Index

A

abandon connection timeout property, *5-7*
AbandonedConnectionTimeoutCallback, *7-1*
admin package, *2-3*
affinity
  transaction-based, *10-16*
  web session, *10-15*
application continuity
  connection initialization callback, *12-2*
  connection labeling, *12-2*
  data source configuration, *12-1*
Application Continuity, *12-1*
applyConnectionLabel, *6-5*
applying connection labels, *6-5*

B

basic connection example, *2-4*
benefits of connection pools, *1-1*
benefits of FCF, *10-3*
benefits of run-time connection load balancing, *10-14*
borrowing connections
  basic steps, *2-2*
  conceptual architecture, *1-2*
  labeled, *6-6*
  overview, *3-1*
  using JNDI, *3-5*
  using the pool-enabled data source, *3-2*
  using the pool-enabled XA data source, *3-4*

C

caching statements, *5-11*
callback
  connection affinity, *10-18*
  labeling, *6-2*
checking unmatched labels, *6-6*
closing connections, *3-10*
conceptual architecture, *1-2*
configure method, *6-2*
Configuring ONS, *10-7*
  client-side daemon configuration, *10-10*
  Remote Configuration, *10-9*
connection affinity
  create callback, *10-18*
  overview, *10-15*
  register callback, *10-19*
  remove callback, *10-19*
  setting up, *10-17*
  statistics, *14-7*
  transaction-based, *10-16*
  web session, *10-15*
Connection Creation Consumer, *4-1*
connection factory, *2-2*
  conceptual architecture, *1-2*
  requirements, *2-1*
  setting, *3-2*, *3-4*
connection labels
  apply, *6-5*
  check unmatched, *6-6*
  implement callback, *6-2*
  overview, *6-1*
  removing, *6-7*
Connection object, *1-2*
connection pool
  benefits, *1-1*
  create explicitly, *8-2*
  create implicitly, *2-1*, *3-1*
  destroy, *8-3*
  general overview, *1-1*
  maintenance, *8-4*
  purge, *8-5*
  recycle, *8-4*
  refresh, *8-4*
  remove connection from, *3-11*
  start, *8-3*
  stop, *8-3*
  understanding lifecycle, *8-1*
connection pool manager,
  create, *8-1*
  create pool explicitly, *8-2*
  destroy pool, *8-3*
  overview, *1-3*, *8-1*
  purge pool, *8-5*
  recycle pool, *8-4*
  refresh pool, *8-4*
  start pool, *8-3*
  stop pool, *8-3*

connection pool properties,
abandon connection timeout, 5-7
connection wait timeout, 5-8
harvest maximum count, 5-11
harvest trigger count, 5-10
inactive connection timeout, 5-8
inactive connection timeout property, 5-8
initial pool size, 5-2
maximum connection reuse count, 5-6
maximum connection reuse time, 5-5
maximum pool size, 5-3
maximum statements, 5-12
minimum pool size, 5-2
optimizing, 5-1
overview, 1-3
setInactiveConnectionTimeout, 5-8
setting, 3-7, 5-1
time-to-live connection timeout, 5-7
timeout check interval, 5-9
timeout properties
inactive, 5-8
validate on borrow, 3-8
connection properties, 3-4
connection reuse properties, setting, 5-5
connection steps, basic, 2-2
example, 2-4
connection URL, 10-12
connection wait timeout property, 5-8
ConnectionAffinityCallback interface, 10-18
ConnectionLabelingCallback interface, 6-1, 6-2
connections
basic steps, 2-2
borrowing, 3-1
borrowing labeled, 6-6
borrowing using JNDI, 3-5
checking if valid, 3-9
closing, 3-10
controlling stale, 5-5
harvesting, 5-9
labeling, 6-1
removing from the pool, 3-11
run-time load balancing, 10-13
using affinity, 10-15
validate on borrow, 3-8
cost method, 6-2
create connection pool
explicit, 8-2
implicit, 2-2

D

data source
PoolDataSource, 1-2, 3-2
PoolXADataSource, 1-2, 3-4
database requirements, 2-1
destroyConnectionPool, 8-3
destroying a connection pool, 8-3

E

enable FCF property, 10-6
errors
connection pool layer messages, A-2
general UCP message structure, A-1
JDBC data sources and dynamic proxies messages, A-6
example
basic connection, 2-4
connection affinity callback, 10-18
FCF, 10-5
labeling callback, 6-3

F

fast connection failover
prerequisites, 10-5
Fast Connection Failover
See FCF
FCF,
configure connection URL, 10-12
configure ONS, 10-7
enable, 10-6
example, 10-5
statistics, 14-7

G

GDS, 10-20
getAffinityPolicy, 10-18
getConnection methods, 3-3, 6-6
getPoolDataSource, 3-2
getPoolXADataSource, 3-4
getStatistics, 14-6
getting a connection, 3-3
getting an XA connection, 3-4
getUniversalConnectionPoolManager, 8-1
getUnmatchedConnectionLabels, 6-6
getXAConnection methods, 3-4
Global Data Services, 10-20

H

harvest connections, 5-9
harvest maximum count property, 5-11
harvest trigger count property, 5-10
HarvestableConnection interface, 5-10
high availability, 1-3, 10-1

I

initial pool size property, 5-2

integration
third-party, 3-11
isValid, 3-9

J

JDBC connection pool
See UCP
JDBC driver
connection properties, 3-4
requirements, 2-1
jdbc package, 2-3
JNDI, 3-5
JRE requirements, 2-1

L

LabelableConnection interface, 6-1, 6-5
labeled connections
apply label, 6-5
borrowing, 6-6
check unmatched, 6-6
implement callback, 6-2
overview, 6-1
remove label, 6-7
labeling callback
create, 6-2
example, 6-3
register, 6-4
removing, 6-5
run-time algorithm, 6-3
lifecycle of connection pools, 8-1
lifecycle states, 8-2
Load Balance Advisory, 10-13
load balancing, 10-13

M

manager, connection pool, 8-1
maximum connection reuse count property, 5-6
maximum connection reuse time property, 5-5
maximum pool size property, 5-3
maximum statements property, 5-12
method, 3-4
Minimal Pool configuration, 2-5
minimum pool size property, 5-2

O

ONS, 10-7
ons.config file, 10-7
optimizing a connection pool, 5-1
Oracle Client software, 10-7
Oracle Client software requirements, 2-1
Oracle Notification Service
See ONS
Oracle RAC
connection affinity, 10-15
features overview, 10-1
run-time connection load balancing, 10-13
statistics, 14-6
Oracle RAC Load Balance Advisory, 10-13
overview
connection pool manager, 8-1
connection pool properties, 5-1
connection pools, general, 1-1
connection steps, 2-2
high availability and performance features, 1-3
labeling connections, 6-1
Oracle RAC features, 10-1
UCP, 1-2

P

password, 2-2, 3-3, 3-4
pool manager
See connection pool manager
pool properties
See connection pool properties
pool size, controlling
initial size, 5-2
maximum, 5-3
minimum, 5-2
pool-enabled data source
create instance, 3-2
pool-enabled XA data source
create instance, 3-4
PoolDataSource interface, 1-2, 3-2
PoolDataSourceFactory class, 3-2, 3-4
PoolDataSourceImpl, 3-11
PoolXADataSource interface, 1-2, 3-4
PoolXADataSourceImpl, 3-11
purgeConnectionPool, 8-5
purging a connection pool, 8-5

R

Real Application Clusters
See Oracle RAC, 1-2
recycleConnectionPool, 8-4
recycling a connection pool, 8-4
refreshConnectionPool, 8-4
refreshing a connection pool, 8-4
registerConnectionAffinityCallback, 10-19
registerConnectionLabelingCallback, 6-4
removeConnectionAffinityCallback, 10-19
removeConnectionLabel, 6-7
removeConnectionLabelingCallback, 6-5
removing connection labels, 6-7
removing connections from the pool, 3-11

reuse properites
maximum count, *5-6*
reuse properties
maximum time, *5-5*
run-time connection load balancing
overview, *10-13*
setting up, *10-14*
statistics, *14-7*

S

SERVICE_TIME, *10-14*
setAbandonedConnectionTimeout, *5-7*
setAffinityPolicy, *10-18*
setConnectionAffinityContext, *10-18*
setConnectionFactoryClassName, *3-2*, *3-4*
setConnectionHarvestable, *5-10*
setConnectionHarvestMaxCount, *5-11*
setConnectionHarvestTriggerCount, *5-10*
setConnectionProperties, *3-4*
setConnectionWaitTimeout, *5-8*
setFastConnectionFailoverEnabled, *10-6*
setInitialPoolSize, *5-2*
setInvalid, *3-9*, *3-11*
setMaxConnectionReuseCount, *5-6*
setMaxConnectionReuseTime, *5-5*
setMaxPoolSize, *5-3*
setMaxStatements, *5-12*
setMinPoolSize, *5-2*
setONSConfiguration, *10-7*
setPassword, *3-3*, *3-4*
setSQLForValidateConnection, *3-8*
setTimeoutCheckInterval, *5-9*
setTimeToLiveConnectionTimeout, *5-7*
setURL, *3-3*, *3-4*
setUser, *3-3*, *3-4*
setValidateConnectionOnBorrow, *3-8*
SHORT, *10-14*
SQL statement caching, *5-11*
stale connections, *5-5*
startConnectionPool, *8-3*
starting a connection pool, *8-3*
statement caching, *5-11*
statistics
connection affinity, *14-7*
FCF, *14-7*
Oracle RAC, *14-6*
run-time connection load balancing, *14-7*
stopConnectionPool, *8-3*
stopping a connection pool, *8-3*
system properties, *2-3*

T

third-party integration, *3-11*
THROUGHPUT, *10-14*
time-to-live connection timeout property, *5-7*
timeout check interval property, *5-9*
timeout properties
abandon, *5-7*
check interval, *5-9*
time-to-live, *5-7*
wait, *5-8*
TimeToLiveConnectionTimeoutCallback, *7-1*
transaction-based affinity, *10-16*

U

UCP,
basic connection steps, *2-1*
conceptual architecture, *1-2*
Oracle RAC features, *10-1*
overview, *1-2*
UCP for JDBC
connection pool properties, *3-7*, *5-1*
UCP manager
See connection pool manager
ucp package, *2-3*
universal connection pool
See UCP
UniversalConnectionPoolManager interface, *8-1*
UniversalConnectionPoolManagerImpl, *8-1*
unmatched labels, *6-6*
URL, *2-2*, *3-3*, *3-4*, *10-12*
username, *2-2*, *3-3*, *3-4*

V

validate connections
on borrow, *3-8*
programmatically, *3-9*
ValidConnection interface, *3-9*, *3-11*

W

web session affinity, *10-15*

X

XA connections, *1-2*, *3-4*
XAConnection object, *1-2*