Oracle Database 11g R2: Architecture & Internals
ora11g263-ver1
Length: 2 days
Price: $1,195.00

Course Description

Success in database administration and tuning, or in the development of database applications, depends upon having a sufficient understanding of the architecture and internal mechanisms which operate within the database. Without such an understanding, one could implement such things as structural changes, performance tuning adjustments and other modifications to the environment which could actually be counterproductive. The purpose of this unique and popular training course is to reveal the underlying architecture of the Oracle database environment. This course is also intended to be of help to information technology (IT) managers and executives who require an understanding of the technology upon which they and their staff rely. This course is often used in combination with other advanced Oracle database administration or database developer courses to provide the prerequisite foundation in the architecture of the database. Major objectives covered within this training guide include:

- Understanding the broader Oracle enterprise architecture, including the client, middleware and database tiers found within a multi-tiered enterprise environment.
- Understand key computing concepts such as parallelization, grid-based resource acquisition and clusters.
- Understanding the role of database machines, such as the Exadata database computing machines and storage machines.
- An in-depth exploration of the database architecture, including memory, process and data structures, and the composition of an Oracle database instance.
- Alternative modes of database operation, including dedicated server mode, shared servers mode, parallel execution and how one selects the appropriate mode for each environment.
- Consider the role of the Shared Global Area (SGA) and the various memory caches and subcaches which can be optionally configured within that space.
- Consider the complimentary role of the Program Global Area (PGA), also known as the Process Global Area.
- Discuss the role of the instance background processes, including those which are optional and those which can have additional instances optionally launched.
- Consider physical database storage structures such as tablespaces, data files, blocks and the internal format of rows.
- Consider the alternative row-level storage option of hybrid columnar compression.
- Compare and contrast internal storage of data segments, B-tree and bitmap index segments.
- Review all of the possible database object types which one may find within the logical application database.
- The schema and ownership context in which logical database objects reside.
- The editions context in which database objects can exist in different forms and how hot application upgrades are supported by database editions.

For more information call 614.481.6555 or E-mail info@babsim.com
Course Audience

The primary audiences for this course are: • Chief Information Officers (CIO) and other information technology management • Database administrators • Application designers and developers • Web server administrators • System administrators • Implementation specialists • Data center support engineers

Course Outline

THE BROADER ORACLE ENTERPRISE ARCHITECTURE • ABOUT ENTERPRISE ARCHITECTURES • ABOUT PARALLELIZATION • SMP • THE DATABASE SERVER STACK • THE DATABASE SERVER SOFTWARE • V$VERSION EXPLORING THE ORACLE DATABASE INSTANCE • DATABASE INSTANCE CONFIGURATIONS • ABOUT THE SGA • Using V$SGA_DYNAMIC_COMPONENTS • ABOUT THE PGA • MANAGING INSTANCE MEMORY EXPLORING THE INSTANCE PROCESSES • INSTANCE BACKGROUND PROCESSES • SQL EXECUTION PROCESSES • Using V$SESSION • About The PGA • SQL STATEMENT EXECUTION EXPLORING LOGICAL STORAGE: DATABASE OBJECTS • APPLICATION DATABASE OBJECTS • SCHEMA & OWNERSHIP CONTEXT • EDITIONS CONTEXT & REDEFINITION EXPLORING PHYSICAL STORAGE: DATABASE FILES • ABOUT THE DATABASE FILES • DATABASE SERVER PARAMETER FILE • CONTROL FILES • ALERT LOG & TRACE FILES EXPLORING PHYSICAL STORAGE: TABLESPACES • TABLESPACES & DATA FILES • AUTOEXTEND Options • ABOUT TEMPORARY SEGMENTS • ABOUT INDEX SEGMENTS

Available Dates

Request a Course Date

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