

CLAROS

«clarITy»

DATA SHEET

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What is «clarITy» ?

«clarITy» is a data base monitoring tool. It allows you to monitor, analyse and optimize your database according to your needs.

With «clarITy» your data base is always in good shape!

Advantages

LIGHTWEIGHT

There is no need to install anything in the databases a DBA wishes to monitor. All that is required is a database user with minimal privileges. No service or daemon needs to run on the server to facilitate the working of this solution.

FLEXIBLE

Thanks to the sheer simplicity and flexibility of Oracle Application Express, all reports and functions are easily adjusted. All reports and lists in the application can be exported to CSV format and thus data can easily be further analysed in Excel or any other spread sheet application. Interfacing with other applications is therefore built-in.

CUSTOMIZABLE

The entire application can quickly and efficiently be customized for any given environment and/or application.

PROACTIVE

Thanks to the historic key metrics, a DBA can finally be proactive by spotting trends early, detect trouble spots and suggest and implement improvements before they become critical. The same historic data will also allow the DBA to evaluate the impact of the actions that were taken.

ACCURATE

Based on the Data collected from the RMAN catalogues and the databases themselves, the application provides the DBA with an accurate estimation as to how long a point in time recovery would take.

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Have a Look at the GUI

«Dashboard» showing databases with issues in various areas.

The screenshot shows the Claros Dashboard in a Mozilla Firefox browser. The main content area is titled "Databases with issues" and displays a table with 10 columns: SID, Hostname, Env, Cnt, App, Config, Memory, Space, Perf, and Security. The table lists several databases with various status icons (red X, yellow triangle, green checkmark) indicating issues. To the right of the table, there are "Display Options" (radio buttons for "DBs with Problems Environment", "Problems/Envs", and "Graphics"), "Links in the list" (instructions on how to use instance names and symbols), and a legend for the symbols: a red X for Alert, a yellow triangle for Warning, a green checkmark for OK, and a blue icon for Nothing to report.

SID	Hostname	Env	Cnt	App	Config	Memory	Space	Perf	Security
MISBP	sun0219a.claros.com	PROD	BB	MIS	✓	✓	✓	✗	!
MISMP	sun0428a.claros.com	PROD	MB	MIS	✓	✓	✓	✓	!
PORBP	sun0044a.claros.com	PROD	BB	POR	✓	✓	✓	!	!
RASBA	sun0236a.claros.com	ACCT	BB	RAS	✓	!	✓	✓	!
RASBP	sun0399a.claros.com	PROD	BB	RAS	✓	!	✓	✓	!
ROUAP	sun1u32s.claros.com	PROD	ALL	ROU	✓	✓	✓	✗	!
SCECA	sun1uc9s.claros.com	ACCT	CV1	SCE	✓	✗	✓	✓	!
SCECP	sun1ucbs.claros.com	PROD	CV1	SCE	✓	✓	✓	!	!
TIVCP2	sun1u37s.claros.com	PROD	CV1	TV	✓	✓	✓	✗	!
TIVCP4	sun1uads.claros.com	PROD	CV1	TV	✓	!	✓	✓	!

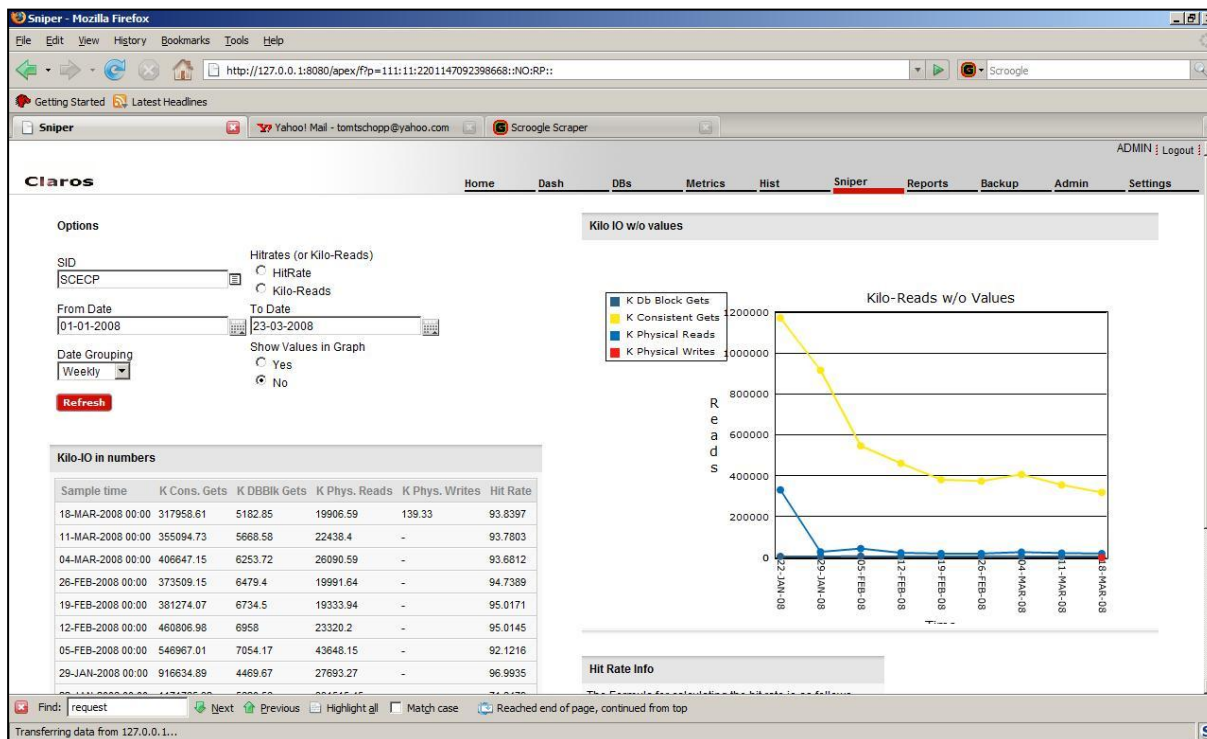
Backup report showing elapsed time since the last backup.

The screenshot shows the Claros Backup Exception Report in a Mozilla Firefox browser. The report is titled "Backup Exception Report" and contains a table with 9 columns: SID, Hostname, Database Type, Backup Type, Frequency, Days elapsed, Last Backup, Status, and Sample Date. The table lists various databases and their backup details. On the left side, there are "Backup Overviews" (radio buttons for "RMAN Repositories", "RMAN Global", "RMAN Backups TBS System", "Backup Calendar", and "Exception Report") and a "Database Type" section (radio buttons for "%", "Oracle", and "MS SQL-Server"). Below these are instructions for backup refresh times: "RMAN Oracle Backups are refreshed every 2 hours. Native Oracle UX Backups are refreshed once a day ~9am. Windows Backups are refreshed once a day ~9am."

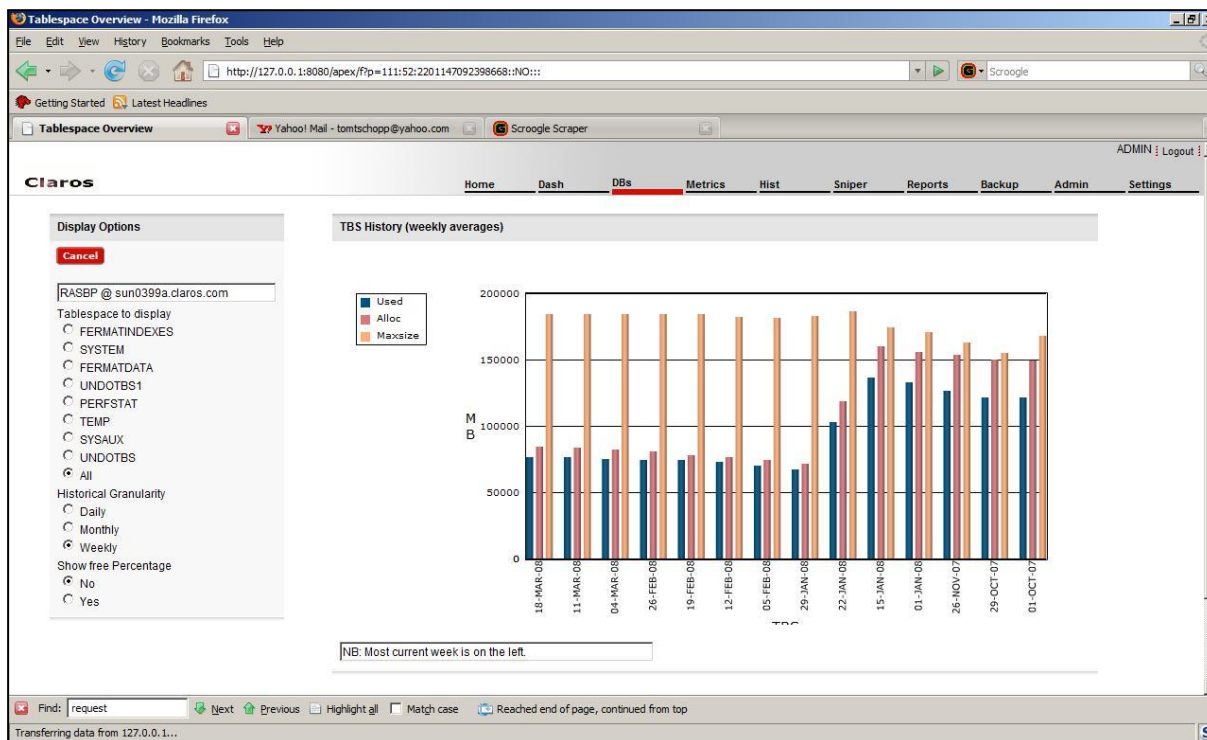
SID	Hostname	Database Type	Backup Type	Frequency	Days elapsed	Last Backup	Status	Sample Date
BANMA	sun0235a	ORACLE	Rman	Weekly	4.4469	02-APR-2008 05:38	OK	06-APR-2008 17:30
RCATMA	sun0586a	ORACLE	Native	Daily	3.6388	03-APR-2008 01:01	KO	06-APR-2008 16:21
BANBA	sun0252a	ORACLE	Rman	Weekly	4.4469	02-APR-2008 05:38	OK	06-APR-2008 17:30
RASBA	sun0236a	ORACLE	Rman	Weekly	4.2419	02-APR-2008 10:33	OK	06-APR-2008 17:30
MISBA	sun0212a	ORACLE	Rman	Daily	.5455	06-APR-2008 03:16	OK	06-APR-2008 17:30
UBIBA	sun1u01s	ORACLE	Rman	Weekly	4.538	02-APR-2008 03:27	OK	06-APR-2008 17:30
ROUAA	sun1u30s	ORACLE	Native	Weekly	7.1491	30-MAR-2008 12:47	KO	06-APR-2008 16:21
BANCA	sun0149a	ORACLE	Rman	Weekly	4.4469	02-APR-2008 05:38	OK	06-APR-2008 17:30
SCECA	sun1uc9s	ORACLE	Native	Daily	3.5122	03-APR-2008 04:04	KO	06-APR-2008 16:21
MISCA	sun0598a	ORACLE	Rman	Daily	.4853	06-APR-2008 04:42	OK	06-APR-2008 17:30
TVCA2	sun1ua9s	ORACLE	Rman	Weekly	6.152	31-MAR-2008 12:42	OK	06-APR-2008 17:30
RASBD	sun0434a	ORACLE	Rman	Weekly	4.2755	02-APR-2008 09:45	OK	06-APR-2008 17:30
MISBD	sun0211a	ORACLE	Rman	Daily	.5471	06-APR-2008 03:13	OK	06-APR-2008 17:30
RASCD	sun0491a	ORACLE	Rman	Weekly	4.3987	02-APR-2008 06:47	OK	06-APR-2008 17:30
MISCD	sun0597a	ORACLE	Rman	Daily	.4823	06-APR-2008 04:47	OK	06-APR-2008 17:30
BANMP	sun0418a	ORACLE	Rman	Weekly	4.4498	02-APR-2008 05:34	OK	06-APR-2008 17:30
MISMP	sun0428a	ORACLE	Rman	Daily	.5534	06-APR-2008 03:04	OK	06-APR-2008 17:30
PORMP	sun0045a	ORACLE	Native	Daily	3.6823	02-APR-2008 23:59	KO	06-APR-2008 16:21

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Weekly Database Read showing impact of new index created mid-January



Weekly tablespace size report showing dramatic impact of reorg end of January



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Various Reports - this example shows - in a calendar - all activities of DBAs that acted on alerts and / or warnings.

The screenshot shows the Claros web application interface. The 'Reports' section is active, displaying a calendar for 'DBA Activities' for the month of March 2008. The calendar grid shows activities for each day, such as 'Xom Success (1)', 'Xom Success (2)', and 'Xom Working (1)'. Navigation buttons for 'Weekly', 'Daily', 'Previous', 'Today', and 'Next' are visible above the calendar. On the left, there are options to filter the report by 'Report Type' (Activities, Generic, Storage, Top Physical IO) and 'Environment Application' (%, Dev, Prod, UAT).

This report shows the top consumers of physical IOs, comparing them to all other databases.

The screenshot shows the Claros web application interface with the 'Top Physical IO Info' report selected. The report provides a top-down list of physical IOs for all Oracle databases in the last hour. It includes a table with the following data:

SID	Phys. Host	Env.	App.	Client	Sampled	K Phys. R	% Read	K Phys. W	% Write
ROUAP	sun06	Prod	Routing	All Clients	20.03.2008 04:00PM	17184.27	86.5586	14.39	2.2676
TIVCP1	node01	Prod	Tivoli	Claros	20.03.2008 04:00PM	721.79	3.6357	6.84	1.0779
RASBD	node02	Dev	Risk Assessment	Big Bank	20.03.2008 04:00PM	426.74	2.1495	164.28	25.8880
TTRCP1	node01	Prod	TimeTracking	Claros	20.03.2008 04:00PM	296.4	1.4930	412.38	64.9847
SCECP	node01	Prod	SCenter	Claros	20.03.2008 04:00PM	270.86	1.3643	8.17	1.2875
ROUAA	sun04	UAT	Routing	All Clients	20.03.2008 04:00PM	266.46	1.3422	.1	0.0158
TIVCP1	sun05	Prod	Tivoli	Claros	20.03.2008 04:00PM	185.93	0.9365	3.2	0.5043
MISBP	node01	Prod	MIS	Big Bank	20.03.2008 04:00PM	158.75	0.7996	1.28	0.2017
SCECA	node02	UAT	SCenter	Claros	20.03.2008 04:00PM	158.33	0.7975	.02	0.0032
RASBP	node01	Prod	Risk Assessment	Big Bank	20.03.2008 04:00PM	113.17	0.5700	5.61	0.8840

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Architecture

The «ClarITy» tool serves as a central repository of crucial key values from all Oracle databases in an environment.

The application will be installed in a central database that uses dynamic database links to connect to the monitored databases to “harvest” these values at specified intervals. Hence tnsnames.ora does not need to be maintained.

The connections are made using a dedicated user (whose passwords are encrypted). These key values, or metrics, are completely customizable and can easily be adjusted and/or extended to suit a given company's environment.

ClarITy V1 covers the following areas:

- Configuration (Version discrepancies, broken jobs, log mode, last RMAN backup, etc)
- Memory (Cache size, SGA, PGA, UGA, ORA-04031 errors, etc)
- Space (Free space, allocated space, maximal space, temp tablespaces with datafiles, growth rates, etc)
- Performance (cache hit ratios, read/write statistics, connection infos, statistics info, etc)
- Security (blocked users, dba users, standard users with default passwords, environment specific audit points....)
- Application specific Key values
-

In addition, the application can be made aware of databases containing RMAN catalogs and uses this - at predefined intervals - to collect information about all backups made for all databases that use these RMAN repositories.

By default, all these metrics are “historized” and kept indefinitely in order to provide trend analysis. However, this historization can be switched off for a given metric, if the DBA does not deem the historic data to be relevant. All historic data can be aggregated at determinable intervals into daily, weekly and monthly averages.

Each metric can run at different intervals (every time, daily or weekly) and it can define what a given value of the metric should initiate (warning, alert, info, etc.) if it exceeds, falls below, equals to, or differs from a defined threshold value. Crossing a threshold can then trigger a mail to the DBA and/or support group.

ClarITy supports grouping of any number of database for n clients in m environments for k applications.

Note: One of the first installations is currently running against ~250 databases for ~10 Clients, ~40 Applications in ~6 environments.

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Requirements

REPOSITORY

- Oracle APEX 3.1 or higher
- Preferably Oracle XE, 10g, 11g (for example XE / 11g with embedded PL/SQL Gateway, else HTTP server or APEX Listener)
- Minimum Oracle 9.2.0.3 (with Apache Server)
- Databases pre-10g Release1 additionally require JVM to be installed in the database.

ORACLE DATABASES

This depends on the version of the database ClarITy is installed on.

I.e. if XE 10.2.0.1 is used as the home of ClarITy, it can monitor databases down to V8.1.7.0

- no earlier versions will be supported.

BROWSER

To view or develop Oracle Application Express applications, Web browsers must support Java Script and the HTML 4.0 and CSS 1.0 standards.

For example the following browsers are required to develop applications in Oracle Application Express V4:

- Mozilla Firefox 3.5 or later version
- Google Chrome 4.0 or later version
- Apple Safari 4.0 or later version
- Microsoft Internet Explorer 7.0 or later version
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Application Express applications can be developed that support earlier Web browser versions, including Microsoft Explorer 6.0.