DMFAS 6 Training Modules

TECHNICAL TRAINING CATALOG

Spring 2015

DMFAS

What is the objective of DMFAS 6 technical training?

DMFAS 6 technical training aims at providing database administrators or IT staff with the knowledge and skills necessary to carry out all aspects of DMFAS administration at their institution.

Technical training consists of the following components:

- DMFAS 6 architecture
- DMFAS 6 database structure
- Operation and maintenance of the DMFAS 6 software
- Network administration
- Application servers
- Maintenance of computer equipment
- Maintenance of the DMFAS 6 software
- Reference material for DMFAS administration

The DMFAS Programme ensures that technical staff who receive technical training are then able to perform all the tasks and operations relating to DMFAS administration.

What are the prerequisites for DMFAS 6 technical training?

Participants must satisfy certain prerequisites in order to enroll in DMFAS technical training. Participants should have:

- A good knowledge of the Oracle database, preferably 11g or later

- The role of DMFAS administrator or database administrator or a role involving technical support to DMFAS 6 users

- A back-up of the DMFAS 6 database used at the institution for use in upgrade training

DMFAS 6 architecture

DMFAS 6 architecture covers the technical foundation, tools and standards on which the software was built. Topics are as follows:

- Software architecture in general

- DMFAS 6 design standards

- 3-tier architecture

- Java technology

- Other programming features

- DMFAS 6 development tools

- Security considerations

DMFAS 6 database structure

Database structure encompasses the nuts and bolts of the DMFAS database and covers:

- A review of basic database concepts

- The DMFAS 6 database

- Reference material

Operation and maintenance of the DMFAS 6 software

This is one of the key components of DMFAS technical training. Knowledge of the following topics is indispensable for DMFAS administration:

- The DMFAS 6 environment: program locations, directory structures and files
- Back-up strategies and techniques
- Regular administration tasks: optimization of the database, Control Panel parameters, clean work tables, background processes, etc.
- How to set up a DMFAS workstation
- DMFAS 6 security
- DMFAS 6 auditing

Network administration

This component of technical training applies to the administration of the network on which the DMFAS software is run. The topics include:

- Granting and revoking access to the files required for DMFAS in accordance with the rules of the institution
- Backing-up DMFAS software components regularly and storing them on a secure server
- Optimizing the network to deliver maximum response time to users
- Upgrading or changing the network operating system
- Migrating DMFAS software to new network versions as needed.

Application servers

Application servers are an integral part of all web-based applications. DMFAS 6 supports Apache Tomcat, Jboss Application Server and Oracle Application Server. Training will focus on specific instructions and recommendations tailored to the application server in use at the. The topics may include:

- Installing the Java Development Kit (JDK), a prerequisite for the installation of an application server
- Installing and configuring the application server
- The directory structure of the application server
- Optional tasks for optimizing the performance of the application server

Maintenance of computer equipment

This component of technical training applies to the computer hardware on which the DMFAS software is run. The topics include:

- Upgrading the operating system and other middleware on the workstation(s) and server(s)
- Investigating hardware issues which users may encounter with the DMFAS software and which may affect their use of the system
- Trouble-shooting hardware problems not related to the internal functioning of DMFAS but which may affect its use

Maintenance of the DMFAS 6 software

As the DMFAS 6 software is updated on a regular basis, DMFAS administrators need to be aware of the process and procedures necessary for keeping their system current. These include:

- Performing the regular administration and maintenance tasks such as setting the system parameters and cleaning the work tables

- Installing upgrades and fixes sent by the DMFAS Programme for the software

- Using Trac, a web-based application for communicating with the DMFAS Helpdesk in order to record, track and resolve issues relating to DMFAS 6

Reference material for DMFAS administration

During the training, the instructor will present all the reference material available for DMFAS administration. The Programme has developed extensive, regularly updated technical documentation such as the *DMFAS 6 Installation Guide*, *The Hardware, Software and Training Requirements for DMFAS 6*, *Data Diagrams for DMFAS Database Tables*, the *DMFAS 6 Control Panel User's Guide* and so on.

The instructor will provide participants with electronic copies of these and other useful references during the training.
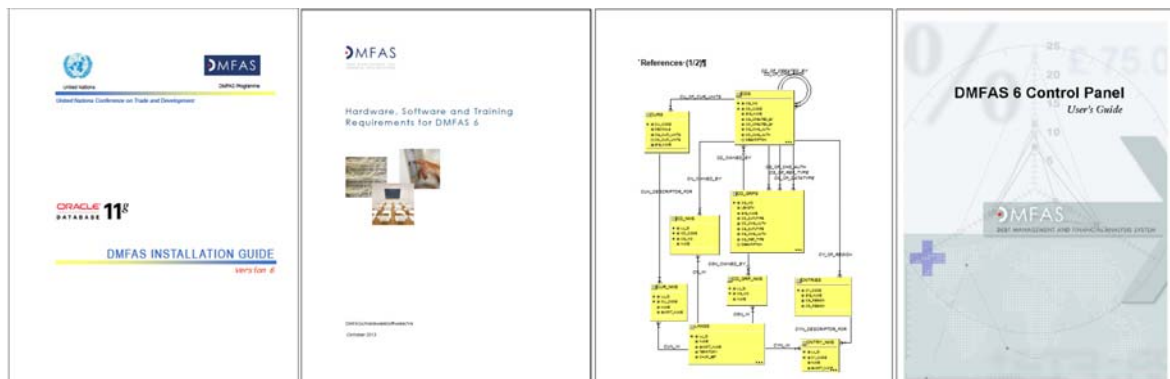
Above some of the key reference material available for DMFAS administration.

Module 14: The DMFAS 6 Control Panel

Target audience	The two types of users of the Control Panel:
	- The database administrator (DBA)
	- The DMFAS functional administrator who is expert in debt management operations and who may also have knowledge of issues relating to system performance and/or database management
	Each type of individual can be responsible for the installation, maintenance and administration of DMFAS at a site.
Prerequisites	Familiarity with DMFAS 5.3
Duration	3-4 hours (depending on the number of participants)
Objective of the module	Learn about the different modules available in the DMFAS 6 Control Panel.
Skills developed	After completing this module, the participant will be able to:
	- Configure the installation and module parameters of DMFAS
	- Assess the usefulness of the Security and Auditing modules for his/her institution
	- Customize the DMFAS software
	- Apply the Support functions as needed
	- Monitor scheduled background operations or calculations
Content	What is the Control Panel?
	Who should use the Control Panel?
	How to access
	Documentation on the Control Panel
	Installation Parameters
	Module Parameters
	The Security module
	Customizing DMFAS
	The Support module
	The Auditing module
	Background Processing
Modality	Presentation made by the trainer during the classroom.
	Practice of DMFAS 6 Control Panel
	Q&A session.
Evaluation	Informal evaluation using a quiz
Material	PowerPoint hand-outs

Target audience	The two types of users of the DMFAS 6 Control Panel:
	- The database administrators (DBAs)
	- The DMFAS functional administrator who is expert in debt management operations and who may also have knowledge of issues relating to system performance and/or database management
	Each type of individual can be responsible for the installation, maintenance and administration of DMFAS at a site.
Prerequisites	Familiarity with DMFAS 5.3
Duration	1-2 days (depending on functionalities used by the institution)
Objective of the module	Use the DMFAS 6 Security and Auditing modules to ensure the integrity and protection of the institution's data.
Skills developed	After completing this module, the participant will be able to:
	- Set up a security scheme
	- Implement auditing according to the institution's needs
Content (in two parts)	**DMFAS security and auditing and operational risk management**
	About the Control Panel
	About the Security module
	Basic security concepts * The best way to set up security * Characteristics of a good scheme * Overview of the process in DMFAS * Details of the process * Activate the security scheme
	Specific feature for report security
	Data Export Security
	About the Auditing module
	Define Auditing Parameters * Detailed Auditing Log
Modality	Presentation made by the trainer during the classroom
	Exercises
	Q&A session
Evaluation	Informal evaluation using a quiz
Material	PowerPoint hand-outs

Target audience	Database administrators (DBA), the DMFAS functional administrator or any individual responsible for the installation, maintenance and administration of DMFAS at a site.
Prerequisites	Familiarity with DMFAS 5.3
Duration	1-2 days
Objective	Learn about DMFAS 6 architecture
Skills developed	After completing this module, the participant will be able to: - Define software architecture - Specify DMFAS 6 design standards - Explain what is meant by 3-tier architecture - Designate the Java technology in use - Describe certain programming features - Indicate the main DMFAS 6 development tools - Identify the security inherent in DMFAS 6
Content	**Software architecture** What is software architecture? * Standard on software architecture * Architecture Description **DMFAS 6 design standards** Rational Unified Process (RUP) * RUP and best practices * Unified Modeling Language (UML) **3-tier architecture** Presentation, business logic, data tier * DMFAS 6 and browsers * DMFAS 6 and application servers * Oracle RDBMS **Java technology** What is Java technology? * Java programming language * Java source code * Jave EE * JavaServer Faces (JSF) **Other programming features** What is Java technology? * Java programming language * Java source code * Jave EE * JavaServer Faces (JSF) **DMFAS 6 development tools** Eclipse * Eclipse BIRT * Oracle SQL Developer **Security considerations** The Security module * The Auditing module * Spring Security * Single sign-on **Conclusion**
Modality	Presentation made by the trainer during the classroom Exercises Q&A session
Evaluation	Informal evaluation using a quiz
Material	PowerPoint hand-outs

Module 18: Database Structure

Target audience	Database administrators (DBA), the DMFAS functional administrator or any individual responsible for the installation, maintenance and administration of DMFAS at a site.
Prerequisites	Familiarity with DMFAS 5.3 and DMFAS 6
Duration	1-2 days
Objective	Learn about database structure
Skills developed	After completing this module, the participant will be able to: - Define basic database concepts - State the characteristics of relational database management systems - Explain the difference between tables and views - Indicate the relationship between DMFAS 6 and Oracle - Describe the query tool and how it is used - Identify key reference material available for the DMFAS 6 database
Content	**A review of basic database concepts** What is a database? * Database management systems * Relational models * Relational databases * What is SQL? * Queries * SQL in user-defined reports **The DMFAS 6 database** The Oracle RDBMS * DMFAS 6 and Oracle * Tables and views * The query tool **Reference material** The Hardware, Software and Training Requirements for DMFAS 6 * The DMFAS 6 Installation Guide 11g * Database Structure Diagrams * DMFAS 6 Database Tables and Windows * DMFAS 6 Database Tables (reports)
Modality	Presentation made by the trainer during the classroom Exercise Q&A session
Evaluation	Informal evaluation using a quiz
Material	PowerPoint hand-outs