

Product Information:

## IIRTIxx: InfinityQS™ Real Time Importer

### Overview

The *InfinityQS™ Real Time Importer* is an upgrade to the current CMM Integrator application. It incorporates all the features of the *InfinityQS™ CMM Integrator* and adds many new features. Beyond the import capabilities embedded in the CMM Integrator, this system includes the following additional features.

- **Specification Limit Test** – Each piece within a subgroup written to the database can be optionally tested against the Upper and Lower Specification Limit Values that are stored within the InfinityQS™ database.
- **Control Limit Test** – If a subgroup written to the database passes the Specification Limit Test, it can then be optionally tested against the specified Upper and Lower Control Limit Values stored within the database.
- **Process Event Logging** – If a subgroup fails the Specification Limit or Control Limit Test, a Process Event can optionally be written to database.
- **Email Notifications** – If a subgroup fails the Specification Limit or Control Limit Test, the system can send Email Notifications to SPC Mail recipients as defined within the InfinityQS™ database.
- **Field Concatenation** – When configuring mapping-definitions, textual information can be combined. For example, the Part Definition's Item value could be defined as **Imported as (%1)-(%2)**. During the import operation, if the first field of a record in the import file was **XYZ**, and the second field was **1**, the Part that is ultimately written to the database would be **Imported as XYZ-1**.
- **Field Calculation** – When configuring mapping-definitions, test values can be defined as calculations. For example, the Test Definition's value could be defined as **Imported as abs((%5)-(%6))**. During the import operation, the test value will be the absolute value of the difference between the numbers in column 5 and column 6. All of the mathematical functions available within the Data Entry Configuration's Equation Editor are available for use in the RTI configuration.
- **Subtest Support** – When configuring mapping-definitions, multiple values (columns) can be specified. For example, the Test Definition's Item value could be defined as **Imported as (%7);(%8);(%9)**. During the import operation, column 7 would be imported as subtest 1; column 8 would be imported as subtest 2; and column 9 would be imported as subtest 3.
- **Multiple Test Definitions** – In the CMM Integrator program, only a single Test Definition could be defined. *InfinityQS™ RTI* allows multiple test definitions to be assigned.
- **Specification Limit Definitions** – Import Files can now include specification limit information within its fields. If Specification Limits do not already exist for the subgroup, *InfinityQS™ RTI* will automatically write them to the database.

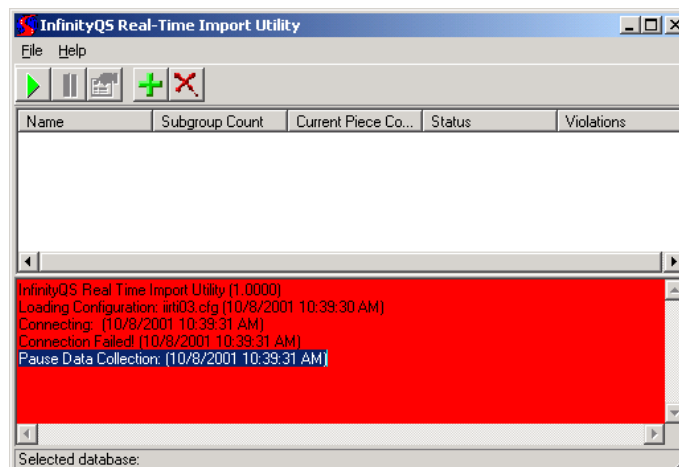
- **System Tray Status – *InfinityQS™ RTI*** presents an animated icon in the system tray (in the task bar next to the clock). The user always knows the status of the program without having to display the main window. If the Email Notification feature is enabled, an additional icon also shows the status of the *InfinityQS™* Email System.
- **Activity Status** – Click on the *InfinityQS™ RTI* system tray icon, and the main window displays all activity since the program was first started. Along with a tally and number of subgroups and pieces that have been collected since the current configuration was activated.

## Getting Started

Once *InfinityQS™ RTI* is installed on the machine, it can be run by selecting the **InfinityQS™ Real Time Importer** short cut located under the *InfinityQS™ International – Applications* folder under the Program Files folder of the Start menu.



The first time the program is run after installation, you will be required to register the program with your assigned license number. After that, you will briefly see the standard *InfinityQS™* Splash screen.


Since this is the first time the program has been run, it has obviously never been configured before. Therefore, the main window will turn Red and will present an error within the Activity Display. The error presented will look similar to the illustration below.

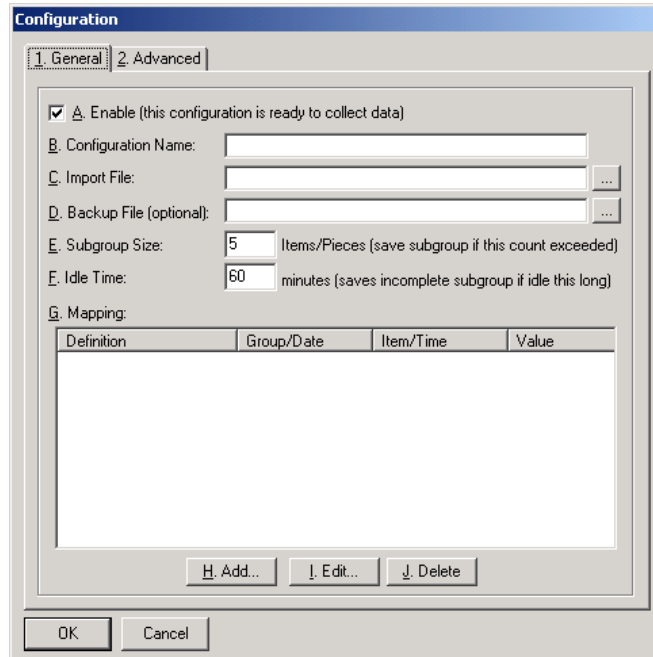


At this point, it is necessary to configure *InfinityQS™ RTI*.

### Configuration Properties – General Tab

The properties window can only be displayed while the system is paused. If the Activity Display is not colored red, select the menu command, **File-Pause** or click . Once paused, select the menu command, **File-Properties** or click .

If the program has never been run before, you will need to create a new configuration. Either select the menu command, **File-Add** or click . You will first be asked to connect the configuration to an *InfinityQS™* database. This procedure is no different from connecting to a database using any other *InfinityQS™* product. Once a database connection has been established, the Configuration window will be presented.



**Configuration Name** – RTI can have multiple configurations. Each configuration can collect data from a different text file. The can also be enabled or disabled separately.

**Import File** – When the import utility is active, each record in the import file extracted and compiled into subgroups and the resulting information written to the **Database**. To specify the import file, type a valid path and file or click . When the import utility is active, if the specified file does not exist the program will simply wait until it does. If however the specified file is invalid, an error will be displayed and the program paused.

**Backup File (optional)** – As records are extracted from the **Import File**, they are logged into this file. To specify the backup file, type a valid path and file or click . While this field is optional, if the specified definition is invalid, an error will be displayed and the program paused.

**Subgroup Size** – As records are read from the **Import File**, the import utility makes logical decisions when compiling subgroups. For example, if any Part, Process or Subgroup Descriptor information changes from one record to the next, a subgroup is stored and the new record becomes the beginning of a new subgroup. If nothing changes, this field tells the import utility to automatically store subgroups once all test characteristics within the subgroup reach this value, or once any test within the subgroup is about to exceed this value.

**Idle Time** – While active, if a subgroup has been partially collected from the import file, but no additional information arrives within this specified time frame, the incomplete subgroup will be saved automatically.

**Mapping** – This area determines how subgroups will be compiled while the system is active. Mapping deserves much attention and is described in details below.

## Configuration Properties – Advanced Tab

The screenshot shows the 'Configuration' dialog box with the 'Advanced' tab selected. The 'Field Separator' is set to 'Comma'. Under 'When Subgroup Violations occur...', the 'Send Email to SPC Email Recipients' checkbox is checked, with 'Mail Box...' and 'Configure Mail Server...' buttons. The 'Log Violations to the Database as Events' checkbox is unchecked. Under 'Subgroup Violation Types', both 'Test subgroup for Out-Of-Specification' and 'Test Subgroup for Out-Of-Control' are checked. The 'Maximum Errors Allowed' section has 'Specified...' selected with a value of '0', and 'Log Errors to File (iqsRTI80.log)' is checked. The 'Record Sampling' section has 'Number of Records to Skip...' set to '0', and 'Skip Records Before Collecting a Subgroup' is selected.

**Field Separator** – Select whether the source file is **comma** or **tab** delimited.

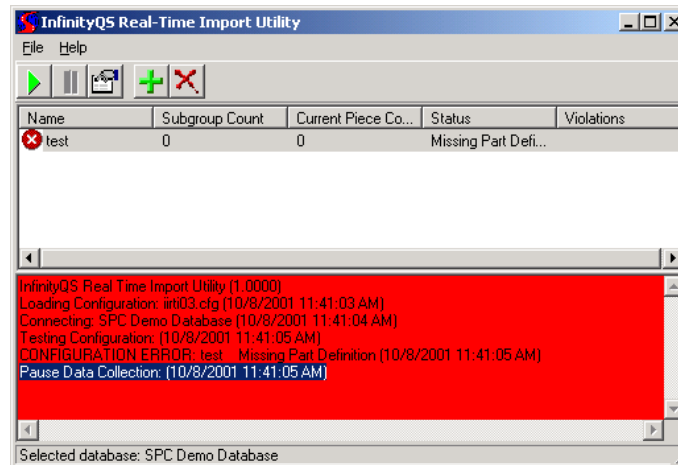
**When Subgroup Violations occur ...** – Use these check boxes to determine what action to take should a subgroup violation occur. The first time this program is used, be sure to click **Mail Box...** and **Configure Mail Server**.

**Subgroup Violation Types** – Use these check boxes to specify the types of tests that should be enabled. If both are checked, after the subgroup is saved to the database, the Specification Limit test is performed first. Only if that test is successful will the Control Limit Test be performed.

**Maximum Errors Allowed** – Setting this option will force RTI to save the data to the database even if errors are encountered (either a maximum number or unlimited). One possible scenario may be that the first 3 rows in the source file contain header information with the actual data beginning on row 5. To handle this situation, up to 4 errors would be allowed. Additionally, you can choose optionally have errors logged to a log file (iqsRTI80.log – located in the windows directory).

**Record Sampling** – Normally, RTI saves every record found in the source file. Enabling this option allows you to “sample” pieces in the file by specifying how many records to skip for each record saved. You must also specify whether the selected record *follows* or *precedes* the skipped records.

Once configured, click **OK** to close and accept the configuration settings. Whether OK or Cancel is pressed, the configuration is saved and the Import Utility goes active. If there are any errors, the Activity Display will return to Red and will indicate the type of error that occurred. After reviewing the error, it may be necessary to return to the configuration properties. If no error occurred, the Activity Display will show “Collecting Data” as the last logged activity and the display will be White.



The illustration above shows that after Configuring Properties, the configuration was Saved, the database was reconnected and the Configuration Test failed. Specifically, a Part Definition was not assigned. To continue, simply modify the configuration (in this case by specifying a Part Definition) and click OK.

## Mapping

Most Mapping Definitions items can be specified as either supplied from the buffer file or coming from the database. The items that can be specified during Mapping are:

- **Time** – This specifies the sample time that will be stored with the subgroup data. Generally this item should be defined in the buffer file. If not a static time can be specified or no time specified. If no time is specified then the time the subgroup data is written to the database will be used.
- **Part\*** – Part, if defined as coming from the buffer file, can be dynamic. Part can also be static and be defined as coming from the database. Part is a required definition.
- **Process\*** – Process, like Part can be either dynamic or static depending on whether or not is defined a coming from the buffer file or from the database. Process is a required definition.
- **Job, Lot, Split** – These are a special category of subgroup descriptors that only accept numeric values in the range of 0 to 1,999,999. These fields can only be specified as coming from the buffer file.
- **Employee** – Employee, like Part can be either dynamic or static depending on whether or not is defined a coming from the buffer file or from the database. Employee is not a required definition.
- **Subgroup Descriptor** – Subgroup Descriptors, which are additional fields that are tagged to a subgroup, can be either dynamic or static depending on whether or not they are defined as coming from the buffer file or from the database. Subgroup Descriptors are not required. If they are defined, changes in s subgroup descriptors data value will cause the subgroup to be saved. This is regardless as to whether or not the Subgroup Size requirement has been met.
- **Piece Descriptor** – Piece Descriptors, which are additional fields that are tagged to a piece or item, can be either dynamic or static depending on whether or not they are defined as coming from the buffer file or from the database. Piece Descriptors are not required.

- **Serial Number** – This is a special type of piece descriptor that only accepts numeric values in the range of 0 to 1,999,999. This field can only be specified as coming from the buffer file.
- **Test\*** – Test definitions include both a Test Name, which can come from buffer file or database, and a Test Value that must come from the buffer file. At least one test definition is required.
- **Specification Limits** – Specification limits can also be imported with the test data. Specification limits can only be defined if a single Test definition is used. Please note that specification limits from the source file will only be stored if they don't exist in the database. Specification limits stored in the database will not be overridden by imported specification limits.

**Note:** Items marked with an \* are required for a valid configuration.

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