BUSINESS INTELLIGENCE PORTALS AND ORACLE PORTAL

Elizabeth S. Reardon, Vlamis Software Solutions, Inc. ereardon@vlamis.com

OVERVIEW

Call them EIPs (Enterprise Information Portals), BIPs (Business Intelligence Portals) or simply Portals, but web portals are emerging as today's choice for combining disparate information sources into one organized location. Use of this portal structure can help organizations to manage information assets.

Using portals organizations can:

- Improve efforts of collaboration and innovation
- Capture tacit knowledge from in-house experts
- Facilitate the sharing of knowledge and information linking
- Increase competitive advantage and decrease time-to-market

WHAT IS PORTAL?

A portal is a means of supplying an organization's employees, customers, suppliers, and/or business partners with a customized and customizable, integrated, secure view of the information that they need to function efficiently. The information contained in a portal could include documents, applications, URLs, and organizational newsletters. Oracle Portals are also customizable for individual users or groups of users, allowing not only the developers or system administrators to publish and manage content, but also letting the user organize and contribute his own information.

WHAT IS A PORTLET?

An Oracle Portal page is made up of regions, and portlets reside in portal page regions. Portlets may be thought of as "web components" that display information from other web sites and generate summaries of key information. More than one portlet can be placed on the same page so that users have easy access to frequently used sites and information.

WHAT IS A **PROVIDER**?

In Oracle Portal, portlets are owned and managed by portlet providers. The portal provider handles the communication between the portal and the portlet.

DIFFERENCES BETWEEN WEBDB 2.2 AND ORACLE PORTAL 3.0

Some of the main difference between WebDB 2.2 and Oracle Portal 3.0 are listed below. For more detailed information about the differences, and information on the transition from 2.2 to 3.0, please refer to: "Transitioning to Oracle 9iAS Portal", an Oracle White Paper, December 2000.

BASIC PHILOSOPHY OF WEBDB 2.2

WEBDB 2.2

- Browser-based development tool for creating and managing web-based application components, and websites
- Menu-based user interface (UI) design
- Separate administration areas for components and for sites

PORTAL 3.0

- Enhanced WebDB 2.2 by making the product itself into a portal.
- Use a portal to create a portal
- Task-oriented user interface
- Customizable by each different user
- Tasks are exposed through "portlets"
- Anything you create in the product can itself be made into a "portlet"
- Centralized administration features

DEVELOPER USER INTERFACE

WEBDB 2.2





USER INTERFACE

In WebDB 2.2 the primary user interface was the root folder within a WebDB site or display page of an application component.

In Portal 3.0 each user may have an individual portal page, or login to a specified group portal page.

DATABASE SCHEMAS

In WebDB 2.2 each user had a corresponding database schema, but in Portal 3.0 an individual user account now longer requires its own schema.

WEB SERVER

Portal 3.0 now uses Apache Server.

CONTENT PUBLISHING

WebDB 2.2 users and developers should be familiar with the concept of content publishing, but Portal 3.0 has extended the content publishing capabilities. Sites are now known as "content areas". Multiple "content areas" (site builder sites) can reside in the same portal installation.

- Folders can be displayed as portlets
- There are nested categories and perspectives
- Attributes and types may be applied to folders and items
- There can be item level security

WHAT DOES PORTAL HAVE TO OFFER?

PORTAL INTERFACE

WEB-BASED GUI

The interface to Oracle Portal 3.0 is browser-based. There is no Oracle Portal 3.0 specific client software that must be installed on a user's PC. Portal pages may be accessed via any browser simplifying maintenance and upgrades to the organization web site.

SECURITY

USER AND GROUP ACCOUNTS

Security access to pages, portlets, and items may be set at the user or group level. User and group information may also be recorded and tracked.

SINGLE SIGN-ON

Oracle Portal 3.0 may be configured to support single sign on (SSO) from the user's home page to the individual portlets. This means that a user who has a portal page that contains several secure portlets would only have to enter his login and password once to have near instant access to his requested information.

ADMINISTRATION & MONITORING

The Administration functionality also allows the Portal administrator to maintain and manage the portal instance using the portal browser interface. Administrators may add/edit users and groups, set permissions, develop components, and manage the listener/gateway.

Monitoring and logging functionality allow the Administrator to analyze web site activity. The Administrator can track which pages or portlets have traffic and who is using the site. This will allow the Administrator to make more informed decisions on improving performance and usability.

PERSONALIZED CONTROL

Individual users can customize pre-defined pages that they have been granted privileges to view and customize. This allows the user to set the page content to best meet their needs. This also allows the same page definition to be custom tailored multiple ways, thus minimizing custom coding to meet individual requirements.

Some portlet providers also allow the user to customize the content that the portlet displays. Customizable portlets combined with Oracle Portal's ability to support multiple instances of the same portlet on the same page allow the user to display different views of the same information at the same time.

PORTLET OPTIONS

PRE-BUILT PORTLETS

Portal 3.0 is pre-configured with a standard set of portlets. These portlets include:

- Login/LogoutFavorites
- HTML Portlets
- Administration
- User Management
- Logging Reports

PORTAL PARTNERS

Third party partners have developed and continue to develop portlets that may be integrated into a portal page. For more information on third party partners check <u>http://www.oracle.com/portals/partners</u>.

BUILD PORTLETS DECLARATIVELY

Portlets may be developed using the Oracle Portal 3.0 development environment. The Portal GUI allows developers to create forms, reports, and HTML pages that may be transformed into portlets for publication. After a form or report is developed, it may be turned into a portlet by a simple check of a box.

BUILD PORTLETS PROGRAMMATICALLY

The Oracle Portal public API may be used to develop portlets. Both web and database calls are supported by the API.

BUILD PORTLETS USING PDK

PDK is the abbreviation for Portal Development Kit. The PDK contains a wealth of information in both utilities and articles. The utilities save the developer time, effort, and guidance when developing portlets programmatically. The articles provide detailed technical information on all aspects of portlet development.

How Can Portal Be Utilized?

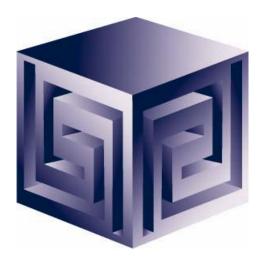
- Ability to access Corporate BI data
- Single source logon
- User-centric View of Corporate Information
- Knowledge Management
- Improved Business Processes
- Oracle Corporate Strategic Direction
- Provide a single sign on to Oracle applications like:
 - Reports
 - Discoverer
 - Express

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IOUG-A Live! 2001

paper number 418



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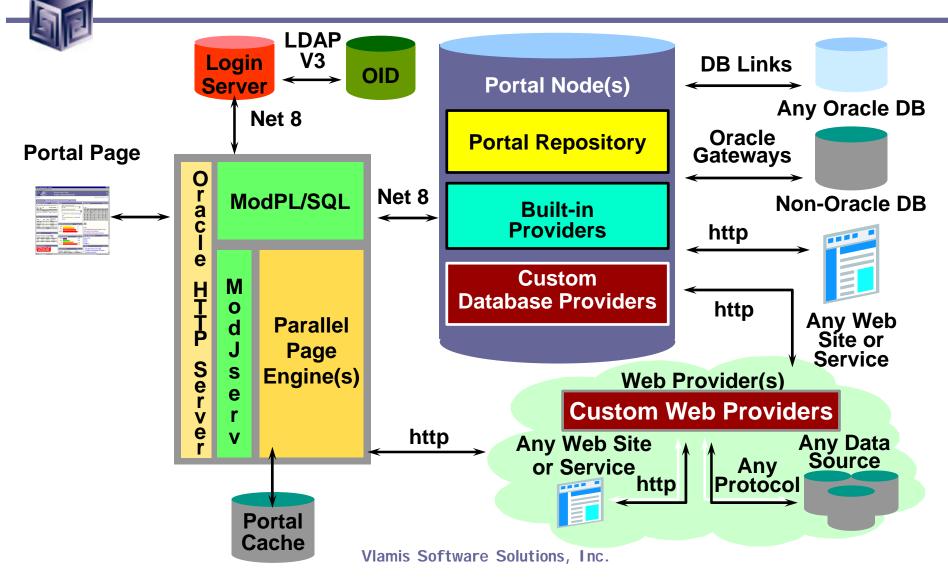
- Founded in 1992 in Kansas City, Missouri
- A Member of Oracle Partner Program since 1995 along with various Oracle Beta Programs
- Designs and implements databases/data marts/data warehouses using RDBMS and Multidimensional tools
- Specializes in Data Transformation, Data Warehousing, Business Intelligence, Oracle Financials and Applications Development
- Founder Dan Vlamis is former developer at Oracle-Waltham office for Sales Analyzer Application
- Oracle Certified Solutions Provider
 ORACLE



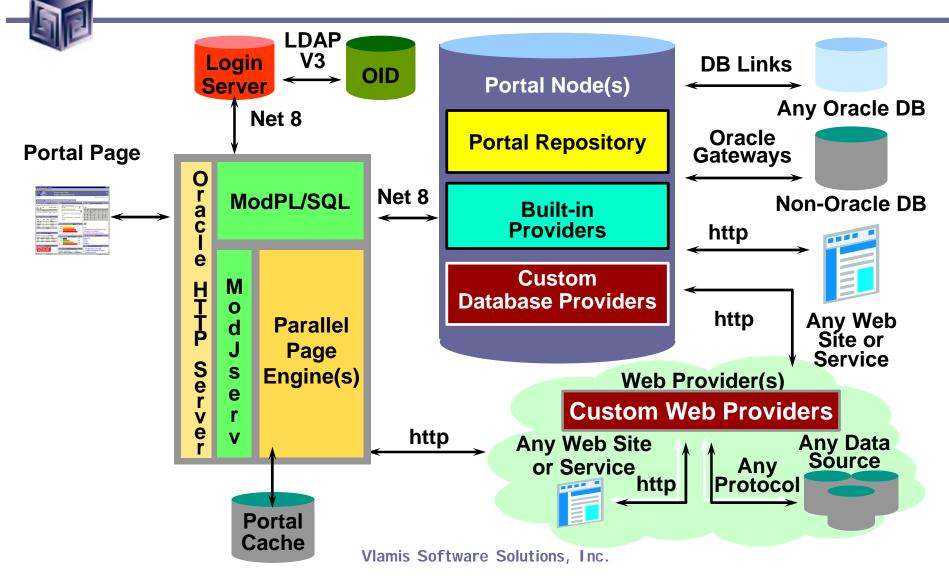


- Definitions
- Differences WebDB 2.2 and Portal 3.0
- Ease of Use
- Administration
- Site Analysis
- Integration
- Demonstration

9iAS Portal Architecture



9iAS Portal Architecture





- PORTAL
 - Set of sites, pages, and applications brought together in one central location and accessed through a common interface.
- PAGE
 - The common interface of the portal.
 - Comprised of portlets.
- PROVIDER
 - Entity that owns and manages portlets.
- PORTLET
 - Area of HTML and XML displayed within a region on a page.

Differences – Philosophy WebDB 2.2

- Browser-based development tool for creating and managing web-based application components, and websites.
- Menu-based user interface design.
- Separate administration areas for components and for sites.



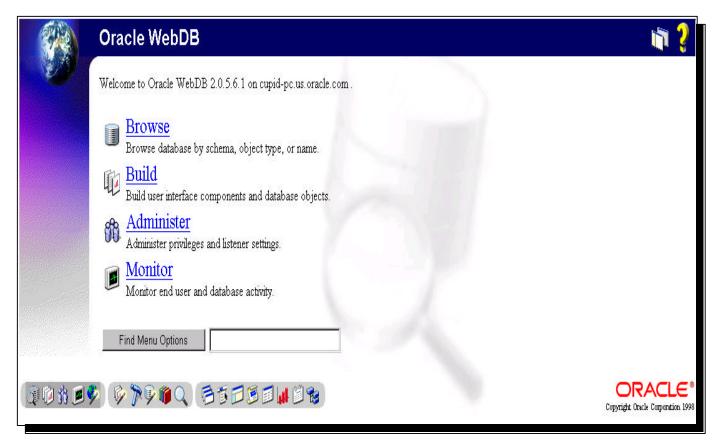
Differences – Philosophy Portal 3.0

- Enhanced WebDB 2.2 by making the product itself into a portal.
- Used a portal to create a portal.
- Task-oriented user interface.
- Customizable by each different user.
- Tasks are exposed through "portlets".
- Anything created in Portal 3.0 can be made into a "portlet".
- Centralized administration features.

Differences – UI WebDB 2.2



Primary UI – root folder



(1) ORACLE IJ Oracle Portal Guide Navigator Home Helr August 15, 2000 Customize Page Account Info Logou Quick Start i Welcome. Welcome Larry Ellison! Create Portal Pages My Inks Pages Customize Favorites Customize **Create a New Portal Page** Create a New Page Layout Corporate URL Use a step-by-step wizard to create a new portal page. Portal pages let Use a step-by-step wizard to create a new page layout, that you aggregate content from a multitude of sources. can be later used to build different portal pages (see above). Oracle Edit an Existing Portal Page Create a New Page Style Quokka Sports Select from a list of existing portal pages, or type in the name of one Use a step-by-step wizard to create a new page style, that Yahoo you know, to edit its structure and definition. can later be applied to any portal page. myCNN Name: Edit North N Build your own **Recent Objects** neines pr Customize enelleations and social and social 1. Corporate Portal Page 2. Page **Content Areas** Customize Applications Customize 3. Zipped Items Folder **Create a New Content Area Create a New Application** 4. New Corporate Portal II Style Page Style Use a one-step wizard to create a new content area. Content areas Create a container for your new application. Build 5. C2AREA Site hold self-published information in the form of folders and items. components like menus, forms, reports and link them Use portal pages to link one or more content areas together for together. 6. RootNavbar Navigation Bar better organization and centralized access. 7. C2AREA NAVBAR STYLE Style **Modify Application Components** 8. CZAREA Style **Modify Your Content** Select from a list of existing applications, or type in the name 9. wsl portal Page Select from a list of existing content areas, or type in the name of of one you know. Edit an application, or choose one of the 10. Main Page Style Page Style one you know. Go directly to the content area, or choose one of the actions that appear below. actions that appear below. Web Application: Edit Content Area: Go There External Applications Customize Hotmail My Yahoo!

Difference – UI Portal 3.0

Differences – Database Schemas



- WebDB 2.2
 - Each user had a corresponding database schema.
- **Portal 3.0**
 - An individual users account no longer requires its own schema.

Differences Portal 3.0



- Web Server.
 - Portal 3.0 uses Apache Server.
- Content Publishing extended.
 - Sites now "content areas"
 - Multiple "content areas" can reside in same portal installation.
 - Folders can be displayed as portlets.
 - There are nested categories and perspectives.
 - Attributes and types may be applied to folders and items.
 - There can be item level security.



Ease of Use - Portlets

- Pre-Built Portlets
 - Portal Partners
 - http://www.oracle.com/portals/partners
 - http://www.portalcatalog.oracle.com
 - Out-of-The Box Portlets
 - Login/Logout
 - Favorites
 - HTML portlets
 - Administration
 - User Management
 - Logging Reports
 - More…



Ease of Use - Portlets

- Build portlets <u>declaratively</u>
 - Built-in Providers for Web Publishing and Application Development
 - Web publishing
 - Use 9i AS Portal content areas to publish, organize, classify and manage content and links
 - Content Areas (Folders, Navigation Bars, Categories, and Perspectives)
 - Web application development
 - Use 9i AS Portal components (forms, charts, reports, etc.) to capture, act upon and display dynamic data
 - Portal Pages

Ease of Use - Portlets

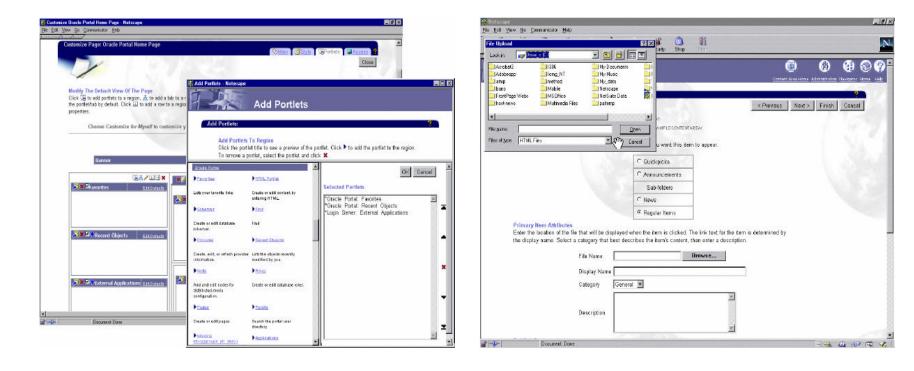
Build portlets programmatically (using PDK)

- Custom Web Providers
 - Communicates through stored procedure calls
 - Can be implemented in PL/SQL or Java
 - Interacts with Framework via direct database procedure calls; results returned as HTML/XML
 - Used for database-centric applications; managed by the portal
- Custom Database Providers
 - Communicates through standard HTTP calls
 - Can be implemented in any Web development environment (JSPs, Java, cgi-bin, Perl)
 - Interacts with Framework via http; results returned as HTML/XML
 - Flexibility for existing and remote Web services; work in familiar development environment

Ease – User Customizable

- Add or Remove Portlets
- Add content

• Alter Page Layout



Ease - Services



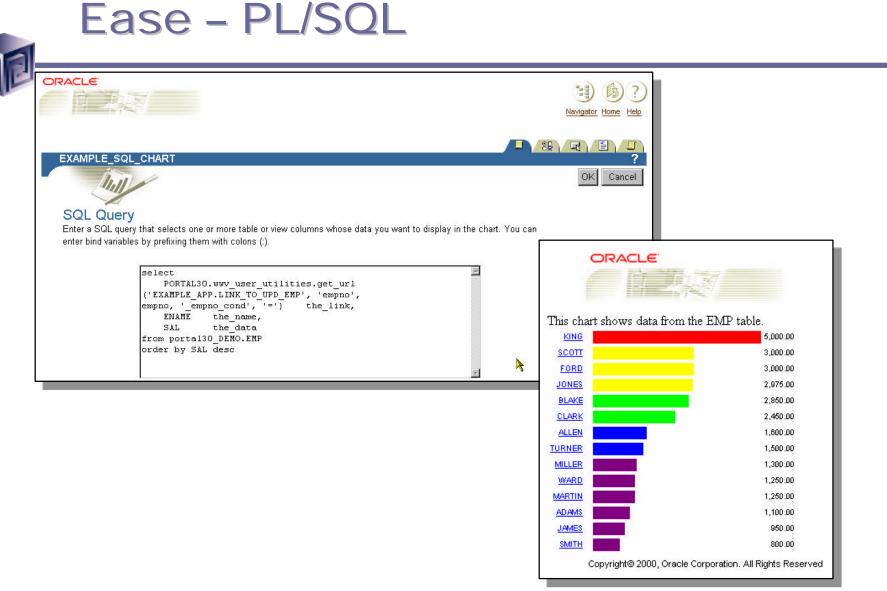
- Content Areas
- Folders
- Content Items
- Content Classification
- Navigation Bar
- Personal Folders
- Content Area Search
- Custom Attributes
- Custom Procedures





- Forms
- Reports
- Charts
- Dynamic Pages
- Calendars
- Hierarchy
- Frame
- Menu
- Shared

						Path: Applications > Shared Components					
Ease - Templates							Ŧ		Name 🔺 🔻		
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Ease – Java

• Java Servlet

Hello World Portlet

Hello PORTAL_PUBLIC

- Uses 50% more code
- More error handling

• Java Server Page

Hello World Portlet - JSP

Hello PORTAL_PUBLIC This portlet is a JSP.

• Uses 50% less code

Examples from http://portalstudio.oracle.com



Database Administration

Links			Build Administer Administer Database Monitor
Favorites	Customize		
Oracle		Schemas	Database Information
Oracle Portal Help		Create New Schemas	Database Name
Dracle Technology Network		Build a new database schema.	Monitor database settings, control files, log mode, and other information.
Work		Edit Schema	Database Initialization Parameters
Recent Objects	Customize	Type the name of a schema, then click Edit. Or, click 🗉 and	Monitor all database initialization parameters.
2777	Content	select a schema from the list, then click Edit.	NLS Parameters
URTERREPOSITING	Area		View National Language Support (NLS) init.ora parameters.
URTEEREPUSITURY	Navigation	Name Edit	Version Information
	Bar		View database, CORE, PL/SQL, and other database option versions. Web-related Parameters
	Style	Roles	Monitor subset of init.ora parameters related to PL/SQL web
ORTLETREPOSITORY NBST /elcome to Oracle Portal	Style Page	Create New Roles	applications.
veicome to oracle Portal	гауе	Build a new database role.	Non Default Parameters
On the Web			View initialization parameters that have changed in the init.ora file.
External Applications	Customize	Edit Role	Job Related Parameters
No external applications		Type the name of a role, then click Edit. Or, click 🗐 and select	View parameters specific to configuring jobs.
have been selected for	,	a role from the list, then click Edit.	Database Memory Consumption, Transactions and Locks
display. To select	-Bala		Jobs Defined
applications to display, "Customize".	CIICK	Name Edit	Monitor information about currently-defined DBMS jobs.
			Jobs Running
			Monitor DBMS jobs that are currently executing.
			Queues
			Monitor definitions of advanced queues.
			System Global Area (SGA) Consumption Report
			View report of memory consumption by component group.
			Session I/O View report of consistent gets and physical reads by session.
			view report of consistent gets and physical reads by session.



Site Administration

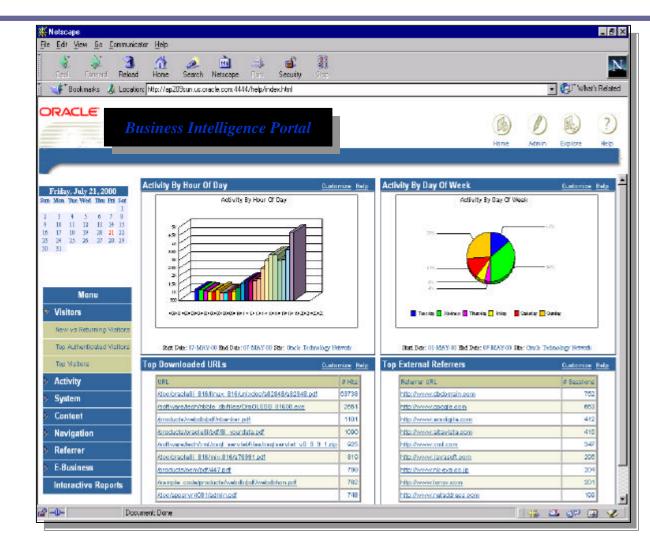
ORACLE D BR	7 C	Pracle Portal	Navigator Home Help
April 15, 2001			Refresh Customize Account_Info Logout
Links			Build Administer Administer Database Monitor
<u>Favorites</u>	Customize		
Oracle		Users	Groups
Oracle Portal Help Oracle Technology Network		Create New Users Create users, specify account availability, and assign login server privileges.	Create New Groups Create groups, assign users to them, and designate group administrators.
Work			
Recent Objects	Customize	Edit User Click 国, select a user from the list, then click Edit.	Edit Group Click I, select a group from the list, then click Edit.
PORTLETREPOSITORY	Content Area		
PORTLETREPOSITORY	Navigation Bar	Name: Edit	Name: Edit
PORTLETREPOSITORY PORTLETREPOSITORY NBST Welcome to Oracle Portal	Style [Style Page	A Real Provide A Real ProvideA Real ProvideA Real ProvideA Real Provide A Real Pr	
	1	Services	Provider
On the Web		Global Settings	Add a Portlet Provider
External Applications	<u>Customize</u>	Establish default home page, default style, proxy server settings, activity log interval, Login Server settings and logout behavior, and	Register a portlet provider to the list of providers.
No external application have been selected for		portlet timing at the system level.	Edit a Portlet Provider
display. To select applications to display	, eliek	Listener Gateway Settings	Enter a provider name, then click Edit.
"Customize".	, CICK	Adjust listener and gateway settings.	Name Edit
I		Log Registry Administration Administer log registry which determines what log requests result	Display Portlet Repository

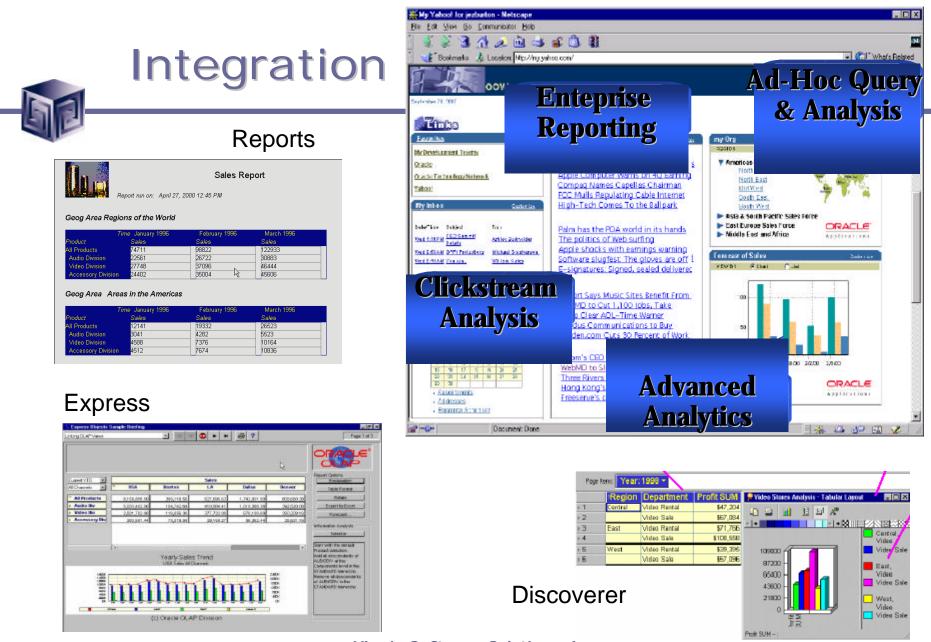


Site Analysis

ORACLE Oracle Portal			Navigator Home Help				
April 15, 2001			Refresh Customize Account_Info Logout				
Links			Build Administer Administer Database Monitor				
<u>Favorites</u> Oracle	Customize						
Oracle Portal Help		Monitor By Object Customize	Monitor Search <u>Customize</u>				
Oracle Technology Network		Sub-folders	Enter values in box below to search for monitoring charts and reports. Go				
2 my		Portal					
Work		Pages Portlets Documents	Parameter Screens				
Recent Objects	<u>Customize</u>	Content Areas	Reports				
PORTLETREPOSITORY	Content Area	<u>Folders Items Searches</u> Categories Perspectives					
PORTLETREPOSITORY	Navigation Bar	Categories Perspectives Application Components					
PORTLETREPOSITORY	Style	The second	Questions Answered Customize				
PORTLETREPOSITORY NBS Welcome to Oracle Portal	T Style Page						
	raye	Charts Customize	Pages				
On the Web		Chart by Browser Chart by Date	What are the most popular pages?				
External Applications	Customize	Chart by Event Chart by IP Address	Portlets				
No external application have been selected for		Chart by Language Chart by Object	What portlets are most frequently added to pages? 🖻				
display. To select applications to display, click "Customize".		Chart by Row Count Chart by Time of Day	What portlets are most often hidden on pages? 🗩				
		Chart by User	Content Areas				
			Who are the most frequent content area contributors? ${ar {\cal P}}$				
			Folders				
		the the second s					

Site Analysis







•Windows 2000 Server Environment

•Reports •URL •Reports Services Security

•Express •URL

•Discoverer •Waiting for Discoverer 4.1





Alter http.conf file:

.

Aliases: Alias /icons/ "D:\Oracle\iSuites\Apache\Apache\icons/" Alias /jservdocs/ "D:\Oracle\iSuites\Apache\Jserv\docs/" Alias /jinitiator/ "d:/oracle/developer/JINIT/" Alias /rep60demo/ "d:/oracle/developer/TOOLS/DEVDEM60/DEMO/REPORTS/" Alias /web_qt/ "d:/oracle/developer/TOOLS/DOC60/US/"

.

ScriptAlias: ScriptAlias /cgi-bin/ "D:\Oracle\iSuites\Apache\Apache\cgi-bin/" ScriptAlias /dev60cgi/ "d:/oracle/developer/tools/web60/cgi/"



Reports and Apache

Syntax:

http://<host_name>/dev60cgi/rwcgi60.exe?server=<server_name> &report=<report_name.rdf>&userid=<user>/<pword>@<sid> &destype=cache&desformat=HTML

Example:

http://bethinsp7000/dev60cgi/rwcgi60.exe?server=Rep60&report= salcomm.rdf&userid=scott/tiger@orcl&destype=cache&desformat= HTML



Reports and Portal

Install Reports patches to Reports 6i version
6.0.8.11.3
1663658 – version 6.0.8.13.1
1710849

•White Paper

Security Tips in Oracle Reports Services Release 6i with Oracle Portal Release 3.0 An Oracle Technical White Paper October 2000



Demo Environment

Windows 2000

•Oracle 8.1.7.0.0 Database

without HTTP Server

•9iAS version 1.0.2.0.0 •HTTP Server version 1.3.12.0.2a •Portal 3.0.7.6.2

•Reports 6i version 6.0.8.11.3 •Patch 1663658 – version 6.0.8.13.1 •Patch 1710849

•Express 6.3.2.0.0

Se

Services

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e	Name 🔺	Description	Statu	Startup Type	Log On As
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	🍓 Oracle Express Agent		Started	Manual	<mark>_LocalSys</mark> t∈
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	🏶 Oracle Reports Server [rep60]		Started	Manual	LocalSyste
	🏶 Oracle Web Integration Server			Manual	LocalSyst∈
	CracleDEV_HOMEClientCache80			Manual	LocalSyst∈
	CracleiSuitesAgent			Manual	LocalSyste
	CracleiSuitesClientCache			Manual	LocalSyste
	🖏 OracleiSuitesDataGatherer			Manual	LocalSyste
	CracleiSuitesHTTPServer		Started	Automatic	LocalSyste
	CracleOLAP_HOMEClientCache			Manual	LocalSyste
	🖏 OracleOraHome81ClientCache			Manual	LocalSyste
	🖏 OracleOraHome81CMAdmin			Manual	LocalSyst∈
	CracleOraHome81CMan			Manual	LocalSyste
	CracleOraHome81TNSListener		Started	Automatic	LocalSyste
	CracleServiceORCL		Started	Automatic	LocalSyste
31-1	Performance Logs and Alerts	Configures		Manual	LocalSyste





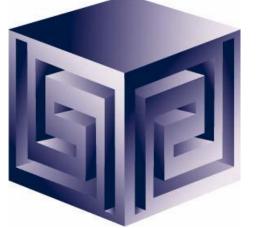
Business Intelligence Portals and Oracle Portal presented at IOUG-A Live! 2001

paper number 418

This presentation may be downloaded from: <u>www.vlamis.com</u>

Or

Contact author at: <a>ereardon@vlamis.com



More Portal Information: <u>http://portalcommunity.oracle.com</u> <u>http://portalstudio/oracle.com</u> <u>http://portalcatalog.oracle.com</u> PDK on portal community and OTN Oracle 9iAS Portal Discussion Forums

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