

**Hach WIMS Indirect Server-Side Interface to Hach SC1000 via
Modbus TCP**

Q12677 Documentation



Be Right™

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1 - Documentation : Introduction

1.1 Interface Introduction

The **Hach WIMS Server-Side Interface to HACH SC1000 via Modbus TCP** imports data from the Hach SC1000 over TCP into Hach WIMS.

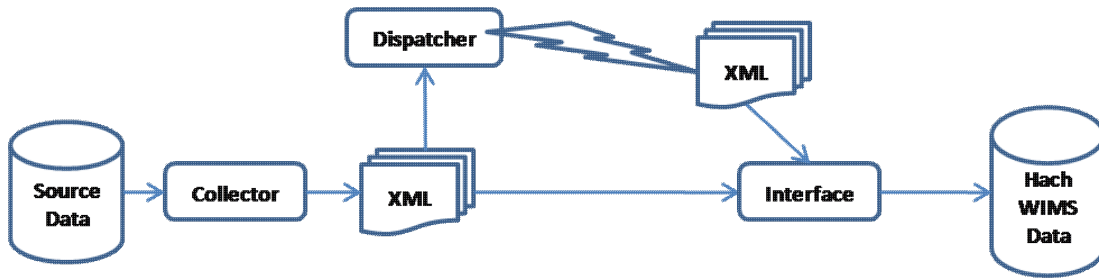
The Interface uses a Collector (Q12678) that continuously monitors the SC1000 and generates OPSDATAXML files that will be read by the Interface. The Collector (See Section) generates one of these files every minute and contains 1 data point for each Item that is being monitored by the collector.

[Reference ID: 12764]

1.2 Overview of Indirect Interface Concepts

The main components that collaborate on getting **source data** from SCADA or LIMS systems into the **Hach WIMS database** are the: **Collector**, **Dispatcher**, and **Interface**.

The reason there are these components is to provide flexibility, to be more robust, and to overcome disconnected system conditions.



1. Source Data

The source data is typically a database of SCADA or LIMS type data stored by some automated or manual system

2. Collector

The Collector is responsible for polling source data periodically and creating XML files in a specific format (i.e., OPSDATAXML file format)

3. Dispatcher(See Section)

The Dispatcher is optional and is used for dispatching XML data files from source computer systems to the Hach WIMS computer when these two are not the same network. The Dispatcher transfers XML data files to the Hach WIMS computer system via File Transfer Protocol (FTP). If the source data is on the same computer as the Hach WIMS database, then this component is not needed.

4. Interface(See Section)

The Interface reads in XML files created by the Collector, summarizes the data based on variable setup in **Hach WIMS Client**, and imports the data to the **Hach WIMS database**. The Interface must be able to connect to the **Hach WIMS database**.

5. Hach WIMS Database

End point for data storage. The Database needs to know how the interface is defined, allows you to uniquely name the interface, and provides place holders, called "variables", that hold the data imported from the interface.

6. Hach WIMS Client

The Hach WIMS Client is the part of the system that allows you to read data and generate reports. Hach WIMS Client reads data from Hach WIMS Database.

[Reference ID: 12559]

1.3 Source versions tested

MUST IMPLEMENT

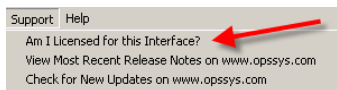
[Reference ID: 12765]

2 - Documentation : How To

2.1 _ Step-by-Step Instructions on How to Configure Interface

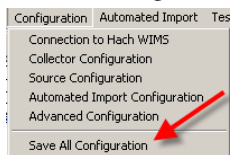
You will need to follow these steps in order to configure your interface :

1. You must have **Hach WIMS Database Management System** installed and running. This can be running from anywhere on your network, but can also be running on the same computer as your interface.
2. You must have **Hach WIMS Client** installed. Make sure you can log into Hach WIMS Database Server using Hach WIMS Client.
3. Run your interface in Interactive mode by clicking on its entry in your windows Start Menu.
4. Configure a connection to your Hach WIMS Server. Use **Configuration - Connection to Hach WIMS**(See Section 3.8) to do this.
5. Make sure you are properly licensed to run this interface. In Main Menu, select **Support -> Am I licensed for this Interface.**



If you pass this test, continue to step 6. If not, contact Hach Company Sales at 800-677-0067.

6. Upload interface definition file to Hach WIMS Server. Use **Utilities - Upload definition file to Hach WIMS**(See Section 3.15) to do this.
7. You will need to assign a collector record to your interface. First the record must be created. You will need to configure **Hach WIMS Client for a server side interface**(See Section 2.4) .
8. Now you are ready to assign the collector record created in *the previous step* to your interface. Use **Configuration - Collector Configuration**(See Section 3.7) to do this.
9. The Configuration - Collector Configuration will provide an opportunity to configure the Collector component. Click on **Collector Configuration Settings** button and follow the instructions in Collector - Common Collector Configuration(See Section 5.3) .
10. You need to link at least one Hach WIMS variable to the chosen collector record.
11. Configure the source so that interface can read from the source system.
Locate the '**Configuration -> Source Configuration**' article in the '**Topics specific for operation of Interface**' chapter to gain instructions on how to do it.
12. Save all configuration Settings by clicking on **Configuration -> Save All Configuration.**



13. You are now ready to test the interface. Use **Test - Test Import All**(See Section 3.14) to do this

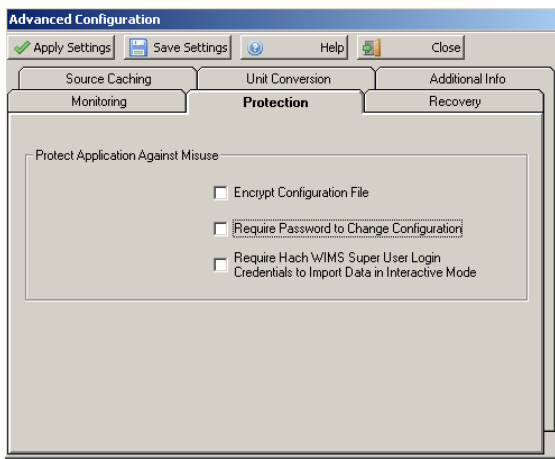
Furthermore, You may want to configure **Automated Import.** Use **Configuration - Automated Import Configuration**(See Section 3.6) to do this.

[Reference ID: 12563]

2.2 Change Configuration Protection Password

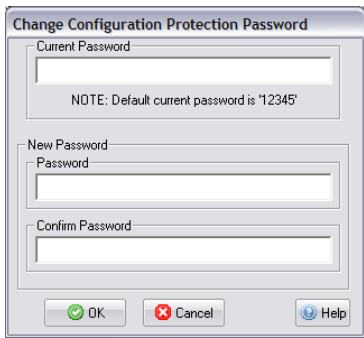
Requiring a password for configuration changes will prevent unauthorized or accidental tampering with your configuration from within the interactive mode.

From the interface, select **Configuration** and **Advanced Configuration**. Click on the **Protection** tab.



Click on the box next to **Require Password to Change Configuration** and **Save Settings** button.

Use this screen to set a new configuration protection password.



NOTE: The default password is '12345'. If you configure the interface to use a password and later remove the password check, it will reset to '12345' again.

[Reference ID: 12055]

2.3 Configuration is Password Protected

The configuration is password protected if you changed it in **Change Configuration Protection Password**(See Section 2.2) . You must enter the correct password in order to save any changes to the configuration of this interface.



See Advanced Configuration(See Section) if you want to disable the password protection.

NOTE:

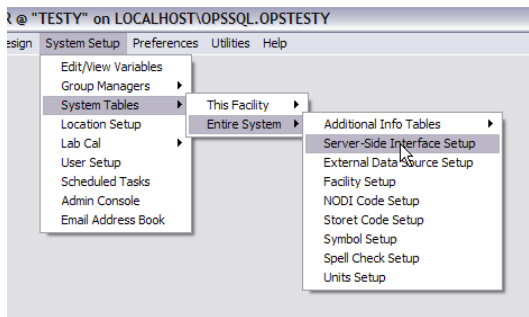
If your configuration is protected with a password, you must know the password before you can disable the password check.

[Reference ID: 12056]

2.4 Configure the Hach WIMS Client for a Server-Side Interface (SCADA2OPSSQL)

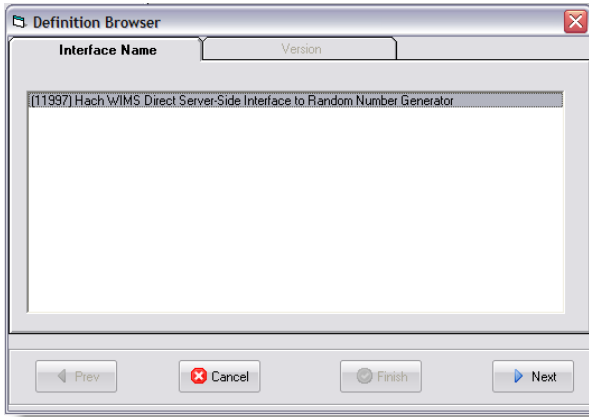
In order to use a **Hach WIMS Server-Side Interface**, you must do the following:

1. Start your **Hach WIMS Client** and navigate to the **System Setup -> System Tables -> Entire System -> Server-Side Interface Setup** menu selection:



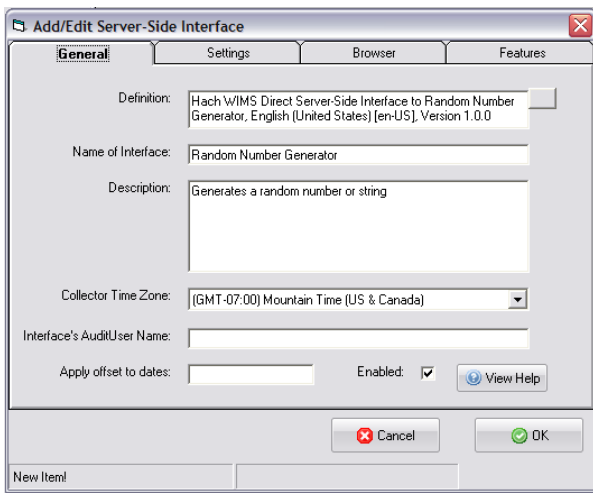
2. If the "Server-Side Interface Setup" screen shows no interfaces, or the one you want to configure is not shown, you have to:
 - ◆ Is the interface definition file uploaded? Click the **New** button to determine if the definition file is uploaded, and see if it appears in the list of interfaces. If it is there, continue to step 3.

- ◆ If the definition file is not uploaded, click the **New Definition** button and navigate to the g2_server_lu file located where the interface is installed. (Alternatively, you can select **Utilities - Upload Definition File to Hach WIMS**(See Section 3.15))
3. With the definition uploaded (or present), click the **New** button and create an instance of the server side interface. You can have multiple interface sources for the same definition.



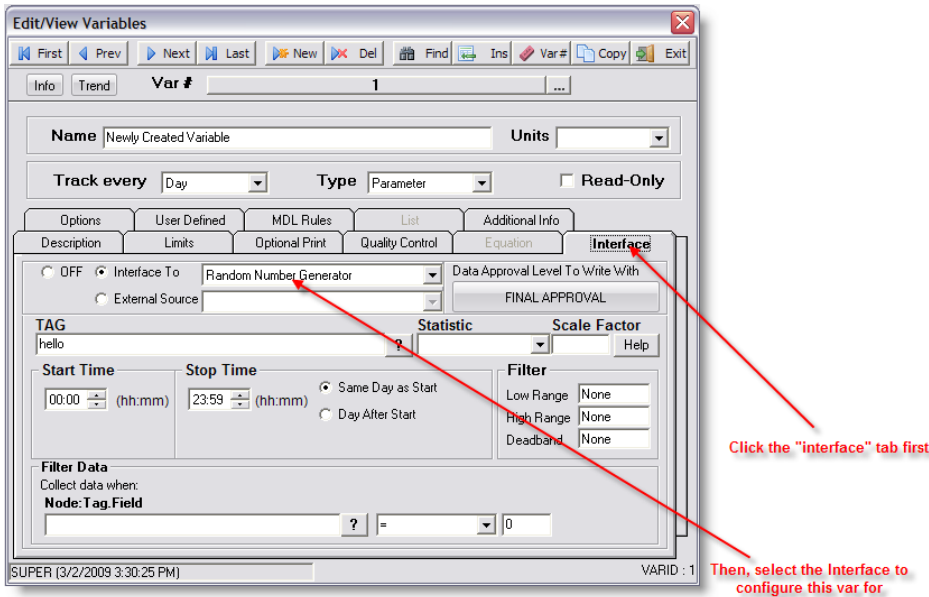
In this example, we are using the Random Number Generator interface. Select the name of your interface, click **Next**, and select the version.

4. Configure the interface:



Make note of the "Name of Interface" field - this is how your interface will be identified. In this case - it is "Random Number Generator". Fill in a "Description" and select the "Collector Time Zone", in this case, it is set to Mountain Time (US & Canada). Click **OK** to create the interface record.

5. Configure Browser - Click on the **Browser** tab and enter the requested information to allow the **Hach WIMS Client** the ability to browse tags from the source system. In some cases, you will need to install an OLE DB driver, on the Hach WIMS Client computer, that will allow communications to the source system. If it is impossible to configure this option, or you wish to do this later - uncheck the **Enable** button on the **Browser** tab.
6. Go to **System Setup -> Edit/View Variables**.
7. Go to the variable you wish to configure for storing interface data:



Click the **Interface** tab on the variable you are configuring, then click the **Interface To** radio button and select the interface needed for this variable. The area below will fill up with the settings needed to finish configuring this variable.

8. For detailed instructions on configuration of variables, look for the '**Supported Variable Configurations For Interface ...**' article in the '**Topics specific to the operation of this Interface**' chapter.

[Reference ID: 12041]

2.5 Hach WIMS Super User Credentials

To enable this feature, select **Configuration -> Advanced Configuration(See Section)** . Then check the "**Require Hach WIMS Super User Login Credentials to Import Data In Interactive Mode**" setting.

You must provide the correct user name and password in order to import data in interactive mode.

Contact your Hach WIMS Administrator for help if you do not know the username and/or password.

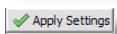
[Reference ID: 12057]

2.6 Using Common Buttons

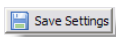
Common Hach WIMS Interface Buttons:



Displays help for the current interface screen.



Applies the current settings.



Attempts to apply the current changes and save them permanently. The save will fail if the settings cannot be applied first.



Closes the current window - no changes are saved.



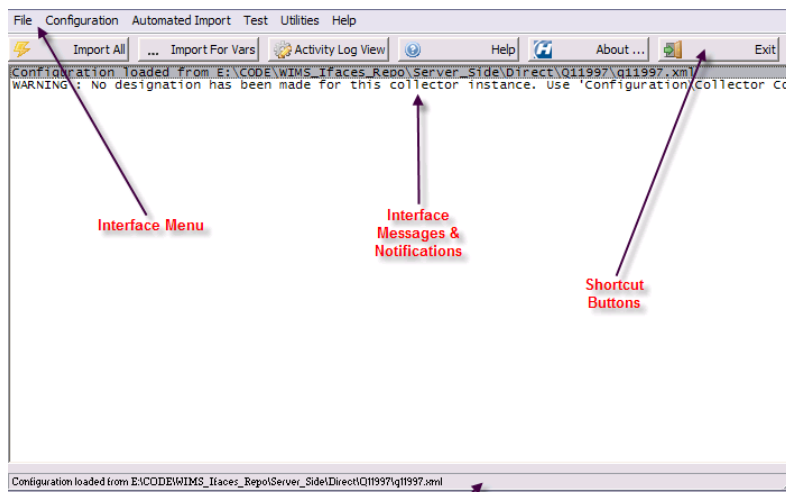
Cancel the current activity/operation.

[Reference ID: 12039]

2.7 Using Main Interface Screen

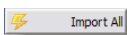
This is the main interface interactive screen.

When running in interactive mode, you can set the various interface configuration settings, monitor & control the interface service, as well as interactively collect data.

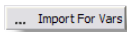


The main parts of the of the screen of interest are:

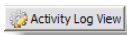
- **Main Menu**
- **The Shortcut Buttons:**



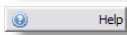
Import all data(See Section 3.10) .



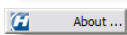
Import data for selected variables(See Section 3.11) .



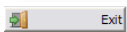
Monitor service activity(See Section 3.1) .



Display help for the current window.



Display general interface information.



Exit the interactive interface session.

- The **Interface Messages & Notification** area - the white background area displays scrolling text regarding the interface's activity. All manner of data is logged here, including data collection status, errors, warnings and other

general information regarding the interface's current activity.

Depending on the **Verbosity**(See Section) level set, you may or may not see all information.

If there is a directory called "Log" in the interface directory, the interface will also log to a text file of the form:

<mm_dd_yyyy__hh_mm_ss_interactive.log>

E.g., if the current date is 2/26/2009 and the current time is 3:02:13 PM, the file will be called:

02_26_2009__15_02_13_interactive.log.

- The status bar, at the bottom of the screen, displays miscellaneous information regarding the interface.

[Reference ID: 12036]

2.8 Using Select Date Range to Import

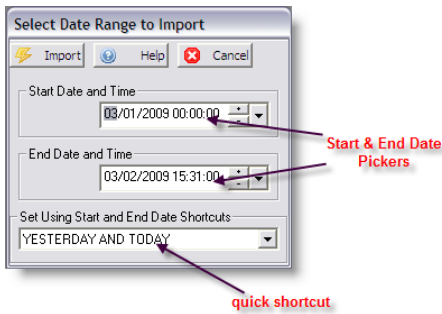
When importing data for one or more specified variables, you have to specify the date range of the source data you want to get.

You can do this in 2 ways:

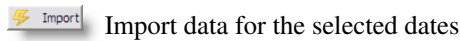
1. Use both the **Start & End Date Pickers**

- OR -

2. Use a start/end date **quick shortcut**:



Buttons:

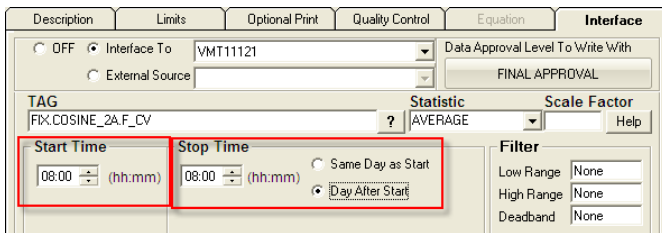


Other buttons are described in **Using Common Buttons**(See Section 2.6) .

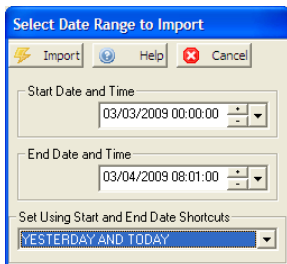
Principle 1: Data will be imported based on the **Start and End Date and Time** and how the variable's **Stop Time** is set up. The **Stop Time** must fall within the date range requested.

Principle 2: Data is stored on the date and time of the variable's **Start Time**.

For example: We set a variable with **Start Time** of 08:00 and a **Stop Time** of 08:00, and select **Day After Start** as shown below.



Then I run the interface to pull data for March 3, 2009 00:00:00 to March 4, 2009 08:01:00.



The interface will return a value for March 2 and March 3. Why? The stop time is our requested date range starting on March 3, 2009 with a stop time of 8 AM. The stop time is computed to March 3, 2009 08:00:00. Since we selected the stop as day after start, the start time is March 2, 2009 at 08:00:00. According to principle #2, the data point is stored on the start time.

So for our example:

Requested Date	Start Date and Time	Stop Date and Time
March 3, 2009	March 2, 2009 08:00:00	March 3, 2009 08:00:00
March 4, 2009	March 3, 2009 08:00:00	March 4, 2009 08:00:00

If we had set our date range from March 3, 2009 00:00:00 to March 4, 2009 07:59:59, then the interface would return only the first record, because stop time of March 4, 2009 08:00:00 in the second record, is past the end date and time of our range.

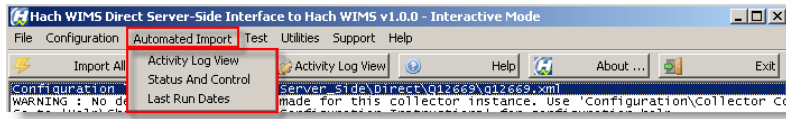
If we had set our date range from March 3, 2009 08:01:00 to March 4, 2009 08:01:00, then the interface would return only the second record, because the Stop Date and Time of the first record (March 3, 2009 08:00:00) does not fall within our start and end date range.

[Reference ID: 12058]

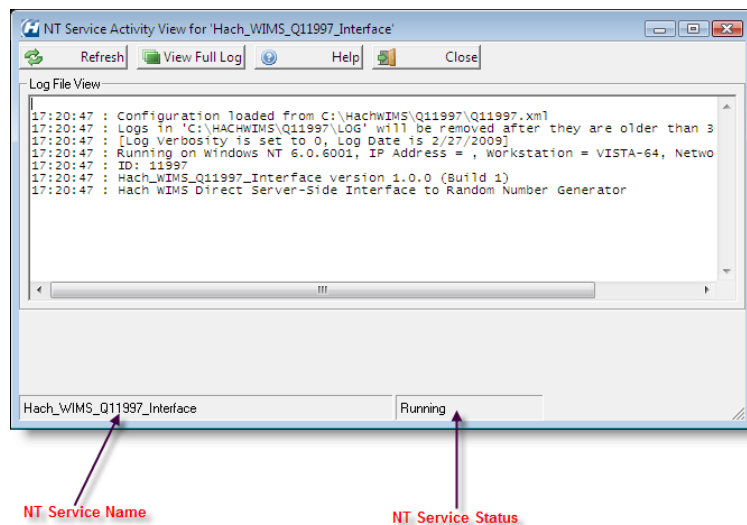
3 - Documentation : Main Menu

3.1 Automated Import - Activity Log View

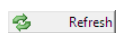
For Automated Import options, click the **Automated Import** button on the top menu bar of the interface.



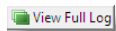
The **Activity Log View** lets you view the interface NT Service log.



Buttons:



Force refresh of the service log view. To shorten the refresh interval, see **Configuration - Advanced Configuration**(See Section).



View the full service log.

The rest of the buttons are explained in **Using Common Buttons**(See Section 2.6) .

NOTE:

If the log cannot be read, make sure the service name is correct and that it's running. See **Automated Import - Status and Control**(See Section 3.3) on how to start the service if it's not running (assuming the service name is correct) and see **Configuration - Advanced Configuration**(See Section) on how to view/change the service name.

3.2 Automated Import - Modify Last Ran Dates

This screen lets you modify the per-facility Last-Ran Date of the interface.

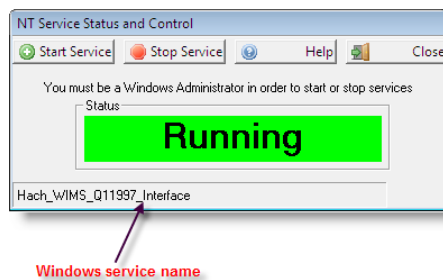
NOTE:

This is different than the default Last-Ran Date described in Configuration - Automated Import Configuration(See Section 3.6) , which is the default Last-Ran Date for ALL facilities that have not had any data imported.

[Reference ID: 12051]

3.3 Automated Import - Status and Control

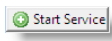
The **NT Service Status and Control** screen lets you monitor the state of interface service, and start or stop the service (Note: you must be logged in as a Windows Administrator):

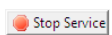


The name of the service is displayed in the bottom left (see screenshot) corner of the screen. This is the name of the service that the interactive program is configured to monitor.

If this is NOT the name of the service, you can change it from the **Configuration - Advanced Configuration**(See Section) screen.

Buttons:

 Start the service, if it is not running.

 Stop the service, if it is running.

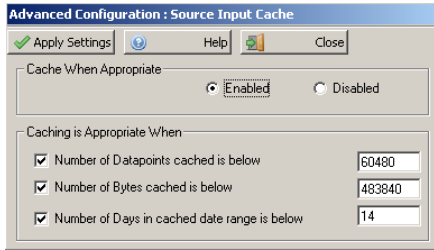
All other buttons are explained in **Using Common Buttons**(See Section 2.6) .

[Reference ID: 12047]

3.4 Configuration - Advanced Configuration : Source Input Cache

Source Input Cache Configuration, is used to configure criteria for caching, if the interfaces supports caching and the option is **Enabled**. Caching is used to load more data into memory at one time, and retain it for processing variables instead of continuously rereading source data from disk. This will speed up processing, but uses more computer resources - such as memory. Set the parameters to set thresholds for processing chunks of data and so that the interface does not surpass the limitations of your computer.

(Note: Not all interfaces have this feature available)



Click **Apply Settings** to apply changes and return to parent form. Click **Close** to return without applying changes.

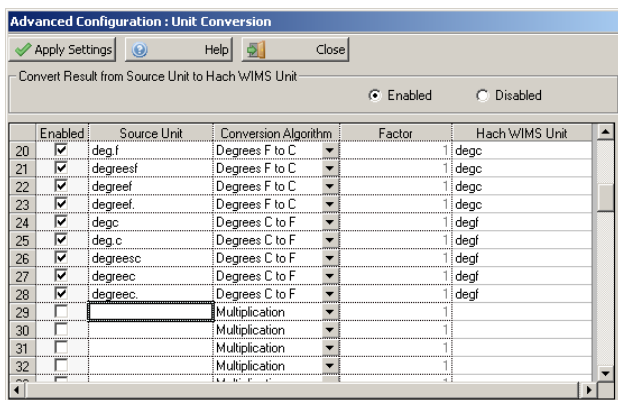
[Reference ID: 12132]

3.5 Configuration - Advanced Configuration: Unit Conversion

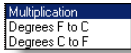
Unit Conversion, if enabled, is used to configure unit conversion when the "units" from the source are different than the "units" in Hach WIMS.

This feature can be turned off, simply click the **Disable** radio button under Convert Result from Source Unit to Hach WIMS Unit.

(Note: Not all interfaces have this feature available)



1. Under **Source Unit** enter the text value as it is in the source
2. Select the **Conversion Algorithm**



- ◆ **Multiplication** - Multiply the source result by the **Factor** before writing to Hach WIMS
 - ◆ **Degrees F to C** - Convert degrees Fahrenheit to degrees Celsius
 - ◆ **Degrees C to F** - Convert degrees Celsius to degrees Fahrenheit
1. Enter the **Factor** amount, how much to multiply the source result by before writing to Hach WIMS. When using the Degrees conversion, enter a 1 (one)
 2. Enter the **Hach WIMS Unit** that the Hach WIMS variable will be using

For example, the source result is stored in parts per million ("ppm") and it needs to be converted in Hach WIMS as parts per billion ("ppb"). You could add the following conversion:



(Note: this is one of the default conversions included)

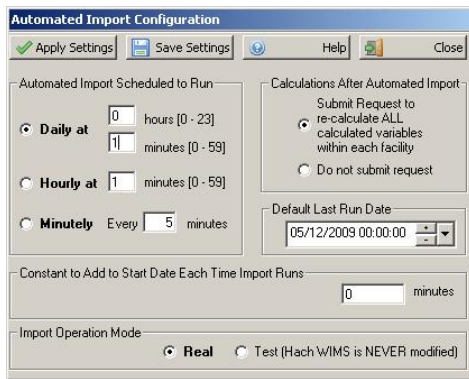
Click **Apply Settings** to apply changes and return to parent form. Click **Close** to return without applying changes.

[Reference ID: 12328]

3.6 Configuration - Automated Import Configuration

Each interface can be configured to run as a service. This is when you want to schedule an automatic retrieval of data, without user intervention.

The **Automated Import Configuration** screen allows you to configure the schedule, whether to submit calculation requests, the Last-Ran Date, and the import operation mode:



- **Automated Import Schedule** - configure when the interface service is scheduled to run:
 - ◆ **Daily** -the interface will run **ONCE** per day, at the specified schedule. E.g., to run it at 2:30 am, you would enter "2" into the hours box and "30" into the minutes box. Note that time is entered in "military" format. To enter 4:45 pm, you would enter "16" into the hours box, NOT 4.
 - ◆ **Hourly** - the interface will run **every hour** at the specified minute after the hour
 - ◆ **Minutely**- the interface will run **every X minutes** where X is a number between 1 and 1440. E.g., to run it every 5 minutes, you would enter "5".
- **Calculations After Automated Import** - select this option if you would like the Hach WIMS AdoCalc service to recalculate all variables within **every** facility after an import operation completes.
- **Default Last Run Date** - this is the point in time from which the interface service will try to retrieve data, up until the current point in time. After a successful run, the current time will become the last run time. By default, this is set to one day prior to the current day.

E.g., assume today is February 25, 2009, if you have just installed the interface and have 3 months of historical data you want imported into Hach WIMS. You should enter November 25, 2008 as the Last-Run Date (3 months prior to February 25th). Once the interface completes its run, the Last-Run Date will be set to February 25, 2009 automatically. The next time it runs (assuming it runs Daily), February 26, 2009, it will only fetch **one** day's worth of data.

- **Constant to Add to Start Date Each Time Import Runs** - Enter the number of minutes to add to the Start Date when the interface runs in automatic mode. This allows the interface to capture data from previous runs that might not have been available at that time.
 - ◆ During automated import, interface queries source data for the following date range :
from (Last Run Date/time(See Section) + *Constant to Add to Start Date Each Time Import Runs*) *to*
(current date / time)

If your source system does not yet contain the needed data at the time of automated import, use this setting to push back the **from** parameter. For instance, if you need the import to start 2 hours before Last Run Date/time(See Section) , you need to enter value of **-120** (negative 120) to *Constant to Add to Start Date Each Time Import Runs*

NOTE: Situations when you would need to input a positive value in this field are very rare.
 Value of 0 (default) has no negative or positive effect on start date.

- **Import Operation Mode** -Real mode imports data into Hach WIMS where as Test does not actually import data, but tests the query capability and timing of the interface.

Buttons:

The buttons are explained in Using Common Buttons(See Section 2.6) .

[Reference ID: 12044]

3.7 Configuration - Collector Configuration

The **Collector Configuration** is the place where you configure the source of your data - the SCADA/LIMS system that holds the data you want to import.



NOTE: Before you can configure the collector, you MUST configure the Connection to Hach WIMS(See Section 3.8) and you must setup the Hach WIMS client(See Section 2.4) .

Select **Which Hach WIMS G2 Interface Am I** for this interface. The names that appear in the drop-down box are the ones that were configured in the Hach WIMS Client. This name is then tied to this interface and is unique.

Buttons:

The buttons are explained in Using Common Buttons(See Section 2.6) .

If the Interface you are using has a separate Collector Utility that generates OPSDATAXML files that it reads from, you can configure and launch it from here.



Collector Configuration Settings Opens a screen that allows you to configure the Collector's settings

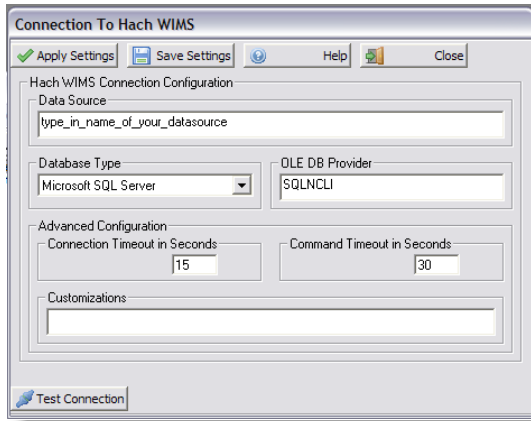
Launch Collector Starts the Collector utility

[Reference ID: 12042]

3.8 Configuration - Connection To Hach WIMS

The **Connection to Hach WIMS** screen lets you configure how the interface will connect to **Hach WIMS Database Server**.

This is one of the first items you configure when setting up a new interface.

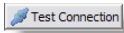


- **Data Source** - this field specifies, in loose terms, the "Database/Datasource server name" where your Hach WIMS system is configured to store data. "Database/Datasource server name" means different things depending on whether you are running against Oracle or MS SQL:
 - ◆ Oracle - you can type in either the Oracle TNS name or a string in the form of *host:port/SID*, if using the Oracle HOSTNAME adapter.
 - ◆ MS SQL - this is in the form of *host\sql_instance_name*
- **Database Type** -select the appropriate type of your Hach WIMS database
- **OLE DB Provider** - this specifies which "database driver" the interface will use when connecting to Hach WIMS and again depends on the database type:
 - ◆ Oracle - the default string should be fine
 - ◆ MS SQL - if connecting to MS SQL 2005 or later, use the native client to connect. Specify SQLNCLI as the provider. **NOTE: You will need to have the Microsoft SQL Native Client installed for this to work.** If connecting to MS SQL 2000, specify SQLOLEDB as the provider.
- **Connection Timeout in Seconds** - how many seconds the program should wait when establishing a connection to the Hach WIMS database before aborting.
- **Command Timeout in Seconds** - specifies how many seconds the program should wait for a query to complete before aborting the operation.

WARNING: Large values for these two settings can cause the program to not respond for a long period of time! Do NOT use 0 unless you know what you are doing - it will cause the program to wait indefinitely, and if your database server is down, the only way to cancel the operation is to forcefully quit the program.

- **Customizations** - this should be left empty unless you were told otherwise by a Hach Support Engineer or you know what you are doing.

Buttons:

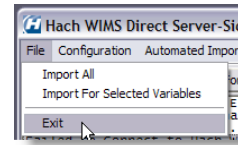


Test to see if the connection settings are valid and the interface is able to connect to Hach WIMS client. This will NOT **Apply** or **Save** the settings.

The other buttons are explained in Using Common Buttons(See Section 2.6) .

[Reference ID: 12037]

3.9 File - Exit



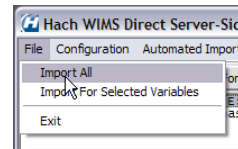
Terminates the interactive interface program.

NOTE:

Clicking "Exit" only closes the interactive interface session. Since the interface can be configured to run as a Windows Service, clicking "Exit" does NOT affect this service, it will continue collecting data. The service can be scheduled to collect data anytime, whether a user is logged on to the machine or not. The service for the interface will continue collecting data whether the interactive program is running or not.

[Reference ID: 12035]

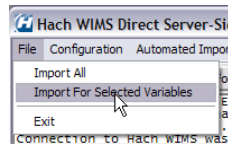
3.10 File - Import All



Imports all data for all variables.

[Reference ID: 12034]

3.11 File - Import For Selected Variables

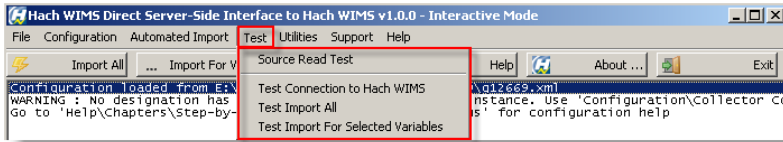


Imports data for the selected variables.

[Reference ID: 12038]

3.12 Test - Source Read Test SCADA to Hach WIMS

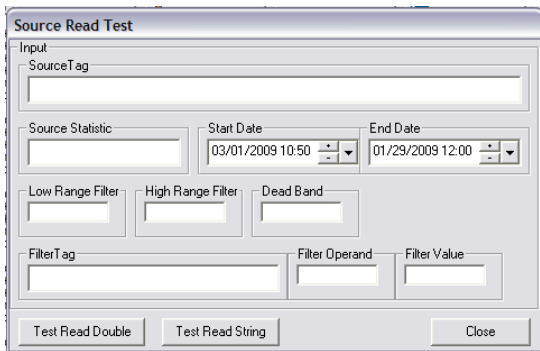
For testing options, click on the **Testing** menu option at the top menu bar of the interface.



The **Source Read Test** functionality is useful for source testing purposes.

Use this screen to look at source data for specific dates, using different statistics (MINIMUM, MAXIMUM, AVERAGE, etc).

This is useful when you want to look at source data on specific dates, WITHOUT doing an actual import. (No data will be overwritten on the Hach WIMS database.)





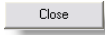
To do a test, you will need to specify a tag in the Source Tag field.

Then, for each tag, you can specify:

- The Source Statistic to apply (MINIMUM, MAXIMUM, AVERAGE, etc).
- The start and end dates you want data fetched.
- The high & low ranges, as well as the dead-band (optional).
- The filter tag - a second source tag that acts as a filter to the main selected tag (optional).

Buttons:

-  Interpret the tag as a double (floating-point) tag and return a floating-point number.
-  Interpret the tag as a string tag and return the result as a string.



Closes the window.

[Reference ID: 12054]

3.13 Test - Test Connection to Hach WIMS

Perform a test against the Hach WIMS connection to see if the connection is valid

[Reference ID: 12052]

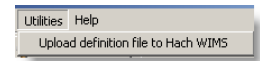
3.14 Test - Test Import All

This performs a **test** import for all interface-configured variables. Note that no actual data will be written to the Hach WIMS database.

[Reference ID: 12053]

3.15 Utilities - Upload Definition File to Hach WIMS

This feature allows you to upload the interface definition (g2_server_lu) file to the Hach WIMS database. This is needed in order to setup a collector record in Hach WIMS.



Once the definition file has been uploaded, proceed with creating a collector record in Hach WIMS Client.

The process to setup a collector record is outlined in How to configure the Hach WIMS Client for a server-side interface(See Section 2.4) .

[Reference ID: 12040]

4 - Documentation : Release notes

4.1 Release Notes for SCADA2OPSSQL Type of Hach WIMS Direct Server-Side Interface

Build 66(8/21/2015)

- Variable Browser relocated location path field next to variable name (4660)

Build 65(3/30/2015)

- Variable Browser Select All button no longer selects filtered variables (4582)
- Variable Browser now displays location path (4582)

Build 64 (7/3/2014)

- Additional logging added (4159)
- Added a database connection throttle allowing other processes (programs) to process events to run. (4267)
- Variable Browser improvements - added quick filter, filter by facility. (4385)
- Variable Browser UI improvement for Windows 7 (4466)

Build 60

- Added support for MAXTIME and MINTIME to the import process.(4185)
- Fixed problem importing text values.(4125)
- Added user option setting to keep the database connection open during the entire import process.(4106)

Build 57

- **Added a global variable to CommonGlobals to allow custom notes to the stats summary at the end of a run. I added the global variable to CommonGlobals and it is used in CommonImport (4132)**

Build 56

- Added a global variable to CommonGlobals and CommonImport to keep the CustomImport object alive so its connection would stay open. We were having a problem with a special database driver hanging when it was closed. (4106)

Build 55

- Fixed framework to properly handle Text Parameter type variables (4125)

Build 53

- Updated framework to handle time zone differences and how they affect direct and indirect interfaces

Build 47

- Added logging in CommTAGFilter routine CarryLastValue when verbosity is set to 9

Build 46

- Changed CommonImport to make sure start date is correct when using the Cache feature in Advanced Settings (only affects certain interfaces) (3261)
- Changed CommonTAGFilter to scrutinize data returned from CustomTAGFilter (only affects certain interfaces) (3313)
- Changed CommonTAGFilter to propagate execution error check down to lowest level, so that we can distinguish between an execution error and bad data (only affects certain interfaces) (3426)

Build 41

- Added to CommonTypeDateManager in Common_SCADA2OPSSQL; added code to compensate for daily var that have less than 1440 min/slot (i.e., 60 min from total day) so that it would get current day if the start and stop times have passed current time (Fortress 2673)

Build 40

- Added ability to view connection string in CustomConfig form

Build 37

- Added ability for SCADA2OPSSQL type of interfaces to define a global configuration tree

Build 36

- Fixed problem with statistics TIMELT, TIMEGT, and TIMEEQ not counting the very first record.

Build 34

- Added to caching function to support the following statistics for parameters using flat file databases: TOTAL, AVERAGE, MINIMUM, MAXIMUM, FIRST, LAST, DIFF, RANGE, COUNT, INVENTORY, TIMEGT, TIMELT, and TIMEEQ
- Added to caching function to support the following statistics for text parameters using flat file databases: MINTIME, MAXTIME, FIRST, LAST, COUNT
- Added to caching function to support the following filter operators on filter tags when using flat file databases: =, <, >, <=, >=, <>, and CYCLESTO

(Note: consult the "Topic specific to the operation of this interface" article "Supported Variable Configuration" to see whether your interface supports these available options or not)

Build 28

- Added ability to specify adjustment of start date in minutes when running in automated mode. This can be configured under Configuration / Automated Import Configuration (2445)
- Added support for caching of input to accelerate interface performance of interface that rely heavily on IO (2481)
- Added support for filtering for OLEDB types of SCADA2OPSSQL interfaces (2457)

Build 10

- Initial Release to Public

[Reference ID: 12068]

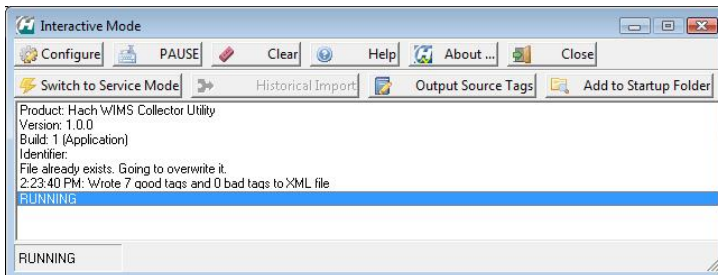
5 - Documentation : Collector

5.1 Collector Interactive Main Screen


This is the main collector interactive screen when running as a Windows Tray Application.


When the Collector is installed as a Windows Tray Application (the default mode) this is the screen that you will interact with. When the Collector is installed as an NT Service you will be presented with a different screen(See Section 5.8) . When you start the Collector it will not be visible by default unless errors occur. To view the main screen, you need to double click on it's icon in the system tray.


When running in this mode, you can set the various collector configuration settings as well as import live and historical data (if supported by your collector).





- **The Shortcut Buttons:**


 **Configure** Allows you to configure the collector's settings.


 **START** Starts the scheduler to import live data. When the collector is scheduled to import live data it is in RUNNING mode. If the collector is in this mode then the START button is replaced with the PAUSE button.

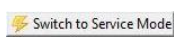
 **PAUSE** Stops the import scheduler for live data. When the collector is not scheduled to import data it is in PAUSE mode. If the collector is already in this mode then the button is replaced with the START button.

 **Clear** Clears the activity log window.

 **Help** Displays help for the current window.

 **About ...** Brings up general information about the Collector.

 **Close** Hides the Collector. The collector continues to run.

 **Switch to Service Mode** If you installed the Collector as a NT Service, this restarts the Collector in NT Service View and Control mode.



If your Collector supports this feature you can enter a date range to import data from.



Outputs the tags that you are importing into an OPSDATAXML file. This file is needed by the Hach WIMS Client Interface Source Tag Browser.



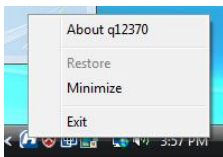
If you want the Collector to startup automatically each time Windows restarts, then click this button. This will copy a shortcut to the Collector into the Windows Startup folder. Note: This is not the same as running as an NT Service.

- **The System Tray:**



When the Collector is running as a Windows Tray Application it will appear in the Windows System Tray as an icon with a big H. To make the Collector visible, double click on the Icon. The icon will appear as 1 of 3 colors:

1. Blue - RUNNING mode. The Collector is scheduled to import live data.
2. Red - PAUSED mode. The Collector is not scheduled to import data.
3. Yellow - MANUAL mode. The Collector is importing Historical data.



If you right click on the Icon in the System Tray a small menu will popup. From this menu you can shutdown the collector by choosing exit. You may also pull up the about box, restore the Collector or minimize it.

- **The Collector Messages & Notification** area - the white background area displays scrolling text regarding the collector's activity. All manner of data is logged here, including data collection status, errors, warnings and other general information regarding the collector's current activity.

Depending on the **Verbosity**(See Section) level set, you may or may not see all information.

If there is a directory called "Log" in the Collector directory, the Collector will also log to a text file of the form:

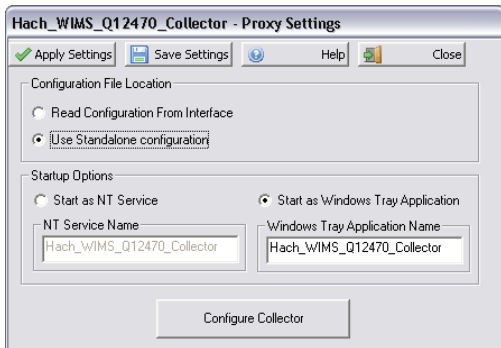
`<mm_dd_yyyy__hh_mm_ss_collector_name_Collector.log>`

E.g., if the current date is 2/26/2009 and the current time is 3:02:13 PM, the file will be called:
`02_26_2009__15_02_13_collector_name_Collector.log`.

- The status bar, at the bottom of the screen, displays what mode the Collector is currently in (RUNNING, PAUSED, MANUAL).

5.2 Collector Proxy Settings

The Collector's Proxy Setting screen tells the Collector how to behave when it starts up.



- **Configuration File Location**

- ◆ **Read Configuration From Interface** - When the Collector is installed on the same machine as the Interface, the Collector by default will read in the configuration information from the same file that the Interface uses to store configuration settings. If you choose this option, the Configure Collector button will be disabled:



To change the configuration settings you need to go to the Interface, click on the menu Configuration/Collector Configuration and press the Collector Configuration Settings button:



- ◆ **Use Standalone configuration** - When the Collector is installed on a different machine (or you don't want it to use the same configuration file as the Interface) choose this option. This will allow the Collector to have it's own configuration file that isn't shared with the Interface and the Configure Collector button will be enabled.

- **Startup Options**

- ◆ **Start as NT Service** - Choose this option if you plan to run the Collector as a NT Service. Choosing this option does not install the Collector as a Service; it tells the Collector that it expects to be run as a service.

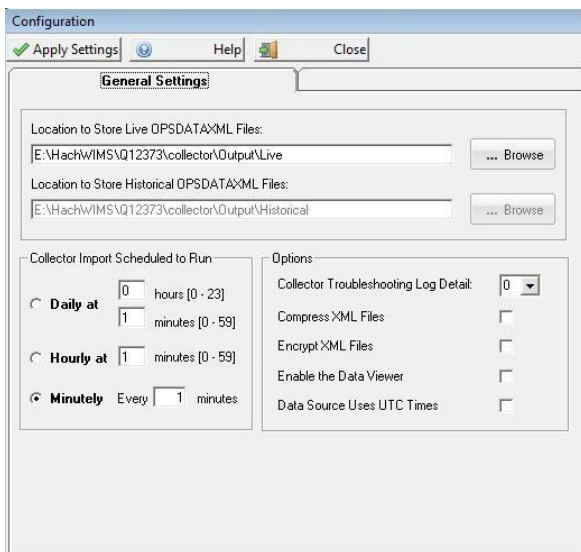
See the documentation(See Section 5.7) on how to install the Collector to run as a Service.

- ◆ **NT Service Name** - The name that the Collector uses when it is run as an NT Service. You may want to change this name if you have more than one collector running as an NT Service.
- ◆ **Start as Windows Tray Application** - This is the default option. In this mode the Collector runs as a standard Windows Application.
- ◆ **Windows Tray Application Name** - The name that you want to give this Collector. This name will appear in the Caption of all the forms/windows that you open.
- **Configure Collector Button** - Allows you to configure the collector's settings.

[Reference ID: 12421]

5.3 Common Collector Configuration

The Configuration Screen allows you to configure the Collector's settings.



- **Live OPSDATAXML Files** - The location where you want the live data OPSDATAXML files stored. The Collector automatically monitors the source tags that you defined and writes it's data to a series of xml files that will be read by the Interface.
- **Historical OPSDATAXML Files** - The location where you want the historical data OPSDATAXML files stored. These are the files that get generated when you manually import historical data.
- **Collector Import Schedule** - configure when the collector is scheduled to import data:

- ◆ **Daily** -the collector will run ONCE per day, at the specified schedule. E.g., to run it at 2:30 am, you would enter "2" into the hours box and "30" into the minutes box. Note that time is entered in "military" format. To enter 4:45 pm, you would enter "16" into the hours box, NOT 4.
 - ◆ **Hourly** - the collector will run **every hour** at the specified minute after the hour
 - ◆ **Minutely**- the interface will run **every X minutes** where X is a number between 1 and 1440. E.g., to run it every 1 minute, you would enter "1".
- **Collector Troubleshooting Log Detail** - Used to specify how much application runtime information to log. The higher the log level the more detail that will be logged. This information will let you know how the program is performing and alert to issues that may need to be addressed.
 - **Compress XML Files** - Check this option if you want to compress the OPSDATAXML files that the collector is generating. If you are collecting many tags the OPSDATAXML files that get generated can get rather large. By compressing them it can take a typical 2MB file and compress it to about 200KB.
 - **Encrypt XML Files** - Check this option if you want to encrypt the data that is stored in the OPSDATAXML files. The Interface will decrypt the files when it uploads the data into WIMS. It should also be noted that when you encrypt the files it also compresses them at the same time.
 - **Enable Data Viewer** - When the Collector is being run as a Windows Tray Application you have the option of whether or not to view the live data of the source tags you are importing. If this is checked, the data viewer will appear below the activity log.
 - **Collector Uses UTC Times** - The Collector will convert the data to UTC Times unless the data already uses UTC Times. Only check this if you are sure that your Collector is using UTC Times. UTC stands for Universal Time Coordinated. It is a coordinated time scale, maintained by the Bureau International des Poids et Mesures (BIPM). It is also known a "Z time" or "Zulu Time".

[Reference ID: 12422]

5.4 Custom Collector Configuration for Collector Q12678

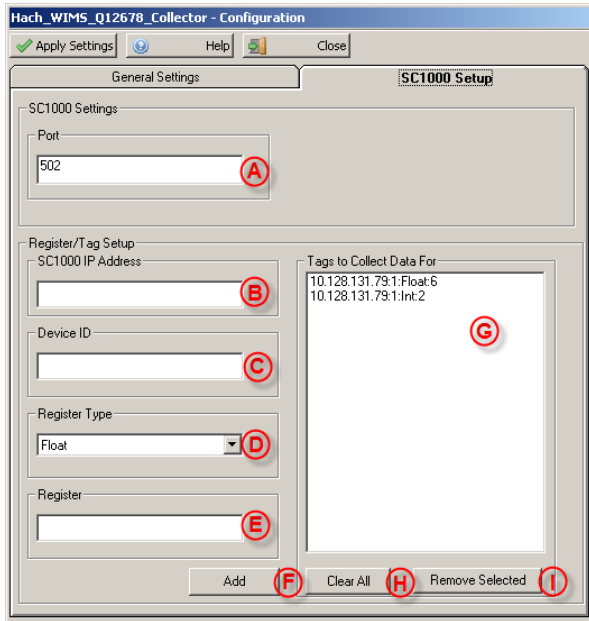
The Collector Configuration is very important. This article will cover the SC1000 Setup Tab in the Collector configuration. This configuration tells the collector which data points to monitor on the SC1000 and which points it should collect data for. This collector is able to monitor multiple SC1000 units at once. Each SC1000 unit must be connected to the network and must be licensed for ModBus TCP. The Collector communicates with the SC1000 using ModBus TCP and it will not function if the SC1000 is not properly licensed for ModBus TCP.

This configuration screen can be accessed from either the interface or the collector. This setting is set under the Configure Button in the collector (to find the collector please follow the instructions in the Using this Collector article(See Section 5.12). Please review the mentioned article to determine where you should go to find the settings information.

To setup General settings please follow the instructions found in the Common Collector Configuration article(See Section 5.3).

This article will focus on setting up the SC1000 Setup tab. This tab is responsible for telling the collector which registers to collect data from and which SC1000 devices.

Tag Setup



A. This is the port that the Collector will use to connect to your SC1000 devices. It will only use one port so any SC1000 that you wish to connect to must all use the same port.

B. We are now setting up a Specific Point to read. This is the IP address of the SC1000 Containing that point.

C. This is the Device ID of the SC1000. This can be found on the SC1000 and is called the MODBUS ADDRESS. (If you can connect to your SC1000 using a web browser it will look like this)

MODBUS TCP

MODBUS TCP	ON
TCP PORT	502
TELEGRAM	
MODBUS ADDRESS	1
VIRTUAL SLAVES	OFF
DATA ORDER	NORMAL
SIMULATION	
STATUS	

D. This is the Register Type of the address. There are 5 Register Types. You will need to review your SC1000 Documentation and your Prob Documentation for further details on which type to choose. Your SC1000 will also provide some information under the Telegram menu under the MODBUS Menu. The telegram menu can only be accessed on the device and not via web access. The telegram menu will also display it's base type. Note: There is a very big difference between Int and Int2 (same with uint and uint2). Besure you choose the right one.

Float: This is any number that would return a Decimal Place.

Int: This is any number that does not have a decimal place. This number can be negative.

Int2: This is a 32-Bit Integer. This is the same as an Int except for Larger values.

UInt: This is any number that does not have a decimal place and Cannot be negative.

UInt2: This is a 32-Bit UInt. This is the same as UInt except for larger values.

E. This is the register value that corresponds to the parameter you would like to import. This information can be found in the telegram menu under the MODBUS TCP menu on the SC1000.

F. Once you have filled out B, C, D, and E you can press the Add button to add this parameter to the list of parameters to pull data in for. You will see the information added to box G.

G. This box lists the 'Tags' that this collector is setup to monitor. If you wish to pull in a parameter, it must be part of this list.

H. You can clear the entire list of Tags by pressing this button. Use caution, this action cannot be undone.

I. You can remove a selected tag from this list. This action cannot be undone.

Tag Information

Once you have added a parameter by following the steps above, you will have a Tag in the list in box G. This represents a parameter on a specific SC1000 unit. This Tag is used in the Hach WIMS Edit/View Variable setup to link a Variable in Hach WIMS to the data in this tag. This is a process called Cross Referencing.

The Tags are setup in a format so that they are easy to duplicate and understand.

The tag has 4 parts, each separated by a ':'. For example the tag 10.128.131.79:1:Float:6 has 4 parts.

Part 1: "10.128.131.79" Corresponds to the SC1000 IP address.

Part 2: "1" corresponds to the SC1000 Device ID or MODBUS ADDRESS.

Part 3: "Float" corresponds to the Register type for the parameter we wish to retrieve data for.

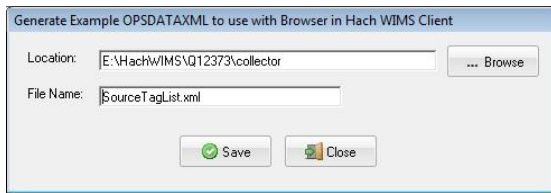
Part 4: "6" corresponds to the Register which contains the value for the parameter we wish to retrieve.

We can use this knowledge to help us setup our Hach WIMS variables.

[Reference ID: 12766]

5.5 Generate Example OPSDATAXML File for Hach WIMS Client

The Hach WIMS Client needs to know what tags are available to link to WIMS variables. The Hach WIMS Client uses a browser control that contains a list of all the available tags that you defined. In order for the browser control to know what these tags are, it reads them in from an OPSDATAXML file. Once you have configured all the tags that you are interested in you need to open up the following screen:



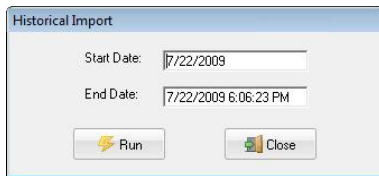
You can launch this screen by click on  Output Source Tags from the main Window.

Click the Save button to generate a file that contains all the tags. Remember where this file is stored because when you configure the Interface in Hach WIMS Client, it will ask where this file is stored.

[Reference ID: 12425]

5.6 Historical Data Import

This screen allows you to import historical data. If your data source maintains historical data then you can import data for the date range that you enter. The collector will read the historical data for the date range specified and copy the data into OPSDATAXML files. Once the OPSDATAXML files have been generated you will have to import them into Hach WIMS client using your Interface (See Section 2.8).



Start Date - The beginning of the date range to import

End Date - The end of the date range to import

Run - Starts the import process

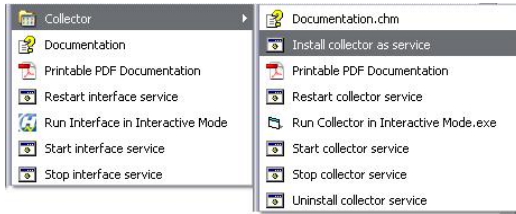
Close - Closes the Window and does not import data

[Reference ID: 12424]

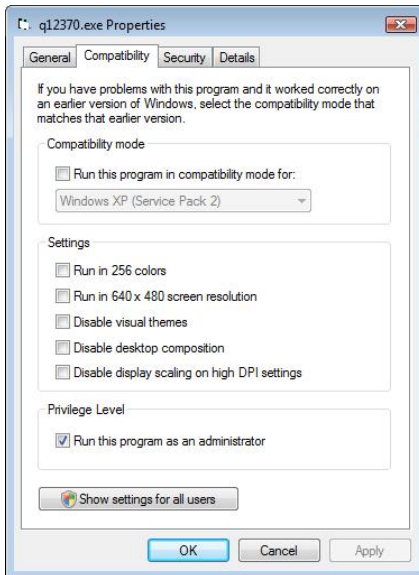
5.7 Install Collector as a NT Service

The Collector can be installed as a NT Service. By default it runs as a traditional Windows Tray Application. Installed with the Collector is a batch file that will configure the Collector to run as a Service. If you click on the Start menu, choose HACH Company/Hach WIMS/Your Interface/Your Collector you will see the file called 'Install collector as service'. If you select this file it will go ahead and configure the Collector to run as a service. The next time Windows starts the Collector Service

will start automatically.



For Windows Vista users you will need to perform the following step: You need to configure the Collector to run as an administrator. To run as an administrator, right click on the collector's executable file (i.e. Q12370.exe) and select Properties. Choose the Compatibility tab and check 'Run this program as an administrator'.



You can now start the Collector and run it as a Service. When you double click on the Collector's executable file it will open up the **NT Service Collector Interactive Screen**(See Section 5.8) . From that screen you can open the **NT Service Status and Control Screen**(See Section 5.10) so you can start the Service (after installing the Service it won't be started yet).

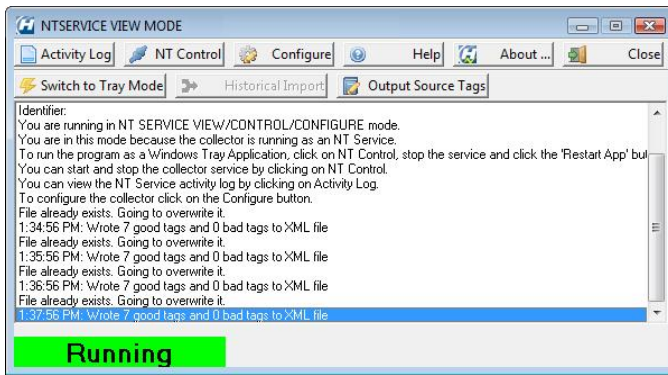
[Reference ID: 12428]

5.8 NT Service Collector Interactive Screen

This is the Collector's interactive screen when running as a NT Service.

When the Collector is installed as a NT Service this is the screen that you will interact with. When the Collector is installed as a Windows Tray Application you will be presented with a different screen(See Section 5.1) .

When running in NT Service interactive mode, you can set the various collector configuration settings, view and control the Service status as well as import historical data (if supported by your collector).



• **The Shortcut Buttons:**



Allows you monitor the Service activity



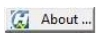
Allows you start and stop the Collector Service as well as view the Service's current status.



Allows you to configure the collector's settings.



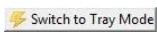
Displays help for the current window.



Brings up general information about the Collector.



Closes the application. If the Collector Service was running it will continue to run.



Stops the Collector from running as an NT Service and restarts the Collector as a Windows Tray Application.



If your Collector supports this feature you can enter a date range to import data from.



Outputs the tags that you are importing into an OPSDATAXML file. This file is needed by the Hach WIMS Client Interface Source Tag Browser.

- **The Collector Messages & Notification** area - the white background area displays scrolling text regarding the collector's activity. All manner of data is logged here, including data collection status, errors, warnings and other general information regarding the collector's current activity.

Depending on the **Verbosity**(See Section) level set, you may or may not see all information.

If there is a directory called "Log" in the Collector directory, the Collector will also log to a text file of the form:

`<mm_dd_yyyy__hh_mm_ss_collector_name_Collector.log>`

E.g., if the current date is 2/26/2009 and the current time is 3:02:13 PM, the file will be called:

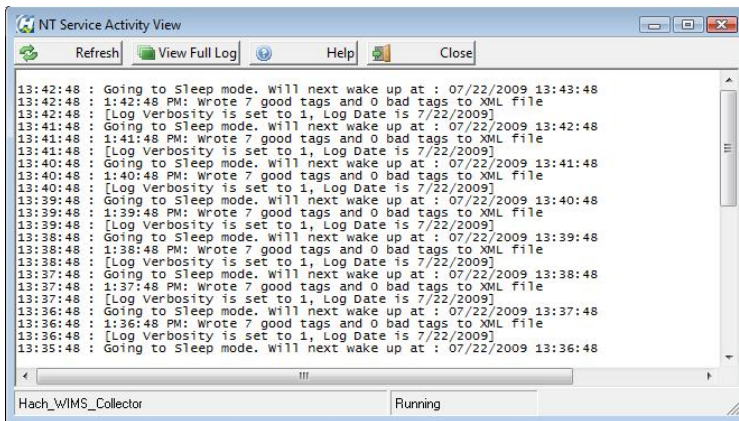
`02_26_2009__15_02_13_collector_name_Collector.log.`

- The status bar, at the bottom of the screen, displays the status of the NT Service.

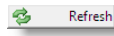
[Reference ID: 12420]

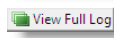
5.9 NT Service Log View

The **Activity Log View** lets you view the Collector's NT Service log.



Buttons:

 **Refresh** Force refresh of the service log view.

 **View Full Log** View the full service log.

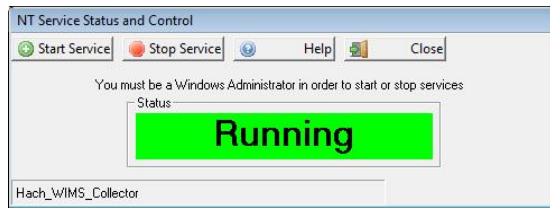
NOTE:

If the log cannot be read, make sure the service name is correct and that it's running. See **NT Service Status and Control** (See Section 5.10) on how to start the service if it's not running (assuming the service name is correct) and see **Proxy**(See Section 5.2) **Settings**(See Section 5.2) on how to view/change the service name.

[Reference ID: 12426]

5.10 NT Service Status and Control

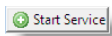
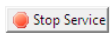
The **Status and Control** screen lets you configure and monitor the state of collector service:



The name of the service is displayed in the bottom left (see screenshot) corner of the screen. This is the name of the service that the interactive program is configured to monitor.

If this is NOT the name of the service, you can change it from the **Proxy Settings**(See Section 5.2) screen.

Buttons:

-  Start the service, if it is not running.
-  Stop the service, if it is running.

[Reference ID: 12427]

5.11 Release notes for collector Q12678

Version 1.0.1 (Build 32, Released on 9/9/2010)

- Updated ability to write OPSDATAXML Revision 3
- Upgraded to Common Framework build 116, SCADA Framework build 53, Updated framework to handle time zone differences and how they affect direct and indirect interfaces

Version 1.0.0 (Build 22, Released on 1/11/2010)

- Initial release for distribution.

[Reference ID: 12768]

5.12 Using the SC1000 via Modbus TCP Collector (Q12678)

This interface comes in two pieces. The collector constantly monitors the SC1000 and writes values 1 time per minute per monitored parameter. These values are written to an XML file. These files will need to be placed somewhere so that the Interface portion of the software can read them. The Interface will read the XML files for their data values, summarize them based on a statistic and then write them to the Hach WIMS database. The Collector and the Interface can be on the same computer or on separate computers. As long as the XML files can be read by the interface, it doesn't matter which computer you use.

Unlike some other collectors, this collector can not read historical data. This means that all data read is read from a live source. If this collector is brought offline for a time and brought back up, any data while the system was down will be lost.

Starting up the Collector:

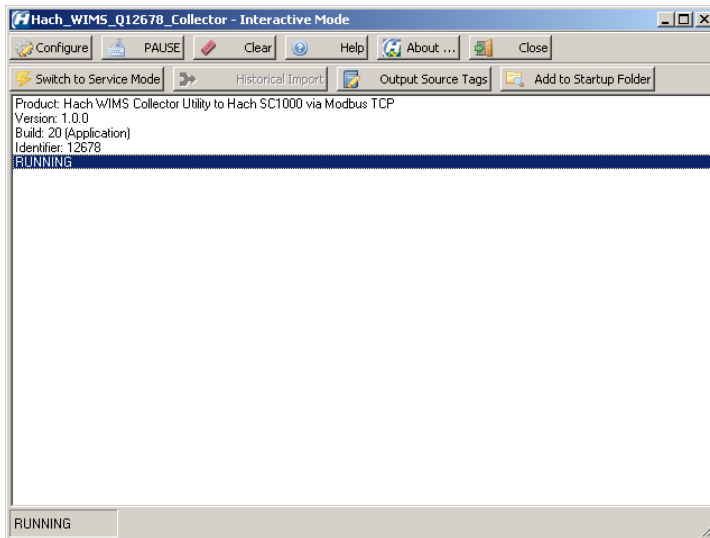
To start you collector up go to Start -> All Programs -> Hach Company -> Hach WIMS ->

Finding the Collector Once it's Running:

Once the collector is started, you will see an icon in your Icon Tray in the bottom left hand side of your task bar. You can double click this icon to display the User Interface for the collector.

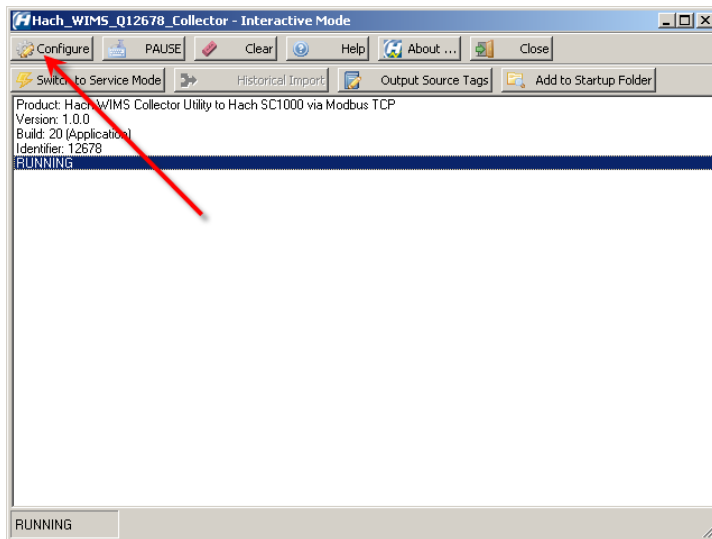


Using the Collector:

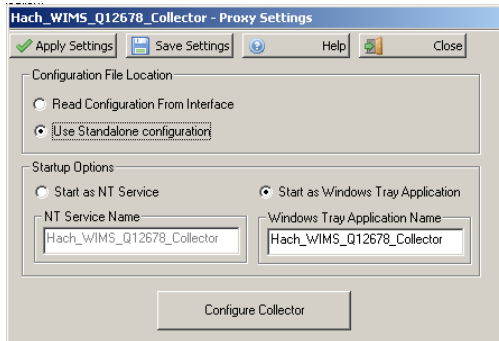


The first thing you will need to do is setup your collector's configuration.

1. Press the Configure Button on the top lefthand side of the Collector



2. You will see the Proxy Settings Screen. For additional Information on this window, read Collector Proxy Settings(See Section 5.2) article. From here you have two Options. If the Collector and Interface are on the same computer, you can tell your collector to use settings setup in the interface for this collector's configuration by selecting "Read Configuration from Interface". For additional Information, read Collector Proxy Settings(See Section 5.2) article. Whether the collector and interface are on the same machine or on separate machines, you can always choose to use "Use Standalone Configuration".



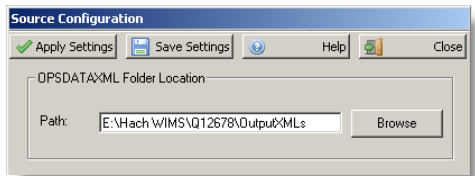
3. You can click on Configure Collector here (if you chose "Use Standalone Configuration") or you will have to configure the collector in the interface. Please review the Common Collector Settings article (See Section 5.3) for information on general settings. Please review the SC1000 Setup Collector Configuration article (See Section 5.4) for information on Setting up this collector to read values from the SC1000. It is important to understand that you must configure this interface to read specific registers from the SC1000 before it will read anything from the device.
4. Once Configuration is complete you can start your collector.

[Reference ID: 12767]

6 - Documentation : Topics specific to the operation of this interface

6.1 Configuration - Source Configuration Q12677

You must simply specify the Location of the OPSXML files created by the Collector.



[Reference ID: 12772]

6.2 Release notes for interface Q12677

Version 1.0.8 (Released on 12/3/2015)

- Fixed DIFF function (4623)
- Upgraded interface to Common Framework(See Section) Build 149

Version 1.0.7 (Build 113, Released on 1/29/2013)

- Updated to the latest common framework
- Fixed problem uploading the G2_Server_LU file

Version 1.0.6 (Build 108, Released on 5/10/2012)

- Upgraded to Common Framework build 137, SCADA Framework build 60
- Added support for SQL Server 2012 (4202)

Version 1.0.5 (Build 82, Released on 11/3/2010)

- Fixed problem with the timezone of the computer system running the Interface is affecting the results when it should not

Version 1.0.4 (Build 78, Released on 9/28/2010)

- Fixed problem with reading encrypted/compressed XML files

Version 1.0.3 (Build 76, Released on 9/9/2010)

- Upgraded to Common Framework build 116, SCADA Framework build 53, Updated framework to handle time zone differences and how they affect direct and indirect interfaces

Version 1.0.2 (Build 56, Released on 8/3/2010)

- Upgraded interface to Common Framework Build 100

Version 1.0.1 (Build 40, Released on 2/9/2010)

- Upgraded interface to SCADA2OPSSQL Framework Build 47

Version 1.0.0 (Build 28, Released on 1/11/2010)

- Initial release for distribution.

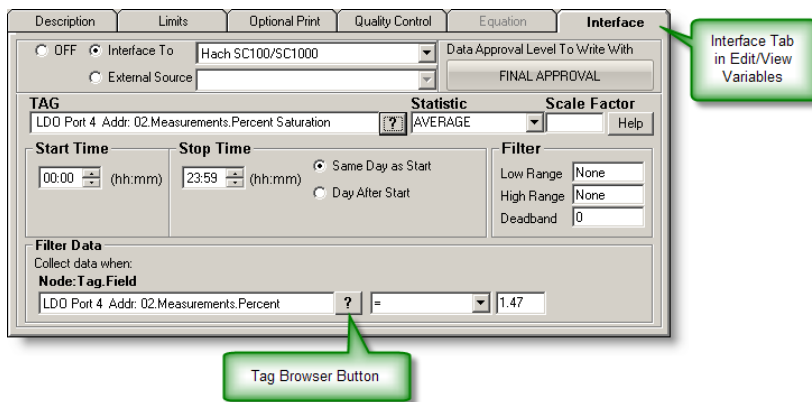
[Reference ID: 12769]

6.3 Supported variable configurations for interface Q12677

Supported variable configurations for the **Hach WIMS InDirect Server-Side Interface to Hach SC1000 via ModBus TCP**.

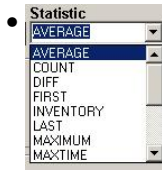
To configure a variable to hold values from a Hach SC1000, select **Edit/View Variables** in the client and select the **Interface** tab.

Then click **Interface To** radio button. The drop down box next to the option is now enabled, click the drop down arrow and choose the Hach SC1000 interface name (name given when configuring the interface).



Now you are ready to configure a signal tag for the Hach SC100/SC1000. The **Tag** name and a **Statistic** are all that are mandatory.

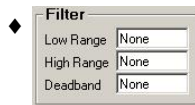
- TAG** This is the tag name in the Hach ProcessLink Software. This may be referred to as an OPC Item or tag name. View the Custom Configuration article(See Section 5.4) for tag descriptions.



This is a listing of all the statistics supported by this interface. This includes the following statistics for a specified time period.

AVERAGE	Take the average of the data points
TOTAL	Take the sum total of all values
MINIMUM	Get the minimum value
MAXIMUM	Get the maximum value
FIRST	Get the first value
LAST	Get the last value
DIFF	Calculate the difference between the first and last values. If the first value is larger than the second then it will perform the following calculation: $(10 ^ {Ceil(LOG(first_value) / LOG(10))}) - first_value + last_value$ Ceil will cause the value to round up
RANGE	Calculate the absolute value of the difference between the minimum and maximum values
COUNT	Counts the number of data points.
MINTIME	The date and time when the minimum value occurred.
MAXTME	The date and time when the maximum value occurred.
TIMEGT(x)	Counts the number of data points greater then 'x'.
TIMELT(x)	Counts the number of data points less than 'x'.
TIMEEQ(x)	Counts the number of data points equal to 'x'.
INVENTORY	Running total of used volume. Only decreases in value are counted. Use the DEADBAND option in Hach WIMS variable setup to eliminate erroneous readings due to noise or vibrations.

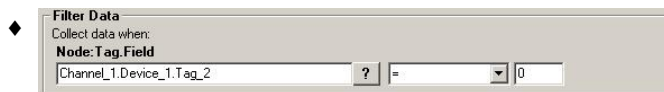
- Scale Factor** This is the value to multiply the result by when using parameter variable types. Commonly used to convert from one unit base to another. For example to convert gallons per minute (GPM) to gallons per day (GPD), set the scale factor to 1440 (1440 minutes per day).



All three fields must have numeric values or the word None (as shown). The Low Range and High Range will crop data from the source. For example to eliminate negative numbers from a particular tag, set the Low Range to 0 (zero) - this will get any values equal to or greater than 0 (zero). The Deadband is used for the statistic Inventory and will eliminate noise levels up to the value specified. For example, if you enter .5 next to Deadband, any value change of .5 or less, will be ignored.



- ◇ Start Time will set the beginning of the time slot for this variable.
- ◇ Stop Time will set the ending time for the time slot.
- ◇ Same Day as Start is only used by daily variables and it means the stop time is on the same day as the start time.
- ◇ Day After Start is also only used by daily variables and it means the stop time is a day after the start time.



Allows you to filter data based on another tag. For example, flow rate while not in backwash, but during backwash we don't want flow rates uploaded to Hach WIMS.

- ◇ Node:Tag.Field is the ProcessLink tag name you want to filter by, in our example it would be the backwash state.
- ◇ Middle field is the filter operator. This can be <, >, =, <=, >=, <>, or CYCLESTO.
- ◇ Last field is the filter value. So when the 'backwash state' is greater than 0 (not backwashing) then our system will get values. When the value drops to zero or negative, do not get values.

[Reference ID: 12771]

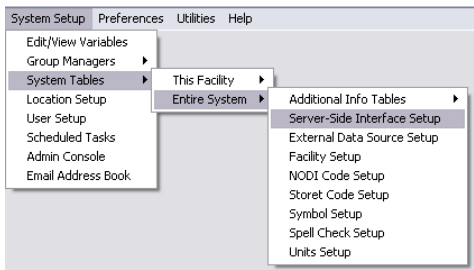
6.4 Using Interface Browser Q12804

Using the interface browser for **Hach WIMS Server-Side Interface to Hach SC1000 via ModBus TCP**.

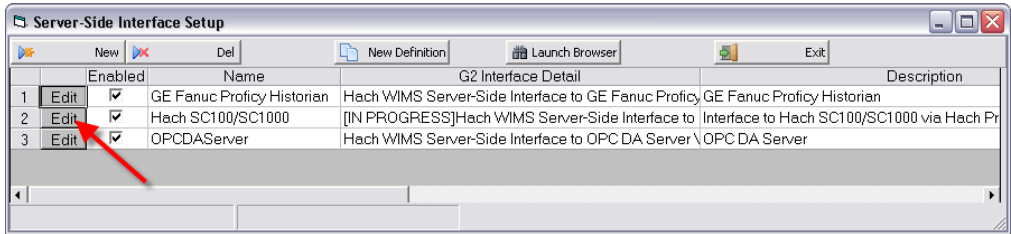
Step 1: While in the Hach WIMS client, select **Edit/View Variables** and click the **Interface** tab.

Step 2: The browser connection must be properly configured. In the Hach WIMS client:

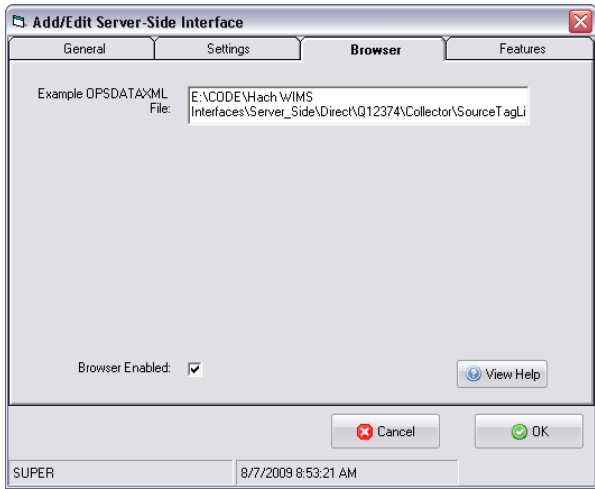
- Select **System Tables -> Entire System -> Server-Side Interface Setup**.



- Select the **Edit** button for the Hach SC100/SC1000 entry that you want to enable the browser for.



- Click on the **Browser** tab and enter the location of the exported tag list OPSDATAXML file generated in the Source Configuration section of the Interface. The browser will search this file for the available Tag Names. Make sure **Browser Enabled** is checked and click **OK** button.



You are ready to view tags from the HMI. Click on **System Setup** -> **View/Edit Variables** and click on the **Interface** tab.

Click the button with a ? (question mark) on it as shown below:

Options User Defined MDL Rules List Additional Info

Description Limits Optional Print Quality Control Equation **Interface**

OFF Interface To Hach SC1000/SC1000 Data Approval Level To Write With
 External Source FINAL APPROVAL

Help

TAG LDO Port 4 Addr: 02.Measurements.Percent Saturation ? **Statistic** AVERAGE **Scale Factor**

Start Time 00:00 (hh:mm) **Stop Time** 23:59 (hh:mm) **Filter**

Low Range None
High Range None
Deadband None

Filter Data
Collect data when:
Node: Tag.Field

The browser will load (your Tags will look different):

Source Tag Browser for Hach WIMS Client

File Help

OK Cancel Help Exit

Tag Name

- LDO Port 4 Addr: 02.Measurements.Oxygen Concentration
- LDO Port 4 Addr: 02.Measurements.Percent Saturation
- LDO Port 4 Addr: 02.Measurements.Temperature
- SC1000 - pHDsc Port 4 Addr: 04.Measurements.tgPhMeas
- SC1000 - pHDsc Port 4 Addr: 04.Measurements.tgTempDegCMeas

Search

Select the appropriate Source Tag and click OK.

[Reference ID: 12770]