

Oracle® Certification Program Candidate Guide

*Oracle8i Internet Database Operator
Certified Professional Track*

December 2001

Contents

Oracle Certification Program Candidate Guide

Oracle8i Internet Database Operator Certified Professional Track



- 1** *The Benefits of Oracle Certification*
- 2** *Oracle8i Internet Database Operator Certified Professional Track*
- 3** *Preparing for the Oracle8i Internet Database Operator Certified Professional Test*
- 4** *Registering for Your Test*
- 5** *Taking Your Test*
- 6** *After You Are Certified*
- 7** *Special Testing Opportunities*
- ✓** *Test Content Checklist*

Visit the OCP Web site at <http://www.oracle.com/education/certification>

1

The Benefits of Oracle Certification

The demand for professionals in information technology (IT) is high, and the competition for jobs is intense. Individuals, experienced or new to the profession, need to know what skills make them attractive to employers. Employers look for ways to distinguish employees and prospective employees who have the solid foundation of skills needed for effective performance.

The Oracle Certification Programs help the IT industry make these distinctions by establishing a standard of competence in key entry level and professional job roles.

An Oracle Certification is a valuable, industry-recognized credential that signifies a proven level of knowledge and ability. Each higher level of Oracle certification brings a higher standard of benchmarked skill and ability, which leads to greater opportunities and higher pay.

"Oracle is the #1 skill sought by IT managers, and is the hardest to find."¹

Benefits to the Technical Professional

An ***Oracle Associate Certification (OCA)*** demonstrates that you have a solid understanding of the foundation skills of a given job role which can be applied at an apprentice or entry level.

By earning your OCA designation you can gain increased entry level job opportunities. The OCA is the stepping stone to starting a success-filled career as an Oracle Professional.

Beyond OCA, by becoming an ***Oracle Certified Professional (OCP)*** you demonstrate your understanding of the full range of skills required by Oracle professionals in your chosen job role. The OCP is in high demand in today's marketplace, and that level of demand continues to grow with each new installation of Oracle technologies around the world. OCP certification raises your visibility and increases your access to the industry's most challenging opportunities.

The Oracle Certification Programs can give you a distinct advantage. OCPs have testified to the value of Oracle Certification² :

- 97% said they have benefited from certification
- 89% said they gained more confidence in their Oracle expertise after becoming certified
- 96% would recommend the program to a professional colleague

The true value of earning an OCP credential is increased opportunity. With more opportunity comes career growth and higher pay. Oracle Certifications have consistently delivered the best value for the investment made by IT professionals.

"Oracle's predominant OCP certification showed 28 percent more money than the average certification program measured."³

Benefits to the IT Employer

The Oracle Certification Programs are also valuable to hiring managers who want to distinguish among candidates for critical IT positions. For companies that send employees through annual IT training, certification ensures a return on the training investment by validating the knowledge and understanding gained in training sessions. Companies can also combine certification with an employee development program to enhance employee loyalty and performance on the job. Hiring certified professionals has a direct impact on a company's success, as these conclusions from research by International Data Corporation⁴ suggest:

- Certified professionals handled 40% more support calls, and their employers have reported 49% less system downtime.
- For the majority of companies surveyed, the savings from increased effectiveness paid the costs of certification in fewer than nine months..

¹ Source: *Information Week Magazine*

² Source: "Highlights From The Oracle Certified Professional Benefit Survey," *Market Analysis and Research Strategies*.

³ Source: "Certification Salary Survey", *Certification Magazine*, December, 2000

⁴ Source: "Benefits and Productivity Gains Realized Through IT Certification," *International Data Corporation*

2

Oracle8i Internet Database Operator Certified Professional Track

In today's increasingly complex system environments, a new role has emerged as an integral part of efficient, successful database administration. This is the role of the Database Operator (DBO)—an individual who performs simple, operational tasks on an Oracle database and who has an introductory knowledge of database software and the graphical utilities associated with managing the database.

DBOs provide valuable support to Database Administrators (DBAs) in the management of the database. Because they have the ability to execute routine administrative tasks on the database independently, DBOs enable enterprise DBAs to concentrate on mission-critical operations, including making strategic decisions about database design, maintenance and tuning, as well as diagnosing and troubleshooting complex database issues.

Oracle Internet Database Operator: Overview

Oracle University has designed an intensive training and certification package to give DBOs the knowledge and skills they need to be successful.

The training enables participants to:

- Install Oracle database software
- Create and configure Oracle databases
- Load data

- Set up and manage users
- Install and implement applications
- Perform routine backups and performance checks

The DBO training package includes:

- Four days of Instructor-led, hands-on classroom instruction
- Two self-paced technology-based training (TBT) modules
- Two Oracle simulator scenarios for applied learning online
- Self-study SQL exercises

Oracle Internet Database Operator Certification

The training package provides complete preparation for the Oracle Internet Database Operator certification exam. By earning professional certification, DBOs gain a tangible, industry-recognized credential that distinguishes them as top performers and valued members of the database support team.

Typical candidates for the exam are IT professionals, such as network administrators, systems administrators, or Web masters, whose responsibilities affect databases or include assisting in the management of Oracle databases. Ideal candidates have completed the Oracle University training for Database Operators and have hands-on work experience with Oracle databases before taking the Oracle Internet Database Operator exam.

To become a certified Oracle Internet DBO, candidates must pass only one exam. This exam challenges them to apply specific knowledge that they have gained, through Oracle training and on-the-job experience, to real-world scenarios.

Working on a computer with no other resources, candidates must answer a number of questions which test their knowledge and experience as DBOs. Because there is no way for candidates to memorize what they need to know for the exam, only proven performers can achieve a passing grade. The certification exam in the Oracle Internet Database Operator Track are created against the Oracle8i Server.

Candidates are not required to take any Oracle University courses before attempting the certification exam. However, with a combination of instructor-led training (ILT), technology-based training (TBT) and simulator scenarios, the Oracle DBO training package provides excellent preparation, considerably enhancing the knowledge and confidence of candidates who are preparing for the exam.

3

Preparing for the Oracle8i Internet Database Operator Certified Professional Test

Oracle recommends that you prepare for the Oracle Internet Database Operator exam by combining offerings from Oracle University with practice and on-the-job experience. Start by reviewing the topics covered on the exam in the Test Content Checklist in this guide. Then look over the following preparation methods for a combination that suits your background.

Oracle University Preparation Tools

Instructor-Led Training and *Technology-Based Training* offered by Oracle University are the best way to prepare to become an Oracle Certified Professional. These courses lay the foundation of knowledge you will need to pass the OCP exam.

Refer to the curriculum map on the following page to chart your optimal preparation based on Oracle University instructor-led training and technology-based training. Your local Oracle University representative can advise you on the best option. For more information, visit the Oracle University Web site at <http://education.oracle.com/>.

Preparing On Your Own

Experience is the best way to deepen your understanding of the topics covered in Oracle University courses. Oracle recommends that you extend your classroom learning by applying your new skills and knowledge either on the job or through practice and self-study.

Test Content Checklist

Use the Test Content Checklist to identify all of the test topics for which you must prepare. Oracle may make modifications to the Test Content Checklist, so visit the OCP Web site at <http://www.oracle.com/education/certification/> to download the latest version of this guide.

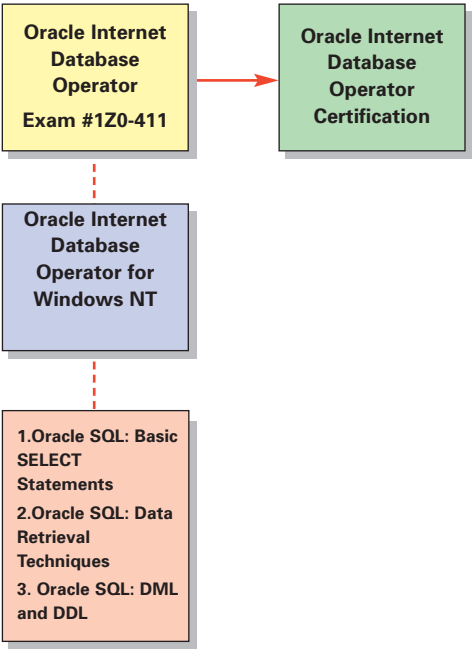
Additional Preparation Tools

■ Practice Tests

Oracle and Self Test Software have partnered to develop the highest quality practice tests available to individuals seeking Oracle Certified Professional status. To purchase practice tests, visit the OCP web site at <http://www.oracle.com/education/certification/>

Oracle8i Internet Database Operator Certified Professional Exam and Training

Listed below the exam is the corresponding Oracle University training.



- = OCP Exam
- = Instructor-Led Training
- = Technology-Based Training

4

Registering for Your Tests

The Oracle Certification tests are offered through Prometric, the world's largest provider of testing to the information technology industry. Prometric features more than 800 authorized Prometric testing centers worldwide.

All tests are delivered by computer. A brief tutorial precedes each test to familiarize you with the test delivery system. You should attempt to answer every question in the tests because incomplete answers are scored as incorrect.

Reviewing the Candidate Agreement

Candidates pursuing Oracle Certification must accept the terms of the Oracle Certified Professional Candidate Agreement before taking the tests.

You will be presented with the agreement on-screen before the exam starts. You can also review the agreement before your appointment by visiting the OCP Web site at www.oracle.com/education/certification/canagreemt.html.

Scheduling Your Test at an Authorized Prometric Testing Center

1. There are two convenient ways to register for testing:
 - a. Register online at <http://www.oracle.com/education/certification>. (Online registration is not available for beta exam registration.)
 - b. Call the Prometric Regional Service Center (RSC) serving your country during normal business hours (a list of RSCs is located on the last page of this guide)
2. Make sure that you have both the number and title of the test that you are registering for. The Prometric customer service representative will ask for your name and contact information, as well as your preference as to date, time, and location for testing. Schedule your appointment to take the test at any available time Monday through Saturday during normal authorized Prometric testing center hours. Hours vary by location. Be sure to note when and where you are scheduled to take the test.
3. When you register, ask the Prometric customer service representative for a list of valid forms of identification that you will need to present when you take your test. You will not be allowed to take the test without valid identification.

4. Regular exam fees are equivalent to \$125 US Dollars, plus any local taxes. The exam fee is payable to Prometric by major credit card (VISA, MasterCard, American Express and Switch Cards) at the time of registration. All discounts must be applied at the time of paying your exam fee.
5. You must schedule a test at least 24 hours in advance.

Changing or Canceling Your Appointment

To cancel or reschedule your test appointment, you must call the Prometric Regional Service Center. The cancellation policy by region is:

- The Americas: One business day in advance
- Asia Pacific: By midday (Sydney time) the previous business day
- EMEA: Two business days in advance
- Japan: Three business days in advance

Candidates who do not appear for the test or who cancel less than one business day prior to the test will not receive a refund.



Taking Your Tests

On Test Day...

1. Arrive at the testing center at least 15 minutes prior to your scheduled appointment.
2. Sign the test log and present two forms of identification. One must be a government-issued photo identification. Both forms of identification must contain your signature.
3. The test administrator will give you a brief orientation and escort you to a computer terminal where you will take the test. You are not allowed to bring papers, books, bags, or calculators into the room.
4. Remember to adhere to the requirements set forth in Oracle Certification Candidate Agreement. You must agree to the terms and conditions in the agreement before completing any Oracle Certification exam. Any attempt to cheat, assist others, or remove exam content from the testing room will not be tolerated and may result in a zero score, disallowance of OCP credential, even prosecution by law.

Obtaining Your Test Results

You will receive your score report immediately after the test. Beta exam score reports are sent to candidates following analysis and scoring of the beta exam. Candidates completing a beta version of a test can expect their score reports 10-12 weeks following the beta period. Your results are automatically forwarded to Oracle following testing. Please keep a copy of all test reports for your records.

Retaking a Test

Candidates must wait 30 days before retaking a failed exam. There are no exceptions to this policy.

If you do not pass an Oracle Certification exam on the first attempt, Oracle encourages you to make use of the diagnostic feedback supplied with the score report to review the areas that need further study.

If you receive a low score, an Oracle University training course may be necessary for you to gain more knowledge. Otherwise, if you only require skillset review in a few areas, we recommend you consult the Oracle Learning Network, where you will find each topic area available as a short course module. Most modules are only 45 minutes. Visit OLN at www.oracle.com/education/oln/.



After You Are Certified

Receiving Your Oracle Certification Welcome Kit

You will receive a certificate by mail from Prometric within 30 days after successfully completing all tests in a certification track. You can use your certificate as verification that you are an Oracle Certified Professional.

If you do not receive your certificate, write to fulfillment@prometric.com and provide your name, candidate ID, and current mailing address.

OCP Members Web Site

In addition, you will receive information on how to obtain a copy of the OCP logo. The logo may be used on business cards and resumes. You will also receive a letter of congratulations from Oracle which will indicate how you can begin to access the wealth of OCP benefits that await you. This will include the access login and password you will need to enter the OCP member online

community.

Keeping Current with New Oracle Technology Releases

Oracle is committed to keeping the Oracle Certification Program current with the latest technology. To ensure the value of your Oracle Certified Professional credential, you may find it advantageous to upgrade your certification to the latest release.

Retirement of an OCP Track

Once Oracle announces the retirement of a track, you will have at least six months to pass the remaining exams in the retiring track. If you do not upgrade your certification by the deadline, you will be required to complete all tests within the new track to obtain the latest credential. Consult the OCP Web site for current testing requirements.

Updating your Demographic Information

Visit the Prometric web site at <http://2test.com> to update your demographic information.

Follow the steps below:

1. Select "Information Technology Certification" from the drop down menu and click "GO"
2. Log in to the site with your User Name and Password. If you have never registered online before, select the link to set up your online account.
3. In the left navigation bar under "Testing with Prometric", select "Update User Profile".
4. You may update your mailing address, telephone numbers and your email address.
5. Select "Next". Your OCP Candidate information is now updated.



Special Testing Opportunities

Special Opportunities: Beta and Tryout Tests

Oracle may offer beta or tryout versions of OCP tests as new and updated questions are developed. Beta and tryout tests are generally offered free or at a discount from the regular test price. Participating in beta and tryout tests is a good way to economize on your certification and to be among the first professionals to be certified on a new track or product release.

Beta score reports are sent to candidates following analysis and scoring of the beta test.

Visit the OCP Web site at <http://www.oracle.com/education/certification/> to find beta and tryout opportunities. Oracle provides detailed descriptions of each beta and tryout offer to help you decide if the tests are right for you.

Visit the OCP Web site at <http://www.oracle.com/education/certification/>



Test Content Checklist

The following test content checklist shows the objectives covered in the OCP exam.



Test Content Checklist

Oracle Internet Database Operator (Exam #1Z0-411)

Define an Oracle Database

- Explain the difference between a database management system and a flat file system
- List the tasks of the relational database management system (RDBMS)
- Define the components of an Oracle database
- Distinguish the logical and physical structure of an Oracle database
- List the most common terms used in a relational database

Tools are Used to Access an Oracle Database

- Define the SQL and PL/SQL languages
- Define the appropriate tool used to achieve tasks within the database: Designers, Developers, End-Users, DBAs and DBOs
- Set up a repository and a management server for Oracle Enterprise Manager
- Start and stop the intelligent agent
- Manage your services from the Console

What are the Duties of an Oracle Database Operator?

- List the main job tasks of the Oracle Database Operator

- Define the appropriate tool for performing each task.

How to Install Oracle Database Software

- Identify the appropriate tool required to install Oracle database software
- Install the Oracle server, Oracle Enterprise Manager, Net8, and SQL*Plus products

How to Create an Oracle Database and Services

- Create a database by using the Database Assistant tool
- Identify the files required to create and open a database
- Identify the directory in which the Oracle database files are stored
- Display the database services using the NT control panel services utility

Where to Find Important Oracle Files

- Create a password file that is used to authenticate a user
- Identify the contents and location of the database trace files

Network Administration

- Identify the location and purpose of the Net8 configuration files
- Create the Net8 configuration files using Net8 assistant

How to Stop and Start an Oracle Database

- Use OEM Instance Manager to shut down the database
- Shut down the database in different modes
- Use Instance Manager to start up the database in different modes
- Configure the init.ora parameters by using Instance Manager

How to Implement the Logical and Physical Structure for New Applications

- Define the components of an application in an Oracle database
- Create the logical and physical structure to set up a new application
- Use Storage Manager to manage the applications
- Define the use of tablespaces
- Create and manage rollback segments

How to Set Up Users for a New Application

- Describe the function of the three categories of users
- Define the purposes of system privileges
- Assign system privileges to users directly or through roles

(Exam# 1Z0-411) Oracle Internet Database Operator , continued

- Use Security Manager to manage users, privileges and roles

How to Create Objects to Store Application Data

- Use SQL*Worksheet to run scripts that create the objects of an application
- Use Oracle Schema Manager to list the objects created by each schema for the applications
- Use Oracle Storage Manager to control the space used by the objects in the database

How to Secure Application Data Manipulation

- Define the object privileges required to access and manipulate data of application objects
- Use Security Manager to grant and revoke object privileges to and from users and roles

Why and When to Back Up Databases

- Define the frequency of database backups
- Back up a database by using Oracle Backup Management Tools
- Perform a full database backup
- Define how to automate periodic database backups

Recover a Crashed Database

- Identify different crash scenarios

- Perform a complete recovery in NOARCHIVELOG mode
- Archive redo log files to avoid loss of data and reduce recovery time
- Set a database in ARCHIVELOG mode
- Perform a complete recovery in ARCHIVELOG mode

How to Load Non-Oracle Data

- List the types of constraints of a table
- Disable table constraints by using Schema Manager
- Load data into a table by using Oracle Data Management Tools
- Re-enable constraints after loading data, using Schema Manager
- Automate periodic data loads using Job service

How to Anticipate Administration Issues

- Anticipate and know administration issues:
 - Database down
 - Lack of space for tablespaces or segments
 - Over-consumption of archive and trace files
- Automate detection by using:
 - Job Service
 - Event Service

How to Install Oracle WebDB

- Describe the use of Oracle WebDB
- Install Oracle WebDB
- Build database objects and components
- Learn how to start and exit Oracle WebDB

Administer with WebDB

- Describe WebDB Administer
- List the WebDB key features
- Manage users, privileges and roles
- Monitor Oracle WebDB by using WebDB Administer

Set Up the Listener with WebDB

- Select the PL/SQL Gateway Setting to configure the listener
- Set up the Database Access Descriptor
- Set up the global settings
- Change directory mappings
- Change Multipurpose Internet Mail Extensions types

SQL Commands

- Identify the guidelines for constructing valid statements with SQL commands
- Display the entire data in a database table by using the SELECT command.

(Exam# 1Z0-411) Oracle Internet Database Operator , continued

Declarations and Access Control

- Select specific columns from a database table by using the SELECT command.
- Write an SQL command to perform calculations by using arithmetic expressions.

Customizing Queries

- Write a SELECT statement to specify an alias name for a column heading.
- Write a SELECT statement to display concatenated columns and literal character strings.
- Write a SELECT statement to display actual values instead of NULL values.
- Write a SELECT statement to display unique rows.

Conditional Clauses

- Sort the data retrieved from a database table by using the ORDER BY clause.
- Restrict the rows returned by using the WHERE clause.

Comparison Operators

- Query a database table by using the logical comparison operators.
- Query a database table by using the SQL comparison operators.
- Query a table by using the NULL operators.

Multiple Conditions: Application

- Sequence the SQL operators in the order in which they are processed.
- Query a database table by using the logical comparison operators.
- Query a database table by using a combination of search conditions.

Single Row Functions: Data Conversion

- Identify the features of TO_NUMBER function.

- Convert number type data to character type using SELECT statement.
- Convert date type column values to character values using TO_CHAR function.
- Query a database table using nested single row functions.

Simple Join

- Identify the types of problems that are rectified using the LastKnownGood Configuration.
- Display columns from multiple tables using an equijoin.
- Qualify the ambiguous column names in a simple join query on multiple tables by using the WHERE clause.
- Qualify the columns with table aliases by using SQL commands
- Query multiple database tables by using a non-equijoin condition.

Outer and Self Joins

- Query multiple database tables using an outer join.
- Identify the definition of a self join.

Group Functions

- Identify the uses of group functions.
- Match the types of group functions with their applications
- Query a database table to return values by using the group functions.

Creating and Selecting Groups

- Query a database table using the GROUP BY clause to return rows according to a specified group condition.
- Query a database table to display summary results for groups within groups using the SELECT statement.

- Query a database table to return specified groups using the HAVING clause.
- Identify the situations that result in invalid queries.

Tables

- Identify the features of the table structures.
- Identify the rules to reference another user's table.
- Identify the rules for naming database tables.
- Sequence the syntax elements of the CREATE TABLE command in their correct order

Datatypes and Constraints

- Match the Oracle7 datatypes with their descriptions
- Identify the uses of constraints in Oracle7.
- Match the different types of constraints with their description.
- Identify the description of constraint levels.

Tables: Creation and Confirmation

- Create a table from a table instance chart.
- Create a table by using a subquery.
- Display the structure of a table by using the DESCRIBE command.

Inserting Data

- Match the SQL commands with their functions.
- Add new rows in a table by using a SQL command.
- Insert special values in a table by using the SQL functions.

(Exam# 1Z0-411) Oracle Internet Database Operator , continued

Manipulating Row Data

- Copy rows from a table by using a subquery.
- Update existing rows in a table by using a SQL command.
- Update all rows in a table by using a SQL command.
- Delete rows from a table by using a SQL statement.

Transaction Processing

- Identify the circumstances that ends a transaction.
- Identify when a transaction is controlled in Oracle7.
- Identify the effects of the COMMIT command.
- Identify the effects of the ROLLBACK command.
- Discard the changes made to a table by using a SQL command.

Altering Tables

- Remove a table from the Oracle database using an SQL statement.
- Rename a table using an SQL command.
- Remove all the rows from a table using a DDL command.
- Manage comments using an SQL command.

Managing Views

- Identify the advantages of views.
- Match the different parameters in the CREATE VIEW command syntax with their descriptions.
- Create a simple view by using the CREATE VIEW command.
- Create a complex view that contains group functions to display values from two tables.
- Remove a view from the an Oracle database by using a SQL statement.

Managing Indexes

- Create an index using the CREATE INDEX command.
- View the existence of the indexes in the USER_INDEXES data dictionary view
- Remove an index from the data dictionary using the SQL command.



Regional Service Centers

Sydney, Australia Regional Service Center (direct dial#)	+612.9414.3663
Lelystad, Netherlands Regional Service Center (direct dial#)	+31.320.23.9894
Tokyo, Japan Regional Service Center (direct dial#)	+ 813.3269.9620
Latin America Regional Service Center (direct dial#)	+1.410.843.4300
North America Regional Service Center (toll-free#)	+1.800.891.3626

Prometric Regional Service Centers

How to Use This Table

1. Locate your country on the table.
2. Call the Prometric Regional Service Center (RSC) listed for your country. The RSC numbers are shown in the box above. If there is a toll-free number to the Regional Service Center for your country, it will be shown in the table below. For a list of testing sites in your country, please refer to <http://www.prometric.com>, Test Center Locator.

COUNTRY	RSC	TOLL-FREE #
Algeria	Lelystad	
Argentina	Latin America	
Australia	Australia	1.800.806.944
Austria	Lelystad	0660.8582
Bahamas	Latin America	
Bangladesh	Australia	
Barbados	Latin America	
Belgium	Lelystad	0800.1.7414
Bermuda	Latin America	
Bolivia	Latin America	
Botswana	Lelystad	
Brazil	Latin America	000.817.965.5340
Brunei	Australia	
Bulgaria	Lelystad	
Cameroon	Lelystad	
Canada	North America	
Cayman Islands	Latin America	
Chile	Latin America	
China	Australia	1.0800.610.0036
Colombia	Latin America	980.13.0932
Costa Rica	Latin America	
Croatia	Lelystad	
Curacao, NA	Latin America	
Cyprus	Lelystad	
Czech Republic	Lelystad	
Denmark	Lelystad	
Dominican Republic	Latin America	
Ecuador	Latin America	
Egypt	Lelystad	
Estonia	Lelystad	
Fiji	Australia	
Finland	Lelystad	
France	Lelystad	01.428.93.122
Gabon	Lelystad	
Bahrain	Lelystad	
Georgian Republic	Lelystad	
Germany	Lelystad	0130.83.97.08
Ghana	Lelystad	
Great Britain	Lelystad	08.00.592.873
Greece	Lelystad	
Guam	Australia	1888.249.6392
Guatemala	Latin America	
Honduras	Latin America	
Hong Kong	Australia	800.96.8444
Hungary	Lelystad	
Iceland	Lelystad	
India	Australia	
Indonesia	Australia	001.803.61608
Ireland	Lelystad	1.800.626.104
Israel	Lelystad	
Italy	Lelystad	1.6787.8441
Ivory Coast	Lelystad	
Jamaica	Latin America	1.800.892.1978
Japan	Tokyo	0120.3877.37
Jordan	Lelystad	
Kazakhstan	Lelystad	
Kenya	Lelystad	
Kuwait	Lelystad	

COUNTRY	RSC	TOLL-FREE #
Latvia	Lelystad	
Lebanon	Lelystad	
Lithuania	Lelystad	
Luxembourg	Lelystad	
Macau	Australia	
Macedonia	Lelystad	
Malaysia	Australia	1800.80.0508
Malta	Lelystad	
Martinique	Lelystad	
Mauritius	Lelystad	
Mexico	Latin America	95.800.332.1034
Morocco	Lelystad	
Namibia	Lelystad	
Nepal	Australia	
Netherlands	Lelystad	0800.022.7584
New Caledonia	Australia	
New Zealand	Australia	0800.44.1689
Nigeria	Lelystad	
Norway	Lelystad	
Oman	Lelystad	
Pakistan	Australia	
Panama	Latin America	
Papua New Guinea	Australia	
Paraguay	Latin America	
Peru	Latin America	
Philippines	Australia	1.800.1.611.0126
Poland	Lelystad	
Portugal	Lelystad	
Puerto Rico	Latin America	
Reunion Island	Lelystad	
Romania	Lelystad	
Russia	Lelystad	
Saudi Arabia	Lelystad	
Senegal	Lelystad	
Singapore	Australia	800.616.1132
Slovakia	Lelystad	
Slovenia	Lelystad	
South Africa	Lelystad	
South Korea	Australia	007.8611.3095
Spain	Lelystad	
Sri Lanka	Australia	
Suriname	Latin America	
Sweden	Lelystad	
Switzerland	Lelystad	0800.55.69.66
Taiwan	Australia	008.061.1141
Tanzania	Lelystad	
Thailand	Australia	01.800.611.2401
Trinidad & Tobago	Latin America	
Tunisia	Lelystad	
Turkey	Lelystad	
Ukraine	Lelystad	
United Arab Emirates	Lelystad	
United States	North America	1.800.891.3926
Uruguay	Latin America	
Venezuela	Latin America	
Vietnam	Australia	612.9414.3666
Yugoslavia	Lelystad	
Zimbabwe	Lelystad	



Copyright © Oracle Corporation 2001

All Rights Reserved

Printed in the USA

V.12.01

Oracle Corporation World Headquarters

500 Oracle Parkway

Redwood Shores, CA 94065 USA

Worldwide Inquiries:

+1.650.506.7000

+1.650.506.7200 (Fax)

<http://www.oracle.com>

<http://education.oracle.com>

<http://www.oracle.com/education/certification>

OCP Inquiries:

webteam_us@oracle.com

US Inquiries:

1.800.633.0575

Oracle Corporation is the world's leading supplier of software for information management, and the world's second largest independent software company. With annual revenues of over \$8.3 billion, the company offers its database, tools, and application products, along with related consulting, education, and support services, in more than 145 countries around the world.

Oracle is a registered trademark, and PL/SQL, SQL*Plus, Oracle8 and Oracle8i are trademarks or registered trademarks of Oracle Corporation. Other names may be trademarks of their respective owners.