The Sysadmin’s Guide to Oracle

Ben Rockwood
This booklet is dedicated to the memory of my hero, Bob Larson, who gave more to the UNIX community than most will ever know.
Contents

Introduction 1

1. Installation and the OFA 3
   UNIX Users and Groups 3
   Environmental Variables 3
   File Locations 4
   Memory Parameters 4
   Troubleshooting Logs 5
   Steps for Installation 5

2. Oracle Basics 7
   Create a Database 7
   Connect to and Start the Database 9
   Create a Table 9
   Add Data to the Table 10
   Create an Index 10
   Query the Table 10
   Create and Query a View 10
   Destroy Objects 11
   Stop the Database 11
   Destroy the Database 11

3. Poking Around Inside Oracle 12
   The Data Dictionary 13
   Essential System Tables 14
   The Dollar Views 15

4. Files and Components 16
   Database Files 16
   Initialization Parameters 17
   Oracle Startup 18
   Oracle Distribution Files 21

5. Users and Permissions 22
   Users and Passwords 22
   Adding New Users 23
   Privileges, Roles, and Profiles 24
   Changing Passwords 26

6. The Listener 27
   Configuring the Listener 27
   Starting the Listener 28
TNS Resolution  29
Connecting Remotely  30
Troubleshooting TNS  31

7. Oracle Programming  32
   SQL  32
   PL/SQL  33
   Pro*C: The Oracle SQL Precompiler  34
   The C Interface: OCI  35
   Regarding Perl  36

8. SQL*Loader  39
   Loading Syslog into a Table  39

9. Exporting Databases with Data Pump  42
   The Export  42
   The Import  44

10. Using RMAN  47
    Enabling ARCHIVELOG Mode  47
    Basic RMAN Backup  49
    Basic Recovery  51
    Listing Backups  53
    Advanced Backup  54
    Advanced Recovery  55

11. Loose Ends  62
    Oracle Flashback  62
    Data Guard  64
    OLTP  65
    Oracle Options and Extensions  66

12. Tools to Lessen the Pain  68
    YaSQL  68
    TOra  69

Appendix: Oracle Processes  71
Foreword

The Sysadmin's Guide to Oracle, like many books, went through a long, transformative process before it was printed. The result is a short book that covers what a person who may support Oracle 10g as a sysadmin needs to know.

Ben Rockwood set about this project in a way that I found familiar. He set up his own Oracle servers and experimented, based on his research, until he found techniques that worked. This brand of work and writing is really core to much of the UNIX sysadmin experience, where hands-on is the standard for learning.

If you find yourself charged with managing systems that run Oracle, even if you have formerly worked with Postgres or MySQL, this book will be of service to you.

Rik Farrow

Short Topics Series Editor