

What's New in IGSS V9

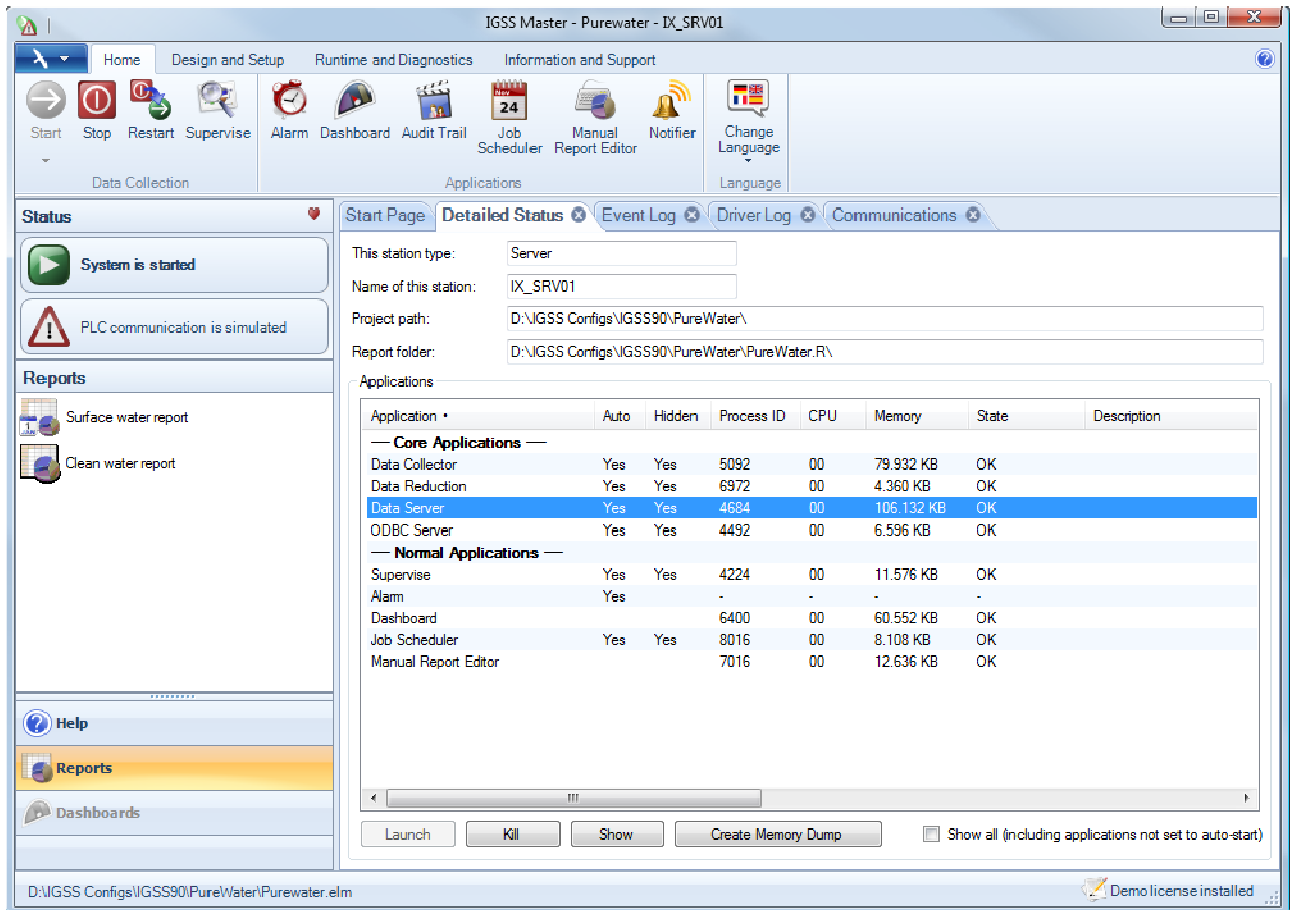
Table of Contents

The IGSS Master Module	3
Design and Runtime modes	3
Added value for the IGSS System Integrators when developing	4
Added value for the IGSS system operators when supervising	6
How do I get started with the IGSS Master module?	8
The New IGSS Reports Module.....	8
What happens to my existing standard reports and RMS reports?	9
Overview of the IGSS Reports module	9
Global reports.....	10
Added functionality in IGSS V9	11
More data types available for reports	11
Activate VBA function when generating a report	11
Improved copy/paste functionality	11
Generate batch report for each occurring event.....	11
The IGSS Maintenance Module.....	12
Monitoring equipment condition	12
The IGSS Data Server	13
Data file queries handled by the IGSS Data Server	14
Monitoring the IGSS Data Server.....	14
Improved Audit Trail.....	15
Export to CSV.....	15
Access control	15
Clear all filters.....	15
Detailed notes for changes.....	15
Improved Dashboards.....	16
Alarm Trend widget	16
Access control	17
Other improvements in the IGSS Dashboard module	18
Object Templates in Event Criteria	18
Online Change of Alarm Properties	18
Performance and robustness.....	19
User Defined Entries for Command Menu on Diagrams and Areas	19

The IGSS Master Module

Designing and supervising SCADA projects is a complex task which consists of many different aspects and a long line of software tools to be applied. To make your work with IGSS smooth and easy, we have developed the IGSS Master module.

The IGSS Master module is a central entrance point to all other IGSS modules and tools. This centralized structure makes IGSS easy and intuitive to use by always providing you with the necessary tools when needed whether you are developing or supervising.



The IGSS Master module, a central entrance point for the IGSS SCADA system

Design and Runtime modes

You can split all IGSS users into two rough user types– the system designer and the system operator. This is why we've invented two modes in the IGSS Master module.

- The Runtime mode for the monitoring and control tasks
- The Design mode for the development and design tasks

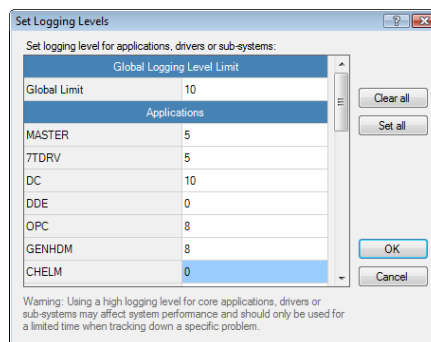
The number of features available in Design mode is higher than the one in Runtime mode. By using access control, you can block certain users from entering Design mode.

Added value for the IGSS System Integrators when developing

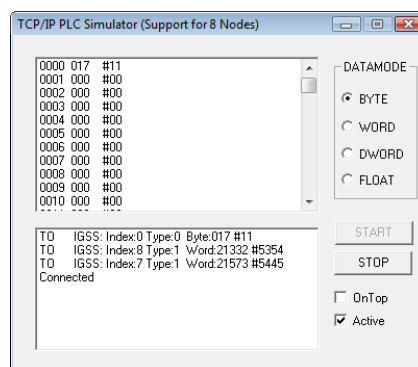
The IGSS Master module helps the system integrators to quickly access the necessary development tools, such as design modules and relevant help files and manuals. This will make the configuration process easier and faster, both for new and experienced users of IGSS.

With the IGSS Master module, important testing, error tracking and debugging tools have been improved and made instantly accessible. For example, with a single click, you can now access the project's event and communication driver log files. These can now also be filtered to effectively track any specific errors in the project. It has now been made very easy to set different logging levels on each IGSS application. From the new module, you can also directly access other very useful development tools, such as:

- The **TCP/IP PLC Simulator** which allows for test of data communication between IGSS and a set of simulated PLC registers.
- **Communications** which lists the contents of: data packets sent to and from the PLCs, system data packets and error packets.
- From the **Detailed Status** tool you will see all the active IGSS applications and their operational status. You can also easily show or hide a separate status window for each of the core IGSS data handling programs to monitor their status.

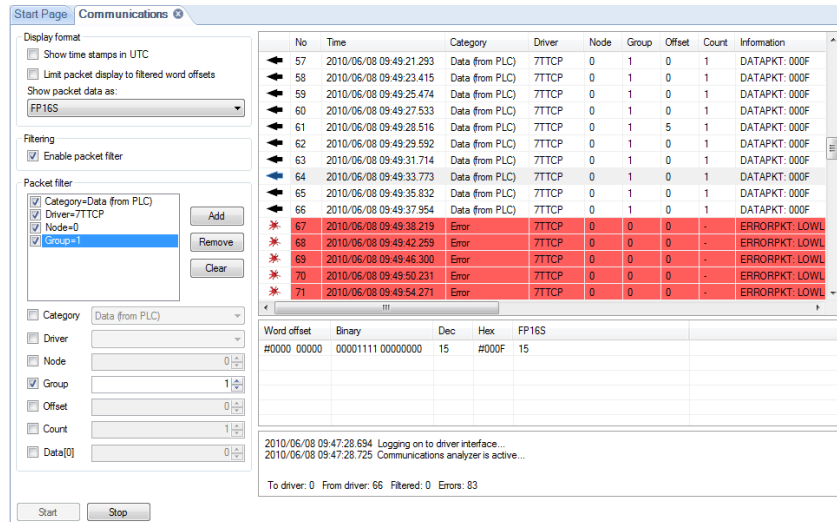


Different logging levels are easily set in the IGSS Master module

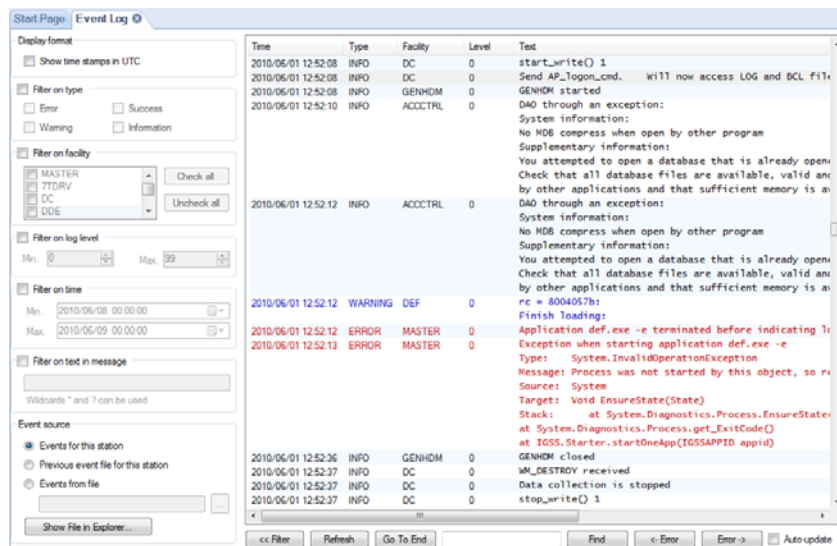


The TCP/IP PLC Simulator is a useful tool when testing the PLC communication

What's New in IGSS V9



The Communications tool is a strong tool for following all types of data packets and their contents



The Event Log is intuitively integrated in the IGSS Master module

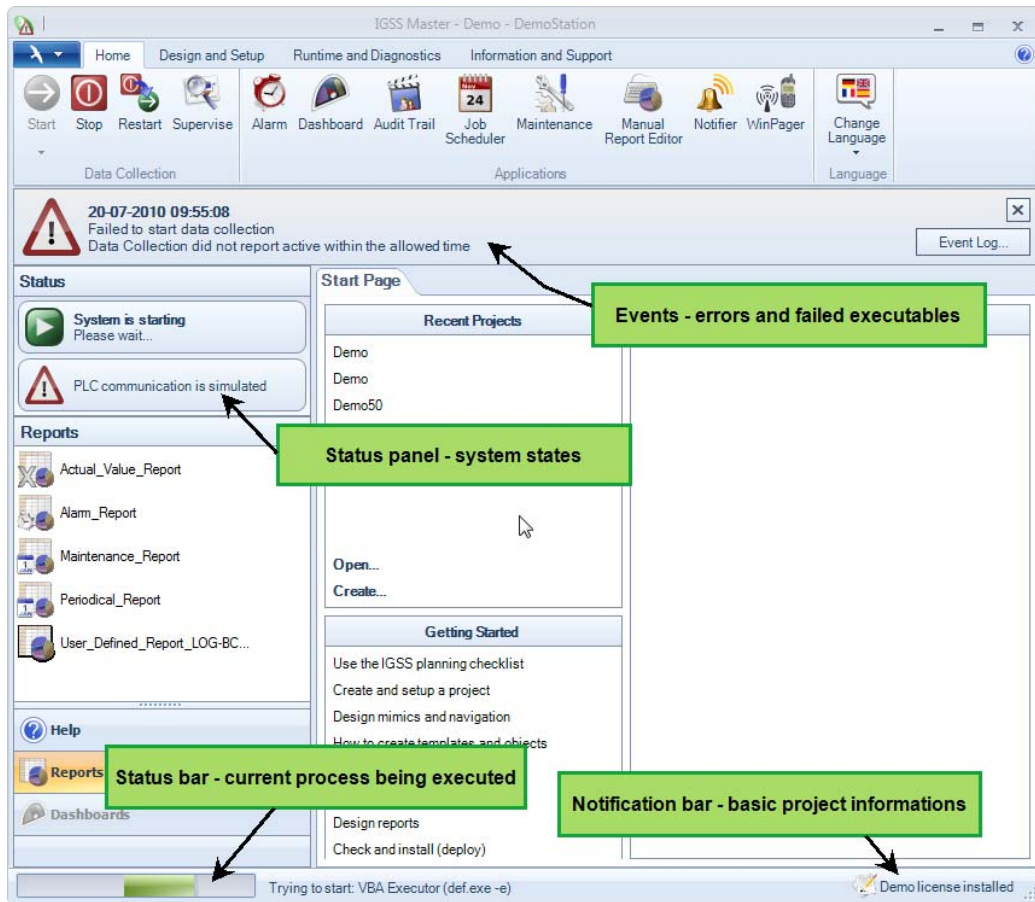
Important IGSS system files and project folders have also been made accessible through the IGSS Master module. This will help our support team to more quickly solve any technical problems that you would have encountered with IGSS.

The IGSS Master module will also offer you important and valuable system information. In the application window you will find the:

- Events - these will provide detailed information of any failing IGSS operation.
- Status panel - this will show the system state (running / stopped) and if any important data handling parameters have been set, for example, simulated values or no data collection.
- Status bar - this will show the current process being executed along with any given parameters.

What's New in IGSS V9

- Notification bar - shows some basic and non-crucial information about the IGSS system.



The IGSS Master module provides valuable system information to the project designer when working in Design mode

Open IGSS projects from Windows shortcuts or libraries

The IGSS project file extension, .elm, has been associated with the IGSS Master module. This means that you can create Windows shortcuts to your projects. In Windows 7, you can even use the powerful Windows Explorer libraries to make collections of IGSS project files. A library can be set up to dynamically add any project files you create on your PC.

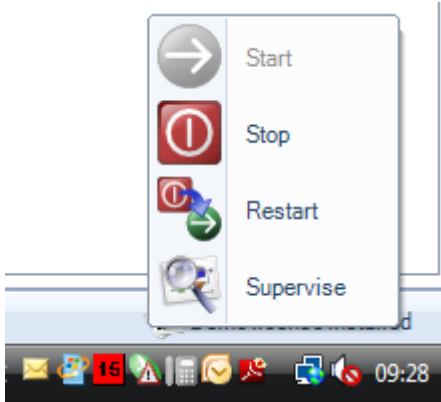
Added value for the IGSS system operators when supervising

For the system operators, the IGSS Master module offers an intuitive access to all necessary monitoring tools and modules.

Some of the advantages for the system operators are listed below:

Start and stop projects from the Windows Taskbar

When the IGSS Master is running, you get the application icon in the notification area of the Windows Taskbar. The user can now right-click the icon to do the following actions: Start, stop, restart and start Supervise.



Standard reports and user-defined reports

Reports are an important part of monitoring and keeping statistics on the running process. This functionality has been made easily accessible for the operators directly in the IGSS Master window.

All help files relevant for supervising with IGSS

The IGSS Help system has a wide suite of help files explaining many different tasks with the IGSS software. However, the system operators only need help files and manuals relevant for supervision, hence only these help files are visible when IGSS is in Runtime mode.

IGSS Dashboards

The IGSS Dashboards offer a very flexible and customized supervision tool for the system operators. It is possible to have many different dashboards and with a single click, you can now switch between these dashboards.

Online language change

Many automation facilities have international workers in their staff group. To ensure correct and efficient use of the IGSS SCADA system, operators should always be able to work with the software in their own language. From the IGSS Master module you can now directly make an online change of the operating language.

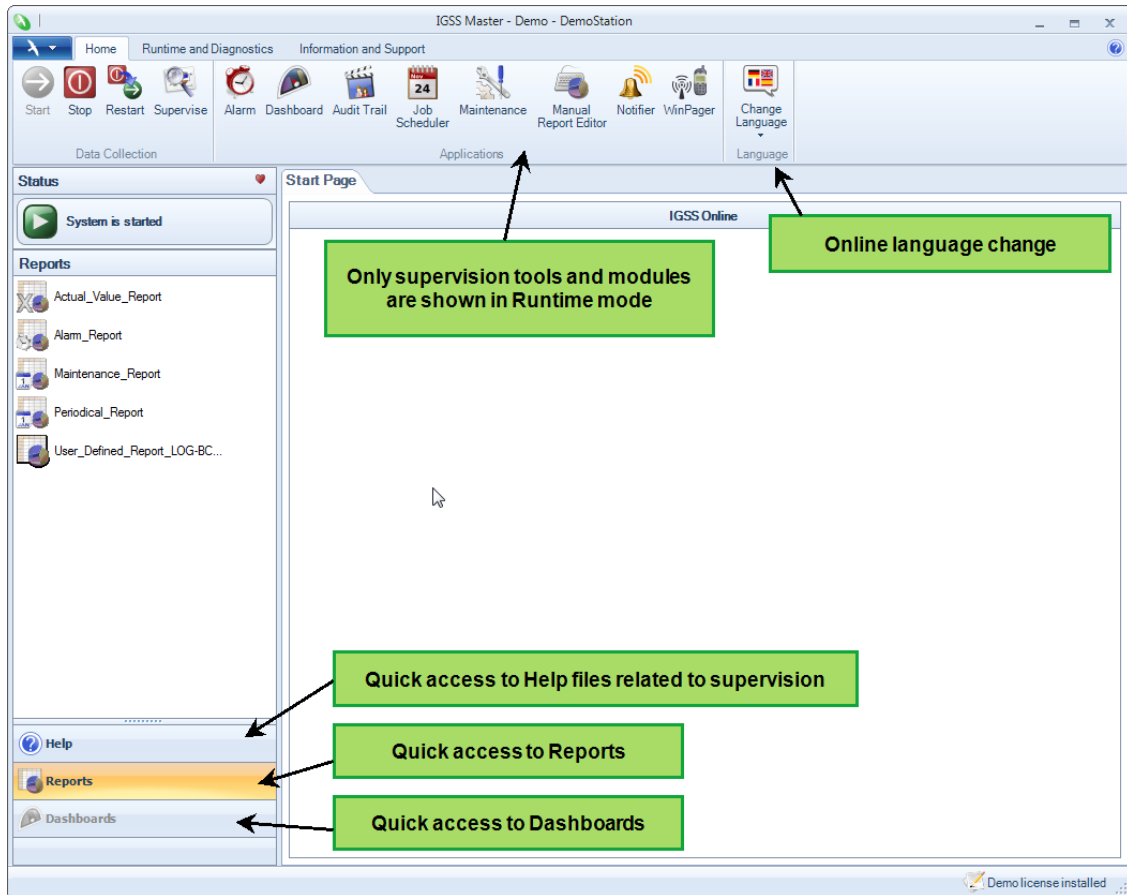
Remote support with TeamViewer

In some support cases, remote support is the most practical and effective way of solving an onsite problem. Using the industry standard Remote Access solution, TeamViewer, end users can now get instant help from the IGSS Support Team. The end user simply clicks a button, then provides IGSS Support with a user name and password. They connect and can now troubleshoot the problem. The end user must have a Support & Update Agreement to use this feature.

Operator station login

Login to the IGSS server from an operator station is also very easy and straight forward with the IGSS Master module.

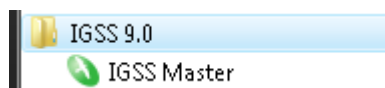
What's New in IGSS V9



The IGSS Master module makes it easy for the operators to access relevant supervision tools when working in Runtime mode

How do I get started with the IGSS Master module?

When IGSS is installed, the Windows Start Menu will now only show one module, the IGSS Master.



This program will launch the IGSS Master module. To get you familiar with the IGSS Master module, we have supplied you with an IGSS Master help file and an introduction video illustrating how easy it is to get started with IGSS through the IGSS Master module.

[Click here to see the IGSS Master introduction video](#)

The New IGSS Reports Module

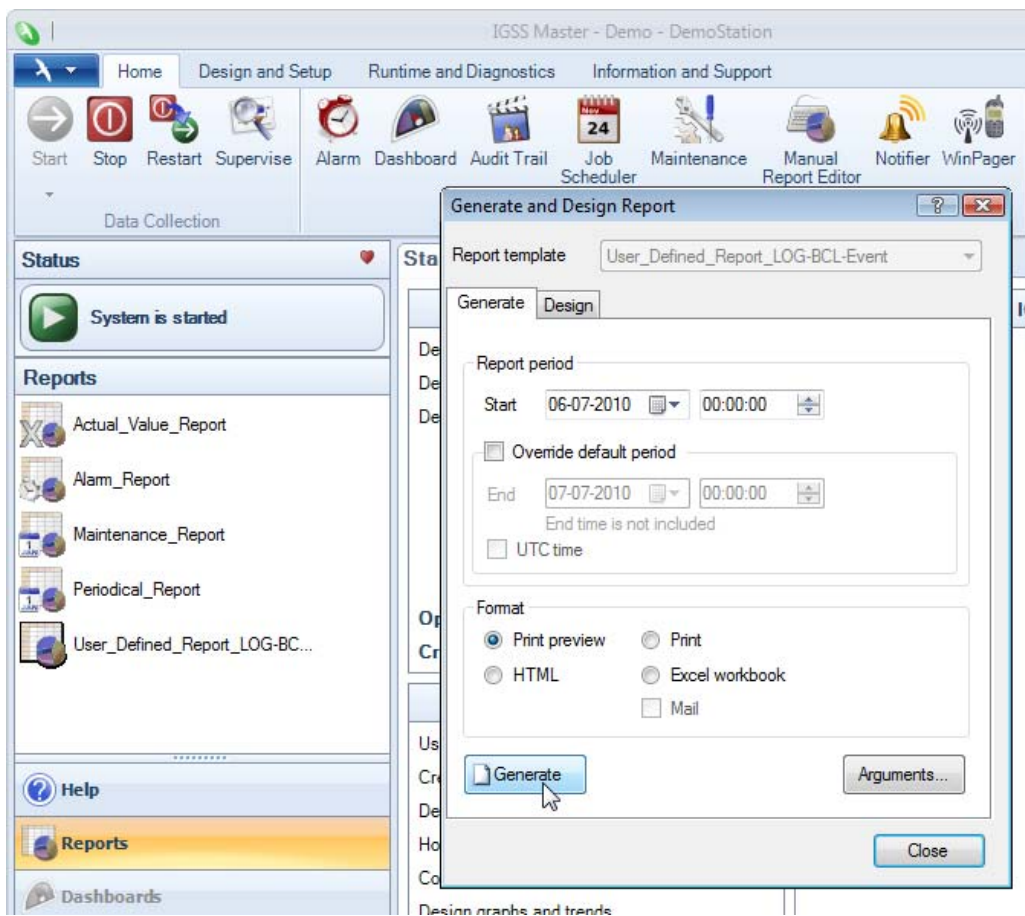
The IGSS Reports module is the new central report manager in the IGSS SCADA system. From this module you can create, modify and generate process reports in many different formats.

What happens to my existing standard reports and RMS reports?

In IGSS V9, the IGSS Reports module replaces the RMS module and the two standard report modules: Snapshot reports and Periodical reports. Previously defined standard reports are still available through the new reports module and existing RMS reports can be converted into IGSS V9 custom report formats.

Overview of the IGSS Reports module

The IGSS Reports module is seamlessly integrated in the new IGSS Master module and provides you with a quick and intuitive access to all of your defined reports. Setting up the user-defined reports has also been made easier with a new user interface layout.



1 - The IGSS Reports module integrated in the IGSS Master module

Here are given some examples of report formats that you can implement with the IGSS Reports module:

Typical report formats	Example of use
Actual value report	This report shows a snapshot of your process components. IGSS can be set up to automatically create this report when a certain

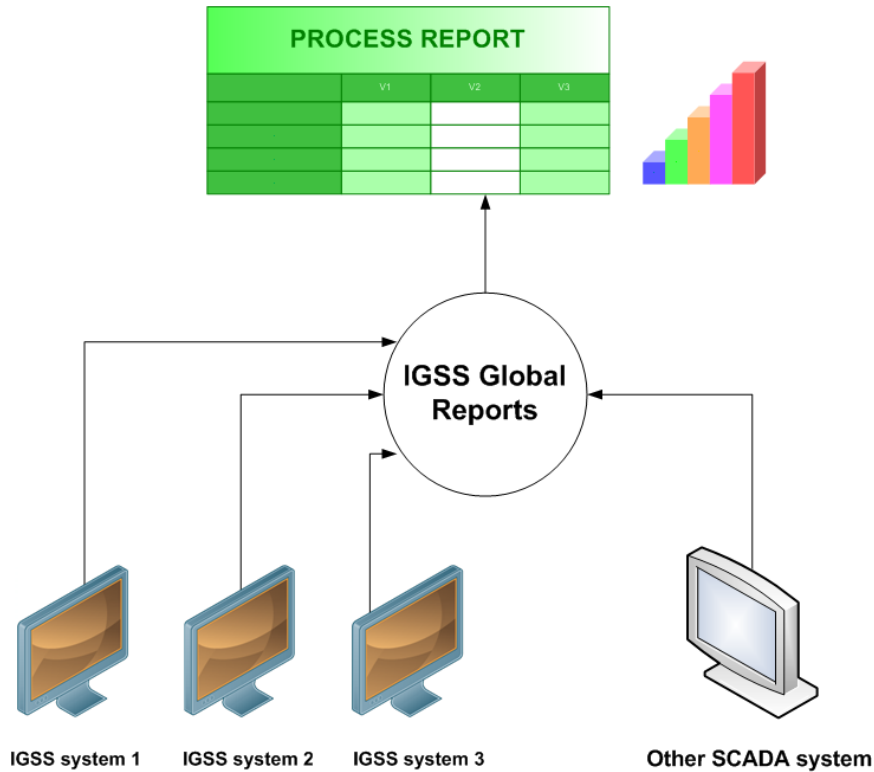
	situation or alarm occurs. This can be useful to perform a root failure analysis.
Periodical report	This can be a daily report automatically generated every morning at 7.00 AM
Alarm statistics report	This report gives you an overview and statistics of all alarms that have occurred, within a defined interval, for the objects selected in the report.
User-defined report – log report	The user-defined reports are integrated with Microsoft Excel 2007/2010 ¹ which allows for very flexible and creative report layouts. All IGSS data formats are available as report data, for example log data.
User-defined report – batch report	User-defined reports can be made to list data for a series of batch production processes. The reports can also be automatically generated when a defined event occurs.

Global reports

IGSS global reports is a new feature in IGSS V9 which allows you to create user-defined reports, based on process data from several different SCADA systems.

A global report is integrated in the IGSS Reports module and is set up as a user-defined report. When designing your global report, you can connect your data tags to many different IGSS servers. The data can then be collected and shown in a single report. Additionally you can collect report data from non-IGSS SCADA systems, through the standard OLEDB interface, and show the data in the same report. OLEDB data sources include SQL Servers and ODBC Servers.

¹ Microsoft Excel 2010, 64 bit is not supported.



1 - Global reports allows you to collect and present report data from several IGSS systems or even non-IGSS systems

To benefit from the global reports feature, you must purchase the global reports add-on license option.

Added functionality in IGSS V9

The release of the new IGSS Reports module comes with a list of new and improved features for the user-defined reports:

More data types available for reports

- User-defined reports can now also include online values, alarm data for individual objects and alarm data for each alarm number.

Activate VBA function when generating a report

- When a report has been generated, the IGSS Reports module can be configured to launch a VBA function. This allows you to change parameters and send commands in your running IGSS project.

Improved copy/paste functionality

- The copy/paste function in Excel has been improved so that you can copy multiple report data tags and quickly change data parameters.

Generate batch report for each occurring event

- Report sheets in your Excel file can be linked to a defined event. When generating the report, it will include an individual sheet for each time the event has occurred.

2- Creating user-defined IGSS reports from MS Excel

The IGSS Maintenance Module

All industrial plants require a high level of stability and productivity. One way this is to keep the process equipment in perfect condition through preventive maintenance.

The IGSS Maintenance module offers a set of tools that will, quickly and easily, help you to plan and execute a preventive maintenance schedule. The module will notify you whenever a piece of equipment is due for a maintenance inspection.

Monitoring equipment condition

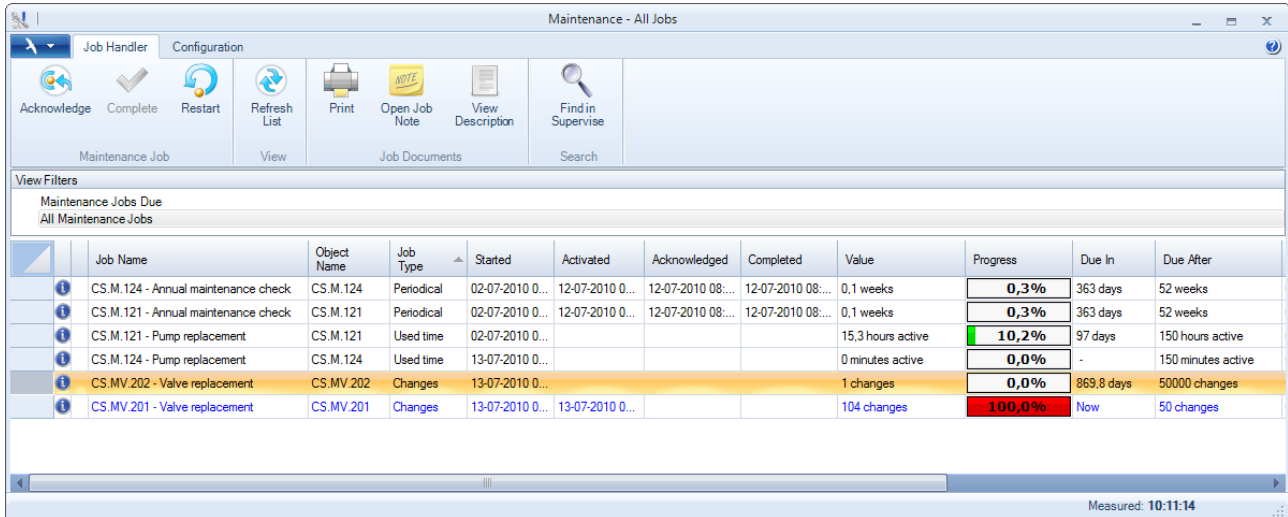
Each object (a pump, a valve etc.) in your IGSS project can be set up for maintenance supervision based on four process parameters:

- Total used time – for example how many hours a pump has been running.
- Operating cycles – for example the number of operating cycles for an electrical contactor.
- Periodical – inspection at a fixed time interval, for example, once every month.
- Counting limit – when an object value reaches a defined limit

The system designer can set up maintenance jobs in Design mode, but the operator can also create and modify jobs in Runtime mode.

What's New in IGSS V9

The IGSS Maintenance module gives you a real-time overview of the maintenance status of your process components and estimates the next scheduled inspections. This allows you to plan your maintenance ahead so you can perform inspections and replacements when the production is at a minimum for example during vacations. The IGSS Maintenance module can also be set up to raise an alarm when a piece of equipment is due for maintenance.



The screenshot shows the 'Maintenance - All Jobs' window. It features a toolbar with icons for Acknowledge, Complete, Restart, Refresh List, Print, Open Job Note, View Description, and Find in Supervise. Below the toolbar is a 'View Filters' section with 'Maintenance Jobs Due' and 'All Maintenance Jobs' options. The main area contains a table with the following data:

	Job Name	Object Name	Job Type	Started	Activated	Acknowledged	Completed	Value	Progress	Due In	Due After
i	CS.M.124 - Annual maintenance check	CS.M.124	Periodical	02-07-2010 0...	12-07-2010 0...	12-07-2010 08:...	12-07-2010 08:...	0.1 weeks	0,3%	363 days	52 weeks
i	CS.M.121 - Annual maintenance check	CS.M.121	Periodical	02-07-2010 0...	12-07-2010 0...	12-07-2010 08:...	12-07-2010 08:...	0.1 weeks	0,3%	363 days	52 weeks
i	CS.M.121 - Pump replacement	CS.M.121	Used time	02-07-2010 0...				15,3 hours active	10,2%	97 days	150 hours active
i	CS.M.124 - Pump replacement	CS.M.124	Used time	13-07-2010 0...				0 minutes active	0,0%	-	150 minutes active
i	CS.MV.202 - Valve replacement	CS.MV.202	Changes	13-07-2010 0...				1 changes	0,0%	869.8 days	50000 changes
i	CS.MV.201 - Valve replacement	CS.MV.201	Changes	13-07-2010 0...	13-07-2010 0...			104 changes	100,0%	Now	50 changes

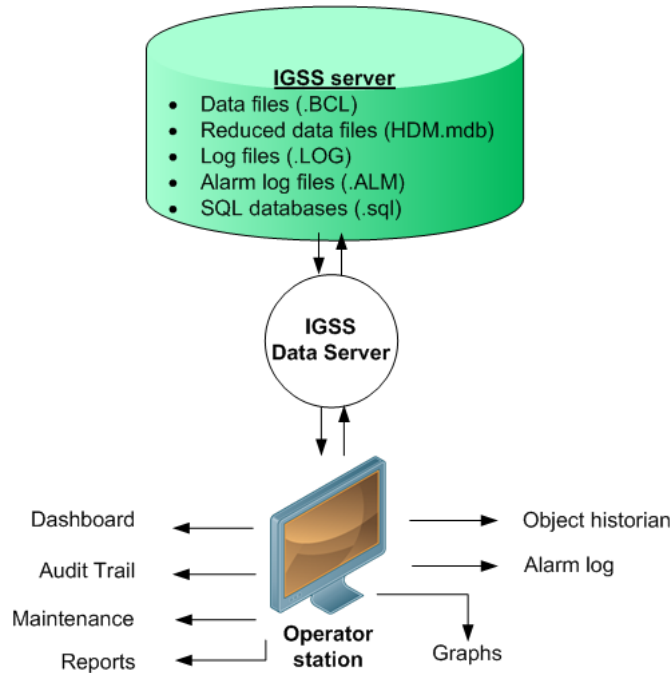
The IGSS Maintenance module is fast and easy to set up and is included in the standard IGSS license so it adds no extra cost.

The IGSS Data Server

The IGSS Data Server is an efficient server for transmission of data between the IGSS server and the operator stations.

When the operator station needs to access stored online or historical data, it will send a query to the IGSS Data Server. The server extracts the necessary data from the data files in the project's report folder and returns the data set to the operator station. The handling of these queries is extremely fast, even on large data sets. On systems running with a limited network bandwidth, the IGSS Data Server will perform much faster than in previous versions of IGSS.

The only requirement for communication between the IGSS Data Server and the clients is an IP connection and opening a specific TCP/IP port.



2 - Communication overview of the IGSS Data Server

The IGSS Data Server will read data from the LOG, BCL and ALM files stored in the report folder. But the requirement of giving all users write access to this folder no longer applies.

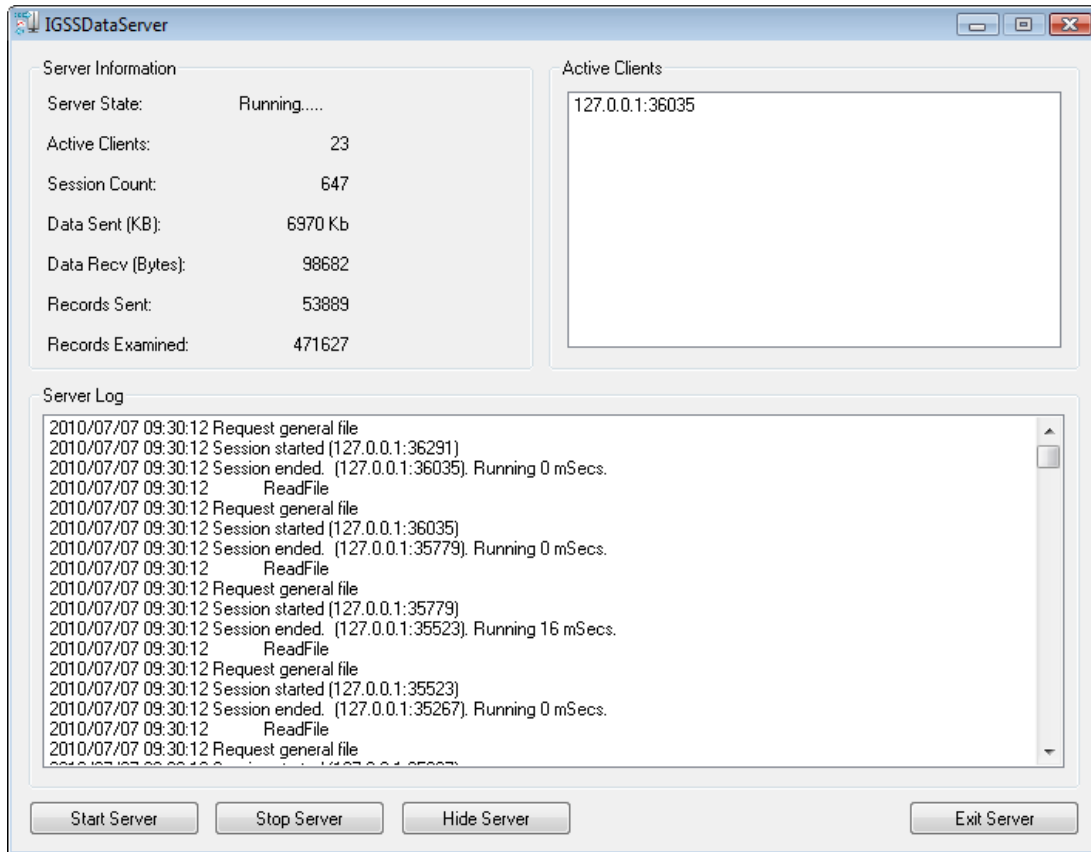
Data file queries handled by the IGSS Data Server

Below is a list of all the processes that the IGSS Data Server handles:

- Dashboard – All data files to the IGSS Dashboard module (BCL, LOG, ALM and HDM)
- Graphs – Standard graphs (LOG and BCL) and user-defined graphs (BCL, LOG, ALM and HDM)
- Alarm log – Historical alarm logs (ALM)
- Object Historian – Historical data for individual process components (BCL, LOG and ALM)
- All reports – standard and user-defined

Monitoring the IGSS Data Server

The IGSS Data Server is automatically launched when the IGSS project is started. From the IGSS Master module you can open the IGSS Data Server window. Here you can monitor the communication between the IGSS server and the operator stations.



3 - Monitoring the IGSS Data Server communication

Improved Audit Trail

The IGSS Audit Trail module was introduced in IGSS V8 and has been well accepted by our users. In IGSS V9 we have further improved some of its features, as described below:

Export to CSV

You can now export your Audit Trail data to a CSV file.

Access control

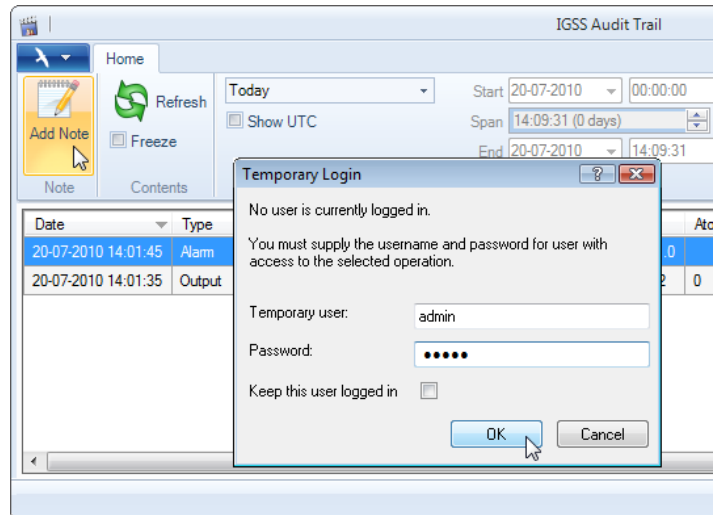
You can also enable access control to avoid unauthorized use of the module

Clear all filters

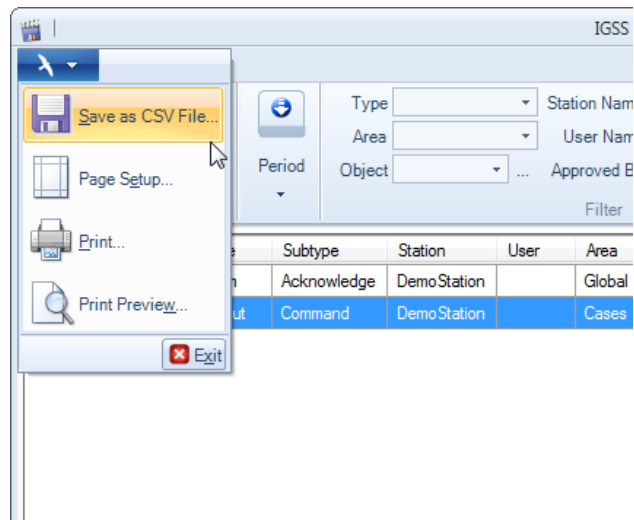
With a single click, you can clear any filter settings and show all recorded system and user actions.

Detailed notes for changes

When IGSS records an audit trail, the note shown in the Audit Trail database will now both list the previous value and the changed value.



Access control is now available for the Audit Trail module



You can export your Audit Trail data to a CSV file

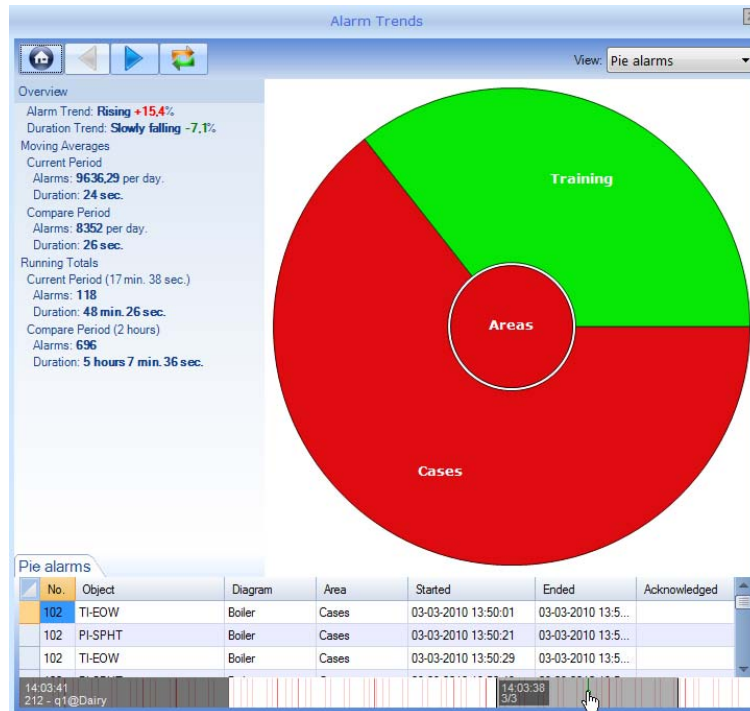
Improved Dashboards

The IGSS Dashboard module was introduced in IGSS V8. The module offered a wide range of flexible supervision tools which could be customized, on-the-fly, by the system operators. To make it even more attractive to use IGSS dashboards, we have further improved the features.

Alarm Trend widget

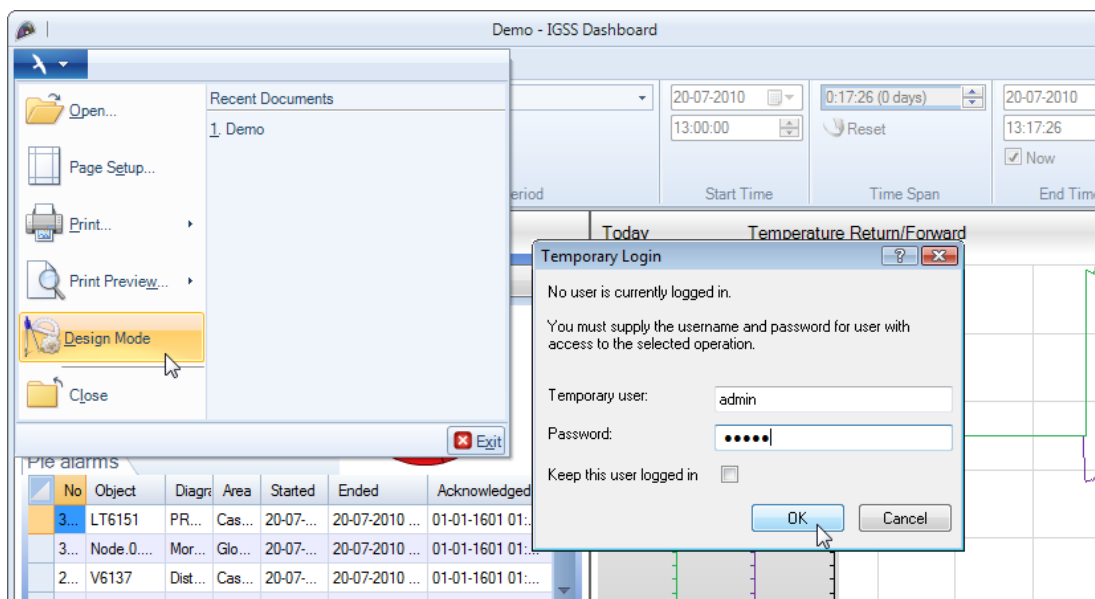
The Alarm Trend widget allows you to get a quick graphical overview of the alarm trends in an IGSS project. Here you can see if the system has a tendency to produce more alarms or longer alarm durations. You will also see an alarm time line which will give you a historical overview of the alarms in the system. Finally, you will see an alarm list showing the specific details for each alarm.

What's New in IGSS V9



Access control

To avoid incorrect use and modifications of dashboards, you can now set up user administration for the Dashboard module. When starting the Dashboard module, you will be in Runtime mode where you can monitor the dashboards. To modify the widgets, you must switch to Design mode. If user administration is enabled, you will be asked to sign in with username and password.



User administration on IGSS dashboards

Other improvements in the IGSS Dashboard module

- Scroll bars – If your dashboard project cannot fit on your computer screen, you will now be able to use scroll bars to navigate the full dashboard.
- DELETE key will now remove the selected widget
- Alarm status on Snapshot widget – The Snapshot widget can now show if an object is in alarm.

Object Templates in Event Criteria

When defining user defined events, you can now use object templates as criteria. For example you can check if any object, based on the FLOW template, has a value higher than 50.

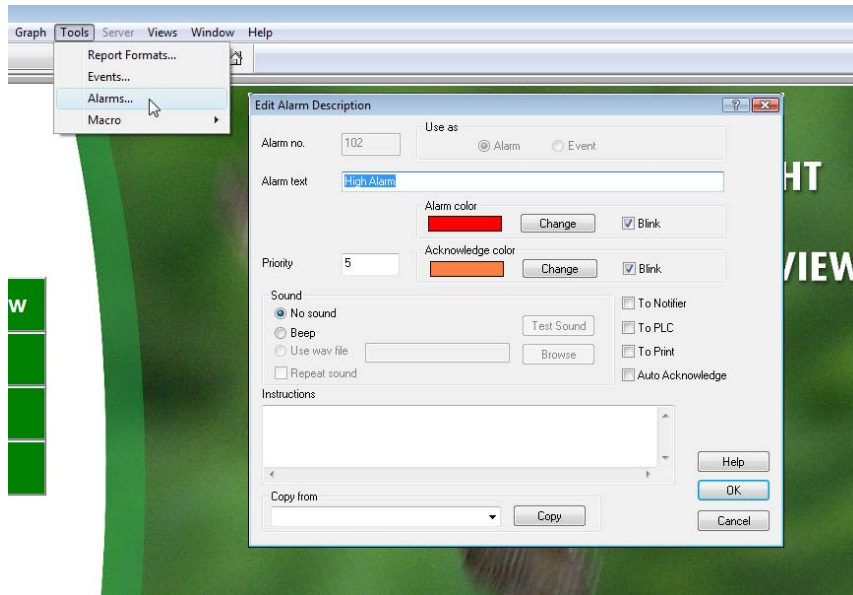
The 'Edit Event' dialog box contains the following fields and sections:

- Event Name:** High Flow
- Display color:** Red
- Alarm on event:**
- To history:**
- Type:** User defined
- Period:** 1 Hours
- First event at:** 20-07-2010 15:15:50
- Criteria:**
 - Buttons: Add Criteria, Delete Criteria, Object Browser
 - Text: You can edit fields and copy/paste lines directly in the list. Object names can be typed or dragged from the object browser.
 - Table:
- Negate result of all criteria:**
- Event is disabled (no events will be generated while in this state):**
- Copy Event From:**
- Properties:**
- Criteria:**
- Buttons:** Copy, OK, Cancel

Type	Object/Template	Atom	Relation	Object/value	Atom
NA	FLOW	Actual Value	> (atom)	CS.R01@Cases	Actual Value
AND	FLOW	Actual Value	> (atom)	50	

Online Change of Alarm Properties

In IGSS V9, it is now possible to change alarm texts and parameters directly in Supervise while the SCADA system is running.



Performance and robustness

Each IGSS project has a number of core files, one of them being the project's database. When the system is running and you are making changes in Design mode, you are now working on a copy of the database. This is to protect the original running database. When you are ready to deploy the changes, the copy becomes the master.

The Check and Install program (CHELM) compiles an IGSS project much faster than before. This makes it much faster to compile and debug changes in large IGSS projects.

User Defined Entries for Command Menu on Diagrams and Areas

If you create a visual (descriptor) in IGSS and link this to a diagram or area, you can now add user defined commands to the visual's menu. The commands will be shown when right-clicking the reference. If you have an overview diagram showing multiple pump stations, you can provide a link on each pump station. The link could go to a map showing where the physical pump station is located.

