

Oracle® Solaris Cluster Data Service for Oracle External Proxy Guide

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Preface

Oracle Solaris Cluster Data Service for Oracle External Proxy Guide explains how to install and configure Oracle Solaris Cluster data services.

Note – This Oracle Solaris Cluster release supports systems that use the SPARC and x86 families of processor architectures. In this document, “x86” refers to the larger family of x86 compatible products. Information in this document pertains to all platforms unless otherwise specified.

This document is intended for system administrators with extensive knowledge of Oracle software and hardware. Do not use this document as a planning or presales guide. Before reading this document, you should have already determined your system requirements and purchased the appropriate equipment and software.

The instructions in this book assume knowledge of the Oracle Solaris Operating System and expertise with the volume-manager software that is used with Oracle Solaris Cluster software.

Bash is the default shell for Oracle Solaris 11. Machine names shown with the Bash shell prompt are displayed for clarity.

Using UNIX Commands

This document contains information about commands that are specific to installing and configuring Oracle Solaris Cluster data services. The document does *not* contain comprehensive information about basic UNIX commands and procedures, such as shutting down the system, booting the system, and configuring devices. Information about basic UNIX commands and procedures is available from the following sources:

- Online documentation for the Oracle Solaris Operating System
- Oracle Solaris Operating System man pages
- Other software documentation that you received with your system

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P-1 Typographic Conventions

Typeface	Description	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name% you have mail.</code>
AaBbCc123	What you type, contrasted with onscreen computer output	<code>machine_name% su</code> Password:
<i>aabbcc123</i>	Placeholder: replace with a real name or value	The command to remove a file is <code>rm filename</code> .
<i>AaBbCc123</i>	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the <i>User's Guide</i> . <i>A cache</i> is a copy that is stored locally. Do <i>not</i> save the file. Note: Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows UNIX system prompts and superuser prompts for shells that are included in the Oracle Solaris OS. In command examples, the shell prompt indicates whether the command should be executed by a regular user or a user with privileges.

TABLE P-2 Shell Prompts

Shell	Prompt
Bash shell, Korn shell, and Bourne shell	\$
Bash shell, Korn shell, and Bourne shell for superuser	#
C shell	machine_name%
C shell for superuser	machine_name#

Related Documentation

Information about related Oracle Solaris Cluster topics is available in the documentation that is listed in the following table. All Oracle Solaris Cluster documentation is available at <http://www.oracle.com/technetwork/indexes/documentation/index.html>.

Topic	Documentation
Hardware installation and administration	<i>Oracle Solaris Cluster 4.1 Hardware Administration Manual</i> Individual hardware administration guides
Concepts	<i>Oracle Solaris Cluster Concepts Guide</i>
Software installation	<i>Oracle Solaris Cluster Software Installation Guide</i>
Data service installation and administration	<i>Oracle Solaris Cluster Data Services Planning and Administration Guide</i> and individual data service guides
Data service development	<i>Oracle Solaris Cluster Data Services Developer's Guide</i>
System administration	<i>Oracle Solaris Cluster System Administration Guide</i> <i>Oracle Solaris Cluster Quick Reference</i>
Software upgrade	<i>Oracle Solaris Cluster Upgrade Guide</i>
Error messages	<i>Oracle Solaris Cluster Error Messages Guide</i>
Command and function references	<i>Oracle Solaris Cluster Reference Manual</i> <i>Oracle Solaris Cluster Data Services Reference Manual</i> <i>Oracle Solaris Cluster Geographic Edition Reference Manual</i> <i>Oracle Solaris Cluster Quorum Server Reference Manual</i>
Compatible software	Oracle Solaris Cluster Compatibility Guide available at the Oracle Solaris Cluster Technical Resources page

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Getting Help

If you have problems installing or using Oracle Solaris Cluster, contact your service provider and provide the following information.

- Your name and email address (if available)
- Your company name, address, and phone number
- The model number and serial number of your systems
- The release number of the operating environment (for example, Oracle Solaris 11)
- The release number of Oracle Solaris Cluster (for example, Oracle Solaris Cluster 4.1)

Use the following commands to gather information about your system for your service provider.

Command	Function
<code>prtconf -v</code>	Displays the size of the system memory and reports information about peripheral devices
<code>psrinfo -v</code>	Displays information about processors
<code>pkg list</code>	Reports which packages are installed
<code>prtdiag -v</code>	Displays system diagnostic information
<code>/usr/cluster/bin/clnode show-rev -v</code>	Displays Oracle Solaris Cluster release and package version information for each node

Also have available the contents of the `/var/adm/messages` file.

Installing and Configuring HA for Oracle External Proxy

This chapter describes the steps to install and configure HA for Oracle External Proxy on your Oracle Solaris Cluster servers.

This chapter contains the following sections:

- “Overview” on page 9
- “Planning the Installation and Configuration” on page 10
- “Overview of the Installation and Configuration Process for HA for Oracle External Proxy” on page 14
- “Installing the HA for Oracle External Proxy Package” on page 14
- “Registering and Configuring HA for Oracle External Proxy” on page 15
- “Operations By HA for Oracle External Proxy” on page 19
- “Upgrading the `ORCL.oracle_external_proxy` Resource Type” on page 20

You can configure HA for Oracle External Proxy as a failover or a scalable data service. See Chapter 1, “Planning for Oracle Solaris Cluster Data Services,” in *Oracle Solaris Cluster Data Services Planning and Administration Guide* and the *Oracle Solaris Cluster Concepts Guide* document for an overview of failover and scalable data services.

Overview

The `ORCL.oracle_external_proxy` resource type interrogates the Oracle Database or the Oracle Real Application Clusters (Oracle RAC) services and interprets the availability of those services as an Oracle Solaris Cluster resource state or status in an Oracle Solaris Cluster configuration.

If the Oracle Database or the Oracle RAC services are unavailable, the Oracle Solaris Cluster resource state will be offline. Similarly, if the Oracle Database or the Oracle RAC services are available, the Oracle Solaris Cluster resource state will be online. Additionally, appropriate Oracle Solaris Cluster status messages will also be displayed.

For example:

```
# clrs status oep-rs
=== Cluster Resources ===

Resource Name      Node Name      State      Status Message
-----
oep-rs             oephost1      Online    Online - Service orcl is UP
                  oephost2      Online    Online - Service orcl is UP
```

Furthermore, if the Oracle Database and the Oracle RAC services are unavailable, the Oracle Solaris Cluster resource status message will also display the ORA error number and some part of the error message, if known.

For example:

```
# clrs status oep-rs
=== Cluster Resources ===

Resource Name      Node Name      State      Status Message
-----
oep-rs             oephost1      Offline    Offline - Service orcl is DOWN /
[ORA-12514, TNS:listener does not currently ...]
                  oephost2      Offline    Offline - Service orcl is DOWN /
[ORA-12514, TNS:listener does not currently ?]
```

Planning the Installation and Configuration

Note – The HA for Oracle External Proxy software can be configured to run in a zone cluster.

To register and configure HA for Oracle External Proxy, you must consider or provide information on the following points.

- Decide whether to run HA for Oracle External Proxy as a failover or scalable data service.
- Decide which extension properties to set. See the *Oracle Solaris Cluster Data Services Planning and Administration Guide* for information about the standard properties and [Appendix A, “HA for Oracle External Proxy Extension Properties,”](#) for information about the extension properties.
- Provide the name of the resource type for HA for Oracle External Proxy. This name is `ORCL.oracle_external_proxy`.
- Provide the names of the cluster nodes that will master the data service.

Configuration Requirements

The following sections describe the configuration requirements for Oracle External Proxy.

- “Remote Database User” on page 11
- “Secure Remote Database Password” on page 11

- “tnsnames.ora File” on page 12
- “Remote Oracle Notification Service” on page 13

Remote Database User

On the Oracle Database or the Oracle RAC database, create a user that will be used by the Oracle External Proxy resource.

The following example shows that a user hauser with a password hauser has been created by using the SQL commands. You can choose a different username and password. The username and password that you chose will be used later by the Oracle Solaris Cluster resource.

```
-bash-3.00$ sqlplus "/as sysdba"
SQL*Plus: Release 11.2.0.2.0 Production on Fri Nov 4 05:23:31 2011
Copyright (c) 1982, 2010, Oracle. All rights reserved.

Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.2.0 - 64bit Production
With the Partitioning, Real Application Clusters, Automatic Storage Management, OLAP,
Data Mining and Real Application Testing options

SQL> create user hauser identified by hauser;

User created.

SQL> grant create session to hauser;

Grant succeeded.

SQL> grant execute on dbms_lock to hauser;

Grant succeeded.

SQL> grant select on v_$instance to hauser;

Grant succeeded.

SQL> create profile hauser limit PASSWORD_LIFE_TIME UNLIMITED;

Profile created.

SQL> alter user hauser identified by hauser profile hauser;

User altered.

SQL>
```

Secure Remote Database Password

The ORCL.oracle_external_proxy resource type verifies a connection to the remote Oracle database. There is no requirement for any Oracle Client software on the nodes where the ORCL.oracle_external_proxy resource type will execute. You will need to create a secure

password to connect to a remote database. [Example 1-1](#) shows how to encrypt the database user password. The example uses hauser as the password. However, this password must correspond to the password you used when creating the database user in “[Remote Database User](#)” on [page 11](#).

Note – Create `/var/cluster/scoep_key` only once on each node. If you intend to create multiple resources of the `ORCL.oracle_external_proxy` type, use the same key for encryption and decryption. If `/var/cluster/scoep_key` is recreated after an encrypted password has been created, it will not be possible to decrypt the encrypted password using the newly created `/var/cluster/scoep_key`. Consequently, the `ORCL.oracle_external_proxy` resource type will fail to connect to the remote database. Also, the resource will go OFFLINE and you will get the `ORA-01017: invalid username/password; logon denied` message.

If you have recreated `/var/cluster/scoep_key`, you will need to recreate the encrypted password again, and then disable and enable the `ORCL.oracle_external_proxy` resource type for the change to be effective.

EXAMPLE 1-1 Encrypting the Database User Password

Assuming a root role on all Oracle Solaris Cluster nodes, do the following:

```
bash-3.00# dd if=/dev/urandom of=/var/cluster/scoep_key bs=8 count=1
1+0 records in
1+0 records out
bash-3.00#
bash-3.00# echo hauser | /usr/sfw/bin/openssl enc -aes128 -e -pass \
file:/var/cluster/scoep_key -out /opt/ORCLscoep/.oep-rs_passwd
bash-3.00#
```

`oep-rs` in `oep-rs_passwd` represents the resource name that you will create later. However, you can choose a different resource name. Now verify that the password can be decrypted.

```
bash-3.00# /usr/sfw/bin/openssl enc -aes128 -d -pass \
file:/var/cluster/scoep_key -in /opt/ORCLscoep/.oep-rs_passwd
hauser
bash-3.00# chmod 400 /var/cluster/scoep_key
bash-3.00# chmod 400 /opt/ORCLscoep/.oep-rs_passwd
```

tnsnames.ora File

A valid `tnsnames` entry for the Oracle Database or Oracle RAC service is required. If an existing Oracle installation exists, for example if an Oracle Application Tier is installed on the Oracle Solaris Cluster nodes, then it is acceptable to use the `tnsnames.ora` file in that installation:

```
${ORACLE_HOME}/network/admin/tnsnames.ora
```

When registering an Oracle External Proxy resource, you need to specify a `tns_admin` extension property, unless the default value `/var/opt/oracle` is acceptable. If so, you can provide either of the following entries:

```
-p TNS_ADMIN=<${ORACLE_HOME}>/network/admin
-p TNS_ADMIN=your path to tnsnames.ora
```

If the `tns_admin` extension property is omitted, the Oracle External Proxy resource defaults to the `/var/opt/oracle` file. If you are interrogating an Oracle Database, the `HOST` entry in `tnsnames.ora` must refer to the `SCAN` name.

```
bash-3.00# mkdir /var/opt/oracle
bash-3.00# cat /var/opt/oracle/tnsnames.ora
ORCL =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = dbhost-scan-lh)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = ORCL)
    )
  )
bash-3.00#
```

The hostname `dbhost-scan-lh` must be resolvable and within the `/etc/inet/hosts` file on each node.

```
bash-3.00# grep dbhost-scan-lh /etc/inet/hosts
10.134.84.58 dbhost-scan-lh.us.oracle.com dbhost-scan-lh
bash-3.00#
```

Remote Oracle Notification Service

Running Oracle Notification Service on every database node reduces the time it takes for the `ORCL.oracle_external_proxy` resource type to connect to the database and to determine the state of the database. To verify that Oracle Notification Service is running on the database nodes, run the following command.

```
bash-3.00# su - oragrid
Oracle Corporation SunOS 5.11 11.0 November 2011
-bash-3.00$ crsctl stat res ora.ons -t
-----
NAME TARGET STATE SERVER STATE_DETAILS Local Resources
-----
ora.ons
ONLINE ONLINE dbhost1
ONLINE ONLINE dbhost2
bash-3.00$
```

If Oracle Notification Service fails or stops running on a database node, the `ORCL.oracle_external_proxy` resource will still continue to monitor the remote database. However, it will take longer to connect to the database and determine the state of the database.

Overview of the Installation and Configuration Process for HA for Oracle External Proxy

The following table lists the sections that describe the installation and configuration tasks.

TABLE 1-1 Task Map: Installing and Configuring HA for Oracle External Proxy

Task	Instructions
Install the HA for Oracle External Proxy package	“How to Install the HA for Oracle External Proxy Package” on page 14
Configure and start HA for Oracle External Proxy	“How to Register and Configure HA for Oracle External Proxy” on page 16

Installing the HA for Oracle External Proxy Package

If you did not install the HA for Oracle External Proxy package during your initial Oracle Solaris Cluster installation, perform this procedure to install the package.

▼ How to Install the HA for Oracle External Proxy Package

Perform this procedure on each cluster node where you want the HA for Oracle External Proxy software to run.

- 1 On the cluster node where you are installing the data service package, assume the root role.
- 2 Ensure that the `solaris` and `ha-cluster` publishers are valid.

```
# pkg publisher
PUBLISHER          TYPE    STATUS  URI
solaris             origin  online  solaris-repository
ha-cluster          origin  online  ha-cluster-repository
```

For information about setting the `solaris` publisher, see “Set the Publisher Origin to the File Repository URI” in *Copying and Creating Oracle Solaris 11.1 Package Repositories*.

- 3 Install the HA for Oracle External Proxy software package.
`pkg install ha-cluster/data-service/oracle-external-proxy`

- 4 Verify that the package installed successfully.
\$ `pkg info ha-cluster/data-service/oracle-external-proxy`
Installation is successful if output shows that State is Installed.

5 Perform any necessary updates to the Oracle Solaris Cluster software.

For instructions on updating single or multiple packages, see [Chapter 11, “Updating Your Software,”](#) in *Oracle Solaris Cluster System Administration Guide*.

Registering and Configuring HA for Oracle External Proxy

The following sections describe how to register and configure HA for Oracle External Proxy.

- “Setting HA for Oracle External Proxy Extension Properties” on page 15
- “Tools for Registering and Configuring HA for Oracle External Proxy” on page 16
- “How to Register and Configure HA for Oracle External Proxy” on page 16
- “Setting up Dependencies on Oracle External Proxy Resources” on page 18
- “How to Verify Data Service Installation and Configuration” on page 19

You can configure HA for Oracle External Proxy as a failover service or as a scalable service.

Setting HA for Oracle External Proxy Extension Properties

The sections that follow contain instructions for registering and configuring HA for Oracle External Proxy resources. For information about the extension properties, see [Appendix A, “HA for Oracle External Proxy Extension Properties.”](#) The Tunable entry indicates when you can update a property.

See the `rt_properties(5)`, `r_properties(5)`, and `rg_properties(5)` man pages for details on all of the Oracle Solaris Cluster extension properties.

To set an extension property of a resource, include the following option in the `cl resource` command that creates or modifies the resource:

`-p property=value`

`-p property`

Identifies the extension property that you are setting.

`value`

Specifies the value to which you are setting the extension property.

You can also use the procedures in [Chapter 2, “Administering Data Service Resources,”](#) in *Oracle Solaris Cluster Data Services Planning and Administration Guide* to configure resources after the resources are created.

Tools for Registering and Configuring HA for Oracle External Proxy

Oracle Solaris Cluster provides the following tool for registering and configuring HA for Oracle External Proxy:

- **Oracle Solaris Cluster maintenance commands.** For more information, see [“How to Register and Configure HA for Oracle External Proxy”](#) on page 16.

▼ How to Register and Configure HA for Oracle External Proxy

Complete the registration and configuration on any cluster member.

Before You Begin Ensure that you have completed the requirements as described in [“Configuration Requirements”](#) on page 10.

- 1 **On a cluster member, assume a root role or assume a role that provides `solaris.cluster.admin` RBAC authorization.**
- 2 **Register the `ORCL.oracle_external_proxy` resource type for the data service.**
- 3 **Create either a scalable or a failover resource group for the Oracle External Proxy resource.**

For example, to create a scalable resource group, do the following:

```
# clresourcegroup create -S [-n node-zone-list] resource-group
resource-group
```

Specifies the name of the scalable service resource group to add.

```
-n node-zone-list
```

Specifies a comma-separated, ordered list of nodes that can master this resource group. This list is optional. If you omit this list, then all the nodes of the global cluster or zone cluster are used to master the resource group.

- 4 **Create an Oracle External Proxy resource in the resource group that you created.**

```
# clresource create -g resource-group \  
-t ORCL.oracle_external_proxy \  
-p service_name=service-name \  
-p ons_nodes=ons-nodes \  
-p dbuser=dbuser \  
[-p plugin_name=plugin-name] \  
[-p tns_admin=tns-admin] \  
-d \  
resource
```


- g *resource-group*
Specifies the name of the resource group .
 - t *resource-type*
Specifies the resource type to add.
 - p *service_name=service-name*
Specifies the Oracle Database or Real Application Clusters (RAC) service name that the Oracle External Proxy uses to connect to the database.
 - p *ons_nodes=ons-nodes*
Specifies the Remote Oracle Notification Service (ONS) nodes that the Oracle External Proxy uses to connect to the database, for example *node:port [node:port]*.
 - p *dbuser=dbuser*
Specifies the server side Oracle database user that the Oracle External Proxy uses to connect to the database.
 - p *plugin_name=plugin-name*
Specifies the plugin module that the Oracle External Proxy uses to connect to the database. You can omit this entry as it will default to `OracleExternalProxy`.
 - p *tns_admin=tns-admin*
Specifies the client-side location for the Oracle `tns_admin` path that the Oracle External Proxy uses to connect to the database. Omit this entry so that it defaults to the `/var/opt/oracle` directory.
 - d
Creates the resource in the disabled state.
- resource*
Specifies your choice for the name of the resource to add.

Note – Optionally, you can set additional extension properties that belong to the Oracle External Proxy data service to override their default values. See [Appendix A, “HA for Oracle External Proxy Extension Properties,”](#) for a list of extension properties.

5 Bring the resource group online.

```
# clresourcegroup online -emM resource-group
```

```
resource-group
```

Specifies the name of the resource group.

The Oracle Solaris Cluster resource is now configured and online, thereby interrogating the state of the remote database. .

Example 1–2 Creating an ORCL.oracle_external_proxy Resource

This example shows the commands for performing the following operations which create a scalable multi-master ORCL.oracle_external_proxy resource on a two-node cluster.

- Creating the oep-rg resource group
- Registering the ORCL.oracle_external_proxy resource type
- Adding the oep-rs resource to the oep-rg resource group

This example assumes that default values are being used for the dbuser, tns_admin, and plugin_name extension properties. It also assumes that the dbuser password has been encrypted on each cluster node.

```
phys-schost-1# clresourcetype register ORCL.oracle_external_proxy
phys-schost-1# clresourcegroup create -S oep-rg
phys-schost-1# clresource create -g oep-rg \
-t ORCL.oracle_external_proxy \
-p service_name=orcl \
-p ons_nodes=binks-scan-lh:6200 \
-d \
oep-rs
phys-schost-1# clresourcegroup online -M oep-rg
phys-schost-1# clresource enable oep-rs
```

Example 1–3 Registering Failover HA for Oracle External Proxy

The following example shows how to register a failover Oracle External Proxy service.

```
phys-schost-1# clresourcetype register ORCL.oracle_external_proxy
phys-schost-1# clresourcegroup create oep-rg
phys-schost-1# clresource create -g oep-rg \
-t ORCL.oracle_external_proxy \
-p service_name=orcl \
-p ons_nodes=binks-scan-lh:6200 \
-d \
oep-rs
phys-schost-1# clresourcegroup online -M oep-rg
phys-schost-1# clresource enable oep-rs
```

Setting up Dependencies on Oracle External Proxy Resources

To use the Oracle Solaris Cluster resource as a dependency for an application resource, set up appropriate dependencies as shown in the following example.

EXAMPLE 1–4 Setting Up Application Resource Group Dependencies

As an example, when the Oracle External Proxy resource is within a scalable resource group and the application resource is within a failover resource group, you can do the following:

EXAMPLE 1-4 Setting Up Application Resource Group Dependencies (Continued)

```
# clrg set -p RG_Affinities=++oep-rg app-rg
# clrs set -p resource_dependencies_offline_restart=oep-rs{any_node} app-rs
```

As an example, when the Oracle External Proxy resource and the application resource are within the same failover resource group, you can do the following:

```
# clrs set -p resource_dependencies_offline_restart=oep-rs app-rs
```

As an example, when the Oracle External Proxy resource and the application resource are in separate failover resource groups, you can do the following:

```
# clrg set -p RG_Affinities=++oep-rg app-rg
# clrs set -p resource_dependencies_offline_restart=oep-rs app-rs
```

How to Verify Data Service Installation and Configuration

After the Oracle External Proxy resource has been installed, configured, and registered, verify it by enabling the Oracle External Proxy resource. Once the Oracle External Proxy resource has been enabled, the resource status will reflect the state and status of the server-side Oracle database. The presence of a resource status message is verification that the Oracle External Proxy has been installed and configured.

Operations By HA for Oracle External Proxy

The Oracle External Proxy software interrogates an Oracle Database or Oracle RAC service and interprets the availability of that service as an Oracle Solaris Cluster resource state or status. As part of that interrogation, the Oracle External Proxy software uses the Oracle JDBC thin driver to connect to the Oracle Database or Oracle RAC service. The connection is then interpreted by Oracle Solaris Cluster with the Oracle External Proxy resource state and status message.

The Oracle External Proxy writes to a trace file within the `/var/opt/ORCLscoep/message_log.resource` file on each node where three generations are kept. The Oracle External Proxy resource type is responsible for maintaining the generations and automatically removes old generations.

Actions in Response to Faults

If the Oracle External Proxy cannot connect to the Oracle Database or Oracle RAC service, the Oracle Solaris Cluster resource will go offline. An appropriate resource status message will

indicate the reason why the connection was not possible. As soon as the Oracle External Proxy can connect to the Oracle Database or Oracle RAC service, the Oracle Solaris Cluster resource will come online.

Upgrading the ORCL.oracle_external_proxy Resource Type

Upgrade the ORCL.oracle_external_proxy resource type if the following conditions apply:

- You are upgrading from an earlier version of the HA for Oracle External Proxy data service.
- You need to use the new features of this data service.

For general instructions that explain how to upgrade a resource type, see “[Upgrading a Resource Type](#)” in *Oracle Solaris Cluster Data Services Planning and Administration Guide*. The information that you require to complete the upgrade of the ORCL.oracle_external_proxy resource type is provided in the following subsections.

- “[Information for Registering the New Resource Type Version](#)” on page 20
- “[Information for Migrating Existing Instances of the Resource Type](#)” on page 20

Information for Registering the New Resource Type Version

The relationship between a resource type version and the release of Oracle Solaris Cluster data services is shown in the following table. The release of Oracle Solaris Cluster data services indicates the release in which the version of the resource type was introduced.

Resource Type Version	Oracle Solaris Cluster Data Services Release
1	1.0

To determine the version of the resource type that is registered, use the `cl resourcetype show` command.

The resource type registration (RTR) file for this resource type is `/opt/SUNWscoop/etc/ORCL.oracle_external_proxy`.

Information for Migrating Existing Instances of the Resource Type

The information that you require to edit each instance of the ORCL.oracle_external_proxy resource type is as follows:

- You can perform the migration at any time.

The following example shows the command for modifying an instance of the ORCL.oracle_external_proxy resource type.

EXAMPLE 1-5 Migrating Instances of the ORCL.oracle_external_proxy Resource Type

The following command sets the Type_version property of the ORCL.oracle_external_proxy resource named oep-rs to 2.

```
# clresource set -p Type_version=2 oep-rs
```


Default	0
Tunable	Any time

Dbuser

This property specifies the server-side Oracle Database user that the proxy monitor uses to connect to the database.

Data Type	String
Default	hauser
Tunable	When disabled

Ons_nodes

This property specifies the Remote Oracle Notification Server (ONS) nodes such as *node:port[,node:port]* that the proxy monitor uses to connect to the database.

Data Type	String
Default	None
Tunable	When disabled

Plugin_name

This property specifies the plugin module name that the proxy monitor uses to connect to the database.

Data Type	String
Default	OracleExternalProxy
Tunable	When disabled

Service_name

This property specifies the Oracle Database or Oracle RAC service name that the proxy monitor uses to connect to the database.

Data Type	String
Default	None
Tunable	When disabled

Tns_admin

This property specifies the client-side location for the Oracle *Tns_admin* path that the proxy monitor uses to connect to the database.

Data Type	String
Default	/var/opt/oracle
Tunable	When disabled

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