# PROJECT-OTR.ORG OpenBD-OTR.Local (v2.0)**Open Source Project Mats Strömberg** 2012

http://www.project-otr.org/

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# Oracle® Tablespace Report

# **Open Source Project**

# Introduction

Oracle Tablespace Report is used to gather various statistics e.g. tablespace usage (allocated, used and free) space. The statistics are stored centrally in the OTR Repository located in an OTR Instance.

This project got started out of a work from a Danish friend, Lars-Bo Vanting, at the time we worked together back in 2005.

Initially it was only based on Tables, Views and PL/SQL. The current version has expanded on the basis and added a web GUI (based on the excellent open source project Open BlueDragon (http://www.openbd.org).

# OpenBD-OTR.Local

OpenBD-OTR.Local is built using a new tool from the Open BlueDragon project called OpenBD.Local.

OpenBD.Local Windows Runtime environment allows you to package up webapps as complete downloadable applications that will have a presence in the main System Tray.

It ships with everything you need, including the Java Runtime. All you need to do is to supply the OpenBD Web App folder.

OpenBD.Local is Windows Jetty Service container where you can deploy any Java application... and of course fits right in the hand of OpenBD and OTR!

OpenBD-OTR.Local has to be setup a little bit different than the OTR. OpenBD-OTR.Local is identical to the original OTR but what we don't want, is having more local workstations doing the scheduled jobs like the Friday snapshot or generating host/instance PDF Reports.

One way to use OpenBD-OTR.Local is to install the OpenBD-OTR.Local on every DBA's Workstation, configure the OTR datasources OTR\_OTRREP and OTR\_SYSMAN but only have 1 single Workstation acting like a master and have this workstation have the scheduled tasks defined.

One major problem with this type of setup is that usually a workstation gets shutdown during nights or weekends and won't be able to do its scheduled tasks.

A better way would be to install OTR on a central Linux/UNIX Server and configure it as described in the OTR Documentation. This way we can let the central OTR take care of all scheduled tasks.

# What's needed to get OpenBD-OTR.Local running?

- Basis for the Oracle® Tablespace Report, from here on simply OTR, tool is the Oracle® Enterprise Manager 10g or the Oracle® Cloud Control 12c, so this is the first thing to be installed if not already done. Anyone running 10 or more Oracle Instances should never be without the Enterprise Manager!!!
- The OTR.Local which can be found at <a href="http://www.project-otr.org/">http://www.project-otr.org/</a>

The complete source is available on Google Code <a href="http://code.google.com/p/oracle-">http://code.google.com/p/oracle-</a> tablespace-report/

• The SQL files needed to setup the Repository on your OTR Repository Database. Also downloaded from http://www.project-otr.org/

NOTE: To avoid license problem with Oracle, the OTR Repository should NOT be installed in the Grid Control, Cloud Control or a RMAN Repository Database! The OTR can very well be run on a Standard Edition DB or even an Oracle XE instance. Future releases of OTR might even be possible to use MySQL as a Repository.

# What does it look like?

We're assuming the OTRREP schema and its objects have been created on the OTR Repository database.

#### The Main screen.



From here we will administrate our Customers, the Database Instances and the relationship of Customer/Database instance(s) and the Tablespaces used.

From here one will also generate reports of space usage at a defined point in time. This can be a report containing database instances for all customers or for a single customer. Reports can be stored as Excel files or as PDF files.

On the right side is the monitoring/alert pane where Instances with some sort of problem coming up will be listed. It will display if the Instance is down, in Blackout mode or if a Tablespace has a problem. With a mouse-over on a red alert the actual tablespace will be shown and how much free space in MB is still available and the "real" % used. With "real" means it's calculating the free space in % based on the "can grow to" value for the tablespace.

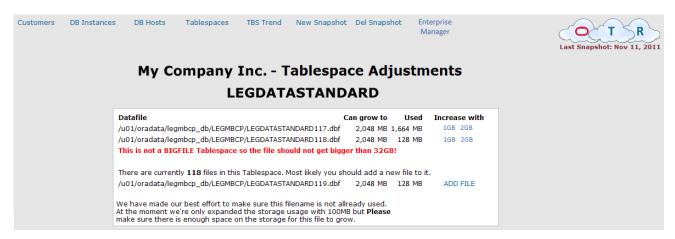
With a click on the red TBS alert, you get the possibility to adjust the tablespace with just one click.

Assuming we have a space problem on a BIGFILE tablespace.



With just one click this tablespace will extend the "Can Grow to" with another 1 or 2GB.

If it would be a non-BIGFILE tablespace...



A list of the files within this tablespace, that have autoextend still on, will be displayed. You can select to increase the "Can grow to" on one of these datafiles with 1 or 2GB or add a new file which will have its initial size set to 128MB and the "Can grow to" set to 2GB.

If a valid Mail Server and Mail account is configured a mail will be sent to the DBA and/or Storage Team with a reminder about checking the storage to make sure you don't run out of space.

#### **Customers**

#### Main screen for customers



From this screen we will administrate our customers. The company info contains Company ID or Mandator and a Customer name.

# Adding a new customer



Simply fill out the form and click on Save.

Customer ID is a 3 letter short name of the customer. This is later used as a connection to the database instance and the tablespaces used by this customer.

#### Edit a customer

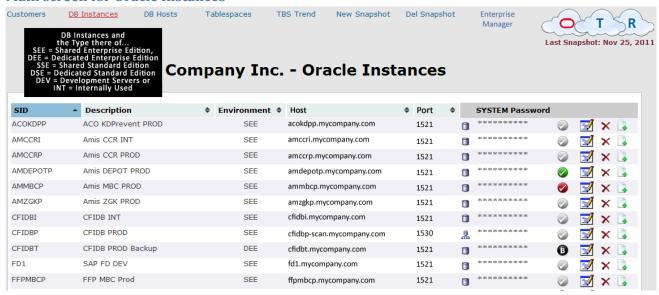


Note: Changing the Customer ID will bring a problem with the collected statistics and with the connection to the tablespaces, so try to keep this unchanged...

#### **DB** Instances

In this module you will register all your Oracle Instances.

### **Main screen for Oracle Instances**



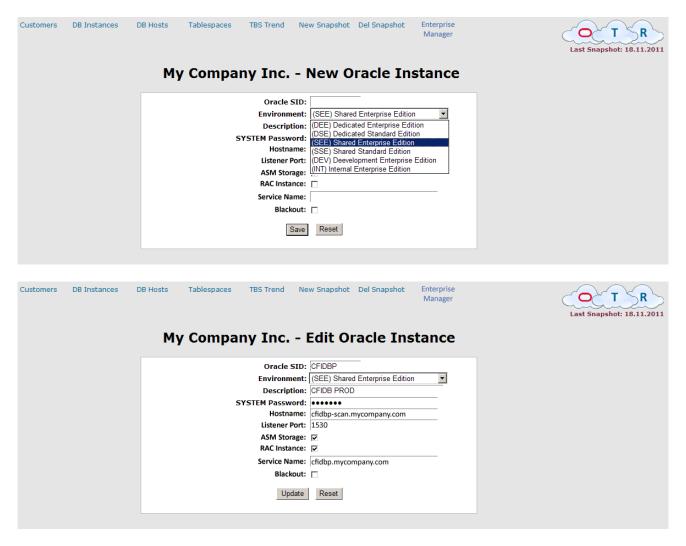
It contains Info like Oracle SID, what type of instance this is, DEE = Dedicated Enterprise Edition, DSE = Dedicated Standard Edition, SEE = Shared Enterprise Edition, SSE = Shared Standard Edition, DEV = Development Instances or INT = Internal Enterprise or Standard Edition (might be the Enterprise Manager Instance, a RMAN Instance or a SnapManager for Oracle Instance as an example). It also contains a short description for the Instance. This is usually related to an Application and/or Production/Integration/Test Instance.

♣ Indicates that this is a Cluster (RAC), ■ indicates that it's a normal standalone Instance.

System password (used to monitor and increase Tablespaces). This password is encrypted in the OTR repository. To check if the password is OK, just click on the  $\bigcirc$ . It will turn  $\bigcirc$  if OK otherwise  $\bigcirc$ . If there is an  $\bigcirc$  icon this means that the Instance is in Blackout status and no snapshots or Tablespace checks will be done on the Instance.

When Adding or Editing an Instance you don't need to add hostname and listener port if you have an Enterprise Manager configured. This will be picked up twice a day with the current info directly from the Enterprise Manager repository. If you don't have any Enterprise Manager these entries are required to be defined otherwise OTR have no possibility to connect to the remote Instance.

During Setup of OTR and with Enterprise Manager configured and available these values will be available and stored on the OTR repository.



#### **DB Hosts**

#### **Main screen for DB Hosts**



This is simply a list of which Instance is running on which physical host and which release it is as of the latest snapshot, usually the automated Friday snapshot. A pdf file will be generated on a weekly basis to keep track of where an Instance once where in case of DB Instances has to get moved around and you have had some setup or maintain scripts stuffed away on the previous server.

# **Tablespaces**

This is the heart of OTR. Here the connection between Customer, DB Instance and the Tablespaces are made.

# Tablespaces main screen



The source for this information can be a .CSV file or an Excel Document. This file will be uploaded to the OTR repository server. In case of an Excel source the file will be converted into a .csv file and stored on a defined location where it will be used as source for an external table.

# **Upload CSV or XLS(X)**



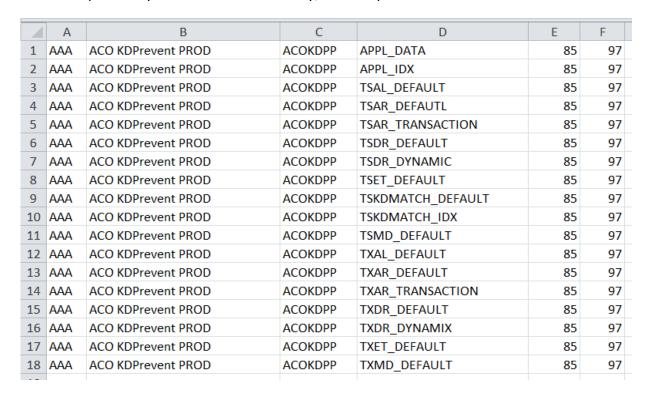
# My Company Inc. - Oracle Tablespace Usage CSV or XLS Upload CSV/XLS File: Upload Reset

The .CSV contains 6 fields/row and will have the following structure:

AAA; Amis CCR INT; AMCCRI; TSDATLARGE; 85; 97 AAA; Amis CCR INT; AMCCRI; TSDATNORM; 85; 97 AAA; Amis CCR INT; AMCCRI; TSDATSN; 85; 97 AAA; Amis CCR INT; AMCCRI; TSIDX; 85; 97

It contains the Customer ID, The Instance Description, OraSID, Tablespace name, Warning threshold and Critical threshold.

The other possibility and also the easiest way, is to keep this info in an Excel sheet.



The content in Excel is the same as for the .csv

Company ID, Instance description, OraSID, Tablespace name, Warning and Critical thresholds.

# **Export as CSV**

This info can also be exported locally as either a .csv file



# **Export as XLS**

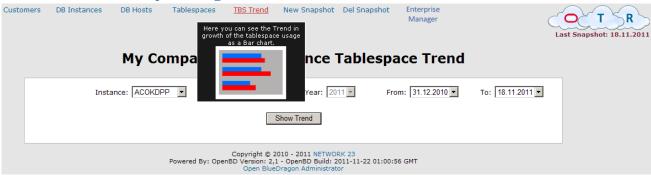
Or as an Excel document



#### **TBS Trend**

This will display the trend of growth graphically in a Bar chart.

# **Main screen for Tablespace Usage Trends**



# Trend defined by 2 snapshots

Statistical data can be displayed from a time period between 2 snapshots.



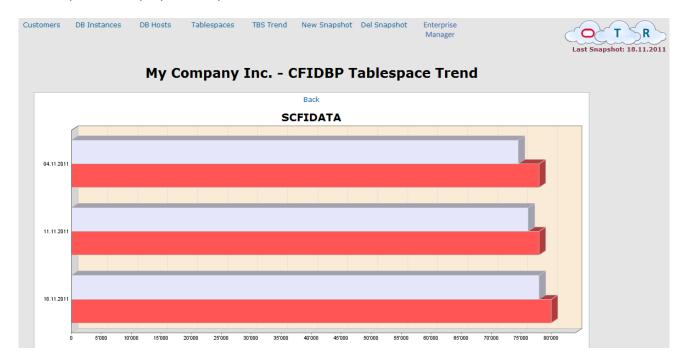
# Trend defined on a Monthly basis

This will pick the last snapshot from each month within the selected year.

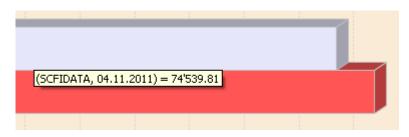


# **Graphical Output**

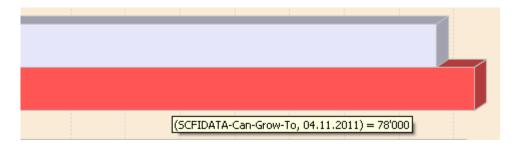
The output will display the output as a bar-chart.



The currently used space in the tablespace...



and the size the tablespace can grow to.



# **Snapshots**

The statistics is stored in the OTR repository as a snapshot. This is done as a weekly Scheduled job defined in the OpenBD Administrator. This job should be scheduled shortly before Friday Midnight.

Snapshots can also be generated manually.



Only one snapshot / day will be stored, so creating a new snapshot again on the same day will simply delete the previous one and create a new snapshot for that day.

## No Friday snapshots!



Since Fridays are our scheduled snapshot day you are not allowed to create manual snapshots on this day. It's possible to delete manually generated snapshots but not the Friday snapshots.



# **Enterprise Manager**

Since we're DBA's we of course need access to our "real" toolbox. Therefor we have a direct link to the login for Oracle® Enterprise Manager.



# How do we get started?

First of all we need to setup the repository OTR schema and the objects used for the repository, assuming of course that Enterprise Manager is already installed!

# **DDL Scripts**

These scripts are located under DOC\OTR-Reporting\Setup\DDL but since OTR.Local isn't installed yet you can download these scripts from <a href="http://www.project-otr.org/">http://www.project-otr.org/</a> under the menu OTR.Local

```
OTR_TBS_UPGRADE.sql
OTR_DB_SPACE_REP_SCHEMA.sql
OTR_DB_SPACE_REP_DDL.sql
OTR_CR_VIEW_TBS_FREE.sql
OTR_CR_VIEW_DB_HOST.sql
OTR_DB_SPACE_REP_DROP_DDL.sql
OTR_DB_SPACE_REP_TBS+SCHEMA_CLIENT.sql
```

# OTR\_TBS\_UPGRADE.sql

If this is an upgrade and your old OTR is still using an EXTERNAL TABLE for the Customer/Instance/Tablespace releationship you need to run this upgrade script. It will create a new normal Table for the Customer/Instance/Tablespace relationship and also copy the old tablspace info from the old table over to this new Table. It will also add a new snapshot Table which will contain statistics about ASM Storage. Some of the other old tables will get some new fields.

```
>@OTR_DB_SPACE_REP_SCHEMA.sql
Enter Database Alias for the OTR Repository [OTR]: SMO
Enter Password for user OTRREP: ********
```

If this is a new setup then just run the scripts described below.

#### **OTR DB SPACE REP SCHEMA.sql**

The first script to run is the OTR\_DB\_SPACE\_REP\_SCHEMA.sql which will create new tablespace(s) for the OTR Repository, Create the schema owner OTRREP and setup the grants needed.

It looks like it expects to place the Tablespaces for the OTRREP schema using normal mounts, typical NFS mounts. If Repository Database is using ASM one simple just enter the Disk Group name instead. E.g. +SMO\_DATA\_DG

NOTE: To avoid any license problems make sure not to use the Enterprise Manager Repository Instance for your OTR Repository!

```
>@OTR_DB_SPACE_REP_SCHEMA.sql
Enter Database Alias for the OTR Repository [OTR]: SMO
Enter Password for user SYS: ******
Enter path for the otr_rep_data01.dbf [/u01/oradata/otr_db/OTR]: /u01/oradata/smo_db/SMO
Enter path for the otr_rep_indx01.dbf [/u01/oradata/otr_db/OTR]: /u01/oradata/smo_db/SMO
OTR Datafiles will be placed under
/u01/oradata/smo_db/SMO/otr_rep_data01.dbf
/u01/oradata/smo_db/SMO/otr_rep_indx01.dbf
If this is correct press Enter otherwise Ctrl+C
```

Choose the OTRREP user's Temporary tablespace.

```
TABLESPACE NAME
                       CONTENTS DB DEFAULT TEMP TABLESPACE
TEMPORARY *
Pressing <return> will result in the database's default Temporary
tablespace (identified by ^{\star}) being used.
Enter Temporary TABLESPACE Name: TEMP
... Creating OTRREP user
```

Entering SYSTEM or SYSAUX as Temporary Tablespace will generate an Error and the script stops.

# OTR\_DB\_SPACE\_REP\_DDL.sql

Next script to run is the OTR DB SPACE REP DDL.sql

```
>@OTR DB SPACE REP DDL.sql
Enter Database Alias for the OTR Repository [OTR]: SMO
Enter Password for user OTRREP: *******
```

This script will create all tables used to store the repository data.

This script will also call the 2 scripts OTR\_CR\_VIEW\_TBS\_FREE.sql and OTR\_CR\_VIEW\_DB\_HOST.sql.

# Done with Step 1

This rounds up the first part and we have to download the OTR.Local.

# Web Frontend using Open BlueDragon

For the Web frontend of OTR.Local we need the server software from the OpenBD project. OpenBD is the world's first truly open source GPL Java and Google App Engine CFML runtime. CFML is a powerful tag/script based language that takes away all the heavy lifting of producing highly scalable web and email based services and sites.

# **Download OpenBD-OTR.Local**

At <a href="http://www.project-otr.org/">http://www.project-otr.org/</a> we need to download the OpenBD-OTR.Local. This contains OpenBD.Local, JRE, OpenBD and the OTR Web GUI all nicely packed up in a standard Windows Installer.

NOTE: If you have installed the old version of OpenBD-OTR.Local, please uninstall this before you install the release 2.0. Please make a notice of the changes you have made in the file C:\Network23\OpenBD-OTR\webapp\otr\Application.cfc before you run the uninstaller.



Agree to the GNU 3 License Agreement and select where to install OpenBD-OTR.

Default it will put OTR under C:\ProjectOTR\OpenBD-OTR.

The installation will create a Start Menu entry for you as well.

Before you start OpenBD-OTR you need to adjust one file in the Application folder.

In directory C:\ProjectOTR\OpenBD-OTR\webapp\otr locate the file Application.cfc

This file has to be adjusted to match your OTR and EM Repository.

# Make changes to the file Application.cfc to fit your Company and setup

Most all parameters for the OTR Application is defined in the file otr/Application.cfc

Update the following settings.

# **Oracle Settings**

```
<!--- SQLNET.DEFAULT DOMAIN for DB-Links --->
<cfset Application.oracle.domain name = "MYCOMPANY.COM" />
<!--- Datasource Settings --->
<cfset Application.datasource = "OTR_OTRREP" />
<cfset Application.dbusername = "OTRREP" />
<cfset Application.dbpassword = "otrrep4otr" />
```

The Application.oracle.domain\_name should correspond to the SQLNET.DEFAUL\_DOMAIN within your Oracle environment.

If you change the password for the Schema Owner OTRREP it needs to be changed here also.

## **Mail Server Settings**

```
<!--- MailServer Settings --->
<cfset Application.mailserver = "smtp.mycompany.ch" />
<cfset Application.mailport = "25" />
<cfset Application.mailtimeout = "60" />
<!--- Mail address for DBA or DBA Group --->
<cfset Application.dba_group_mail = "DB-Services@mycompany.com" />
```

Application.mailserver is the host of your mail server. If this parameter is left empty no mails will be sent when a Tablespace gets extended.

Application.mailport is the SMTP Port used by the mail server. Usually this is port 25.

Application.mailtimeout is the number of seconds to wait before timing out the connection to the SMTP server.

Application.dba group mail is the mail address for the DBA or a DBA Group mail account. The mail will also be sent from this account.

If the mail server is configured, OTR will send an E-mail each time a Tablespace is adjusted. The content of the mail will be something like:

Subject: Tablespace TBSNAME on ORASID just got another 2GB!

Tablespace **TBSNAME** on Instance **ORASID** was just extended with 2GB more.

**ORASID** is located on host mydbhost.mycompany.com

Please make sure there is enough storage space available for this tablespace to grow.

# **Company Settings**

```
<!--- Company Settings --->
<cfset Application.company = "My Company Inc." />
<!--- Excel Document Info --->
<!--- Foreign Characters for Excel
      \beta = chr(223)
      å = chr(229)
      \ddot{a} = chr(228)
      \ddot{o} = chr(246)
      Å = chr(197)
      \ddot{A} = chr(196)
      \ddot{O} = chr(214) \longrightarrow
<cfset Application.excel_doc_info_author = "Mats Str#chr(246)#mberg" />
<cfset Application.excel_doc_info_subject = "Customer Tablspace Usage" />
<cfset Application.excel_doc_info_title = Application.company & " - Tablespace Report" />
<cfset Application.excel_doc_info_lastauthor = "ustr" />
```

Application.company is Your Company Name. This will be displayed on every screen in the application.

Application.excel doc info xxx will be used as document info when generating Excel files. Some character values are provided for foreign character which Excel will understand.

# **Snapshots**

```
<!--- Snapshot Day / Sunday = 1 --->
<cfset Application.snapshot day = 6 /><!--- 6 = Friday --->
```

It's possible to change the snapshot day but it's not really recommend.

The week starts on Sunday = 1 and stops on Saturday = 7

# **General Settings**

```
<!--- General Application Settings --->
<cfset Application.obd_host = "http://minerva:8080/" />
<cfset Application.obd_desktop_host = "http://localhost:8080/" />
<cfset Application.ogc_logon_url = "http://minerva:4889/em/console/logon/logon" />
<cfset Application.host_instance_pdf_dir = "/opt/OpenBD/tbsreports/" />
```

Application.obd host is the host of the OTR web server. If Jetty isn't re-configured for port 80 this should contain the correct port number. <a href="http://YourServer:8080/">http://YourServer:8080/</a>

Application.obd desktop host is the host of the the OpenBD-OTR Application... e.g. your PC.

Application.ogc login url is the URL for your Enterprise Manager login screen.

Application.host instance pdf dir is the location where the weekly PDF reports will be located.

# **Tablespace Warning Settings**

```
<!--- Tablespace Warning Levels --->
<cfset Application.tablespace.mb_left = 1800 />
<!--- Tablespace Warning Levels --->
<cfset Application.monitoring_cycle = 5 />
```

Application.tablespace.mb\_left is default set to 1800 MB.

**Application.monitoring\_cycle** is the number of minutes between each tablespace check. Default is 5 Minutes.

With these settings correctly configured for your environment you are now ready to test the setup of OpenBD-OTR.Local.

# **Test your OpenBD Installation**

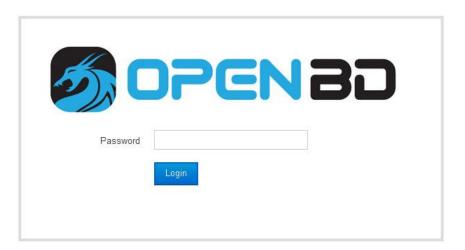
Start the OpenBD-OTR from the start menu an you will see a new Icon in the system tray.



You can either right-click on the OpenBD Icon and select Open... or manually start your web browser and goto the URL http://localhost:8080

You should on the Open BlueDragon Administrator login screen if your Installation was successful.

# MOpen BlueDragon Administrator



By default Jetty, like most every Java Server, is configured to use port 8080. You can easily change this to port to something else but be aware of that port 80 most likely will already be in use and you will have a conflict using this port.

# **Change listener port for Jetty**

If you prefer to use port 80 instead of port 8080 simple stop the OpenBD Server again by right-click on the Open BlueDragon Icon and select close.

Go into the C:\Program Files\OpenBD-OTR directory and edit the file openbd-local.ini

```
#
                      _/| .__/ \_
              |_| http://openbd.org/local/
# The name of the application
app.title=OpenBD:OTR
# The port number of the local server
web.port=8080
# Restrict the server to only the local server
web.localonly=true
# The path of where the webapp lives
web.root=./webapp/
```

Change the web.port to 80 and start OpenBD-OTR again from the start menu.

From now on your OpenBD should respond on standard port 80

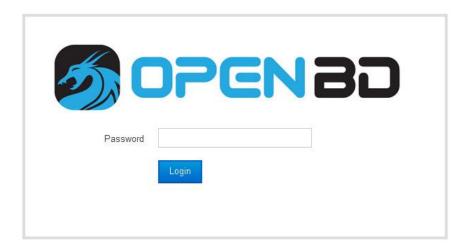
# **Configuring OpenBD for OTR**

First we need to define 2 Datasources for OTR to be able to communicate with the OGC and OTR Repositories.

# **Login to OpenBD Administrator**

Go to the URL, with or without the portnumer depending on if you reconfigured your OpenBD.Local Setup or not, http://localhost[:8080]





The default Password is admin

# **OpenBD Administrator Main Screen**



# Welcome to the Open BlueDragon Administrator

Open BlueDragon is an open source (GPLv3), Java-based runtime engine for CFML. For more information on the Open BlueDragon project, please visit the Open BlueDragon web site and the Open BlueDragon Google Group.

You may use the OpenBD Administrator to manage many OpenBD settings such as datasources, scheduled tasks, mail server settings, directory mappings, custom tag paths, and much more.

For more information on the Open BlueDragon Administrator or to obtain a newer version of the Administrator, please visit the Open BlueDragon Admin Console project at Google Code.

#### Documentation

For the latest OpenBD documentation you may refer to the OpenBD Manual that is bundled with OpenBD and runs locally, or the following resources:

- OpenBD Web Site
- OpenBD Wiki
- OpenBD CFML Manual (generated from nightly builds)
- OpenBD Cookbook

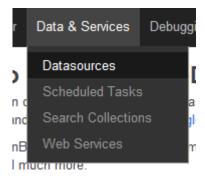
#### **Requesting Features and Reporting Bugs**

- OpenBD Google Group
- OpenBD Issue Tracker
- OpenBD Admin Console project at Google Code
- CFML Conventional Wisdom (general CFML language discussion group)

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Version 2.0 - Nov 11, 2011 12:00 AM

#### To add new Datasources select the menu Data & Services



### Add Datasource OTR\_OTRREP

# Manage Datasource Add a Datasource Datasource Name OTR\_OTRREP Database Type Oracle (Oracle) Add Datasource Datasources No registered datasources No datasources configured

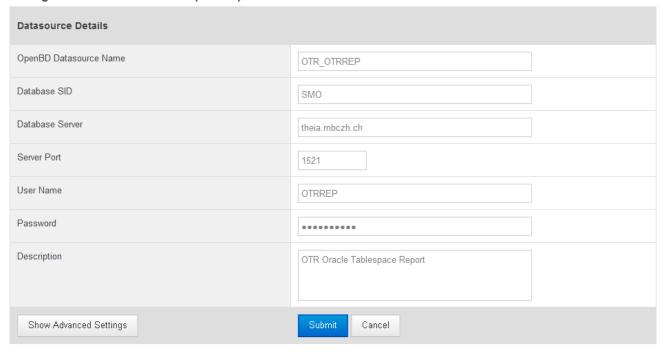
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Version 2.0 - Nov 11, 2011 12:00 AM

Datasource Name: OTR\_OTRREP and Type is of course Oracle and click Add Datasource

# Adding connection info

## Configure Datasource - Oracle (Oracle)



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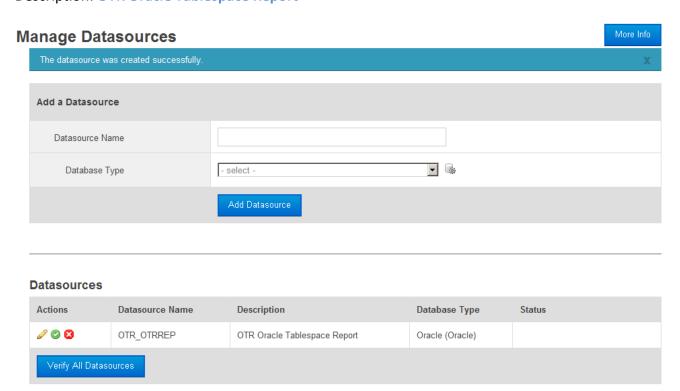
Database SID: < Your OTR OracleSID>

Database Server: < Host of your OTR Instance>

Server Port: <Listener Port for your OTR Instance>

User Name: **OTRREP**Password: **otrrep4otr** 

**Description: OTR Oracle Tablespace Report** 



# Add Datsource OTR\_SYSMAN

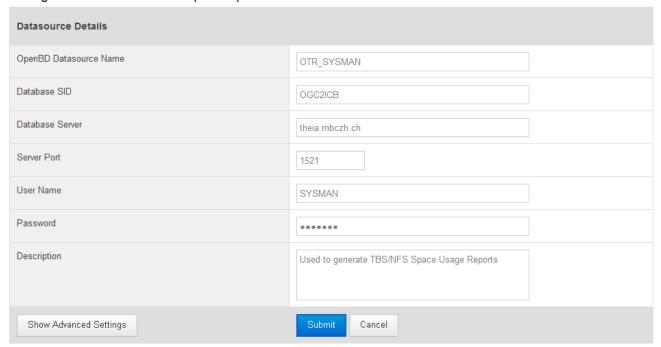
# More Info Manage Datasources Add a Datasource OTR\_SYSMAN Datasource Name Database Type Oracle (Oracle) **▼** Add Datasource **Datasources Datasource Name** Description Status Actions **Database Type** Ø ☑ OTR OTRREP OTR Oracle Tablespace Report Oracle (Oracle)

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Version 2.0 - Nov 11, 2011 12:00 AM

Datasource Name: OTR\_SYSMAN and the type Oracle and click Add Datasource

#### Configure Datasource - Oracle (Oracle)



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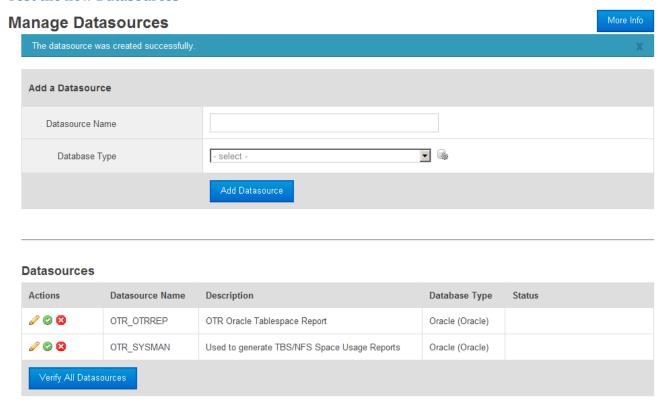
Version 2.0 - Nov 11, 2011 12:00 AM

User Name: SYSMAN < User on your OGC Instance!!!>

Password: <SYSMAN Password>

Description: Used to generate TBS/NFS Space Usage Reports

# **Test the new Datasources**



By clicking on Verify All Datasources you will get a confirmation of the settings and if they are OK

#### **Datasources**



# Get your OTR ready for use

Now after the datasources are created you goto the <a href="http://localhost[:8080">http://localhost[:8080</a>] again and the OpenBD-OTR.Local will need some basic setup (If this isn't done from some other client or the OTR Server)

To get your OTR ready to be used we now need to fill it with usable data.



# **Get Instances from EM Repository**

Since this is a new setup you won't have any database Instances in OTR. Start by selecting the menu 1. Get Instances from your EM Repository. When this step is done the link will be inactive.

# **Create your first Customer**

There are no customers in your OTR Repository. Select the menu 2. Create at least 1 customer (Your self). When this step is done the link will be inactive.

# **Create the Tablespace relationships**

The relation between a Customer, DB Instance and a Tablespace is preferably done using an Excel sheet. As this is a new setup your external table source file doesn't exists yet.

By selecting the menu 3. Load the OTR\_CUST\_APPL\_TBS Table the system will connect to all your registered Instances (as user SYSTEM) and pick up all Tablespaces for each Instance. At this time Tablespaces SYSTEM, SYSAUX, TEMP and UNDO will not be selected.

Your setup is basically done now and you can use the menu Tablespaces and export this as XLS and edit this file locally on your PC.

Replace the Customer ID with correct Customer ID and save the Excel file. Finally upload the file again to OTR and your Tablespace list will now be usable.

# Add all your customers

Make sure to add all customers to your system and that the Customer ID is corresponding to your updated Excel file / External table source file. This will be needed when you create your first snapshot, may it be a manually created snapshot or the weekly generated snapshot.

# **Define a Gather TBS/NFS Space Usage Statistics Job**

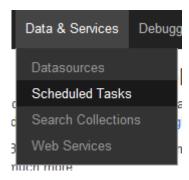
To get the weekly monitoring to collect the Tablespace usage statistics you should now define a Job in the OpenBD Administrator.

NOTE: Make sure only one workstation is doing this or using the Server Install of OTR for these jobs!!!

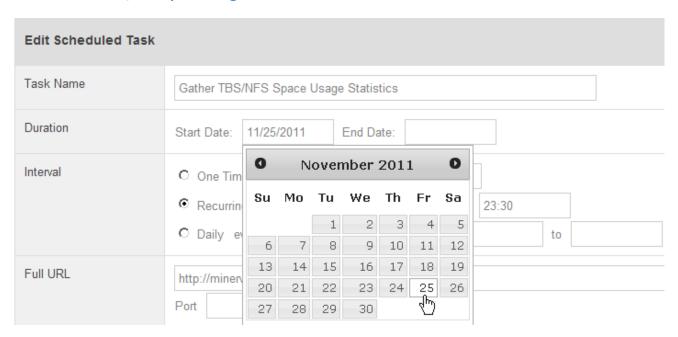
Login to the Administrator using the URL <a href="http://your\_server[:port]/bluedragon/administrator/">http://your\_server[:port]/bluedragon/administrator/</a>

If you haven't changed the Administrator Password it will be admin.

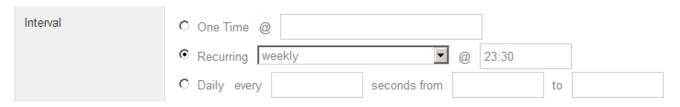
Select the Menu Data & Services and the Scheduled Tasks



Enter Gather TBS/NFS Space Usage Statistics as Task Name.



The Job should be run on a Friday night so select a Date matching a Friday.



Define the job as a weekly recurring job starting at 23:30 (11:30 PM)

# Enter http://your\_server[:8080]/otr/otr\_friday\_snapshot.cfm as Full URL

Full URL	http://minerva/otr/otr_friday_snapshot.cfm
	Port

As request Timeout set the value to 120 seconds.



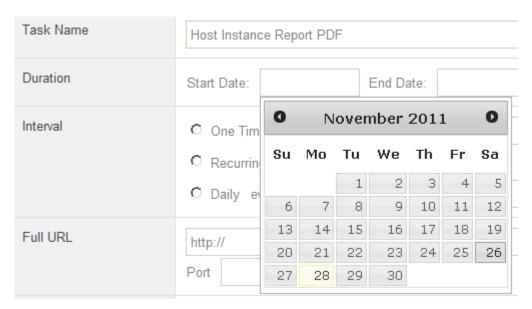
# **Define Job for creating Host/Instance PDF.**

If you could like to have a weekly PDF generated containing info about which Instance is running on which Host, you can create this job over the OpenBD Administrator. The job should be generated on a weekly basis just as the Gather Statistics Job and be run just before or after Friday midnight, shortly after the Gather TBS/NFS Space Usage Statistics Job.

This step is not required but the information could be handy to have later on...

Define the Scheduling Task

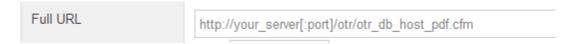
Task Name: Host Instance Report PDF. We'll define the Start Date to be on a Saturday.



Set the Interval to Weekly at 01:00 which means that the job will be run on Saturday morning at 01:00 AM



The URL is: http://your\_server[:port]/otr/otr\_db\_host\_pdf.cfm



Set the Request Timeout to 60 sec and click the Submit button.



Your job is now defined. You could test the job but since we don't have any statistical data collected yet it won't generate any PDF.

# **Update Tablespace Thresholds from EM**

Additionally you can setup a scheduled job for collecting the current thresholds of the tablespaces on your target DB's. This should be a daily job that could run at any time during the day. It will pick up any changes made to Tablespace thresholds done over the Enterprise Manager.

Task Name: Update TBS Thresholds.

Starting Date could be set to Today.

The Interval should be set to Recurring daily and could be run @ 20:00

The URL is: http://your\_server[:port]/otr/otr\_tbs\_update\_threshold.cfm

And the Request Timeout should be set to 60.

# Test your Setup.

As long as you're not testing your setup on a Friday you could now create your first Manual Snapshot. Required is of course that the relationship between Customer/Instance and Tablespace is done so the snapshot will have something to collect.

In the Web GUI of OTR select the menu option New Snapshot.



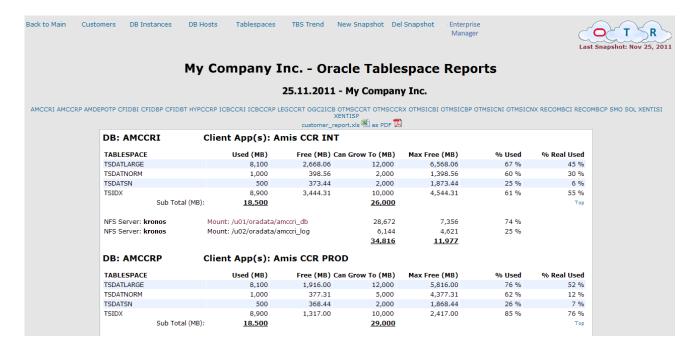
Note: If no snapshots has been made you can't generate any usage reports!!!

If at least 1 Snapshot exists it's possible to run a Report.

First select the Report Date and for which Customer. It can be for All customers or for 1 specific customer. Also select to include (or not) Development DB's and/or Internal DB's like the Enterprise Manager or some other internal type of DB (SMO, RMAN etc.)



The report output will contain info about Instance, Tablespace name, Used MB, Free MB, Can Grow To MB, Max Free MB, % Used and % Real used which reflects the Can grow to space.



The report also contains NFS space usage in MB. How much space an NFS Volume has and how much free space is still available in MB. It also displays which NFS Server or Storage system is used.

One special feature for volumes created with NetApp's SnapManager for Oracle. The names of these volumes are usually not following your regular volume definition. If such a volume is used, it will be displayed with a dark red color. With a mouse-over on such a Mount name the real name of the volume will be displayed.

# For example:

NFS Server: kronos	Mount: /u01/oradata/amccri_db	28,672	7,356	74 %
NFS Server: kronos	Mount: /u02/oradata/amccri log	6.144	4,621	25 %
kronos:/v	ol/SnapManager_20100923141903532_vol_amccrp_db	/gamccrp_db :16	11.977	

This concludes the description of the basic Setup and usage of OTR.

Feel free to add functionality to OTR. Get the source code from Google code and join in on the development.

# **Installing from SVN**

Installing the OTR from Subversion

http://code.google.com/p/oracle-tablespace-report/

#### Introduction

Development for the OTR Application is continuously underway, but if you want to try it out now (and we'd love it if you would!), you can grab the code from Subversion (SVN) and run it on your instance of OpenBD.

NOTE: Do NOT run bleeding edge code on a production or otherwise important instance of OpenBD! There is currently no security in place on the OTR, and any bugs that exist in the bleeding edge code could cause problems with your Oracle Databases.

#### **SVN Clients**

If you don't have an SVN client, you'll need to get one. If you're a developer and you're already using Eclipse, probably the simplest one to grab is Subclipse. It will work on any platform (Linux, Mac, or Windows).

If you aren't on Eclipse, native clients are available for any platform, or you can run SVN from a terminal or DOS window.

One client that seems to be nice that is available for Linux, Mac, and Windows is SyncroSVN. I haven't personally used it but a few Mac bloggers swear by it.

For Windows, the most popular client is **TortoiseSVN**, which integrates directly into Windows file explorer.

For Mac, Versions looks very nice, but again, I haven't personally tried it. svnX is another popular client for Mac.

# **Getting the Code from SVN**

Once you have an SVN client installed, do a checkout from the SVN repository for this project. Details are available on the checkout page. You'll want to grab the trunk.

#### Where to Put the OTR

The OTR code resides in the webapps directory at the top of your OpenBD instance.

The easiest way to configure things is to have your local directory for the SVN project be the root of the instance of OpenBD on which you want to try out the OTR.

# **Reporting Bugs**

Since development is still happening rapidly at this point, expect to see a few bugs here and there, and also expect to be pulling the code down regularly to get the latest version of things.

If you do see a bug that's keeping you from using the admin console or think it might be something we aren't aware of, please report it on the <u>issues page</u>.

# **Requesting Features**

If you have ideas for features you'd like to see in the admin console, no matter how big or small, we'd love to hear them! Please create an issue on the <u>issues page</u> and use the label Type-Enhancement

# **OTR Philosophy**

The group of people behind OTR (so far the group is only me and my dual personality ©, hopefully this group will increase in the near future and preferably not the way where I have to incorporate a triple personality!), believe strongly in the ideals of the Open Source movement. We believe that software that is made available under an open source model, should always remain under that model, and never be abused or incorporated into products that would result in the harm of the original project.

To that end, we believe that any changes that anyone makes to the core engine should be contributed back to the community, for the benefit of the community as a whole. This is what the GPL license frames.

- How much does OTR cost?
   \$0.00 dollars/euros/pounds/yen. Zero. There is no cost for you to download, use, develop and extend OTR, deploy and ship your application.
- Can I sell OTR?
   No. You cannot sell OTR as it is not yours to sell. You may sell installation or consultancy services for OTR. You're also allowed to sell added functions to OTR, although we would prefer you would consider supporting the Open Source Project and contributing your added functionality.
- Okay, where's the catch? What features are you not shipping?
   There is no catch. All functionality in OTR is available to you the current release, or as and when they are developed. We believe in the power Oracle® and CFML language has to offer and we want to get it into the hands of as many DBA's and/or DB Engineers as possible.

# **Trademarks**

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# Credits

OTR Web interface is using Drew Wilson's excellent TipTip jQuery Plugin http://code.drewwilson.com/entry/tiptip-jquery-plugin

OTR Web interface is also using Christian Bach's excellent **tablesorter** jQuery Plugin <a href="http://tablesorter.com/docs/">http://tablesorter.com/docs/</a>

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