Oracle Application Server Portal

Technical Note

SETTING UP ORACLE ULTRA SEARCH FOR ORACLEAS PORTAL 10G (9.0.4)

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ORACLE
APPLICATION SERVER 10g

INTRODUCTION

This Technical Note describes how to setup up and configure Oracle Ultra Search in order to leverage this technology in OracleAS Portal. OracleAS Portal provides Ultra Search integration and an Ultra Search portlet out of the box. This functionality is pre-configured in the Infrastructure Database and ready to use from OracleAS Portal by performing only a few simple configuration steps. For more information on this topic refer to the *Oracle Application Server Portal Configuration Guide (Chapter 8.2.3)*.

The target audiences for this document are administrators who want to setup Oracle Ultra Search and OracleAS Portal integration from scratch to effectively support their deployment environment. Before you can use the Oracle Ultra Search portlet, several configuration steps are required in Oracle Ultra Search, as well as in OracleAS Portal. This Technical Note gives step-by-step instructions of the setup process, including how to:

- Create a new Ultra Search user
- Modify Oracle Application Server configuration files
- Set up OracleAS Portal page groups to be searched
- Create a new Ultra Search instance to search these page groups
- Add an Ultra Search portlet to a portal page

In addition to this Technical Note, refer to the *Oracle Application Server Portal Configuration Guide,* as well as the *Oracle Ultra Search User's Guide* for more information on this topic.

STEP BY STEP INSTRUCTIONS

INITIAL SETUP OF ORACLE ULTRA SEARCH FOR PORTAL USE

The first step is to setup a new Ultra Search user in the database and configure the Oracle Application Server middle-tier accordingly. Next, using the Ultra Search administration tool, you must pre-configure Ultra Search for OracleAS Portal use.

Note: You can also perform all SQL*Plus actions from Oracle Enterprise Manager.

1. Create an additional temporary tablespace, minimum 50 MB (in addition to the default temporary tablespace in the portal infrastructure database).

   Oracle Ultra Search uses the Oracle Text engine intensively. Therefore, a large temporary tablespace must be created for the Oracle Text system user CTXSYS.

```
CREATE TEMPORARY TABLESPACE <name_of_the_tablespace>
TEMPFILE '<path_to_datafile>/<datafile_name>.dbf'
SIZE 50M;
```

2. Assign the temporary tablespace (created in Step 1) to the CTXSYS user. From SQL*Plus, connect as SYSTEM or SYS and enter:

```
SQL> ALTER USER CTXSYS TEMPORARY TABLESPACE
<the_new_temporary_tablespace>;
```

3. Create a new Oracle Ultra Search user and grant privileges (e.g. the WKUSER role) to the Ultra Search user that will host new Ultra Search instances. From SQL*Plus, connect as SYSTEM or SYS and enter:

```
SQL> CREATE USER <username> IDENTIFIED BY <password>
DEFAULT TABLESPACE <default_tablespace>
TEMPORARY TABLESPACE <temporary_tablespace>
QUOTA UNLIMITED ON <default_tablespace>;
```

```
SQL> GRANT CONNECT, RESOURCE, WKUSER TO <username>;
```

For example, call your Ultra Search user **US_USER.**

4. For security reasons, we recommend that you reset the default password of the Ultra Search super user WKSYS. From SQL*Plus, connect as SYSTEM or SYS and enter:

```
SQL> ALTER USER WKSYS IDENTIFIED BY <password>;
```

5. Edit the OC4J configuration file:
   <MIDTIER_HOME>/j2ee/OC4J_Portal/config/data-sources.xml

   Add the following section to the configuration file, replacing *username*, *password* and the *infrastructure_hostname* with valid values.

```
<data-source
class="oracle.jdbc.pool.OracleConnectionCacheImpl"
name="UltraSearchDS"
location="jdbc/UltraSearchPooledDS"
username="<username>"
password="<password>"
url="jdbc:oracle:thin:@<infrastructure_hostname>:<orac
le_port>:<oracle_sid>"
/>
```

   Note: On a default Infrastructure Installation replace <oracle_port> with 1521 and <oracle_sid> with asdb.

6. Edit the Ultra Search configuration file:
   <MIDTIER_HOME>/ultrasearch/webapp/config/ultrasearch.properties

   Replace *infrastructure_hostname* in connection.url with a valid value and *infrastructure_home* in admin.srchome with the physical directory to the infrastructure Oracle Home.

```
connection.driver=oracle.jdbc.driver.OracleDriver
connection.url=jdbc:oracle:thin:@<infrastructure_hostn
ame>:<oracle_port>:<oracle_sid>
admin.srchome=<INFRASTRUCTURE_HOME>/ultrasearch
/webapp/ultrasearch_admin.ear
```

   Note: On a default Infrastructure Installation replace <oracle_port> with 1521 and <oracle_sid> with asdb.

7. Login to the Oracle Ultra Search administration tool to create an Ultra Search instance.

   a. Point your Web browser to:

```
http://<midtier_hostname>:<port>/ultrasearch/admi
n/index.jsp
```

   Note: In a default installation of Oracle Application Server the port is 7778.

b. In the Ultra Search login page, enter:

User Name: WKSYS

Password: <password>

c. Click **Login**.

Note: The user WKSYS is the default Ultra Search super-user who can create Ultra Search instances.

8. Click **Create** at the top of the Instances tab, then **Create instance:**

a. Enter the following:

New instance name: ULTRASEARCH_INST

Database schema : <username_from_ultrasearch_schema>

Schema password : <password_from_ultrasearch_schema>

Note: Enter *username* and *password* of the Ultra Search user created in Step 3 (e.g. US_USER).

b. Click **Apply**.

9. Check that Oracle Ultra Search is correctly installed. From SQL*Plus, connect as the Ultra Search user you created in Step 3 (e.g. **US_USER**) and enter this query:

```
SQL> SELECT index_name
2    FROM user_indexes
3    WHERE index_type = 'NORMAL';
```

This query should return 16 rows.

10. Logout from the Oracle Ultra Search administration tool as the WKSYS user and login as the Ultra Search user you created in Step 3:

a. Click **Logout**.

b. Enter:

User Name : <username_from_ultrasearch_schema>

Password : <password_from_ultrasearch_schema>

c. Click **Login**.

11. On the Instances Tab, choose the Ultra Search instance you created in Step 8 (e.g. ULTRASEARCH_INST) and click **Apply**.

12. Check to see if you can navigate from tab to tab within this Oracle Ultra Search instance.

CONFIGURATION STEPS IN ORACLEAS PORTAL

Now that the basic Ultra Search configuration is complete, you can register the Ultra Search provider in OracleAS Portal. The page groups that Oracle Ultra Search will search, must also be configured accordingly as the Ultra Search portlet can only search public Page Groups and public Pages.

13. Access your OracleAS Portal:

```
http://<midtier_hostname>:<port>/pls/portal
```

14. Login into OracleAS Portal as an administrator and navigate to the **Builder** page.

a. Click the **Administer** tab and locate the **Portlet** sub-tab.

b. Click the **Register a Provider** link in the **Remote Providers** portlet.

15. Register the Oracle Ultra Search provider:

   a. Before registering the provider, check that the Ultra Search provider is operational. Open a new browser window and enter the following URL:

   ```
   http://<midtier_hostname>:<port>/provider/ultr
   asearch/servlet/soaprouter/
   ```

   You should see following message: **Congratulations! You have successfully reached your Provider's Test Page.**

   b. In the Remote Providers page, enter the following:

   Name: ULTRASEARCH

   Display Name: Oracle Ultra Search

   Timeout: 60 seconds

   Timeout Message: Oracle Ultra Search Provider has Timed Out

   Implementation Style: Web

   c. Click **Next** and Enter:

   URL:
   http://<midtier_hostname>:<port>/provider/ultrasearch
   /servlet/soaprouter/

   Service Id: urn:ultrasearch

   Login Frequency: **Once Per Session**.

   d. Click **Next** and enter:

   Grantee: PORTAL

   Type: USER

   Privilege: Manage

   e. Click **Finish**.

16. Create a public page group with public pages in OracleAS Portal to test the Oracle Ultra Search portlet:

   a. Using the Navigator**,** create a new Page Group (e.g. named ULTRASEARCH).

   b. Create two sub-pages inside this Page Group (e.g. named US_PAGE1 and US_PAGE2).

   c. Make both sub-pages public. For each page, click **Properties**, click the **Access** tab and select **Display Page to Public Users**.

   Note: The Ultra Search portlet can only search public Page Groups and public Pages.

   d. Add some items to these sub-pages that you may want to search for, for example, a Word document, an HTML file or an Excel spreadsheet.

   e. Make the page group public. Click Page Group **Properties**, click the **Access** tab and grant view access to the PUBLIC user as follows:

   Grantee: PUBLIC

   Type: USER

   Privilege: View

f. Click **OK**.

CONFIGURION OF ULTRA SEARCH TO INDEX PORTAL PAGES

The indexing of the page groups to be searched by Oracle Ultra Search need to be configured and executed using the Oracle Ultra Search administration tool.

17. Login to the Oracle Ultra Search administration tool to set up page group indexing:

    a. Point your Web browser to:

    ```
    http://<midtier_hostname>:<port>/ultrasearch/a
    dmin/index.jsp
    ```

    b. Enter:

    User Name: <Ultra Search user created in Step 3>

    Password: <password_from_ultrasearch_schema>

    c. Click **Login**.

18. On the Instances Tab, choose the Ultra Search instance you created in Step 8 (e.g. ULTRASEARCH_INST) and click **Apply**.

19. Click the **Crawler** tab and enter:

    Cache Directory Location: /tmp

    Crawler Log File Directory: /tmp

    Note: These directory locations are on the machine where Oracle Application Server mid-tier is installed. You can specify any other directory on the hard disk as the Cache Directory Location or the Crawler Log File Directory as well.

    Click **Apply**.

20. Click the **Sources** tab, and then click the **Oracle Sources** sub-tab. From the list choose **Oracle Portal (Crawlable)** and click **Go**.

21. Enter OracleAS Portal registration details:

    a. Enter:

    Portal Name: MY_PORTAL

    URL base: http://<midtier_hostname>:<port>/pls/portal/PORTAL

    Note that the URL base is case sensitive.

    b. Click **Register portal**.

22. Select the name of the Page Group you created in Step 16 and click the **Create portal data sources** button.

    You can see all the Page Groups that are granted to the PUBLIC user in the OracleAS Portal instance you have just registered. When you select a Page Group, **Edit** and **Delete** icons are displayed. Click **Edit** to choose the document types that you want Ultra Search to search, for example, you can add the MS Word Doc, MS Excel Doc, PDF Doc types. To select multiple document types mark the first one, hold the left mouse button, draw over the document type until the end of the list and release the mouse button. Next, click **>>** and then **Finish**.

23. To schedule the indexing of the portal data sources, navigate to the **Schedules** tab and click **Create new schedule**:

    a. Enter:

Name: PORTAL_SCHEDULE

b. Click **Proceed to Step 2**.

c. Enter:

Time Between Launches (hours): 1

Indexing Option: Automatically accept all URLs for indexing.

d. Click **Proceed to Step 3**.

e. Select:

Get available sources for type: PORTAL

f. Click **Get Sources**.

g. Move the available source to the assigned sources to index it later on.

h. Click **Finish**.

24. Click the **Scheduled** link of the Schedule you created in the Step 23. Click **Execute immediately** to start indexing your portal pages.

    This may take a while as it starts the crawling process. When it is finished you can proceed with the next step

    Note that the Synchronization Schedule Status is set to *Launching*. By clicking **Refresh Status** you can update the status. If the status is *Scheduled* you can see when the next indexing attempt is due.

25. Restart your mid-tier to effect the changes made to the configuration files. You can do this by running **opmnctl stopall** and **opmnctl startall** on the machine with the mid-tier installation.

    If it is not convenient for your whole mid-tier to be down, just restart the Portal OC4J instance.

TESTING THE ULTRA SEARCH PORTLET IN ORACLEAS PORTAL

Oracle Ultra Search is now ready to be used in OracleAS Portal. The final step is to add the Ultra Search portlet to a page and test it.

26. To initially test Oracle Ultra Search, access the JSP sample query application. Point your Web browser to:

```
http://<midtier_instance>:<port>/ultrasearch/query/sea
rch.jsp
```

27. Login into OracleAS Portal.

    a. Navigate to the page group you created in Step 16, e.g. ULTRASEARCH.

    Add the Ultra Search portlet to the root page. You can find the **Ultra Search** portlet in the Portlet Repository under **Portlet Staging Area** > **Oracle Ultra Search**.

    b. Enter the search criteria and click **Submit**.

    Note: You can toggle between a simple search and an advanced search by clicking the appropriate links in the upper right corner of the Ultra Search portlet.

ORACLEAS PORTAL RUNNING IN SSL

If OracleAS Portal is configured to run in SSL mode, only clients that trust Portal's SSL certificate will be able to access Portal. For more Information please check Chapter

13.3.8 – Ultra Search Security Model in the Oracle Application Server 10g Release Notes.

SUMMARY

You now have an overview of the setup process to leverage the power of Oracle Ultra Search in OracleAS Portal. Using the Ultra Search portlet helps organizations to make their users much more productive, since finding information is highly optimized.

RELATED MATERIAL

Oracle Application Server Portal Configuration Guide 10g (9.0.4) – Chapter 8.4

Oracle Application Server Portal User's Guide, 10*g* (9.0.4)

Oracle Ultra Search User's Guide 10g (9.0.4)

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