Product Overview

Features, benefits and product architecture.

Ideal-Analytics is a suite of software tools to glean information and therefore knowledge, from raw data.

Self-service, real-time, on-demand ad-hoc analysis and high performance exploration functionality
with plug-ability, scalability & security, available in both SaaS and on-premise model

1 PRODUCT DESCRIPTION

1.1 Product Summary

Business Intelligence (BI) can be defined as a suite of applications to collect, organize, store & analyze business data and provide access to users to help them in making better business decisions. BI allows organizations to get a more accurate and detailed picture of what is going on in terms of business and customers through various analysis and reports e.g., accurate view of costs, liabilities, risks, customer buying patterns, supplier cost-effectiveness, etc. BI can bring visibility into the organization at granular levels and help link different aspects together.

A number of BI tools are available in the market, but there are a number of short-comings in traditional BI tools. The most important of them is the ability to model ad-hoc queries using an intuitive user-friendly UI and get the answers to those quickly. It has been noticed that most of the time due to lack of flexibility in the application, modeling and answering the ad-hoc queries take a lot of time, and so people try to avoid that; instead they take decision depending on their gut feeling and other available reports which are already existing but may not be appropriate or relevant to the context.

Ideal-Analytics is a BI tool with some unique features. It is completely based on open-source technology to provide a low-cost and high quality solution to customers. It provides complete flexibility to the user to design a query and customize reports on an ad-hoc basis. It uses cutting edge technology of columnar database for lightning-fast performance. On top of these, Ideal Analytics is conceptualized on a SaaS model so that the customers get the benefits in a more cost-effective manner without going through the pains of hosting, maintenance and associated overheads.

1.2 Features

Some of the major features (both functional and technical) of Ideal Analytics are described below:

FUNCTIONAL

Analytics

- ✓ Unique multi-dimensional and multi-fact based web interface, with a responsive user interface to filter, drill-down and roll-up data.
- ✓ Dynamic layout provisioning according to user's preference.
- ✓ The base view offers an array of dynamic visualizations in forms of various charts and contingency tables
- ✓ View specific configurations to switch between aggregation operations on the fly.
- ✓ Export facility to export the reports in a variety of formats, e.g. PDF, PPT, Excel etc.
- ✓ Capability to record complex view configuration for the purpose of arriving at those views with single click at a later time.

- ✓ Capability to define criteria based fact slabs for gauge visualizations as well as criteria based fact targets for target visualizations.
- ✓ Ability to define calculations over aggregations with expression language, along with editor support.
- ✓ Ability to define custom behavior (like semantics of sorting) for special categorical data.
- ✓ Capability to handle huge volumes of data in the web interface.
- ✓ Ability to create organization-wide dashboard and user specific dashboards, with complete control over layout design.
- ✓ One-click externalization of dashboard items (for embedding in proprietary applications/web-sites/live documents).
- ✓ Forecasting and Trend Analysis over time-series data.

Data transformation and loading

- ✓ Ability to load data from multifarious data-sources like DBMS, XLS(X),CVS etc.
- ✓ Dataset configuration capability with extensibility in terms deriving dimensions and facts with the help of expression/scripting languages, along with editor support
- ✓ Hierarchical dataset repository to facilitate data organization as well as hierarchical access control to restrict users' domain of visibility
- ✓ Incremental loading of datasets from variety of data-sources.

Others

- ✓ Mobile Access from Blackberry, Android, iPhone, Java phones and windows mobile based devices to bridge the last mile between users and system.

NON-FUNCTIONAL

- ✓ SAAS Framework with proper administration and accountability
- ✓ Column based Databases for performance improvement
- ✓ RIA based UI for better user experience
- ✓ Robust Security Framework to ensure confidentiality of sensitive data while they move through the internet or stored in the database or files
- ✓ Cluster Enabled for scalability
- ✓ Domain based Intelligence for filtration, drilldown and visualization
- ✓ Complete infrastructure for receiving data from external data sources over a variety of application protocols as well as availability of API for generating client applications to transfer data to Ideal Analytics

1.3 Benefits

Apart from the usual benefits of traditional BI tools, Ideal Analytics provides its users some additional benefits which are briefly described below:

- ✓ Multi-tenancy model frees the user from the cost of application hosting, server maintenance, etc. Deployment on secure clouds ensures high availability and reduced risk for the customers.
- ✓ DSA layer provides capability to load data from different data sources. Integrated Data Source Previewer allows the administrator to easily define the data mapping.
- ✓ Web-based access and mobile accessibility allows users to access the system from virtually any place
- ✓ Dynamic viewer provides users the complete flexibility to select any set of dimensions and to filter them on any criteria to generate exactly the required view in real-time.
- ✓ Statistical tools for trend analysis and forecasting helps users to take business decisions much more easily.
- ✓ Calculated columns based on the existing data fields help users extend the existing data for analyzing various aspects of the data.

2 FEATURE AVAILABILITY AND ROADMAP

Product Features	Availability (as on April 2012)
Multi-Account Installation	✓
Account Administration	
Account Management	✓
Account Configuration	✓
User and Group Management	✓
Access Control Management	✓
Connector and Data-Source Management	
Connectors	
RDBMS Connector	✓
File Connector	✓
Excel Connector	✓
CSV Connector	✓
System Connector	✓
Web Service	[On-Demand]
REST Connector	[On-Demand]
Application Connectors	
Sales Force Connector **	[On-Demand]

	Siebel Connector **	[On-Demand]
	SAP Connector **	[On-Demand]
	Real-time Streaming Connector	November 2012
	Custom Connector Framework	✓
Data Sources		
	Preview and Configuration	✓
	Hybrid Data Sources	✓
Flexible Data Loading Strategy		✓
Dataset Explorer and Collaboration		✓
External Data Management Tool		✓
Large Data Source Handling		✓
Incremental Data Loading		✓
Analytics		
	Multi-Dimensional and Multi-Fact Dynamic Viewer	✓
	Dynamic Filter	✓
	In-Place Filter and Value Column based Search	✓
	Drill Down	✓
	Calculated Columns	✓
	Calculations over aggregations	✓
	Custom Sorting	✓
	Visualization	
	Comparison Charts	✓
	Contribution Charts	✓
	Correlation Charts	✓
	Trend Charts	✓
	Gauge / Slab Charts	✓
	Chart Customization	✓
	Double Comparison	✓
	Target Analysis	✓
	View Persistence	✓
	Trend Analysis and Forecasting	[On-Demand]
Dashboard		
	Corporate Dashboard	✓
	Personal Dashboard	✓
	Customizable Layout	✓
	Dashboard Component Externalization	✓
Search		
	Filter Search	✓
	View Search	✓
	Data Model Search	November 2012

Export		
Export to Excel / Image	✓	
Export to PDF	✓	
Report		
Template based Reporting	✓	
Mobile & Tablet Access		
BlackBerry	✓	
Android	✓	
IPhone	November 2012	
Windows Mobile	November 2012	
Java	November 2012	
Integration / Plug-in Services		
API Abstraction for Connectors and Analytical Services	✓	
Verticalization Infrastructure	✓	
Internationalization	✓	
Postmortem	✓	

** These datasources can be made available through custom connetors plugins based on customers requirement.

3 ARCHITECTURAL HIGHLIGHTS
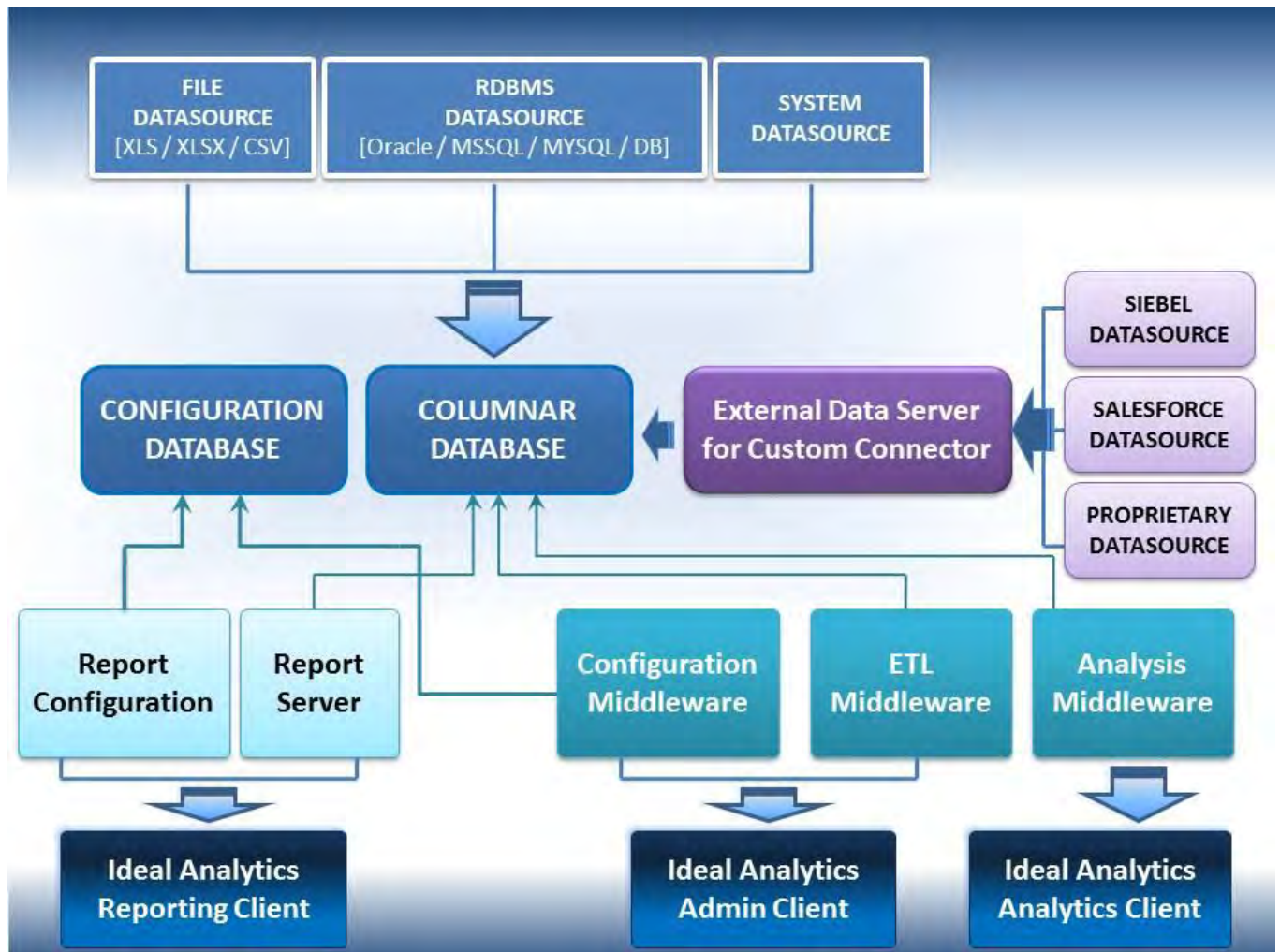
3.1 On-Demand Self-service Analytics

Ideal Analytics incorporates an on-demand analytics methodology. We have moved away from traditional data-warehousing concept of transforming and loading transactional data from OLTP (or other data sources) to OLAP, and querying the data-marts with proprietary languages like MDX. Instead, we just load (without transforming) the transactional data into columnar storage and create an interactive and complete visualization over the aggregation of the transactional data with the help of standard SQL queries. This approach has the following advantages.

✓   We do not need any analysis storage (like OLAP store) and are not dependent on specific technologies like MDX. Instead we create interactive visualizations with the help of SQL queries, but without compromising performance as compared to OLAP store, by using columnar stores.

✓ There is no design phase for analytics views, as opposed to traditional data-warehousing tools, which need customized design models (created by tool consultants) to create the views on. In Ideal Analytics, the users themselves (administrative as well as end users) can configure the data-sources and interactive views are created off-the-shelf.

Another advantage of this approach is micro batching for frequent incremental update, making real-time or near real-time analysis possible in many situations. This is practically impossible for traditional systems with OLAP storage for data warehousing.

3.2   Large Data Handling

Most of the existing BI tools in the market has the limitations on volume of data and analyzing those in real-time. Ideal Analytics wins the race at ease in this aspect and can analyze millions of records on-demand with its unique data loading optimization technique.

3.3   Performance

Ideal Analytics provides lightning-fast performance with the help of:

- Columnar storage for analytics data for quick data retrieval.
- Unique data loading optimization technique to minimize the data traffic.
- In-built query optimization engine with intelligent caching mechanism.

3.4   Data Load and View Update Strategy

Ideal Analytics has the capability to load data to its column storage both on-demand (pull) and automatically by receiving the data (push).

Pull strategy: This methodology is primarily used to reload the complete data-set. In case, the backing data-source allows installation of custom agents (e.g. a database agent installed in the source RDBMS, which has the capability of providing incremental data-set), this strategy will cater for on-demand incremental data load.

Push strategy: In case, the source data-store allows for installation of real-time synchronizing agents, ideal Analytics can listen for updates in the datasets and update the data-sets on a real-time basis. The Ideal Analytics view has the capability of updating the view automatically, in case the underlying data-set is updated (as mentioned above). The view update frequency can be configured while configuring the dataset, according to the nature of the dataset.

3.5   Vertical specific adapter architecture

Ideal Analytics provides an API base for developing a custom connector to a proprietary data-source/system. As a result, analysis of data stored in a proprietary system becomes easy with quick turnaround time for development. It also provides out of the box implementations of industry standard platforms like Sales-Force.

3.6   Enterprise Scalability

Ideal Analytics servers are linearly scalable. Ideal Analytics instances are mostly stateless, backed by centralized and replicable instances of RDBMS storage and columnar storage and fronted by High availability proxy server and hardware load balancers. The only state-full nature of the server is the authentication state, i.e. login sessions, which are by default distributed cache enabled. So, a new Ideal Analytics server instance can be added to the existing cluster seamlessly, to scale up the performance.

3.7   Flexibility in Analysis

Ideal Analytics provides several layers of flexibility in analytics to suit diversified user requirement. Following are some of the techniques it provides:

1. Expression builder and JavaScript Engine allows user to inject custom logic (derived dimensions and facts).
2. Ability to define custom behavior (like semantics of sorting) for special categorical data.
3. Ability to define calculations over aggregations with expression language, along with editor support.

3.8   Externalization

One-click externalization of dashboard items (for embedding in proprietary applications/web-sites/live documents, PDF, PPT etc.) makes it very unique and flexible. For example, a complete set of dashboard items can be embedded in a PDF document and the same can be distributed / shared. The dashboards within the document get automatically updated to reflect the latest data.

## 3.9   Implementation Time and Cost

Ideal Analytics can be implemented in hours, days or weeks compared to months in traditional OLTP based systems.

The total cost of ownership of Ideal Analytics (including implementation and maintenance) is a fraction compared to traditional BI tools. The bundled license includes the columnar database and no separate license is needed for it. Ideal Analytics is available in both SaaS and on-premise model. SaaS model helps small/medium sized companies to implement Ideal Analytics with a very affordable monthly subscription (depends on the usage). For large enterprises, dedicated on-premise installations are provided.

3.10   Platform Independent

Ideal Analytics is platform independent. It provides the flexibility of installing it virtually with any hardware and operating system as per customer's preference.

3.11 Deployment Architecture
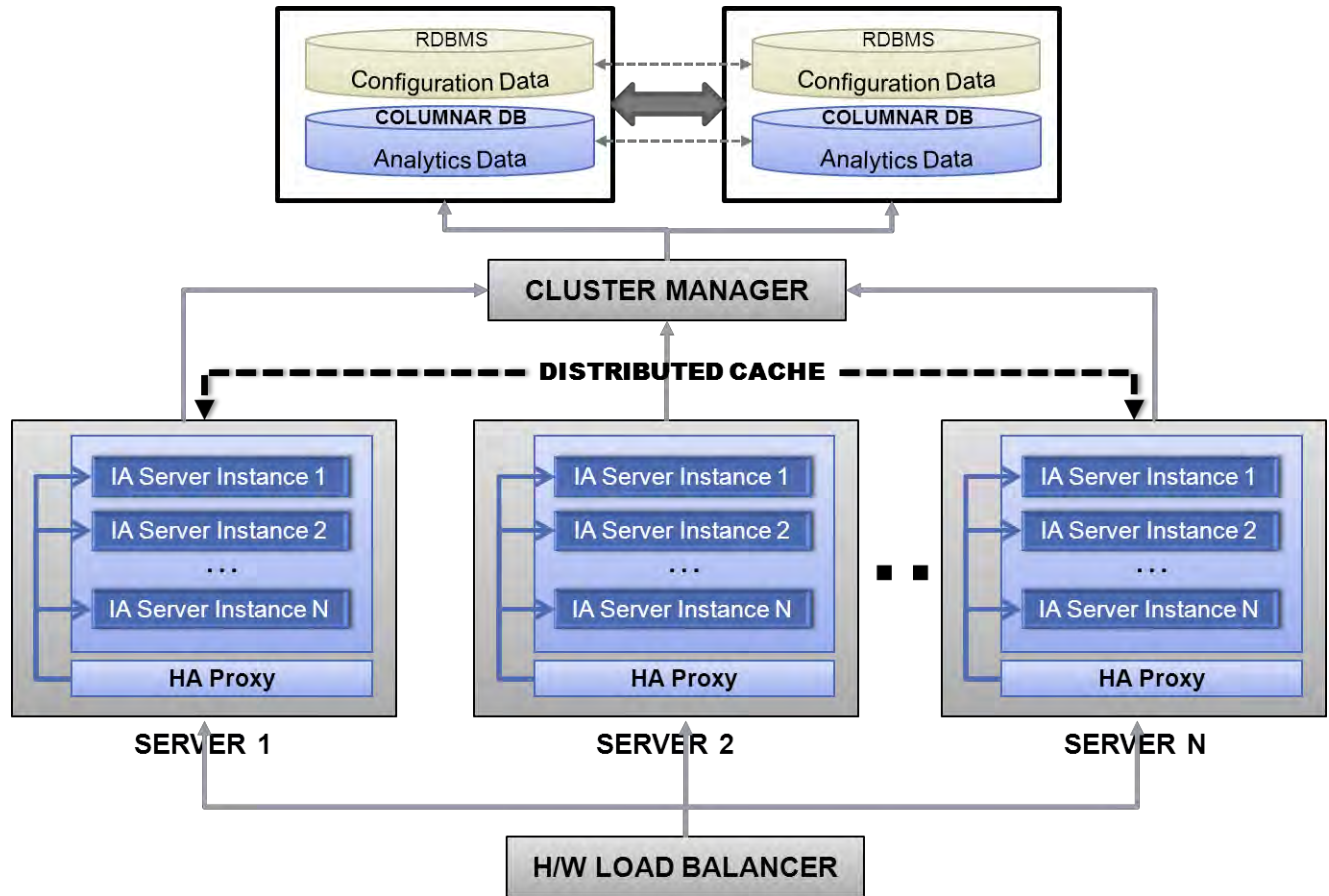
idealanalytics

Analytics On-Demand

Self-service, real-time, on-demand ad-hoc analysis and high performance exploration functionality with plug-ability, scalability & security, available in both SaaS and on-premise model

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