOC STATUSReport RC1_IDOC_SET_STATUS can be used to change the status of IDoc. Status changes are generally needed to move an IDoc to status 68 – no further processingSEARCHING IDOCS IN SAPTCODE WE02/WE05: GENERAL SEARCHIDocs can be displayed in system via TCODE WE02 and WE05. If IDoc number is not known then search can be made on the basis of IDoc Date, Direction, BASIC TYPE, MESSAGE TYPE, and PARTNER NUMBER. Partner number can be found in the Output Messages of the documents.IDoc search can also be made on the basis of ISA or Transfer file Reference.TCODE WE09: SEARCHING DATA IN IDOC SEGMENTSIf we are looking for specific information within the IDocs Segments then this can be found using TCODE WE09. This is useful if you are searching for a particular information in similar kind of IDoc within IDoc segments. For example, if you want to search a particular Purchase Order number e.g. 100000001 in multiple IDocs which lies in Segment E1EDK01 of an IDoc under field BELNR. Then the search can be executed in the following manner. IDOC VALIDATIONS, COMMON IDOC ERRORS AND SOLUTIONThough, the IDoc failure may not be related to any of the above mentioned reasons, the best way to find the IDoc error is to compare the existing IDoc with the good example. Good example IDoc can be easily searched with any of the IDoc search methods as described above.DOCUMENTATION FOR IDOC TYPESIDoc documentation can be found using TCODE WE60 and can be helpful to obtain information of the IDoc Type or its particular segment. It also provides information such as mandatory and optional segments, minimum and maximum number of segments, etc. GENERAL INFORMATION FOR COMMON IDOC MESSAGE TYPESThe following list gives the Basic Type and Message Type combination for common idocsARCHIVING/DELETION OF IDOCS FROM DATABASEAs IDocs grow older they are archived and deleted from the database. Archived IDocs can be viewed using TCODE SARI in Achieve Explorer using archiving object as IDoc. Following are the few programs that are used for archiving and deletion of IDocs from database. IDOC is simply a data container used to exchange information between any two processes that can understand the syntax and semantics of the data. In other words, an IDOC is like a data file with a specified format which is exchanged between 2 systems which know how to interpret that data. IDOC stands for ” Intermediate Document” When we execute an outbound ALE or EDI Process, an IDOC is created. In the SAP System, I DOCs are stored in database. Every IDOC has a unique number(within a client). Key Features IDOCs are independent of the sending and receiving systems.(SAP-to-SAP as well as Non-SAP) IDOCs are based on EDI standards, ANSI ASC X12 and EDIFACT. In a case of any conflict in data size, it adopts one with greater length. IDOCs are independent of the direction of data exchange e.g. ORDERS01: Purchasing module: Inbound and Outbound IDOCs can be viewed in a text editor. Data is stored in character format instead of binary format. Structure of an IDOC The I doc structure consists of 3 parts – The administration part(Control Record)- which has the type of idoc, message type, the current status, the sender, receiver etc. This is referred to as the Control record. The application data (Data Record) – Which contains the data. These are called the data records/segments. The Status information (Status Record)- These give you information about the various stages the idoc has passed through. You can view an I-DOC using transaction WE02 or WE05 As seen the screenshot above IDOC record has three parts Control, Data and Status. Let’s look into them in detail – Control Record All control record data is stored in EDIDC table. The key to this table is the IDOC Number It contains information like IDOC number, the direction(inbound/outbound), sender, recipient information, channel it is using, which port it is using etc. Direction ‘1’ indicates outbound, ‘2’ indicates inbound. Data Record Data record contains application data like employee header info, weekly details, client details etc All data record data is stored in EDID2 to EDID4 tables and EDIDD is a structure where you can see its components. It contains data like the idoc number, name and number of the segment in the idoc, the hierarchy and the data The actual data is stored as a string in a field called SDATA, which is a 1000 char long field. Status Record Status record is attached to an I-DOC at every milestone or when it encounter errors. All status record data is stored in EDIDS table. Statuses 1-42 are for outbound while 50-75 for inbound IDOC Types An I DOC Type, (Basic) defines the structure and format of the business document that is to be exchanged. An IDOC is an instance of an IDOC Type , just like the concept of variables and variables types in programming languages. You can define IDOC types using WE30 What is a Segment? A Segment defines the format and structure of a data record in I-DOC. Segments are reusable components. For each segment SAP creates Segment Type (version independent) Segment Definition (version dependent) Segment Documentation The last 3 characters is the version of the segment Definitions keep changing as per the version but the segment type remains the same. Transaction:WE31 What is Extension IDOC type? An IDOC is of 2 types:- SAP provides many a pre-defined Basic IDOC Types which can not be modified. In case you want to add more data to these restricted basic type you may use an extension type. Most of the times you will NOT use extension. Documentation Each IDOC are thoroughly documented in transaction WE60 Message Type A message represents a specific type of document that is transmitted between two partners Ex. Orders, orders responses, invoices etc An idoc type can be associated with many message types Also, a message type can be associated with different idoc types. Transaction WE81 IDOC Views An IDOC type can be used for more than one message type, which results in IDOCs containing more fields than required for a particular message type. IDOC views are used to improve performance in generating IDOCs to ensure only the relevant segments are filled with data. IDOC Views are important only for Outbound Processing. Partner Profiles A partner is defined as a business partner with whom you conduct business and exchange documents In the partner profile of a partner that we exchange Idocs with, we maintain the parameters that are necessary for exchanging the data. The transaction used is WE20. Port The port defines the technical characteristics of the connection between your SAP system and the other system you want to transfer data with (subsystem). The port defines the medium in which data is exchanged between the 2 systems. There are different types of ports. The 2 most commonly used are the TRFC ports used in ALE and File ports which EDI uses. For TRFC ports we have to give the name of the logical destination created using SM59. When using file port you can specify the directory where the IDOC file should be placed. The other system or the middleware will pick up the file from here. The Function module can be used to generate a file name for the idoc. While Testing you can use “Outbound file” to specify a constant file name. The tab “outbound trigger” can be used to supply information if we want to trigger some processing on the subsystem when an idoc is created at this location. We have to specify the command file name and the directory which has to be run. This is so CONFUSING! Let’s understand the process of creating an IDOC with an example – Whenever a Purchase Order (PO) is created we want to send the IDOC to a vendor. The PO is sent in the form of an IDOC to the vendor (partner). That partner has to be EDI enabled in that system. SAP should realize that it could send doc to this vendor electronically. The PO sent as an outbound idoc by the customer will be inbound idoc for the vendor. The SAP system on the vendor’s side can process this to create an application document (a sales order) on their system. Quotation, RFQ, PO, SO, Invoice, delivery note etc are some of the commonly exchanged documents through IDOC The process of data transfer out of your SAP system is called the Outbound process, while that of data moving into you SAP system is called Inbound process. As a developer or a consultant who will be involved in setting up theses process for your organization. Here are the steps how to set them up- The Outbound Process Steps Involved – Create segments(WE31) Create an idoc type(WE30) Create a message type (WE81) Associate a message type to idoc type(WE82) Create a port(WE21) If you are going to use the message control method to trigger idocs then create the function module for creating the idoc and associate the function module to an outbound process code Otherwise, create the function module or stand-alone program which will create the idoc Create a partner profile(WE20) with the necessary information in the outbound parameters for the partner you want to exchange the idoc with.Trigger the idoc. The Inbound Process Steps Involved-Creation of basic Idoc type (Transaction WE30) Creating message type (Transaction WE81) Associating the Message type to basic Idoc type (Transaction WE82) Create the function module for processing the idoc Define the function module characteristics (BD51) Allocate the inbound function module to the message type(WE57) Defining process code (Transaction WE42) Creation of partner profile (Transaction WE20)

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