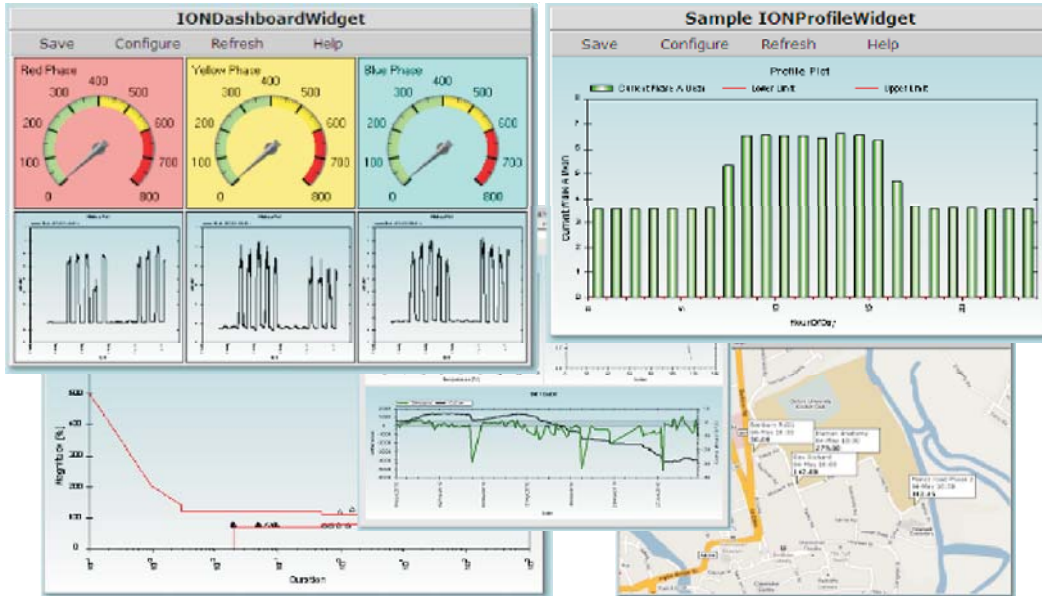# Database Desktop

The **Database Desktop** is another original C-Matic Systems product.
A web application to provide reporting information from PowerLogic® ION Enterprise and other database systems.
Over the years we have been asked to provide enhanced reporting and presentation for particular data from either PowerLogic® ION Enterprise and/or other manufacturers' monitoring systems.
These requests have now been rolled up into one application, the Database Desktop, that provides the user with a toolbox of "widget applications".
As new reporting requirements emerge, we can add further widgets to this versatile solution.
Database Desktop can communicate with Intelligent Link Controller / Minx database, and any other ODBC / ADO compliant database such as SQL Server, Access, Ingres Oracle, Sybase etc.

Overview
The Database Desktop is scalable and ideal for secure retrieval and display of data from all kinds of databases. Data is extracted and presented to the user via one or more widgets that reside on a desktop. Each widget type has a specific function and displays data in a particular way. All widgets are configurable (in terms of fonts, colours, backgrounds etc).
The Database Desktop is compatible with most modern web browsers including Internet Explorer 7 onwards, Firefox, Opera, Chrome and Safari.

Widget
An item that may be placed on a desktop and configured to display information. A widget is an active server page (aspx) designed to extract specific data from a database or web link and display it in a predefined fashion. Widgets may be moved and resized, and have a set of properties that can be tailored by the user.

Desktop
A backdrop on which one or more widgets reside. Like a widget, a desktop has a set of properties (font, colour, background image and position) that can be tailored by the user.
Widgets may be either static, text or image widgets, or interactive like map widgets.

Think of the Database Desktop web application as a Swiss Army knife for data analysis, then each widget represents a different blade, all contained in one handy tool.
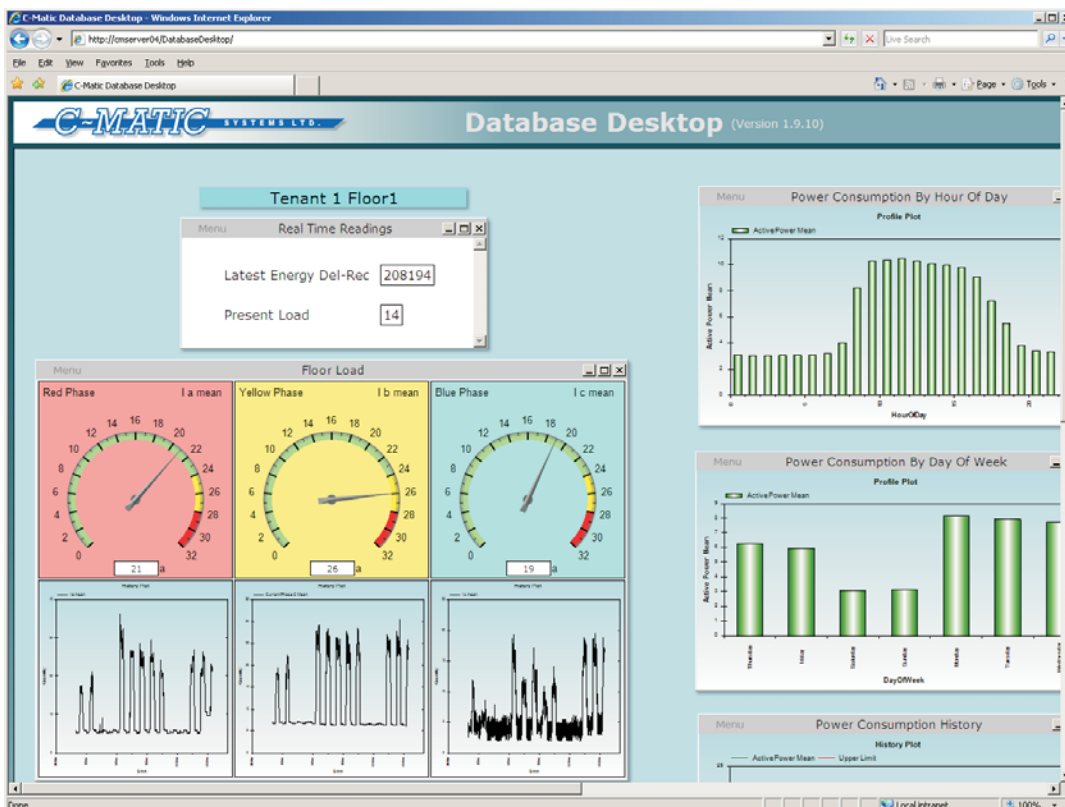
Description

Most widgets support a File function which writes the widget contents (charts and tables) to an RTF file. Widgets also support a Help function which displays help about the widget. A widget will auto display its help until it is configured. It may also be shown at any time by selecting Help from the Widget's menu.

Multiple users and desktops can be configured, the total number depending on the licensing option purchased.

Both desktops and widgets can be set to auto-refresh. Long running desktops can be set to execute a keep-alive function to ensure that the page never times out through inactivity.

Widgets are available to perform simple data retrieval and plotting against data / time, hour of day, day of week or week of year. Pareto widgets plot data in descending order of magnitude against meter name to facilitate rapid identification of opportunities for improvement. Additional widgets are provided the permit plotting data against maps / images using both Google Maps (although there may be licensing implications, dependant on the implementation) and Open Layers interfaces. There are widgets for displaying tabulated data, web images and web pages. In all cases a widget is defined with a set of customisable properties. Most properties have acceptable default values to permit data to be quickly displayed with the minimum effort, whilst also allowing the final result to be heavily customizable.

Additional widgets can be built on request.

Standard Widgets

Widget Description
• Text Widget - Displays text. This type of widget has no menu bar
• Image Widget - Displays an image specified by a web address
• Web Widget - Displays a web site for interactive use within a widget
• Chart Widget - Displays data returned from a query as a chart
• Query Record Widget - Displays the first record returned by a query against a specified database
• Query Table Widget- Returns the complete results of a query against a specified database as a table
• Web Map Widget - Used to combine an image / map with data from a database
• Site Overview Widget - A way of collapsible / expandable way of listing sites + properties with a hyperlinks, user specified, photos, links and specific details
• Global Event Widget - Allows the user to view and edit entries in a global event log

ION Widgets
• ION Sag Swell Widget - Plots power quality events on a CBEMA curve (% magnitude of disturbance v log duration)
• ION History Widget - Plots parameter against date/time
• ION Profile Widget - Plots parameter against hour of day, day of week, day of month or week of year
• ION Pareto Widget - Plots data against meter name in descending order of magnitude
• ION Dashboard Widget - A combination widget for displaying present value gauges + history charts
• ION Map Widget - Simplified map widget for use with ION database. Plots database data on a specified image

Hosting
The Database Desktop is a web application written in .Net 2.0 / asp, and, as such, no software is loaded onto client PCs, instead, the application is hosted on a central server running one of the following Microsoft operating systems:

• Windows Server 2003
• Windows Server 2008
• Windows XP
• Windows 7.0

The Database Desktop requires access to a Microsoft SQL Server 2005 or 2008 database (Express or Standard) to record user ids, permissions, desktop and widget configurations.
The web interface itself must be hosted via Internet Information Services (IIS) and is compatible with any version from 5.0 onwards (must run in Classic Mode application pool in version 7.0 and above.)

The Database Desktop is licensed by the number of users and number of desktops per user. Incremental licenses can be bought and applied if the existing license limit is reached.

Scheduling
Widgets may be scheduled to run (using the Windows Task scheduler) and automatically generate reports.