Important T-Codes for IDoc Processing

T-Code	Description	
WE02	Display IDoc (List)	
WE05	IDoc List	
WE19	IDoc Test Tool	
WE20	Partner Profile	
WE21	Port Definition	
WE30	IDoc Type Development	
WE31	Segment Creation	
WE60	IDoc Documentation	
WE81	Message Type Configuration	
WE82	Message Type and IDoc Type Link	
BD87	Process Inbound IDocs	
BD10	Send Material Master IDoc	
BD11	Send Customer Master IDoc	
BD12	Send Vendor Master IDoc	
BD13	Send Cost Center IDoc	





Common IDoc Types in SAP

IDoc Type	Description	Message Type
ORDERS05	Sales Order / Purchase Order	ORDERS
INVOIC02	Invoice Posting	INVOIC
MATMAS05	Material Master Data	MATMAS
DEBMAS06	Customer Master Data	DEBMAS
CREMAS05	Vendor Master Data	CREMAS
HRMD_A07	HR Master Data	HRMD_A
DELINS04	Delivery Schedule	DELINS
DESADV06	Shipping Notification (ASN - Advanced Shipping Notice)	DESADV
FINSTA01	Financial Status Update	FINSTA
PAYEXT01	Payment Order	PAYEXT
SDPIID01	Sales Pricing Conditions	COND_A
PRICAT01	Pricing Catalog	PRICAT
ORDCHG02	Order Change	ORDCHG
ORDRSP01	Order Response	ORDRSP
SHPMNT05	Shipment Data Transfer	SHPMNT
LSMW02	Legacy System Migration Workbench	LSMW
BOMMAT04	Bill of Materials Transfer	ВОММАТ





What is Idoc?

IDoc (Intermediate Document) is a standard SAP document format (data container) used for data exchange between SAP systems or between an SAP system and external systems. It is primarily used in EDI (Electronic Data Interchange) and ALE (Application Link Enabling) processes. IDocs allow structured data to be transferred in a standardized format.

1. What is EDI (Electronic Data Interchange)?

EDI is used for electronic communication between different business partners (external systems). It enables the structured exchange of business documents (e.g., purchase orders, invoices) between companies in a standardized format.

2. What is ALE (Application Link Enabling)?

ALE is used for data exchange between different SAP systems (SAP-to-SAP communication). It enables distributed processing by replicating and synchronizing master and transaction data across SAP landscapes.



Idoc Types

Types of IDocs

IDocs can be classified based on processing direction and usage:

1. Based on Processing Direction

- Inbound IDoc: Data flows into the SAP system from an external system.
- Outbound IDoc: Data flows out of the SAP system to an external system.

2. Based on Processing Mode

- Synchronous IDoc: Immediate processing (rarely used).
- Asynchronous IDoc: Processed later in the background.

3. Based on Usage

- Basic IDoc Types: Standard SAP structures defining the format of data.
- Extension IDoc Types: Custom-enhanced IDoc structures based on business needs.



What is EDI?

1. What is EDI (Electronic Data Interchange)?

EDI is used for electronic communication between different business partners (external systems). It enables the structured exchange of business documents (e.g., purchase orders, invoices) between companies in a standardized format.

- **Purpose:** Exchange of business documents between SAP and non-SAP systems.
- ◆ **Use Case:** B2B communication (e.g., SAP to a supplier's ERP system).
- ◆ **Data Format**: Uses standardized formats like ANSI X12, EDIFACT, IDoc, XML, JSON.
- ◆ **Processing Mode:** Mostly Outbound (send to external) and Inbound (receive from external).

Example EDI Flow:

SAP generates an Outbound IDoc (e.g., ORDERS for a sales order).

The IDoc is converted into an EDI format (e.g., EDIFACT) using middleware like SAP PI/PO, Seeburger, or Gentran.

The EDI message is sent to the trading partner's system.

The trading partner's system processes the message and may send an Inbound EDI response.

The response is converted back to an IDoc in SAP and processed accordingly.

★ Common EDI Messages in SAP:

ORDERS (Purchase Order)

INVOIC (Invoice)

DELINS (Delivery Schedule)

DESADV (Despatch Advice/Shipping Notice)





What is ALE?

2. What is ALE (Application Link Enabling)?

ALE is used for data exchange between different SAP systems (SAP-to-SAP communication). It enables distributed processing by replicating and synchronizing master and transaction data across SAP landscapes.

- **Purpose:** Communication between SAP systems within the same organization.
- **Use Case:** Transferring Material Master, Vendor Master, or Purchase Orders between SAP systems (e.g., SAP ECC to SAP S/4HANA).
- Data Format: Uses IDocs for data exchange.
- Processing Mode: Can be Real-time or Batch Processing.

Example ALE Flow:

The sending SAP system generates an Outbound IDoc.

The IDoc is transferred to the receiving SAP system using tRFC (Transactional RFC).

The receiving SAP system processes the Inbound IDoc and updates its database.

***** Common ALE IDocs:

MATMAS (Material Master Data Transfer)

DEBMAS (Customer Master Data Transfer)

CREMAS (Vendor Master Data Transfer)

HRMD_A (HR Master Data Transfer)





Difference between EDI & ALE?

Feature	EDI (Electronic Data Interchange)	ALE (Application Link Enabling)
Purpose	B2B Communication (SAP ↔ Non-SAP)	SAP-to-SAP Communication
Use Case	Exchanging documents with external partners (e.g., customers, suppliers)	Data distribution within SAP systems
Formats	ANSI X12, EDIFACT, XML, JSON, IDoc	IDoc only
Communication	Uses middleware (SAP PI/PO, Seeburger, etc.)	Uses RFC, tRFC, or qRFC
Processing Mode	Mostly asynchronous	Can be real-time or batch

