BBC Technology

Colledia™

Control

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Documentation for
Alarm and Monitoring Product Overview

Software release ??

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Alarm and Monitoring Product

Overview

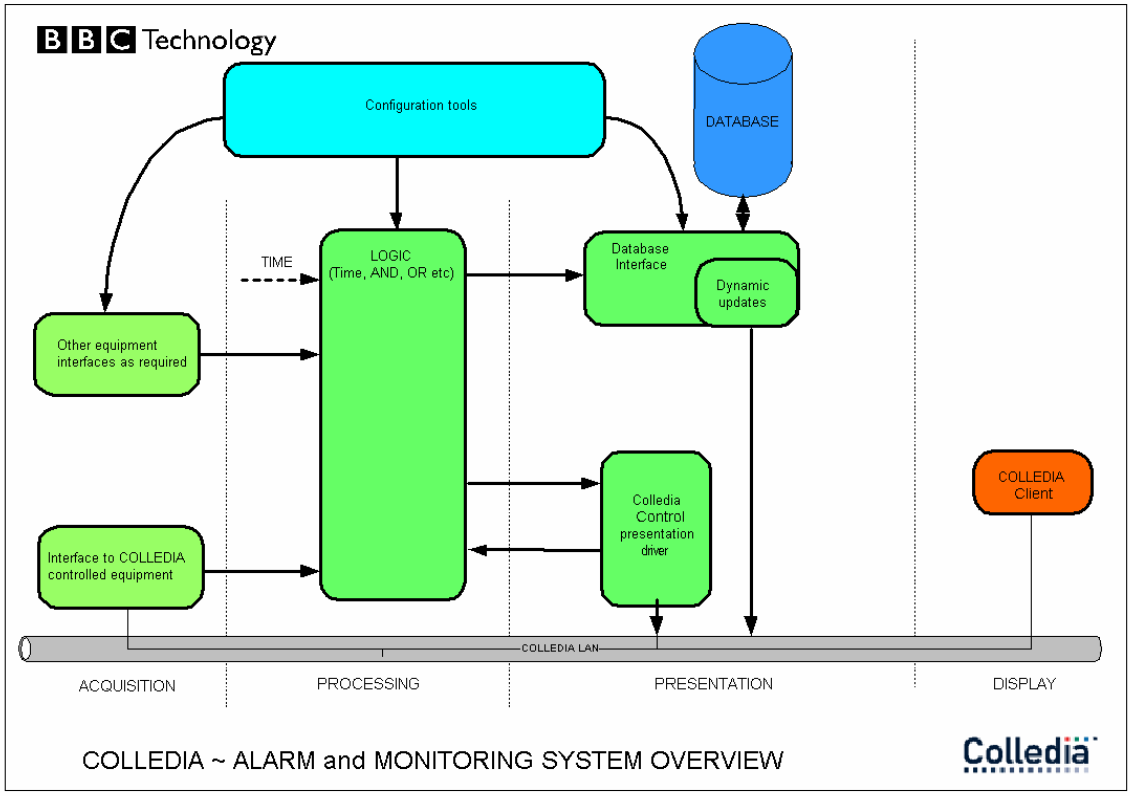
Background

Historically, for each Colledia Control system delivery a bespoke alarm solution was written. The nature of alarms systems is that they change and expand as the system evolves and as equipment is added or replaced. The solution is a modular, scalable and configurable alarm system.

This document is an overview of the Colledia Control Alarm Product. It is a scalable and modular system for monitoring diverse types of equipment. The system gathers data from devices, pre-conditions it, processes it, and presents it to the output modules, enabling current status and historical log information to be viewed. It is configured using configuration components contained in the Colledia Control V4.5 configuration client set. It enables the Colledia Control developer to cope with a project's expanding and changing Alarms requirements.

Description

The Alarm Product runs as an executable on the Colledia Control network. Multiple independent configured alarms systems can coexist in the same Colledia Control System. There may be one or more input and output modules configured with any individual alarm system.



The Colledia Control Alarm system has a number of modules that allow us to

- acquire data from equipment
- precondition the data
- Process the data
- Log events to a database
- Display results

The diagram above shows an overview of the system components, these are briefly explained below.

Acquisition / Inputs and Preconditioning

We can gather data from devices that have Colledia control drivers e.g. GPI Crates, Satellite receivers, Glue components. It is also possible to gather information from devices that are not being controlled.
The incoming data is normalised to three standard states: OK, Alarm, or Unknown. Other processing e.g. timed hold-off can be applied at this point.

Processing

The data is processed using:

- Logical functions (e.g. AND, OR, TRUTH)
- Time of day/week functions
- Timed holdoffs

The processed data is sent to the output/presentation modules and any overrides from these modules are processed.

Output/Presentation

The processes are made available to the Colledia Control network. At present this is achieved by using a Colledia Control driver Infodriver). The processes can also be logged in an SQL database.

Colledia Control Client

This is a normal Colledia Control client and is not part of the alarms system itself. It could be an alarm panel, or a mixture of a control, navigation and alarms functionality. If alarms are presented to the client it is possible for the operator to override the state. For example, the operator could acknowledge an alarm in the FAIL state or Force On an intermittent alarm while the fault is being dealt with by an engineer.

Implementation Description

The installation and configuration of the Colledia Control Alarms System requires an installation of the V4.5 Colledia Control System. The Alarms System maybe included in the shipped version of the Colledia Control System.
The Alarms System software consists of the host application, AlarmControl.exe and the required input (acquisition) and output (presentation) modules, which are dynamic link libraries loaded by the host

application. Without any configuration the software does nothing useful. The key to using this software is setting up a configuration that fits your system and testing it with your system. There may be one or more alarm systems on a Colledia Control System and more than one alarm system may run on the same machine.

A typical system will have one or more input modules and one or more output modules configured. At present the input module available is the Colledia Control Acquisition Module, which gathers information from devices on the Colledia Control network. There are two output modules available the Colledia Control Output, which presents the outputs to the Colledia Control network. The other is the Database Interface Output which writes the to an SQL database, it writes the current state of processes to one table and appends another table to form a historical log. It can also supply change information to a Colledia Control network and allow Colledia Control Clients to add information to the historical log. The database interface expects to have access to an SQL database containing the two tables: historical_log and process_data.

Applicable Documents

Link to other documents in the tree.	

Configuration procedure

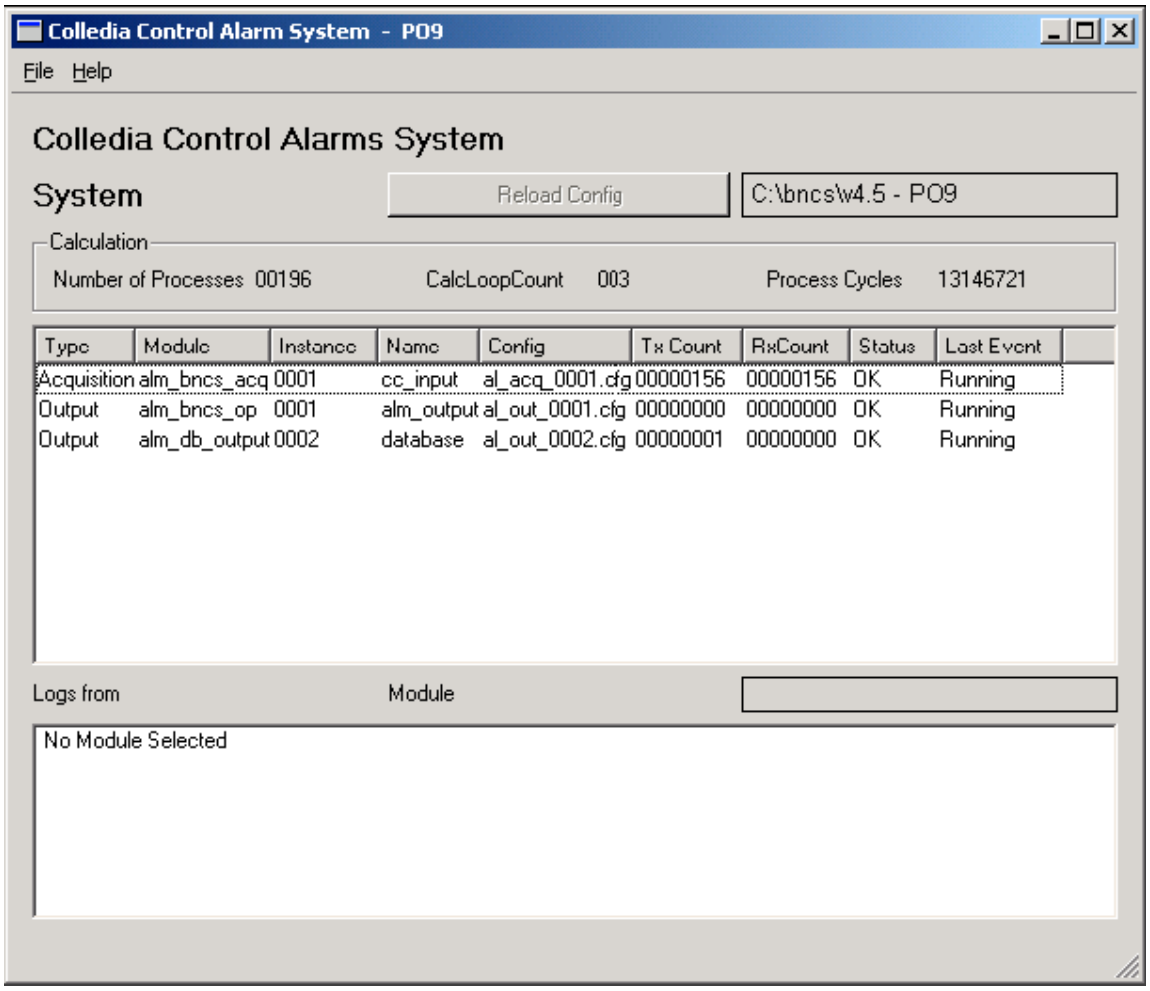
Each module must be configured for the system to do anything useful. It is assumed that you can run the Colledia Control Configuration Client and have access to a configuration server on your network. The configuration client allows you to add new alarms systems and configure the inputs, processes and the outputs. See configuration documentation for details.

Starting up

This is typically done from the Colledia Control Workstation Manager. To do this you must include the required elements in the Launch configuration. For the Colledia Control Acquisition Module to work CSI.exe must be running in client mode. For the Colledia Control Output to work CSI.exe must be running in driver mode and the appropriate infodriver (i.e. the one set in the output configuration) must be running prior to AlarmControl.exe. The application AlarmControl.exe is run with the command line “/AlarmSystem=name”, where “name” is the alarm system name. AlarmControl.exe will load the process configuration and the appropriate input and output modules on start-up.

Diagnostics

The system shown below has one Colledia Control Acquisition module, one Colledia Control Output module and one Database Output module. The path is " C:\Bncsl\v4.5" and the alarm system name is PO9.



The system is displayed at the top of the screen. A more detailed description is written in the document describing the main application.

Dependencies

AlarmControl.exe requires Calarm_process.dll do any calculation. It addition it requires the QT dll, currently qtmt323.dll.

Version History

Current Version of the document is 3.00.0

Version	Change	Date
1.00.00	Original Release	13 November 2003
1.00.00	Demo System	13 January 2004
2.00	Include config section for Processing	31 March 2004
3	Reworking	16 November 2005

Software Version History

Current Version is 1.00.10

Version	Change	Date
1.00.00	Original Release	13 November 2003
1.00.00	Demo system	13 January 2004
2.00.00	System now one application with plugin dlls	31 March 2004

Datasheet

Name

Function

give short functional description of what the application does. List principal exclusions in functionality

BNCS Version Compatibility

list here BNCS versions that work with this driver

BNCS V4 ☐ **32 bit WM_COPYDATA** ☐ **32 bit DLL** ☐

OS Checklist **W98** ☐ **NT4** ☐ **2000** ☐ **XP** ☐

Dependencies

Calarm_process.dll
qtmt312.dll

Other Required DLLs

Other CC components

list here dependencies and DLL requirements

Document Information

Document Release Date

Document Certified by

Location of protocol documents

Location of equipment documentation

Location of this document

Locators

Source Code

Release

Current