

Appendix 2

IdM-V2 Reporting Module

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1. Objective

The objective of this project is to create a Report Module to cover reporting requirements on IdM-V2 User Accounts and related background data configurations. As such, the final product is composed by two different sub-modules:

- Accounts sub-module: includes reporting related with user Accounts
- Configuration Data sub-module: includes reporting related with the background data configuration

Reporting Module will be accessible to users with the necessary privileges to view IdM-V2 data.

IdM-V2 report module shall be developed using JASPER BI suite and it shall be deployed at EMSA's JASPER BI Horizontal framework according to the mandatory requirements defined in document Appendix 3 "JASPER Technical Overview".

Implementation Project shall follow the Project Delivery requirements defined in document Appendix 4 "Project Delivery".

Within their bids, bidders must describe with as much detail as possible:

- The technical solution and approach to be used;
- Any deviation from the technical requirements or Project delivery requirements.

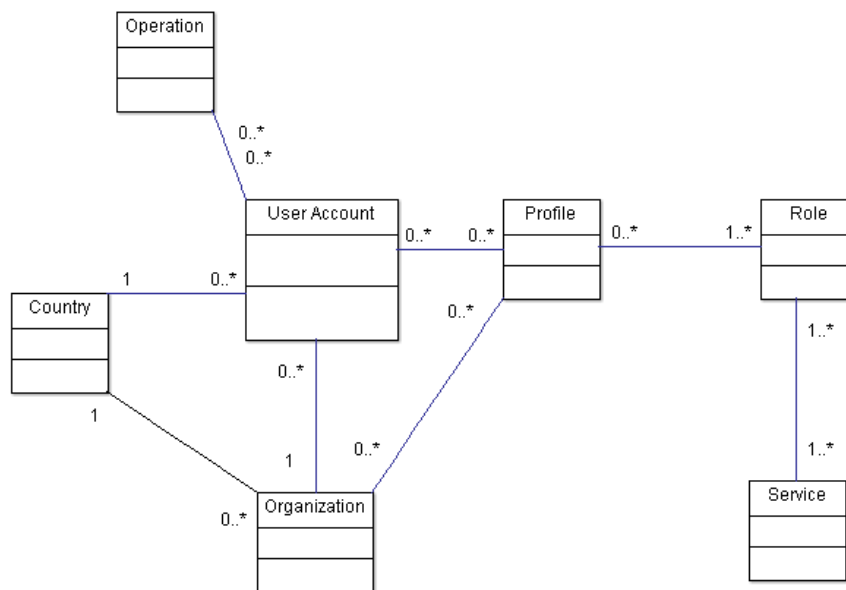
2. Background information

Accounts (aka Users) are the central entity of any Identity Management system; it represents someone (human) behind a device or some other system and pretends to use a protected resource.

Accounts have attributes and are also related with other entities. In a simplified manner, the following business rules are applicable:

- User Account has a set of attributes
- User Account has **one and only one** Country/Institution
- User Account has **one and only one** Organization
- User Account has **zero or more** Operations
- User Account has **zero or more** Profiles. From this relationship, a:
 - User Account has **zero or more** Roles
 - User Account has **zero or more** Services
- Profile may include **one or several** Roles.
- Roles may be used by **none, one or several** Profiles.
- Each Role belongs to **one unique** Service.

From the above, it is clear that other entities also exist to allow an account to be fully configurable. The following image shows a high-level ER diagram where all these relations are represented:



3. Sources of information

Having in mind the two sub-modules previously identified, the sources of information are also two:

- Accounts sub-module: EMSA's IdM-V2 database has currently defined a set of database views, the IDM USER Views, that contains all information needed for this sub-module;
- Configuration Data sub-module: all background information used is stored in EMSA's Staging Area/Database.

3.1 IDM USER VIEWS

IDM_USER_V - IDM USER VIEW

Contains the Accounts and its attributes:

ACCOUNT_ID
FIRST_NAME
COUNTRY_CODE
DISABLE_DATE
FIRST_NAME
ALERT_PHONE
ORGANIZATION
ALERT_EMAIL
ORGANIZATION_CODE
STATUS
SECURITY_LEVEL_CODE
CATEGORY_TYPE
INITIALS
COUNTRY
EMAIL
LAST_NAME
TYPE
SECURITY_LEVEL_DESC
LAST_UPDATE
FAX
MIDDLE_NAME

ADDRESS
CONTACT_PHONE

IDM_USER_SP_V - IDM USER, SERVICES and PROFILES VIEW

Contains information about the relationships between Accounts, Services and Profiles

ACCOUNT_ID
SERVICE
SERVICE_CODE
PROFILE
PROFILE_CODE

IDM_USER_PR_V - IDM USER PROFILES and ROLES

Contains information about the relationships between Accounts, Profiles and Roles

ACCOUNT_ID
PROFILE
PROFILE_CODE
ROLE
ROLE_CODE

IDM_USER_OP_V – IDM USERS OPERATIONS

Contains information about the relationships between Accounts and Operations

ACCOUNT_ID
OPERATION
OPERATION_CODE

3.2 Staging Area/Database

In sort, and referring to the previous ER diagram presented in the “Background Information” chapter, the following entities and their relationships are part of the Staging Database:

- Countries/Institutions
- Organizations
- Services
- Profiles
- Roles
- Operations

Please refer to Appendix 8 for a detailed specification of the Staging Database.

4. Mandatory Requirements

The following points are mandatory requirements for the implementation of the reporting sub-modules defined in the next chapters:

- Design and implementation shall follow the technical specification provided in the “JASPER Technical Overview” appendix.
Within their bids, bidders shall state and describe if and how they comply with the above mandatory requirements. If any deviation is foreseen, it must be explicitly stated and the reasons and impacts clearly presented, and possible solution described in detail;
- ETL processes shall be designed and implemented using Talend (Jasper ETL). This ETL process is responsible for handling the information and making it available in an adequate structure and format to produce outputs identified in the requirements.
Within their bids, bidders shall describe with as much details as possible how the ETL process will be implemented and deployed at EMSA’s JASPER Horizontal framework;
- Design, Implementation and deliverables shall cover (but are not limited to) Database design, Datasource definitions, Domains definitions, Ad-Hoc Views, Reports and Dashboards.

Within their bids, bidders shall list as much details and as complete as possible all the foreseen deliverables to be provided within the scope of this project.

- Results (reports, dashboards, ...) shall be integrated/embedded into EMSA Portal

Within their bids, bidders shall list as much details and as complete as possible how they will address this integration and what technical means (e.g. REST services, HTML integration, Javascript API) will they plan to use.

5. Requirements for the Accounts Report sub-module

Based on the Source of information identified above as “the IDM USER Views”, the contractor shall:

ETL process

Design, implement, test and deploy an ETL process responsible for handling the information and making it available in an adequate structure and format to produce dashboards and reports identified below and to keep historical information to allow future analysis.

It must be possible to configure the time interval for running the ETL process (e.g. daily, every 10 minutes, ...) as well as on demand.

Within their bids, bidders must describe with much details as possible how the ETL process will be implemented and deployed at EMSA’s JASPER Horizontal framework.

Dashboard

Objective	Dashboard Provide a Global dashboard containing the following minimum set of information:
Minimum set of information	Total number of Accounts with the possibility of drill-down ¹ <ul style="list-style-type: none"> • Total number of Accounts per Type • Total number of Accounts per Country/Institution • Total number of Accounts per Organization • Total number of Accounts per Service • Total number of Accounts per Profile • Total number of Accounts per Operation
List of input attributes for restrict/filtering	It shall be possible to restrict/filter the Dashboard information by a date interval (begin and end date) using the Date of Last Change. <ol style="list-style-type: none"> a. No begin and no end date specified: all time (no filter applied) b. Begin date but no end date: from begin date until now c. End date specified but no begin date: since ever until End date d. Begin and End date specified: from Begin date until End date

Reports

Output	HTML with export to PDF, XLS
List of input attributes for restrict/filtering	Type Country/Institution Organization Service Profile Last change interval: begin date, end date Status
Output attributes	Account attributes to be reported are available in IDM USER VIEWS only. Mandatory attributes (always present) and optional attributes shall be decided during project execution

¹ Order of the items below is not mandatory or hieratical.

Two predefined reports shall be provided:

- System Accounts: List all System Accounts
Fixed report where Type=System. All other filter attributes can be applied to restrict the output
- Human Accounts: List all Human Accounts
Fixed report where Type=Human. All other filter attributes can be applied to restrict the output

Within their bids, bidder must describe as detailed as possible:

- How the dashboard and reports will be implemented and how they will work;
- Provide wireframes or mockups for possible solutions to present the dashboard;
- Provide wireframes or mockups for possible solutions to present the reports selection criteria and generated report;
- How dashboard and reports will be integrated/ embedded into EMSA Portal
- Any other dashboard or report that is considered to add value to the sub-module.

6. Configuration Data sub-module

Based on the Source of information identified above as “Staging Area/Database”, the contractor shall:

ETL process

Design, implement, test and deploy an ETL process responsible for handling the information and making it available in an adequate structure and format to produce the dashboards and reports identified. It must be possible to configure the time interval for running the ETL process (e.g. daily, every 10 minutes, ...) as well as on demand.

Within their bids, bidders must describe with as much details as possible how the ETL process will be implemented and deployed at EMSA’s JASPER Horizontal framework.

Dashboard

Dashboard	Provide a Global dashboard containing the following minimum set of information
Minimum set of information	<ul style="list-style-type: none"> • Total number of Services, with drill-down to <ul style="list-style-type: none"> a. Profiles b. Roles • Total number of Profiles, with drill-down to <ul style="list-style-type: none"> a. Roles • Total number of Roles • Total number of Operations • Total number of Countries • Total number of Institutions • Total number of Organizations
List of input attributes for restrict/filtering	<p>It shall be possible to restrict/filter the Dashboard information by a date interval (begin and end date) using the Date of Last Change.</p> <ul style="list-style-type: none"> a. No begin and no end date specified: all time (no filter applied) b. Begin date but no end date: from begin date until now c. End date specified but no begin date: since ever until End date d. Begin and End date specified: from Begin date until End date

Reports

Output	HTML with export to PDF, XLS
List of input attributes for restrict/filtering	Service Profile Roles Status Last change interval: begin date, end date
Output attributes	Attributes to be reported are available in "Staging Database". Mandatory attributes (always present) and optional attributes shall be decided during project execution

Having in mind the previous conditions and requirements, the following predefined reports shall be provided:

- List of Profiles
- List of Roles
- List of Operations
- List of Countries/institutions
- List of Organizations
- List of Services, Profiles and Roles
- List of Profiles and Organizations
- List of Operations and Organizations

Within their bids, bidder must describe as detailed as possible:

- How the dashboard and reports will be implemented and how they will work;
- Provide wireframes or mockups for possible solutions to present the dashboard;
- Provide wireframes or mockups for possible solutions to present the reports selection criteria and generated report;
- How dashboard and reports will be integrated/ embedded into EMSA Portal
- Any other dashboard or report that is considered to add value to the sub-module.

ABOUT THE EUROPEAN MARITIME SAFETY AGENCY

The European Maritime Safety Agency is one of the European Union's decentralised agencies. Based in Lisbon, the Agency provides technical assistance and support to the European Commission and Member States in the development and implementation of EU legislation on maritime safety, pollution by ships and maritime security. It has also been given operational tasks in the field of oil pollution response, vessel monitoring and in long-range identification and tracking of vessels.

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