Oracle Easy Connect Naming

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The Easy Connect Naming method eliminates the need for service name lookup in the tnsnames.ora files for TCP/IP environments; in fact, no naming or directory system is required for using this method.

INTRODUCTION

Clients use a connect identifier in the connect string to connect to a service. The connect identifier can be a connect descriptor or a simple name that maps to a connect descriptor

In this paper, we assume that the reader is familiar with the local naming based on tnsnames.ora file.

CONNECT DESCRIPTORS

A quick re-cap on connect descriptors: Connect descriptor is comprised of one or more protocol addresses of the listener and the connect information for the destination service.

The following example shows a connect descriptor mapped to simple name called sales:

```
sales=
 (DESCRIPTION=
  (ADDRESS=
     (PROTOCOL=tcp)
     (HOST=sales-server)
     (PORT=1521))
  (CONNECT_DATA=
     (SERVICE_NAME=sales)))
```

The ADDRESS section contains the listener protocol address, and the CONNECT_DATA section contains the destination service information. In this example, the destination service is a database service named sales.

EASY CONNECT NAMING

Easy Connect Naming method enables clients to connect to a database server without any configuration. Clients use a connect string for a simple TCP/IP address, which includes a host name and optional port and service name:

```
CONNECT
username@[//]host[:port][/service_name][:server][/instance_name]
Enter password: password
```

This method is recommended for simple TCP/IP environments.

'//' is optional and is there to enable URL style hostname values

<host> is required, and should be a valid DNS host name

<port> is optional, default is 1521, and should be a decmial number for a TCP port number

<sevice_name> is optional. If specified, it should be a legal DB service name according to Oracle/listener conventions. The listener can optionally determine its own default service in version 11g and later.

<server> is optional, should be one of {DEDICATED, SHARED, POOLED}. The default is to leave it unspecified, and let the listener decide.

<instance> is optional, no default, and should be a legal Oracle database instance name.

NAMES.DIRECTORY_PATH

This parameter specifies the order of naming methods Oracle Net can use to resolve connect identifiers to connect descriptors.

By default, when this parameter is not set in sqlnet.ora, all naming methods (including Easy connect naming) are enabled for Net name resolution. In other words, Easy connect naming is available and used by default.

If this parameter is set, please ensure that `EZCONNECT` is specified as one of the values in order to use Easy connect naming method.

DEFAULT_SERVICE_*listener_name*

Setting this parameter in listener.ora enables users to connect to the database without having to specify a service name from client side. This feature is available in Oracle Database 11g and later.

The listener may be servicing several databases. Assuming that a service name is configured in this parameter, if a client specifies a service name, the listener will connect the client to that particular service, otherwise the listener will connect the client to the service specified by the `DEFAULT_SERVICE_listener_name` parameter.

> Note: In connection requests from pre-11g clients, service name defaults to the host name if not specified in easy connect syntax on client-side. The `DEFAULT_SERVICE_listener_name` parameter value is not used for pre-11g clients.

EXAMPLES

This section includes various examples of easy connect naming syntax and how each string converts into a connect descriptor.

Host only, where the host name is sales-server:

```
sales-server
```

This connect string converts into the following connect descriptor:

```
(DESCRIPTION=
  (CONNECT_DATA=
     (SERVICE_NAME=))
  (ADDRESS=
     (PROTOCOL=TCP)
     (HOST=sales-server)
     (PORT=1521)))
```

Host and port, where the host name is sales-server and the port number is 3456:

```
sales-server:3456
```

This connect string converts into the following connect descriptor:

```
(DESCRIPTION=
   (CONNECT_DATA=
       (SERVICE_NAME=))
   (ADDRESS=
       (PROTOCOL=TCP)
       (HOST=sales-server)
       (PORT=3456)))
```

Host and service name, where the host name is sales-server and the service name is sales:

```
sales-server/sales
```

This connect string converts into the following connect descriptor:

```
(DESCRIPTION=
  (CONNECT_DATA=
     (SERVICE_NAME=sales))
  (ADDRESS=
     (PROTOCOL=TCP)
     (HOST=sales-server)
     (PORT=1521)))
```

Host, service name and server, and instance name where the host name is sales-server, the service name is sales, the server is dedicated, and the instance name is inst1:

```
sales-server/sales:dedicated/inst1
```

This connect string converts into the following connect descriptor:

```
(DESCRIPTION=
  (CONNECT_DATA=
      (SERVICE_NAME=sales)
      (INSTANCE_NAME=inst1)
      (SERVER=dedicated))
  (ADDRESS=
      (PROTOCOL=TCP)
```

```
         (HOST=sales-server)
         (PORT=1521)))
```

Host and instance name, where the host name is sales-server and the instance name is inst1:

```
sales-server//inst1
```

This connect string converts into the following connect descriptor:

```
(DESCRIPTION=
   (CONNECT_DATA=
      (SERVICE_NAME=)
      (INSTANCE_NAME=inst1))
   (ADDRESS=
      (PROTOCOL=TCP)
      (HOST=sales-server)
      (PORT=1521)))
```

CONCLUSION

The Easy Connect Naming method eliminates the need for service name lookup in the tnsnames.ora files for TCP/IP environments; in fact, no naming or directory system is required for using this method.

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