

InfraControl Functionality

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1. INFRACONTROL FEATURES AND FUNCTIONALITY

InfraControl is a web-based application that unifies internal and external processes within a single, around-the-clock monitoring device that assesses real world business performance.

InfraControl gathers information from any database source, including network or data mining, and converts it into easy-to-understand and intuitive graphic meters. These meters are installed in a dashboard style format onto a manager's desktop and provide real-time, online analysis of the status of a variety of business elements, including:

- Usage and utilization
- Percentage of uncollected revenue within a bill cycle
- Fluctuations in revenue or consumption
- Average number of calls each CSR handles
- Ratio of outstanding calls to the number of CSRs
- Adequate staffing and workload
- Changes in the customer base
- Performance of marketing promotions
- Quality of Service
- Operational throughput
- Financial throughput
- Completed transactions
- Network operational status
- SLAs

The meters in InfraControl can be customized to monitor any input, alert any device, and display several different meter options. Your System Administrator sets the system parameters used to alert the triggers and select the measuring device that best suits the needs of the data to be gathered. The display options include digital clock, meter, graph, or chart. Several meters can function simultaneously on a user's desktop or browser.

InfraControl can also be used as a customer service tool in monitoring a specific customer's performance based on the provider's or the customer's policies. For example, a customer can request an alert to be issued when 100 international calls are made or if 80% of an account's monthly budget has been spent. InfraControl can enhance a company's ongoing dialog with its business and consumer customers.

Revenue leakage can occur at many points in the process of providing and billing for services. Fraud, inadequate network performance, inaccurate rating, inefficient provisioning, customer churn, incorrect billing and billing to the wrong customer are just some examples of where potential revenue can be lost. With InfraControl, a manager is notified immediately of fluctuations in performance and can prevent potential problems from resulting in lost revenue.

InfraControl monitors and triggers alerts 24 hours a day, seven days a week. Any database or network device can feed data into the InfraControl J2EE server, which is online 24*7. The server itself can send alerts based on user-defined parameters to any of the following media:

- E-mail
- SMS to a mobile phone
- Pager alert
- Fax
- Issue a network command

InfraControl enables immediate intervention by setting into motion processes that can react to any fluctuation in performance. These processes can be manual or automatic, depending on the user's needs and priorities. The user decides how InfraControl will monitor and control and what parameters must be reached to trigger action.

Using InfraControl, managers can analyze and understand current statistics in relation to past performance and future trends. InfraControl delivers real-time information with reliability and scalability, giving managers the data and functionality needed to run business in a flexible and secure environment.

2. ADMINISTRATOR FUNCTIONALITY

InfraControl features two access levels with different sets of functionality – for regular users (clients, who wish to monitor their usage and their budget) and for the Administrator, who performs the overall administration of InfraControl and determines the configuration of services for individual users.

The figure shown here illustrates the InfraControl menu for the Administrator.

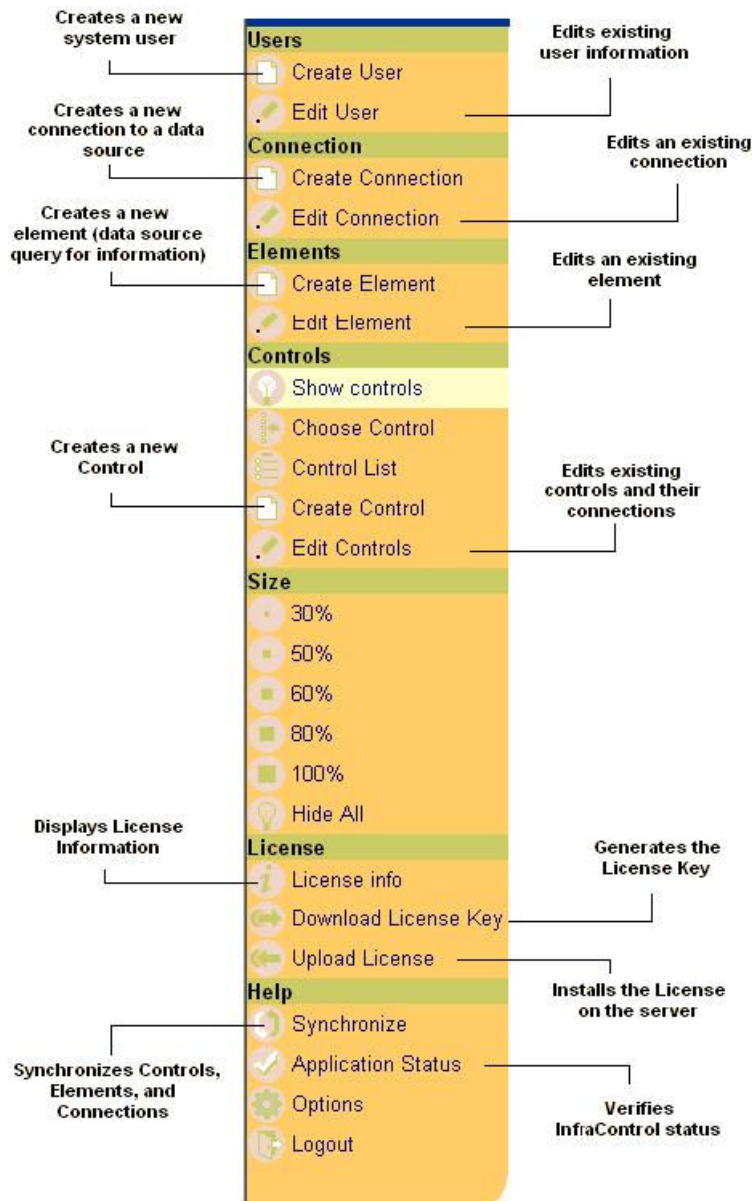


Figure 1: InfraControl Administrator Menu

The sections that follow describe the main InfraControl functionality available to the System Administrator.

2.1 MANAGING USERS

Before individual users can gain access to the InfraControl functionality, the Administrator needs to create users in the system and set their User IDs and passwords. Once the user is created, the Administrator communicates the ID and password to the user, so that the user may start using InfraControl.

The Administrator can also modify any user's information at any time. When the menu item **Edit User** is selected, a window with a list of all existing users opens. The Administrator can select the user and modify this user's information.

2.2 MANAGING CONNECTIONS




Connections are the information sources for InfraControl. By creating a new connection, the Administrator opens the access to a specific source (database, switch, router, or some external DLL) to be used by controls. Once the connection is established, the Administrator can synchronize it and link new controls to it.

Every existing connection can be modified. When the menu item **Edit Connection** is selected, a window with a list of all connections opens. InfraControl shows the status of each connection by means of an icon as shown in the figure that follows.



Figure 2: List of Connections Page

The status icons have the following meanings:

	Connection is good and some elements are connected.
	Unknown connection status or connection's definition is changed and not re-synchronized
	Connection is bad and will be re-initialized.

2.3 MANAGING ELEMENTS

Elements define what exactly is retrieved from a selected InfraControl Connection data source.

When a new Element is created, InfraControl displays a window with the following fields:

Figure 3: Create Element Page

In this window, the Administrator specifies all the necessary parameters for the Element activation. Once an Element is created, it must be synchronized before it can be used by Controls.

As with Connections, InfraControl allows the Administrator to modify Elements and change their major parameters.

2.4 MANAGING CONTROLS

Controls enable users to view real-time information from the selected data source. New Controls can be created to view additional information from a data source. When the Connections and Elements are created and synchronized, the Administrator can start creating Controls, which will be made available to regular users.

InfraControl displays the following window for entering the information necessary to initialize a Control:

Figure 4: Controls Page

If the Administrator decides that a specific Connection or Element needs to be created to work with a particular Control, he can create a Connection or an Element directly from the Create Control window by clicking the **Add>>** button next to the appropriate field.

Once the Control is created and synchronized, individual users can start working with it through their menu.

The Administrator can modify every Control by selecting the menu item **Edit Control**.

2.5 LICENSING

InfraControl v2.4 uses a remote License server. To begin working with InfraControl, the Administrator needs to generate a License Key and send it to the Administrator for authorization.

Once the Administrator authorizes the License Key and returns a License, all that remains to be done is to upload the License to the server. This is accomplished via a simple procedure – the Administrator selects **Upload License** in the menu and specifies the location on the server where the License must be stored.

When the upload is completed, InfraControl becomes fully operational.

3. INFRACONTROL FUNCTIONALITY FOR REGULAR USERS

The functionality for a regular user is limited to a standard set of operations with Controls and Alerts. When a regular user receives a User ID and Password from the Administrator and logs on to the InfraControl server, the following menu is displayed:

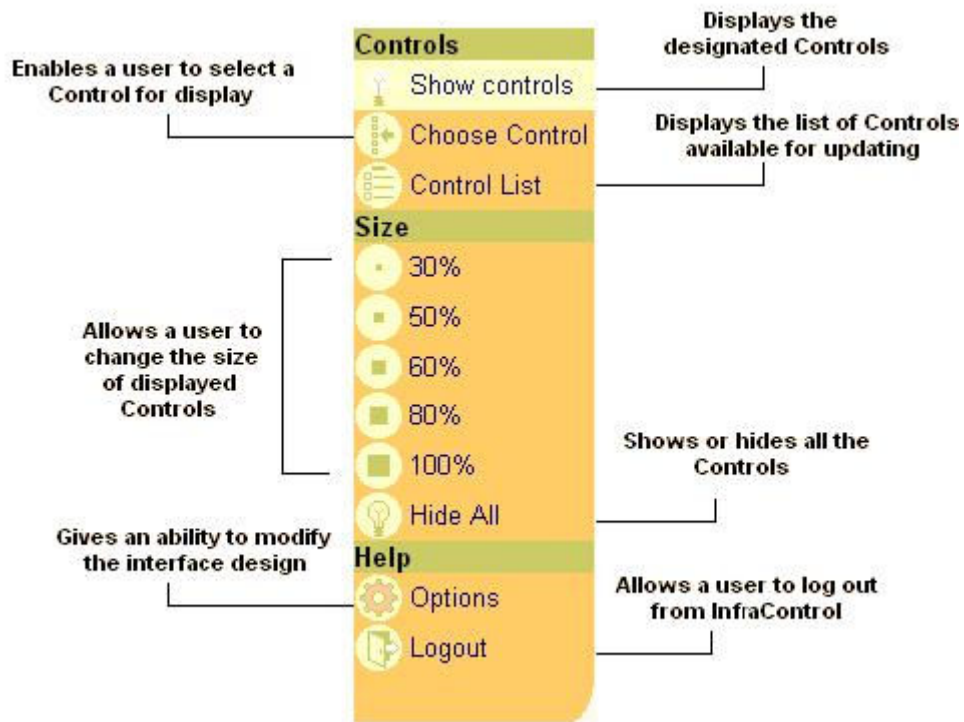


Figure 5: InfraControl User Menu

The sections that follow describe the main InfraControl functionality available to a regular user.

3.1 CHOOSING CONTROLS

A user can select which controls he wants to use for his purposes. The choice is limited to those control types that were created by the Administrator. When the user selects the Choose Control menu item, the following window opens:

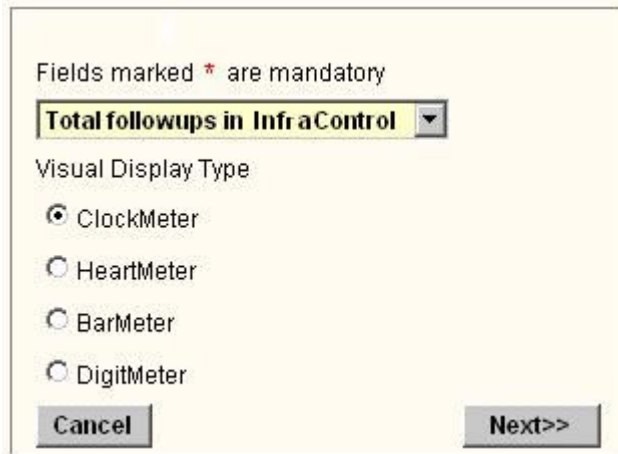


Figure 6: Select Controls Page

In this window, a user can choose a type of Control from the drop-down menu and also select a Visual Display type for the new Control. InfraControl features four different types of display, which help present different types of information in a more comprehensible form. These *Display Types* are:

CLOCKMETER	Presents the information in the form of a gauge with maximum and minimum thresholds serving as the lower and upper limits of the scale.
HEARTMETER	Plots the information across the vertical and horizontal axes with the horizontal axis calibrated in units of time and the vertical axis calibrated in measurement units of the value being monitored (percents, units, people, and so on).
BARMETER	Displays the current monitored value as a vertical bar with maximal and minimal thresholds serving as the upper and lower limits.
DIGITMETER	Presents the information in the form of a table. Each new DigitMeter-style Control is represented by a row, which contains the time mark, the value, and the change of the value since the last Refresh action.

The choice of meters gives a user more flexibility in terms of picking the optimal way of presentation for various types of monitored parameters.

When the Visual Display Type is chosen, the user is taken to the next window, where additional parameters to activate the new Control can be specified:

Fields marked * are mandatory

Control Name:
Total of followups in infraControl

Control Type:
ClockMeter

* **Minimum Threshold**

* **Maximum Threshold**

* **Refresh Interval (in seconds)**
5

<< Back OK

Figure 7: New Control Page

The Wizard window shown above appears when the ClockMeter is chosen. This window has a different look for each Visual Display Type and different information is required to define a new Control depending on its display type.

3.2 DISPLAYING CONTROLS

The User can view all the chosen Controls by selecting the **Show Controls** menu item. An illustration of the InfraControl window with Controls shown is provided in the following figure:

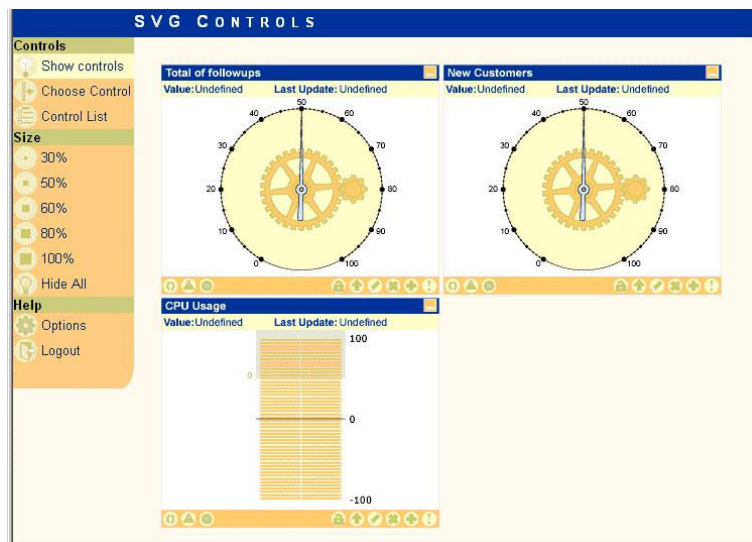


Figure 8: Controls Page

Each individual Control has a toolbar with shortcut keys:

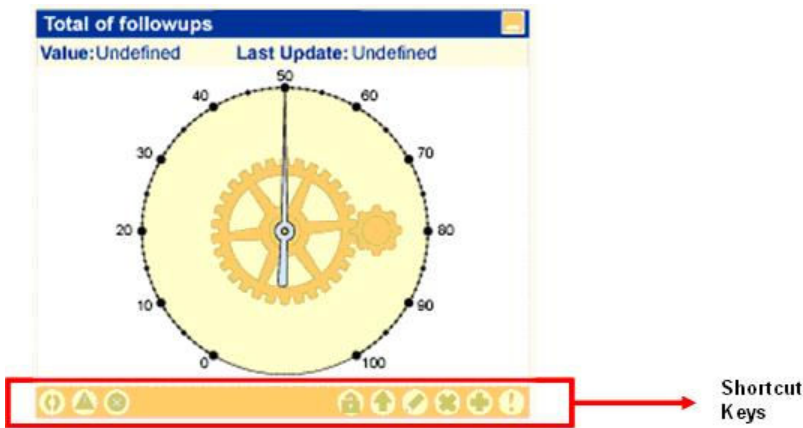


Figure 9: InfraControl Control

These shortcut keys have the following functions:

	Refreshes the Control information.
	Shows a list of alerts, which were issued while the Control was displayed.
	Displays system messages. If a message is received, it will be displayed automatically.
	Locks/Unlocks pre-set thresholds.
	Shows the Control in a pop-up window.
	Updates the user Control.
	Deletes a control from the list of displayed Controls.
	Adds an Alert. For more information on adding Alerts, refer to Creating Alerts .
	Shows the list of linked Alerts.
	Hides/displays an individual control.

3.3 EDITING AND DELETING CONTROLS

Each Control can be modified or deleted completely by using a menu item **Control List** or by clicking shortcut buttons from the Control view (or).

Once the **Control List** menu item is chosen, the user is presented with a list of available Controls and can click on the one to be modified:

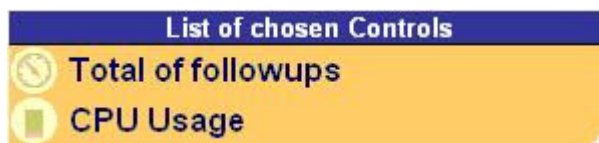


Figure 10: List of Chosen Controls

The interface for editing a Control is identical to the one displayed when the Control is chosen.

3.4 CREATING ALERTS

InfraControl Alerts are used to notify a user when the information in the monitored data source exceeds a certain user-defined threshold.

An Alert can be added by clicking an **Add Alert** (+) shortcut button in the Control window. Once this button is clicked, the user is presented with a window in which to specify all the details concerning the parameters and conditions of operation for major Alerts.

The figure that follows demonstrates a form, which the user has to fill in order to activate an Alert.

The screenshot shows a 'CREATE ALERT' dialog box with the following fields and values:

- Name*: Number of Customers
- Type: Pop-up message
- Value*: 25
- Condition: Lower Than
- Mail Address: sarag@company.com
- Mail Server: mail@maxbill.com
- User Name: sarag
- Serial Number: 55615
- Message*: number of customers is lo
- Generate alert while user is offline: No


Figure 11: Create Alert Page

The following fields are specified:

NAME	Name of the Alert.
TYPE	Alert type (Pop-up message, SMS to mobile, email, etc.)

VALUE	Value for the condition.
CONDITION	Condition for setting off the Alert.
MAIL ADDRESS	Email address to which the Alert is sent.
MAIL SERVER	Mail server to use for sending the Alert.
USER NAME	InfraControl user's username.
SERIAL NUMBER	Alert's serial number.
MESSAGE	Message to include in the Alert.
GET ALERT WHILE USER IS OFFLINE	Select Yes to receive alerts even when the user is offline. Select No to receive alerts only when the user is online.

3.5 VIEWING ALERTS

Users can view the list of Alerts that are linked to a specific Control by clicking the **Alert List** shortcut icon () in the Control window.

3.6 CHANGING SYSTEM OPTIONS

The InfraControl color scheme and menu style may be changed by selecting the Options menu item. When **Options** is clicked, the user is presented with the following screen:

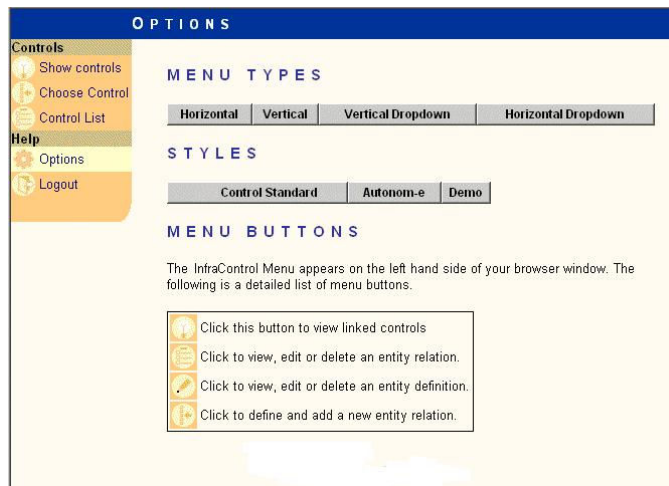


Figure 12: Options Page

The user can choose from four menu types:

- Horizontal
- Vertical
- Vertical Dropdown
- Horizontal Dropdown

When modifying the color scheme, all the interface components are affected by the change.