Oracle Database 12c: Resource Manager & Scheduler

Course Summary

Description

One of the most important and oftentimes underutilized database features is that of the Oracle Database 12c Resource Manager. This is an essential facility for achieving optimum database performance. While this facility could be considered as highly recommended though optional in a traditional Oracle database configuration, in a multi-tenant configuration of pluggable databases enclosed within a container database, the use of the Oracle Database 12c Resource Manager can really be considered as mandatory. This training guide book provides conceptual background information on the advantages of this feature over other resource management systems, offers numerous real-word examples and includes step-by-step workshops and exercise solutions that demonstrate the use of this feature.

Yet another related database feature that is often underutilized is that of the Oracle Database Scheduler. This training guide book shows how this scheduler compares with other scheduling systems, including the Oracle Enterprise Manager 12c Cloud Control job system. We briefly cover the basic features of the Scheduler that are largely self-evident, but the remainder of our material explores advanced capabilities including integration with the Oracle Database Resource Manager, building sophisticated scheduling systems using job classes, windows and other object components, and employing a file watcher that is especially useful in a data warehouse environment. Perhaps most importantly, we will discuss how proliferating systems and databases resulting from machine virtualization and pluggable databases can be effectively managed using a centralized database Scheduler.

Topics

- Managing resources
- Using oracle database resource manager
- Automating tasks with the database scheduler (Basic)
- Automating tasks with the database scheduler (Advanced)
- Centralized administration using the database scheduler
- Database scheduler file watchers & e-mail notification

Audience

- Database administrators
- Web server administrators
- System administrators
- Implementation specialists
- Data center support engineers
- Senior application designers and developers

Prerequisites

- Oracle Database 12c: SQL Fundamentals (Levels I & II)
- Oracle Database 12c: Install & Upgrade Workshop
- Oracle Database 12c: Architecture & Internals
- Oracle Database 12c: Administration Workshop
- Oracle Enterprise Manager 12c Cloud Control: Install & Upgrade Workshop (Optional)

Duration

3 days

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Course Outline

I. Managing resources
  A. About resource management
  B. The database resource manager
  C. Resource manager architecture

II. Using oracle database resource manager
  A. Resource manager privileges
  B. Consumer groups
  C. Grant_switch_consumer_group()
  D. Resource plans
  E. Resource plan directives
  F. Programmatic plans & directives
  G. Utilization_limit example
  H. Update_plan_directive() example
  I. Resource subplans
  J. Automatic & adaptive mapping
  K. DBMS_application_info()   attributes
  L. Activating resource plans
  M. Monitoring resource allocation
  N. Explicit consumer group switching
  O. Instance caging

III. Automating tasks with the database scheduler (Basic)
  A. About scheduling systems
  B. The oracle database scheduler
  C. Database scheduler framework
  D. Programs
  E. Schedules
  F. Jobs
  G. Create_job() primary attributes
  H. Set_attribute() & secondary attributes
  I. Job_style attribute & lightweight job example
  J. Job & instance log management

IV. Automating tasks with the database scheduler (Advanced)
  A. Job classes
  B. Windows & window groups
  C. Chains
  D. Event-based vs. Time-based jobs
  E. Automated maintenance tasks

V. Centralized administration using the database scheduler
  A. Centralized scheduler architecture
  B. Central database setup
  C. Remote host setup
  D. Defining remote jobs
  E. Submitting remote jobs

VI. Database scheduler file watchers & e-mail notification
  A. Email notification
  B. File watchers