FOXBORO®

I/A Series® Software
Report Writer

	Sample Daily Report – daily			Page 1

From Thu Dec 5 00:00:00 1991 To Thu Dec 5 23:59:59 1991
Dec 6 1991 11:27:43

TIME	HT1:CALC1.RI01 avg	HT1:CALC1.RI02 max	HT1:CALC1.RI03 min	HT1:CALC1.RI04 sum
0:00	16.47	42.58	51.61	4597.69
1:00	16.52	41.79	47.90	4586.61
2:00	16.68	42.17	49.99	4608.38
3:00	16.52	40.84	50.97	4597.04
4:00	16.26	42.07	51.85	4582.49
5:00	16.44	42.09	51.06	4581.38
6:00	16.25	42.32	50.83	4611.38
7:00	16.15	42.56	50.91	4569.75
8:00	16.44	43.48	50.92	4609.42
9:00	17.09	41.82	51.02	4586.43
10:00	16.44	42.98	47.59	4585.81
11:00	16.52	44.94	51.42	4577.25
12:00	16.46	41.28	51.52	4592.08
13:00	16.47	42.85	51.13	4578.99
14:00	16.06	42.70	52.37	4576.28
15:00	16.49	41.63	50.50	4548.07
16:00	16.59	43.35	50.08	4557.87
17:00	16.70	43.76	51.71	4583.42
18:00	16.28	45.10	50.50	4609.58
19:00	16.62	41.32	51.86	4591.19
20:00	16.50	44.02	50.55	4618.59
21:00	16.21	42.78	49.94	4586.18
22:00	16.17	41.51	52.00	4590.60
23:00	16.79	40.30	51.26	4596.76
DAILY AVERAGE	16.46	42.51	50.81	4588.47
DAILY MAXIMUM	17.09	45.10	52.37	4618.59
DAILY MINIMUM	16.06	40.30	47.59	4548.07
DAILY TOTAL	395.12	1020.24	1219.48	110123.20

The I/A Series Report Writer is an application software package that provides configuration, scheduling, execution, and archiving of reports via workstation displays.

The Report Writer is a general purpose report definition and execution facility for the Foxboro I/A Series environment. The graphic interface of the Report Writer makes it an easy to use tool for specifying the format and content of a printed report.

The Report Writer has two graphic interface programs that you access from a pull-down menu:

- Report Configurator
- Report Scheduler

The Report Configurator provides a graphic interface for specifying the format and content of the report.

The Report Scheduler provides a graphic interface for generating reports at regular intervals or on demand. It also provides the graphic interface for archiving, restoring, printing, and deleting (after archiving) reports.

You can place text information anywhere in the report, that is, the report is free-formatting.

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You can configure a report to obtain data from the Object Manager, Historian reduction groups, and INFORMIX database tables, including those tables generated by relational database applications developed by the user.

REPORT TYPES AND CALCULATIONS

Central to the entire Report Writer is the idea of a report type. The report type is simply a specification of the time period a report covers. The valid report types are:

- Monthly
- Weekly
- Daily
- Shift
- Hourly

For each report type, you can obtain a list of values. You can also obtain the average, maximum, minimum, and total of the list of values, and include them as part of the report.

The Report Writer can do addition, subtraction, multiplication, and division. Moreover, you can use parentheses to impose calculation precedence. For example you can multiply two variables and include their product as part of the report.

The Report Writer provides scaling for the end result of each element on the list. It also provides a labelling option for discrete values. You can enter symbolic labels, e.g., OFF and ON, where OFF is printed for values less than 1.0 and ON is printed for values equal to or greater than 1.0.

DATA SOURCES

The Report Writer uses the following data sources:

- Historian reduction group data from any or all Historians on the network.

- Instantaneous process point values (real, integer, or Boolean) from the Object Manager.

- Single INFORMIX database tables.

- Joined INFORMIX database tables.

The single and joined INFORMIX database tables contain point id (Compound:Block.Parameter), time, and data values. The INFORMIX databases must reside in the same Application Processor (AP) as the Report Writer.

REPORT CONFIGURATION

From an I/A Series environment, you can access the Report Configurator (RptCfg) from the Configurators (Config) pull-down menu. You use the Report Configurator base display and two windows to layout and configure your reports. These windows are the Report Configuration and Data Definition windows.

Figure 1 shows a sample Report Configurator base display and the top menu bar functions. This display allows you to define formatted templates for the reporting of data. You have access to numerous functions using the top menu bar options.

You use the mouse or trackball, and the keyboard to specify the location and content of text (literal) information and data areas (fields).

REPORT SCHEDULING AND OPERATIONS

The Report Scheduler provides a graphic interface to the UNIX scheduling facility and archiving and printing functions. The Scheduler display allows the user to:

- Schedule reports to execute at regular intervals.

- Execute a report on demand.

- Archive reports to floppy disk.

- Restore archived reports from floppy disk to hard disk.

- Print reports on any printer in the network.

- Delete reports from hard disk after archiving them.

From an I/A Series environment, you can access the Report Scheduler (RptSched) from the Configurators (Config) pull-down menu. You can also use the Password Environment Configurator (PassWd_EnvCfg) to establish the environments from which the Report Scheduler (RptSched) is available.

Figure 2 shows the Scheduler display with typical entries and scheduled reports. This display allows the user to invoke the Report Writer runtime routines at regularly scheduled intervals. It makes the UNIX scheduling file maintenance transparent to the user.

The top menu bar functions on the Scheduler display allow you to:

- Get Help.

- List configured reports and select one for scheduling or on-demand execution.

- Archive, restore, print, and delete reports.

- Exit to the Report Configurator.

- Exit to the previous I/A Series application.

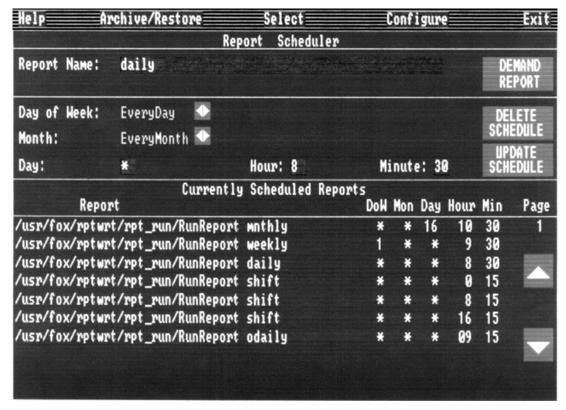Figure 1. Report Configurator Base Display (Typical)

Figure 2. Report Scheduler Display (Typical)

COMPONENTS

The Report Writer consists of the following programs.
- Report Configurator
- Report Execution
- Report Scheduler

The Report Configurator is a graphic application for specifying the format and content of the report. The Configurator runs on an AP, Application Workstation (AW), or Personal Workstation (PW).

The Report Execution program is a non-interactive UNIX program which receives a report configuration file as input and produces an instance of a report relative to the time at which it was run. The Report Execution program runs on an AP, AW, or PW.

The Report Scheduler is a graphic interface for scheduling the Report Writer runtime routines to execute at regular intervals or for executing a report on demand. The Scheduler runs on an AP, AW, or PW.

SYSTEM CONFIGURATION

The Report Writer software runs on an AP (AW) in conjunction with a Workstation Processor (WP), or it runs on a PW. A Report Writer residing on an AP (AW) can service all WP's hosted by the AP (AW).

Configuration and Scheduling are performed locally within the AP/AW/WP cluster.

The Report Writer can obtain reduction group data from one or more Historians, both local and remote. It can obtain INFORMIX table data from one or more INFORMIX databases residing in the same AP (AW) as the Report Writer. It can also obtain Object Manager point values from anywhere on the network.

You can print reports on any printer on the I/A Series network.

FUNCTIONAL SPECIFICATIONS

Report Types
Monthly, Weekly, Daily, Shift, Hourly.

Report Calculations
- For each report type, calculation of the average, maximum, minimum, and total of a list of values.
- Scaling for the end result of each element on a report list.
- Addition, subtraction, multiplication, and division of specified fields, with parentheses for calculation precedence.

Data Sources
- Historian reduction group data from any Historian on the network.
- Object Manager point values (real, integer, or Boolean).
- Single or joined INFORMIX Table data from AP as the Report Writer.

Report Storage
Executed reports are automatically stored in ASCII files.

Printing Reports
Print executed report files on any printer in the network.

Report Size
- Maximum report width depends on the number of line per page.
- For 65 lines per page, maximum page width is 210 characters.
- For 55 lines per page, maximum page width is 256 characters.
- Up to 99 pages per report.

Archive, Restore, and Delete Options
- Archive reports to floppy disk.
- Restore archived reports form floppy disk to hard disk.
- Delete reports from hard disk, after archiving them.

Discrete Value Labelling
- Printing of user-entered label for values less than 1.0 (e.g., OFF).
- Printing of user-entered label for values equal to or greater than 1.0 (e.g., ON)

On-Line Help
- Report Configurator
- Report Scheduler

Installation
One Report Writer per AP, AW, or PW.