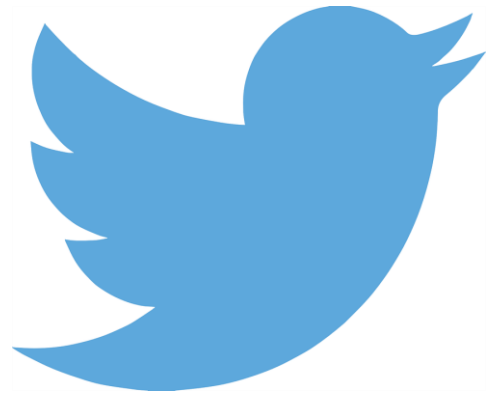


General Data Protection Regulation (GDPR) in Oracle E-Business Suite



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Individual Rights

- **Right to be informed** – What is the organization using your data for?
- **Right of access** – What data does an organization hold about you?
- **Right to rectification** – Ensure data held about you is accurate.
- **Right to erasure** – Have personal data held about you removed.
- **Right to restrict processing** – Limit how an organization uses your data.
- **Right to data portability** – Reuse your data across different services.
- **Right to object** – Object to an organization using your personal data.
- **Rights related to automated decision making** – General restrictions.

Definitions

Article 4 - Definitions (<http://data.consilium.europa.eu>)

For the purposes of this Regulation:

1. 'personal data' means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person;
2. 'processing' means any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means, such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction;

Accountability

- An organization is responsible for ensuring it complies with the GDPR.
 - Must be able to demonstrate compliance.
- Records must be kept of processing purposes, data sharing, retention.
 - May be required to make these available to the ICO on request.
- Data breaches must be reported within 72 hours.
 - Individuals may also need to be informed in some instances.
- Restrictions imposed on the transfer of data outside the EU.
- Penalties for non-compliance can be up to **€20M** or **4% of total worldwide annual turnover** (whichever is higher).

Personal Data in Oracle E-Business Suite

- Oracle recognize the following as potential sources of personal information in E-Business Suite.
 - HR Person
 - TCA Party (Customers and Suppliers)
 - FND User
- Oracle do not support customisations or customer-specific configurations.

Person Data Removal Tool (PDRT)

- Recently released by Oracle. Document ID **2388237.1**.
- Installed as a patch, available for R12.1 and R12.2.
- Identifies personal data associated with HR people, TCA parties and FND users in the database tables.
- Provides many rules and constraints to verify a person does not have any active transactions etc.
 - These may be extended to address additional requirements.
- Data overwritten or obfuscated according to rules.

Person Data Removal Tool (PDRT)

Table Details

Search:
 Product Name: Schema: Table Name: Version:

Results:
 Row Identifier:

Entity Type: Phase:

Column Details

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Select	Column Name	Flexfield Type	Attribute	Data Type	Null Allowed	Comments	Phase	Rule Type	Parameter 1	Parameter 2	Delete
<input type="radio"/>	APPLICANT_NUMBER	NONE	Employee Number	VARCHAR2(30)	Y		1	Random Number	-999999	-100000	
<input type="radio"/>	BLOOD_TYPE	NONE	Health Information	VARCHAR2(30)	Y		1	NULL			
<input type="radio"/>	DATE_OF_BIRTH	NONE	Personal information	DATE	Y		1	User Defined Function	per_drt_pkg	overwrite_date	
<input type="radio"/>	DATE_OF_DEATH	NONE	Personal information	DATE	Y		1	User Defined Function	per_drt_pkg	overwrite_date	
<input type="radio"/>	EMAIL_ADDRESS	NONE	Business Email Address	VARCHAR2(240)	Y		2	User Defined Function	per_drt_rules	name2mail	
<input type="radio"/>	EMPLOYEE_NUMBER	NONE	Employee Number	VARCHAR2(30)	Y		1	Random Number	-999999	-100000	
<input type="radio"/>	FIRST_NAME	NONE	Employee Name	VARCHAR2(150)	Y		1	User Defined Function	per_drt_udf	overwrite_name	
<input type="radio"/>	FULL_NAME	NONE	Dependent Name	VARCHAR2(240)	Y		2	User Defined Function	per_drt_pkg	overwrite_derived_nan	
<input type="radio"/>	GLOBAL_NAME	NONE	Dependent Name	VARCHAR2(240)	Y		2	User Defined Function	per_drt_pkg	overwrite_derived_nan	
<input type="radio"/>	HONORS	NONE	Personal information	VARCHAR2(45)	Y		1	NULL			

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Person Data Removal Tool (PDRT)

Person Data Removal

✔ **TIP** Use this page to search for persons and to remove person data attributes.

Views

View:

Actions:

[Select All](#) | [Select None](#)

Select	Person Name	Entity Type	ID	Status	Constraints	Error Count	Warning Count	Override	Warning Notes	Last Run ID	Run Date
<input type="checkbox"/>	Jones, Miss Tina	HR	1011	Errors Exist		1	0	<input type="text"/>	<input type="text"/>	9233020	22-May-2018 10:56:25
<input type="checkbox"/>	R-HTKYRV	FND	1013439	Removed							1:33:22

Constraint Details

Person Name: **Jones, Miss Tina** ID: **1011**
Entity Type: **HR** Status: **Errors Exist**

Person ID	Constraint Entity Type	Message
1011	HR E	Human Resources: This person is a current contact of another person. Close the active contact relationship.

[About this Page](#) [Privacy Statement](#) [Preferences](#)

Person Data Removal Tool (PDRT)

- Only processes **standard** database fields.
- Deals with the **Right to Erasure** only.
 - Does not facilitate in complying with **Subject Access Requests**.
 - Organizations should catalogue sources of personal data for such cases.
 - Remember to include replicated data – Data Warehouse, Access Databases, Spreadsheets, Printed Documents etc.
- There are however many different *potential* sources of personal information in an E-Business Suite system...

Personal Data in Oracle E-Business Suite

- Flexfield Segments
- Special/Extra Information Types
- Workflow History
- Configurable Processes
 - Audit Trail
 - Oracle Alert
 - Concurrent Request Parameters
- Supporting Systems
 - Application Express
 - OBIEE
- Binary Format
 - Invoices
 - Medical Notes
- Customizations

Identifying Personal Information

- Can be particularly challenging for configuration items.
 - Descriptive Flexfields etc. Particularly **Non-Validated** segments.
- Identify Sources to **Interrogate Metadata**.

Segment Values

Value Set: Value Set Key Flexfield Descriptive Flexfield Concurrent Program

Title: Accounting Flexfield Structure: Vision Health Services /

Independent Segment: Cost Center Dependent Segment:

Independent Value: Value Description:

Values (Cost Center)

Values, Effective Values, Hierarchy, Qualifiers

Value	Translated Value	Description	Enabled	From	To
0000	0000	Balance Sheet	<input checked="" type="checkbox"/>		
1000	1000	Administration	<input checked="" type="checkbox"/>		
1010	1010				
1020	1020				
1030	1030	Budget Manager			
1040	1040				
1050	1050				

Flexfield Segment Values

Mr. J Keymer

OK Cancel

Invoice Workbench (Payables, Vision Operations (USA))

Batch Control Total Batch Actual Total

Invoice

Responsible Person: John Keymer

Context:

OK Cancel Clear Help

1 General

Summary

Items Retainage Prepayments Applied

Amount Paid: USD 0.00

Status: Never Validated, Accounted, Unprocessed, Approval, Not Required

Identifying Personal Information

- **Oracle Data Masking and Subsetting Pack** provides functionality to mask data, remove unnecessary records and perform data discovery activities on the database.
 - Pre-built Masking Packs are available for E-Business Suite. Note **2216575.1**.
 - Works at the **database level** only.
- Aimed more at masking of production instance clones (i.e. Development and Test environments) rather than specific GDPR requests.
- Can perform data discovery and identification of sensitive database columns.
- Requires the Data Masking and Subsetting Pack to be licensed.

Identifying Personal Information

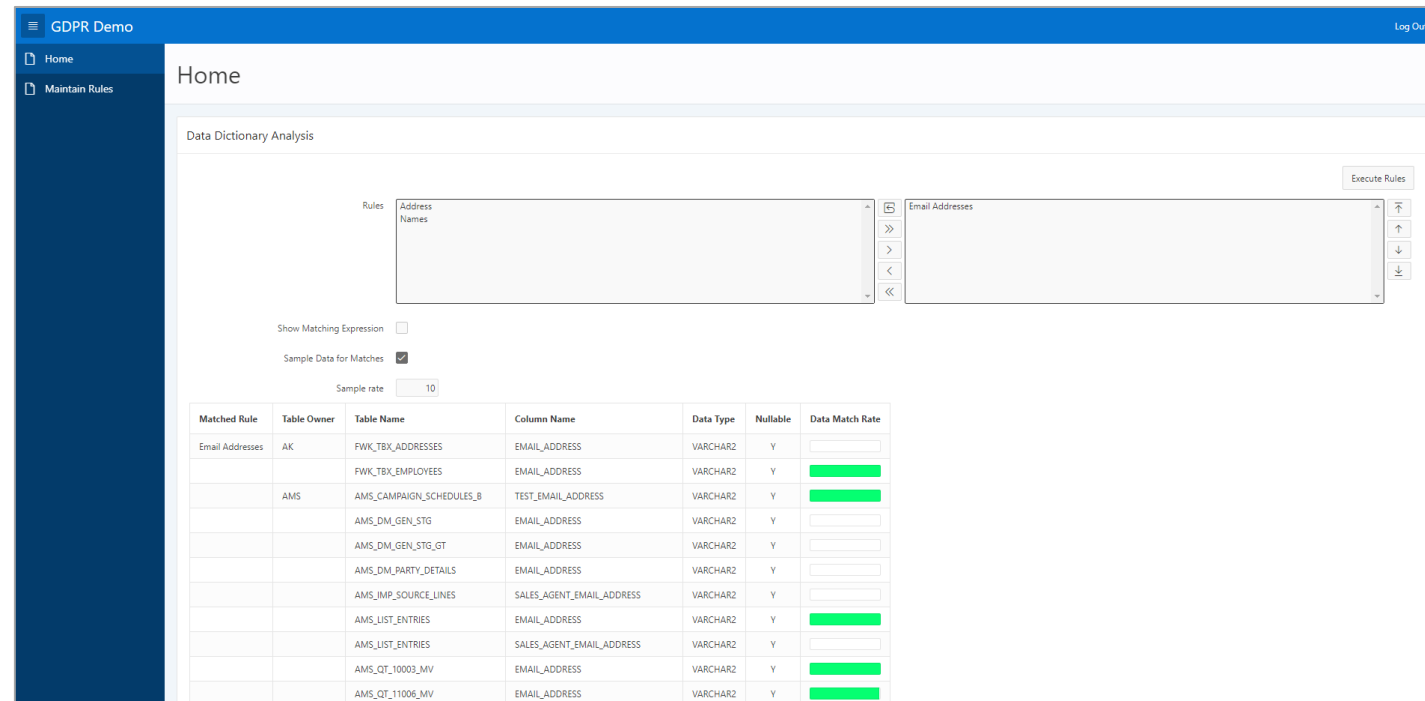
- Traditional tools.
 - Time consuming
 - Non-Intuitive

```
select t.owner, t.table_name, c.column_name, t.num_rows, c.num_distinct
  from all_tab_cols c, all_tables t
 where t.owner=c.owner
       and t.table_name = c.table_name
       and c.column_name like '%EMAIL%ADDRESS%'
       and t.num_rows > 0
       and c.table_name not like 'XX%'
 order by t.owner, t.table_name, c.column_name;
```

OWNER	TABLE_NAME	COLUMN_NAME	NUM_ROWS	NUM_DISTINCT
AK	FWK_TBX_ADDRESSES	EMAIL_ADDRESS	8	8
AK	FWK_TBX_EMPLOYEES	EMAIL_ADDRESS	7	7
AP	AP_SUPPLIER_CONTACTS	EMAIL_ADDRESS	2412	6
AP	AP_SUPPLIER_SITES_ALL	EMAIL_ADDRESS	8052	915
APEX_04010	WWV_FLOW_FND_USER	EMAIL_ADDRESS	7	6
APEX_05000	WWV_FLOW_FND_USER	EMAIL_ADDRESS	8	7

Identifying Personal Information

- Modern Tools
 - Extensible
 - Visual



The screenshot displays a web application interface for GDPR analysis. The main content area is titled 'Data Dictionary Analysis' and features a rule configuration section. On the left, a list of rules includes 'Address' and 'Names'. On the right, a list of email addresses is shown. Below this, there are checkboxes for 'Show Matching Expression' (unchecked) and 'Sample Data for Matches' (checked), along with a 'Sample rate' input set to '10'. An 'Execute Rules' button is located in the top right corner of the analysis area.

Matched Rule	Table Owner	Table Name	Column Name	Data Type	Nullable	Data Match Rate
Email Addresses	AK	FWK_TBX_ADDRESSES	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		FWK_TBX_EMPLOYEES	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
	AMS	AMS_CAMPAIGN_SCHEDULES_B	TEST_EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		AMS_DM_GEN_STG	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		AMS_DM_GEN_STG_GT	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		AMS_DM_PARTY_DETAILS	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		AMS_IMP_SOURCE_LINES	SALES_AGENT_EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		AMS_LIST_ENTRIES	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		AMS_LIST_ENTRIES	SALES_AGENT_EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		AMS_QT_10003_MV	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
		AMS_QT_11006_MV	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>

- Prototype investigation application.

Identifying Personal Information

- Scans **Metadata** for patterns in names.
- **Samples** the data in the table for patterns to give a data confidence rating.
- Can be extended to any number of **rules**.
- Future extensions may be to analyse configuration metadata.
 - Descriptive Flexfields etc.

AR	AR_DOCUMENT_TRANSFERS	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
	HZ_CONTACT_POINTS	EMAIL_ADDRESS	VARCHAR2	Y	<input type="checkbox"/>
	HZ_CONTACT_POINT_VAL_GT	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
	HZ_IMP_CONTACTPTS_INT	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
	HZ_PARTIES	EMAIL_ADDRESS	VARCHAR2	Y	<input type="checkbox"/>
	RA_CONTACTS	EMAIL_ADDRESS	VARCHAR2	Y	<input type="checkbox"/>
	RA_CONTACT_PHONES_INT_ALL	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
	RA_SALESREPS_ALL_OLD	EMAIL_ADDRESS	VARCHAR2	Y	<input type="checkbox"/>
BEN	BEN_CWB_PERSON_INFO	EMAIL_ADDRESS	VARCHAR2	Y	<input type="checkbox"/>
CE	CE_UPGA_CONT_POINT_REC	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
	CE_UPG_CONT_POINT_REC	EMAIL_ADDRESS	VARCHAR2	Y	<input type="checkbox"/>
CN	CN_D_COMP_GRP_B	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
	CN_D_SALESREPS	EMAIL_ADDRESS	VARCHAR2	Y	<input type="checkbox"/>
	CN_SALESREPS_API_ALL	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>
	EC_CN_D_COMP_GRP_B	EMAIL_ADDRESS	VARCHAR2	Y	<input type="text"/>

Identifying Personal Information

Rules [Save](#)

Q

<input type="checkbox"/>	<input type="checkbox"/>	Rule Name	Description
<input type="checkbox"/>	<input type="checkbox"/>	Names	Find name fields.
<input type="checkbox"/>	<input type="checkbox"/>	Address	Find Address fields
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Email Addresses	Identify email addresses

1 rows selected Total 3

Rule Lines

Q

<input type="checkbox"/>	<input type="checkbox"/>	Column Expression	Data Expression
<input type="checkbox"/>	<input type="checkbox"/>	E*MAIL_*ADDRESS	[[[:alnum:]]\.\+\@[[[:alnum:]]\.\.+\]]

Total 1

Identifying Personal Information

- Binary objects can be particularly problematic
 - PDF
 - Word
 - Images
- **Oracle Text** can interrogate some of these documents.
 - Not likely to be useful for cataloguing personal information due to unstructured nature of documents.
 - Better Suited to individual requests.
 - Free feature of the Oracle Database.

Identifying Personal Information

```

create table xxjktst as select * from fnd_lobs where file_id between 1395644 and 1395706;

create index xxjktst_idx on xxjktst(file_data)
indextype is ctxsys.context;

select file_name, file_content_type, file_data from xxjktst where contains(file_data, 'MCCARTNEY') > 0
    
```

Row#	FILE_NAME	FILE_CONTENT_TYPE	FILE_DATA
2	RELEASE_1448_242_0_US.pdf	application/pdf	(HUGEBL...
3	RELEASE_1448_242_0_US.pdf	application/pdf	(HUGEBL...
4	RELEASE_1448_242_0_US.pdf	application/pdf	(HUGEBL...
5	RELEASE_1448_242_0_US.pdf	application/pdf	(HUGEBL...
6	RELEASE_1448_242_0_US.pdf	application/pdf	(HUGEBL...
7	RELEASE_1448_242_0_US.pdf	application/pdf	(HUGEBL...
8	RELEASE_1448_242_0_US.pdf	application/pdf	(HUGEBL...
9	PO_1448_458_0_US.pdf	application/pdf	(HUGEBL...
10	PO_1448_460_0_US.pdf	application/pdf	(HUGEBL...

Standard Purchase Order 458, 0

Progress Master 1000 Progress Blvd Redwood Shores, CA 94065 United States	<table border="1"> <tr><td>Type</td><td>Standard Purchase Order</td></tr> <tr><td>Order</td><td>458</td></tr> <tr><td>Revision</td><td>0</td></tr> <tr><td>Order Date</td><td>17-FEB-2006</td></tr> <tr><td>Created By</td><td>McCartney, MR. Paul</td></tr> <tr><td>Revision Date</td><td></td></tr> <tr><td>Revised By</td><td></td></tr> </table>	Type	Standard Purchase Order	Order	458	Revision	0	Order Date	17-FEB-2006	Created By	McCartney, MR. Paul	Revision Date		Revised By	
Type	Standard Purchase Order														
Order	458														
Revision	0														
Order Date	17-FEB-2006														
Created By	McCartney, MR. Paul														
Revision Date															
Revised By															
Supplier: Advantage Corp 100 Elm Street Richmond, VA 23173 United States															
Ship To: 1000 Progress Blvd Redwood Shores, CA 94065 United States															
Bill To: 1000 Progress Blvd Redwood Shores, CA 94065 United States															

Customer Account No.	Supplier No.	Payment Terms	Freight Terms	FOB	Transportation	Ship Via
	1010	45 Net (terms date + 45)	Due	Origin		UPS
Confirm To Telephone			Requester/Deliver To			

Notes: All prices and amounts on this order are expressed in USD

Line	Part Number / Description	Delivery Date/Time	Quantity	UOM	Unit Price (USD)	Tax	Amount (USD)
1	CE00810 Color LCD Thin Panel Monitor		137	Each	1300	N	178,100.00

Ship To:
Use the ship-to address at the top of page 1

Summary

- Identifying sources of personal information is a complex and involved process.
- The architecture of customisations and configurations has a great impact on the ability to identify and interrogate data.
 - DFF/EIT/SIT design.
 - Unstructured data in attachments.
 - Data Replication and Master Data Management.
- This is **an ongoing process** (GDPR mandates this).

References

Guide to the General Data Protection Regulation (GDPR)

<https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/>

General Data Protection Regulation

<http://data.consilium.europa.eu/doc/document/ST-5419-2016-INIT/en/pdf>

Oracle E-Business suite Person Data Removal Tool (PDRT) Release Notes

https://support.oracle.com/epmos/faces/DocumentDisplay?_afLoop=296456833264575&id=2388237.1

EU General Data Protection Regulation (GDPR) and Oracle E-Business Suite (EBS) – Considerations and Product Capabilities

https://support.oracle.com/epmos/faces/DocumentDisplay?_afLoop=296497650763815&id=2363912.1

General Data Protection Regulation (GDPR) in Oracle E-Business Suite



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