

Oracle Application Express Interactive Reports

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Speaker Qualifications:

- Josh Millinger, President, Niantic Systems, LLC
- CS degrees from UW-Madison, Johns Hopkins
- Former Oracle Sales Consultant and Founder of the Oracle Partner Technology Center
- 15+ Years of Oracle Web Development Experience
- Have Been Developing with and Teaching Apex Since Well Before It Was Even Released as a Product! Started with Excel Migration as first project

Niantic Systems

- Oracle Consulting with a Focus on Application Express
- Application Express Training
- Oracle Forms/Reports
- Discoverer
- Mentoring
- Customers in the Federal, Commercial, Healthcare, Higher Education, Construction verticals

Agenda

- What are interactive reports
- Built –in capabilities run through
- Performance implications
- Customizing CSS
- Meta-data tables
- Javascript Calls
- Customizing GUI
- Linking to Interactive Reports
- Questions

What is an Interactive Report

- Interactive Reports take much of the burden off developers to produce all the different online reports end-users want by allowing end-users to manipulate the data provided for themselves. Developers simply provide an SQL statement "SELECT * FROM my_favorite_table" and then let end-users massage the report as needed.
- Oracle Application Express 4.0 extends the original capabilities with email subscription, icon / report / detail views, enhanced filtering, group by, and sharable saved reports.
 - From Oracle Technology Network
- If you are using 4.0, then you are using IR's!

Interactive Reports Provide:

- Out of the box capabilities
- Ad-hoc capabilities through Javascript/Ajax
- Filtering
- Grouping
- Charting
- Highlighting
- Calculations
- Column Selecting
- Demo

How do they work?

- Use debug to see the query that Apex creates
- Your query becomes the subquery for the report
- Filters/calculations are appended

```
"AVAILABLE_STORAGE_OK", "ID",  
  
select apxws_row_pk, "CATEGORY1", "CATEGORY2", "MANUFACTURER", "PRODUCT", "MODEL", "ENERGY_STAR", "EPEAT", "HOSTNAME",  
"DISC_MANUFACTURER", "DISC_OS", "DISC_EDITION", "DISC_VERSION", "DISC_PATCH_LEVEL", "DISC_BUILD_NUMBER", "DISC_HARDWARE",  
"DISC_NUM_CPUS", "DISC_CPU_SPEED", "DISC_OS_BIT_MODE", "DISC_TOTAL_MEMORY", "DISC_UPTIME", "DISC_LAST_LOGON",  
"DISC_TOTAL_FILE_SYSTEM_SPACE", "DISC_FILE_SYSTEM_USED", "DISC_FILE_SYSTEM_PERCENT", "DISC_FILE_SYSTEM_AVAILABLE",  
"DISC_SERIAL_NUMBER", "DISC_SCAN_DATE", "ISVIRTUAL", "DATASRC", "COMPATIBLE", "TOTAL_MEMORY", "CPU_SPEED", "AVAILABLE_STORAGE",  
"TOTAL_MEMORY_OK", "CPU_SPEED_OK", "AVAILABLE_STORAGE_OK", "ID", count(*) over () as apxws_row_cnt from ( select * from (select b.ROWID  
apxws_row_pk, b.* from (select * from ( select category1, category2, manufacturer, product, model, energy_star, epeat, hostname, disc_manufacturer, disc_os,  
disc_edition, disc_version, disc_patch_level, disc_build_number, disc_hardware, disc_num_cpus, disc_cpu_speed, disc_os_bit_mode, disc_total_memory,  
disc_uptime, disc_last_logon, disc_total_file_system_space, disc_file_system_used, disc_file_system_percent, disc_file_system_available,  
disc_serial_number, disc_scan_date, isvirtual, datasrc, compatible, total_memory, cpu_speed, available_storage, total_memory_ok, cpu_speed_ok,  
available_storage_ok, id, /iifb_monitor.gif image, f?p=&APP_ID.:100001:&APP_SESSION.:IR_REPORT_PRIMARY::CIR,RIR:IR_HOSTNAME:|hostname link  
from oapp_win7_hardware ) ) b) r where ("HOSTNAME" = :APXWS_EXPR_1) ) r where rownum <= to_number(:APXWS_MAX_ROW_CNT) order by apxws_row_pk
```

Performance

- On large queries, performance may suffer
 - Imagine doing a search from 3 million records
- Can use collections as way to improve
- Side Effect is saving becomes difficult due to temp data not being saved with query
- Can limit which columns can be filtered

Performance

- Can set LOV' up to be quicker for Ajax lists
 - Use the declarative function in the builder

List of Values

Column Filter Type Use Defined List of Values to Filter Exact Match

Named List of Values - Select Named LOV -

List of values definition (Enter a SQL query that returns one column)

```
select 'Bronze' from dual
union all
select 'Silver' from dual
union all
select 'Gold' from dual
```

Customization

- Links
- Detail View
- Column customization
- Feature availability

Problem

Customer wanted to update all records that matched criteria, not just those on the page

This required going to the meta-data to try to figure out the query that was being used

Or if we wanted to print out data to PDF or other format

Metadata Repository

- Reports
- Report Instances
- Report Conditions
- Report.....
- Use Apex Views to access
- Can recreate query if need to perform custom actions

Setting Filters

- Set it through the IR interface
- Set it through provided API call
- Set filters through URL

Other tips

- Multiple IR's on one page
 - Supported in 4.1?
 - Setup Email for Subscription
 - ALIAS

Javascript Refresh

- View the javascript calls through Firebug
- `gReport.search('SEARCH')`

Thank You!

- If you're so inclined, send me questions & comments directly:
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