

## ***„Oracle OCP - Oracle Certified Professional”***

### ***Course description:***

Oracle OCP training - Oracle Certified Professional is addressed to users preparing for OCA DBA Oracle ( OCA Administrator Certified Professional - 1 exam 1Z0-042 ), and self-administration of Oracle databases. This course runs an Oracle database expert with many years of experience.

***Aims of training:*** Creating and managing backups using RMAN. Restoring the database to a specific point in time. Database recovery depending on damage. Database recovery using Oracle's Flashback Technology. Detecting damaged data blocks and taking appropriate steps to fix them. Monitoring and improving database efficiency with the help of database consultants. Controlling database resources using the Resource Manager. Simplified task management with Scheduler. Viewing database logs for diagnostic purposes. Configuring multi-lingual database and individually for the session. Implementation of security in the database. Transferring data between different platforms.

### ***Training program:***

#### **1. Using and configuring the Recovery Manager Utility (RMAN)**

- Features and components of Recovery Manager
- Flash Recovery area and RMAN
- RMAN configuration
- Automatic backup control file
- Viewing current RMAN settings
- Configuration and change "retention policy" for the database
- Channel allocation
- Backup to tape
- Overview of RMAN commands
- Parallel backup process
- Backup compression
- Full backup and incremental backup
- Using RMAN

#### **2. Recovering from Non-critical Losses**

- Creating a new temporary table space
- Restoring a log file of repetitions and indexes
- Restoring read-only tablespace
- Authorization methods of database administrator
- Password file loss
- Changing default tablespace for the database

### **3. Incomplete recovery**

- Recovering step by step
- Recovering control file from an automatic backup
- Creating a new control file
- Incomplete recovery
- Simplified recovering through RESETLOGS
- Point-in-time recovery by using RMAN

### **4. Flashback**

- Flashback Technology Architecture
- Configuration and monitoring Flashback Database
- Backup Flash Recovery Area
- Using V\$FLASH\_RECOVERY\_AREA\_USAGE
- Advantages of Flashback Technology
- Using Flashback by using RMAN interface
- Using Flashback Database using EM

### **5. Data Block corruption**

- Symptoms of data block corruption
- DBVERIFY utility and ANALYZE command
- Initialization parameter DB\_BLOCK\_CHECKING
- Using Flashback for logical corruption and DBMS\_REPAIR package
- Block Media Recovery
- RMAN BMR

### **6. Monitoring and memory management**

- Oracle memory structure
- Automatic Shared Memory Management
- SGA tuning advisor
- Automatic tuning and manual modification of SGA parameters
- Change SGA\_TARGET
- Managing PGA resources
- Using a memory advisor

## **7. Automatic performance management**

- Identifying components for fine-tuning
- Wait Events and system statistics
- Diagnosis and optimization of perspectives
- SGA statistics
- Workload Repository
- Advisors
- Automatic Database Diagnostic Monitor (ADDM) scenario and useful tips
- Using SQL Advisor and Access Advisor

## **8. Monitoring and management of space I**

- Database structure
- Space management
- Oracle-Managed Files (OMF)
- Row Chaining and Migrating
- Preventative monitoring of table spaces
- Reuse space management
- SYSAUX tablespace
- Monitoring tables and index spaces

## **9. Monitoring and space management II**

- Automatic Undo space management
- Redo log files
- Types of tables
- Partitioned tables
- Index-Organized Tables (IOT)
- Managing space from SQL
- Optimal size of redo log file
- Overview of Automatic Tuning of Undo Retention

## **10. Automatic Storage Management (ASM)**

- Architecture and functionality
- Dynamic performance views
- ASM instance management
- ASM disk groups
- Using the asmcmd utility
- Database migration to ASM
- Creating an ASM instance in a separate Oracle Home
- Tablespace migration to ASM

## **11. Resource management**

- Configuration and operation of Database Resource Manager
- Creating a new management plan
- Active session switching
- Maximum command execution time
- Creating complex resource management plans
- Administration and monitoring Resource Manager
- Creating consumer groups

## 12. Database security

- Overview of Virtual Private Database
- Security while accessing columns
- Writing your own security features
- Password settings for the listener

## 13. Transferring data

- Data Pump
- RMAN CONVERT DATABASE command
- Creating a directory object
- Create temporary tables

## 14. Using Globalization Support

- Globalization Support features
- The code page of the database and the national code page
- Comparison and linguistic sorting
- Data conversion between client and server
- NLS settings

### *Methodology:*

- PowerPoint mini lectures
- working on computers (each participant works on a separate computer)
- mini training videos

### *Organizational information:*

Number of training hours: 21 hours / 3 days

Time of training 9:15-16:15

Place of training: Łódź, Piotrkowska 125 – KM Studio - trainings