

ECCC SYLLABUS

MODULE: **IT M4 DATABASES**

LEVEL: **EXPERT (D)**

This module exam includes all competences from the basic level (C), extended with competences listed below.

| COMPETENCE GROUP | COMPETENCE WITHIN ECCC STANDARDS |
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| 1. Database administration | 1.1. Introduction to expert use of databases in a distributed environment. 1.2. Users management in expert uses of the databases. 1.3. Monitoring the database state. 1.4. Browsing database objects. 1.5. Data export and import. |
| 2. Tables, perspectives and sequences | 2.1. Database data types in expert applications. 2.2. The rules of naming objects in expert applications. 2.3. DDL code generation for the selected object. Creating database objects using a text interface. 2.4. Operations on the integrity bonds. 2.5. The notion of perspective. Constructing perspectives. 2.6. The notion and practical use of sequence. |
| 3. Queries | 3.1. Methods of creating a query (text interface, Query Builder). 3.2. Constructing join selective queries. 3.3. Constructing functional join queries. 3.4. Queries using DUAL table. |
| 4. Procedures and stored functions | 4.1. Introduction to procedural language. 4.2. Triggers, stored procedures and functions. 4.3. Stored procedures and functions with the parameters. 4.4. Stored procedures and functions returning values. |
| 5. Building applications and reports | 5.1. Creating query-based reports. 5.2. Building query-based applications. 5.3. Forms. 5.4. Working with the application and exporting the results. |

Preferred software for completing tasks for level D:

- Oracle Database 10g XE