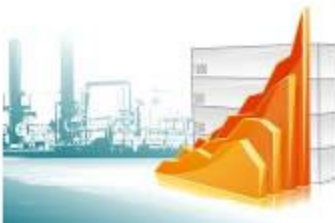


NIBBLE BUSINESS REPORTING





Nibble Business Reporting

Solution Overview
1-Jan10 v1.1

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Introduction

The present document provides a general overview of Nibble Business Reporting, a framework of tools and prebuilt-components used by our team to quickly create powerful reporting systems to display real time information on companies' business data; imagine having, in a single friendly interface, information about Inventory, Accounts, Sales, Production including both live and projected data.

A typical solution would automatically retrieve information from many different sources (accounting, production, sales...) creating a consolidated data repository and present the data through a convenient web-based interface or directly by using common office tools like MS-Excel.

Data can be presented on the web pages as a **point-and-click report** or as an automatically refreshed **dashboard** showing the most critical health indicators of your business; thanks to the flexibility of the web interface reports can be easily adapted to be accessed with portable devices (Blackberry, Windows Mobile,...)

MS-Excel can be used to perform **multi-dimensional analysis** of data by simply selecting the dimensions (e.g. Period and Department) and the value you want to display (e.g. Revenues); this technique also enable running reports while off-line (e.g. review your business results while on a plane).

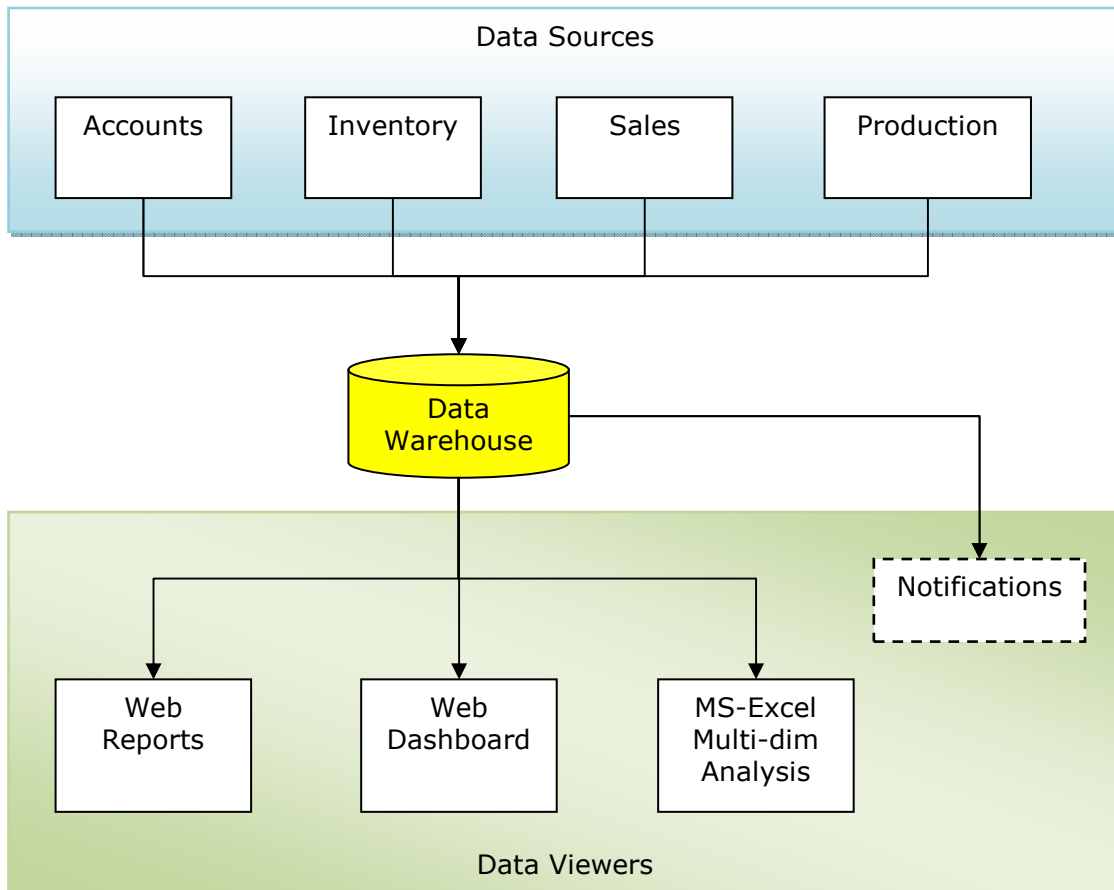
The solution includes generating **automatic notifications** when certain configurable conditions are met (e.g. send an email when the daily sales at that specific shop are higher than \$50,000) or just to send periodical reports (e.g. daily revenues report)

The system is built from a set of standard modules which can be fully customized to meet any target business and special requirements.

The solution is built on a flexible and highly scalable software architecture based on the Nibble Application Framework, a set of run time services and templates used to speed up the solution development, and on industry-standard products and technologies like Microsoft database server and application development tools.



Solution Overview



Data Sources

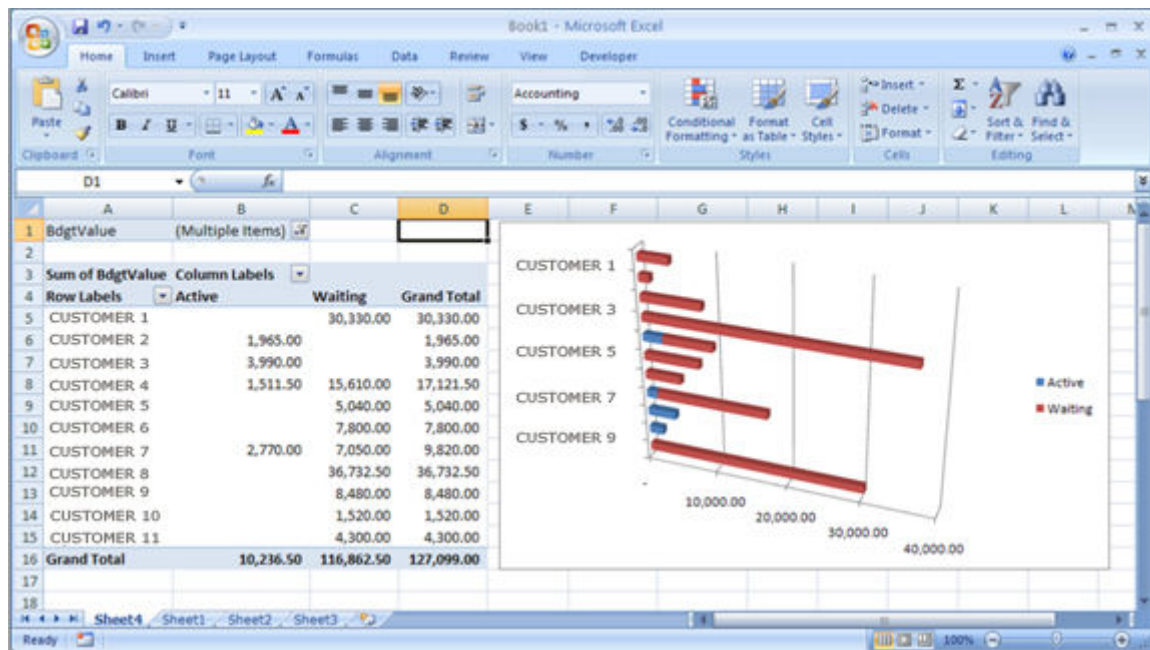
Data can be retrieved from many different sources like: Sage ACCPAC, Intuit Quickbooks, MS Great Plains, MS Retail Management System; more in general the information can be retrieved from any external system which is using a standard ODBC/OLEDB database. Reading from non-standard sources can be achieved by developing custom import modules.

Data Warehouse

Data periodically collected from the Data Sources is stored in a centralized repository where is optimized for reporting; the data import can even enable additional historical information normally not available in the source systems.



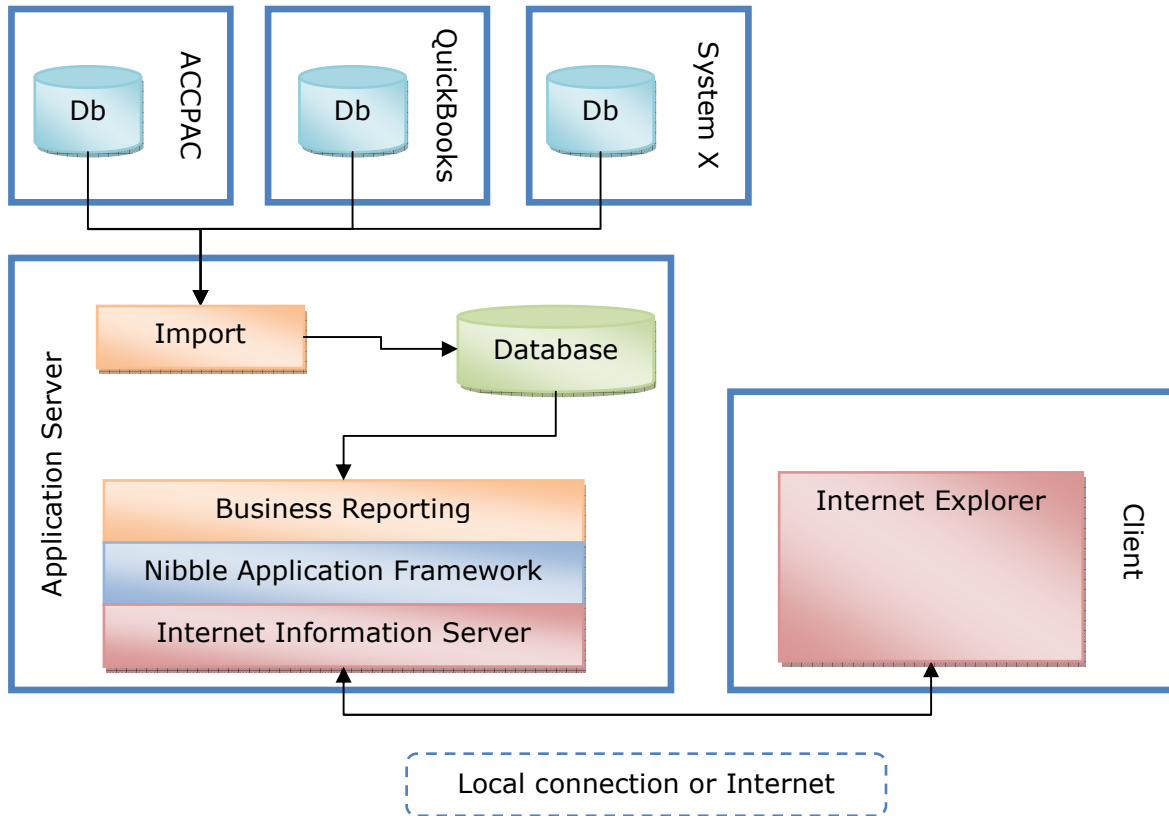
- Multi-Dimensional Analysis:** MS Excel can easily import data from the Data Warehouse for offline analysis within one of the most popular data elaboration environment; in addition to "basic" data manipulation through advanced filters, grouping and macros MS-Excel can use the imported data to create a Pivot Table for multi-dimensional data analysis; Pivot Tables provides drag & drop selection of dimensions (e.g. Period, Department, Sale Rep, Location...) and scalar (e.g. Sales, Item Qty, Expenses, Revenues, Headcount...) for quickly showing powerful reports; graphs are fully supported.



- Notifications:** jobs are periodically executed running queries against the Data Repository to generate notifications email; email notifications can contain information about special conditions (e.g. account N.XXXX is lower than \$\$\$) or just periodical summaries (e.g. Daily Sales after shop closure)

Solution Architecture

Architecture Diagram



The system is hosted on a central server running a Windows platform (Windows XP Professional or Windows Server 2003); users access the application from a generic web browser; the connection is based on internet protocol (HTTP); both local and remote connections are supported.

Architecture Advantages

The solution architecture offers the following advantages:

Low deployment and maintenance costs

Even if accessed by many users from different locations the system can be fully managed and maintained by operating on the central server; no intervention is required to install or maintain workstations.

Access from anywhere

Users can access the system from any workstation running a generic Web Browser (Internet Explorer is recommended) support both local and remote connections through the internet.



Mobile devices support

Thanks to the adoption of standard communication protocols (HTTP) a user interface for mobile devices such as Pocket PC or Blackberry can be easily added.

High Data Security

End users can access the system data ONLY through the application layer which implements appropriate business rules to allow only authorized operations based on the actual user permissions; no direct access to the physical database is needed; no virus present on the client computers can affect the back-end system.

High System Reliability

The centralization of the data allows efficient monitoring and backup procedures; no data is stored on clients.

Low bandwidth requirement

The communication between the clients and the server is based on the same protocol used for general internet browsing (HTTP) which has a very low bandwidth requirement; such approach reduces the traffic on your local network and keeps the system responsive even when used from remote locations.



System Management

A set of run time services included in the solution will ensure proper system reliability and manageability:

- **Nibble BackupCtrl**; this tool automatically executes data backup using external HD; the tool performs a number of functionalities including: backup size calculation, backup unit presence and free space, backup output file verification, backup history cleaning and full email and web reporting.
- **Nibble Monitoring Tools**; a set of tools performs constant automatic checking of the critical part of the system including: memory and disk free space, backup and other jobs execution, network connection and devices availability, system event log errors and warning.

In addition the web application itself is configured to immediately report errors to our technical support.

Platform Requirements

The required platform specifications depend on the actual solution design and the estimated workload (number of users, database size...); as a general indication here are two different options for the server:

Entry Level Server

- Pentium 4, 2GB RAM, 100GB disk
- Windows XP Professional
- Ext. Hard drive for backup 100GB
- Supports
 - o up to 8 concurrent web application users
 - o no support for the Marketing Module

Small Business Server

- Core Duo, 4GB RAM, 250+250GB RAID mirror disk
- Windows Small Business Server 2003/2008 (5CALs), Windows Server 2008 Foundation (15 CALs)
- Ext. Hard drive for backup 250GB (at least 2 recommended)
- Supports
 - o More than 8 concurrent web application users
 - o Full support for the Marketing Module
 - o Advanced Mail and Team Collaboration Functions (MS Exchange Server)
 - o Document Management (Windows Sharepoint Services)
 - o Domain Security and sharing (MS Active Directory)
 - o Network Services (DHCP, DNS, VPN...)

Clients and connectivity

- Local network connection (100Mbit or higher) or Broadband Internet Connection
- Windows XP + Internet Explorer 6.x (recommended) or any generic workstation with a full featured Internet Browser (e.g. a Mac with Firefox)



Solution Implementation

Implementation Steps

The solution is implemented by completing the following steps:

- Requirements Analysis & Draft Solution Design
 - collecting and understanding the requirements by mean of interviews with the customer
 - high level design of the solution defining all the components that need to be developed, and the activities required to deploy the solution
 - **completing this step allows proper planning and cost calculation for the following steps.**
- Detailed Solution Design
 - Defining in details the database structure, the application modules user interface, the security and navigation models
 - Defining in details how to import data from the different data sources: which sources, which data entities and how often do the import.
 - Detailed definition of the software architecture of the solution
- Solution Development
 - Solution platform and Database creation
 - Application modules customization
 - Creation of Data Import procedures
 - Test and tuning
- Solution Deployment
 - Server configuration
 - Solution Setup
 - Data initial feed
 - System documentation and Training

The actual deployment of the solution may require also the following:

- Hardware and software products specification and purchasing
 - Server HW & SW
 - Backup units
 - Internet domain registration

Adopted Components

Creating a solution instance is done through the adoption and customization of pre-existing components such as:

- Nibble Application Framework
 - System general run time services (user authentication and tracking, system administration tools)
 - User interface components and code libraries
 - Website Content Management tools
- Nibble Business Reporting Solution
 - Set of tools and pre-built components to allow developing of the solution
- Microsoft Services
 - MS SQL Server 2000 for database management
 - MS Internet Information Services for website publishing



Solution Ownership

Once completed, the solution instance is owned by the customer who is allowed to use it with no time and number of users (*) limitations within the business organization defined in the project contract; the customer cannot resell the solution as a whole or in part to any other party.

The pre-existing modules (Nibble Application Framework and Nibble Sales Management System Solution template) used by Nibble to develop the solution instance will remain intellectual property of Nibble Computer Solutions Inc who can freely reuse and resell them.

(*) although the licensing model doesn't put any limitation in the number of users that can access the deployed system, appropriate hardware and software upgrades may be required to support a workload bigger than the one targeted by the solution.