Publication date : 05/31/2024

Course : PowerAMC, designing a database

Practical course - 2d - 14h00 - Ref. AMC
Price : 1600 CHF E.T.

Pendant ce cours, vous découvrirez les fonctionnalités majeures de PowerAMC. Vous apprendrez à construire, formaliser et maintenir les modèles utilisés pour concevoir une base de données (modèle Orienté Objet - UML, modèle conceptuel et physique, dictionnaire...).

Teaching objectives

At the end of the training, the participant will be able to:

- Creating a data dictionary in PowerDesigner
- Implement and verify a conceptual data model in PowerDesigner
- Set transformation rules from conceptual to physical data model
- Generate the physical data model with PowerDesigner and analyze the results
- Reverse Engineering with PowerAMC

Intended audience

Database designers and administrators, analysts and developers.

Prerequisites

No special knowledge required.

Practical details

Hands-on work

Half of the practical work is divided between designing models (based on the case study) and representing them with PowerAMC.

Course schedule

PARTICIPANTS

Database designers and administrators, analysts and developers.

PREREQUISITES

No special knowledge required.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

1 Introduction

- Introducing PowerAMC.
- Main features.
- Interface and menus.

Hands-on work
Getting to grips with PowerAMC.

2 Data identification

- Learn how to create a data dictionary.
- Data description and controls.
- How do you define attributes?

Hands-on work
Analyze documents and identify data content. Enter selected attributes and associated rules into PowerDesigner.

3 Semantic data modeling

- The object-oriented model (MOO - UML class diagram).
- Identify classes, associations and constraints.
- How to create a model.
- Normalization: the role of normal forms in understanding data.
- The main concepts proposed by PowerDesigner.
- Proposed checks.
- Conceptual Data Model (CDM).
- Presentation of MCD concepts by analogy and difference with MOO.

Hands-on work
Build a class diagram from the data dictionary. Enter the result with PowerDesigner. Perform the suggested checks. Generate the MCD with PowerDesigner and analyze the result.

4 Physical data modeling

- Presentation of the rules for transforming a semantic model into a physical data model.
- The main optimization rules.
- How does PowerDesigner generate an MPD?
- Generation of the corresponding SQL scripts.

Hands-on work
Transformer le modèle sémantique en modèle physique. Générer le MPD avec PowerAMC et analyser le résultat.

5 Reverse Engineering

- Presentation.
- Reverse Engineering with PowerAmc.
- Functions for creating an MPD from an existing database.
- How do you generate a MOO or MCD from an existing MPD?

Hands-on work
Add new attributes to a database. Regenerate upstream models.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

6 **Conclusion**

- Overview of PowerAMC's processing functions.
- Other diagrams.

Dates and locations

REMOTE CLASS
2026 : 26 Mar., 4 June, 17 Sep., 19 Nov.