



# Fast Data Integrity Check

## User Guide

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### **Important Notice**

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# Fast Data Integrity Check Features

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Fast Data Integrity is a SQL Server-specific utility that performs Sage 300 (Accpac) integrity checking in a fraction of the time taken by the standard Sage Administrative Services function.

Tests on sample data show 10x performance gains, tests on moderate sized databases show 100x performance gains, and tests on large databases show 1000x performance gains. In addition, the program is also "stand-alone" – which means that you do not need to install Sage 300 on the computer running Fast Data Integrity.

The larger the database, the greater the performance gain. Fast Data Integrity performs tests on Sage 300 AP, AR, AS, BK, CP, CS, GL, GP, IC, MT, OE, PM, PO, RA, TX, and UP applications, as well as TaiRox CRM and Collections and TaiRox Productivity Tools. The integrity check also performs some cross-application checking.

**Note:** Some errors reported by the Sage 300 Data Integrity Check that do not affect daily operation are not reported by TaiRox Fast Data Integrity. See [Integrity Check FAQs](#).

## Why Use TaiRox Fast Data Integrity Check for Sage 300?

TaiRox's Fast Data Integrity check goes straight to the SQL database – immediately improving performance and by-passing Sage's data "auto-correction" – and providing simpler data filtering.

There are four good reasons to use TaiRox Fast Integrity:

- **1 – to check Sage 300 data integrity fast.**

Fast Integrity Check runs from 100 times to 1000 times faster than Sage 300's data integrity check, reducing time to solve many problems.

- **2 – to improve accuracy of information from Report Writers and Business Intelligence programs.**

Fast Integrity Check pulls data directly from the database, rather than through Sage 300 objects, and shows where data is inconsistent.

Many Sage 300 objects will "auto-correct" data as it is read, even to the extent of adjusting "formatted and unformatted" versions of some keys that could be used to join tables. This kind of auto-correction means that only data accessed through the objects is guaranteed to be consistent.

- **3 – to eliminate noise that prevents you from finding data issues.**

There are several kinds of noise – for example:

- Numerous "locked period" warnings from 5 year old data.
- Hundreds of "missing user" messages because a user was deleted instead of being made inactive.
- Dozens of "discount taken exceeds ..." messages during mid-month operation that are fixed operationally at month end.

- **4 – to expand or limit integrity checks with a useful set of options.**

- Check all transactions or transactions for 1 or more recent fiscal years.
- Include/exclude inactive records.
- Check/ignore missing required optional fields.
- Include/exclude completed transactions.

## Interactive or Scheduled Operation

TaiRox's Fast Data Integrity product includes two separate data integrity check programs, one runs from a console and the other can run as a Windows scheduled task.

*This document describes how to set up and run the Fast Data Integrity program as a Windows Scheduled Task.*

It also shows you how to use the Fast Data Integrity Console.

- As a Windows Scheduled Task

"Fast Data Integrity" is designed to be run every night as a Windows Scheduled Task on multiple Sage 300 databases.

***If you run Fast Data Integrity as a scheduled task:***

- It must be installed in the Sage 300 environment.
- It will not repair databases.

- Using the console

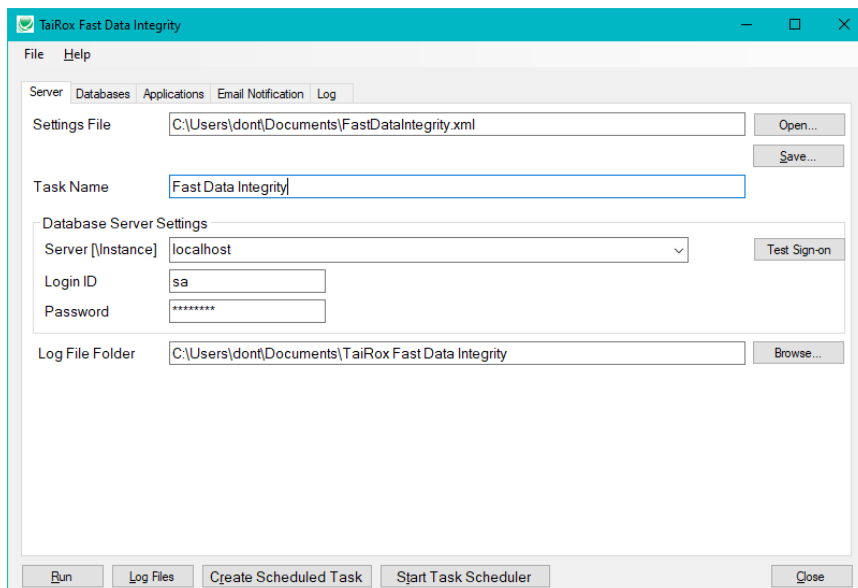
You can run Fast Data Integrity interactively on a single Sage 300 database.

***If you run Fast Data Integrity from the console:***

- You do not have to run the console in a Sage 300 installation. However, if Sage 300 is installed, the program will perform Administrative Services (AS) tests.
- You can select an option to repair orphan records that it discovers.

## Setting Up Fast Data Integrity

Launch Fast Data Integrity from **Start Menu > All Programs > TaiRox Software > Fast Data Integrity**, the following window will appear.



**Note:** The console will appear instead if you choose “**Fast Data Integrity Console**”.

You must connect to the Sage 300 database to run Fast Data Integrity, but Sage 300 does not need to be installed on the computer running the program.

## Server Tab

**Settings File:** All of the settings documented in this manual are saved in an XML file (passwords are encrypted). This lets you run Fast Data Integrity as a Windows Scheduled Task – with the XML file passed as a parameter to the Fast Data Integrity exe program.

**Task Name:** The name is used for notification emails and to help document the log files.

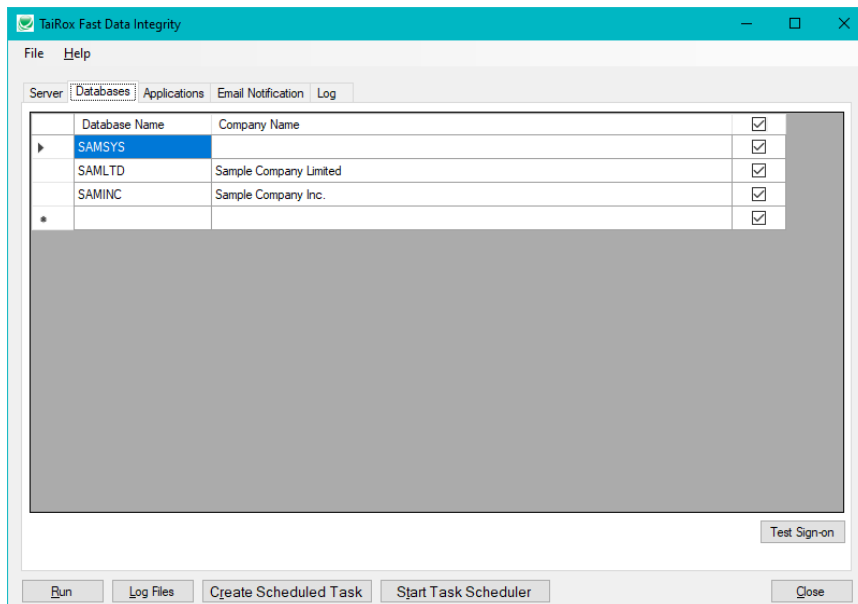
**Database Server Settings:** Enter in the name of the SQL Server instance where the Sage 300 databases are stored. You will need to know a SQL Server login name and password – typically the same one that you used in Database setup.

Click the Test Sign-on button to check access.

**Log File Folder:** This is the location where Fast Data Integrity will place its integrity log files. Make sure that this is a directory that the Windows user running Fast Data Integrity has write access to.

## Databases Tab

When you connect to a SQL Server instance, Fast Data Integrity displays all databases on the server that your SQL Server user ID has permission to view.

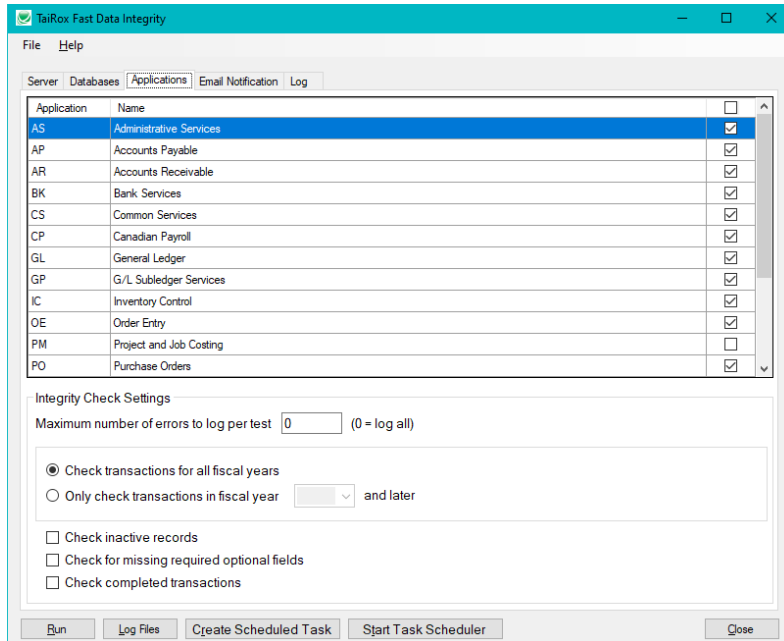


Select each of the Sage 300 databases that you want to check. Again, you can test signing on to these databases by clicking the Test Sign-on button.

## Applications Tab

Select the applications that you want tested for the databases you've entered.

If you want to have different applications tested for different databases, you will need to set up different jobs.



### Integrity Check Settings:

#### Maximum number of errors to log per test

Limiting the number of errors logged per test is a way of eliminating noise in the log. If you have 1,000 errors on test 1 and 1,500 errors on test 2, you may wish to only see the first 10 errors of each type. In many situations these errors are of the same type – for example, a user has been deleted or a period has been locked.

#### Test Transactions in all fiscal years / in fiscal year *nnnn* and later

The purpose of this setting is also to eliminate noise.

There are situations where many errors exist in transactions from ancient times that will never be fixed. Showing these messages may interfere with your ability to spot current errors.

Restricting the transaction tests to a particular set of fiscal years is unlikely to significantly affect performance.

#### Check inactive records

#### Check for missing required optional fields

#### Check completed transactions

These options let you expand or limit the scope of the integrity checks. Note that Check Completed Transactions applies only to I/C, O/E, and P/O transactions.

## Email Notification Tab

Email notifications can be turned on or off. You can use any SMTP server accessible from the server with credentials as you would set them up in an email client such as Outlook.

The settings shown below use notifications@tairox.com, a Gmail account for sending out notifications. (Note that this is not a publicly available email account.)

Select the Email Notification checkbox, enter your email server and account ID settings, and click the Send Test Email button to check that your settings work.

You will need proper credentials that work from the computer running Fast Data Integrity.

The screenshot shows the 'Email Notification' tab in the TaiRox Fast Data Integrity application. The 'Email Notification' checkbox is checked. The settings are as follows:

- Mail Server (SMTP): smtp.gmail.com
- Port Number (SMTP): 587
- Enable SSL:
- Account Name: notifications@tairox.com
- Password: [Redacted]
- Mail To: [Empty]
- Mail From: notifications@tairox.com
- Subject: %Task %DateTime %Status

Buttons at the bottom include 'Reset Email Settings' and 'Send Test Email'. At the very bottom of the dialog are 'Run', 'Log Files', 'Create Scheduled Task', 'Start Task Scheduler', and 'Close' buttons. Below the dialog, there are two input fields for 'Maximum Delay Time' (set to 0) and 'Delay Between Retry Attempts' (set to 1), both with '(0 - 999 Minutes)' and '(0 - 99 Minutes)' respectively.

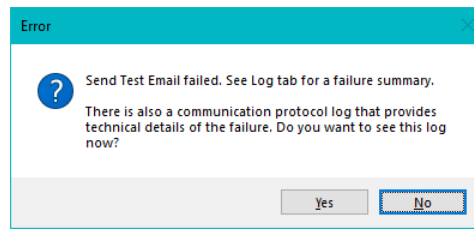
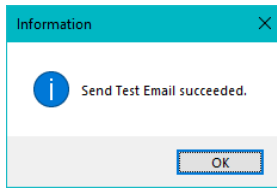
**Mail To:** You can include any number of email addresses, separated by commas or semi-colons.

**Subject:** Use any subject line you want.

The codes %Task, %DateTime and %Status will be replaced respectively by the Task Name on the Server Tab, the Date and Time that the job completes and the Status of the job (SUCCESS or FAILURE). For compatibility reasons %Job will be treated the same as %Task.

The Reset Email Settings button will return the settings shown here, with the appropriate password for notifications@tairox.com.

**Send Test email:** Click this button to test email settings. One of the following dialogs can appear depending on whether the test was successful. If the test fails, check the log file by clicking the Yes button in the error message.



### Note regarding “Enable SSL” if unsupported by the SMTP server

If you select the “Enable SSL” checkbox, the program will first try to send a test email securely. If it does not succeed, it will try to send a test email insecurely. The program will display an error message if the secure test fails, but the insecure test is successful.

If this message appears, it means that:

- Your SMTP server does not support current email communication styles on the port provided. (The "Enable SSL" checkbox has different meanings for different email sending mechanisms, particularly older ones.)
- You should uncheck “Enable SSL” to send emails without SSL protection.

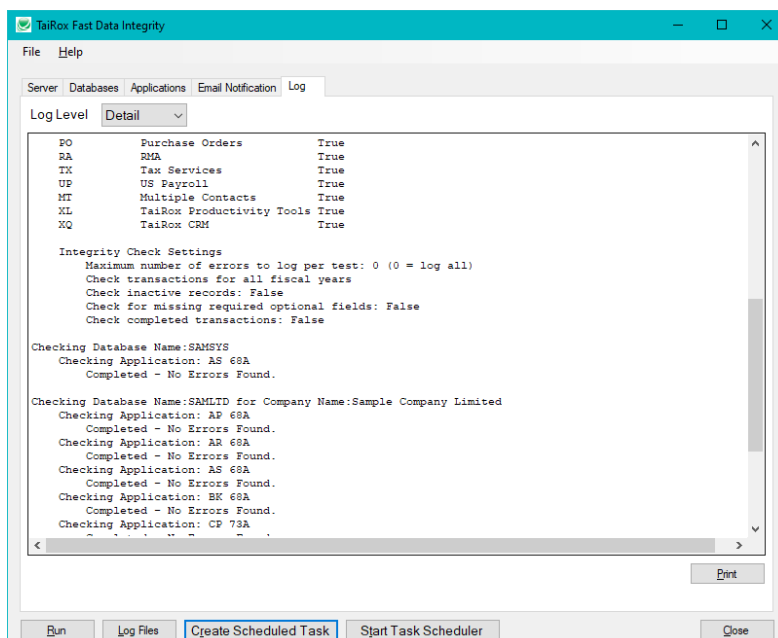
## Log Tab

You can run Fast Data Integrity interactively by Clicking on the Run button at the bottom of the form. The Log window will report the progress of the job.

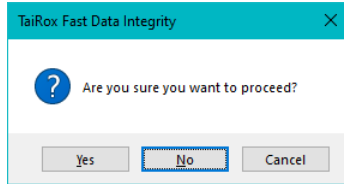
Once the job is complete, you can click the Log Files button to see the log file directory. If email notification has been turned on, the integrity log will be emailed as an attachment.

Select the Log level (Summary or Detail) before you run the integrity check to display the level of detail that you want to display on screen.

To see ALL the integrity check details, click the Log Files button to view the log files folder, and then open the most recent log file.



A warning message will appear when you click the Run button. Click the Yes button to proceed.



## Tests Performed

Click the Log Files button to view the log files folder, and then open the most recent log file. The log file contains a description of each test that it performs. The tests are of several types.

- Foreign key tests are important because the keys are used to join tables together for reporting. Missing keys may cause data to be missed in reports. Fast Data Integrity checks all of these relationships.
- Orphan tests are important because some business intelligence tools will pull this inaccessible data into their data-cubes. Fast Data Integrity checks for all possible orphans.
- Fast Data Integrity checks all optional fields for validity.
- Several tests check that detail numbers add up to header totals.

## Create Scheduled Task

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Fast Data Integrity will create a basic task with that can be managed with the Task Scheduler. The task will have the Task Name on the Fast Data Integrity Server tab.

We provide this feature to ensure that the Task Scheduler's Action tab will be populated with the path to the Fast Data Integrity program and also populated with the current XML path and name. These are the most common errors made by Sage 300 consultants not familiar with the Task Scheduler.

**Important Notes:** You **MUST** edit the task created by Fast Data Integrity in the Windows Task Scheduler to provide credentials for the task. Otherwise, it will not run. Other important options also need to be set up properly.

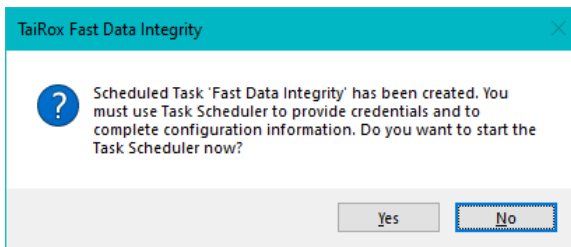
Consult Task Scheduler documentation for important details beyond the scope of this document.

## Using the Create Scheduled Task Button

Fill in the fields for Fast Data Integrity and run it manually before creating the scheduled task to ensure that the XML file is properly set up.

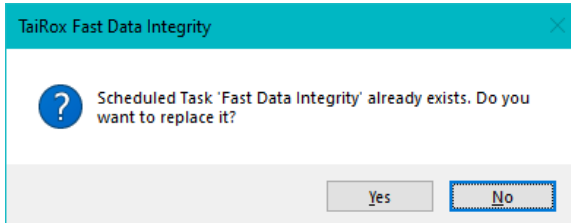
- **Click the Create Scheduled Task button to create the task.** The following message will appear:





- Click Yes to start the Windows Task Scheduler.

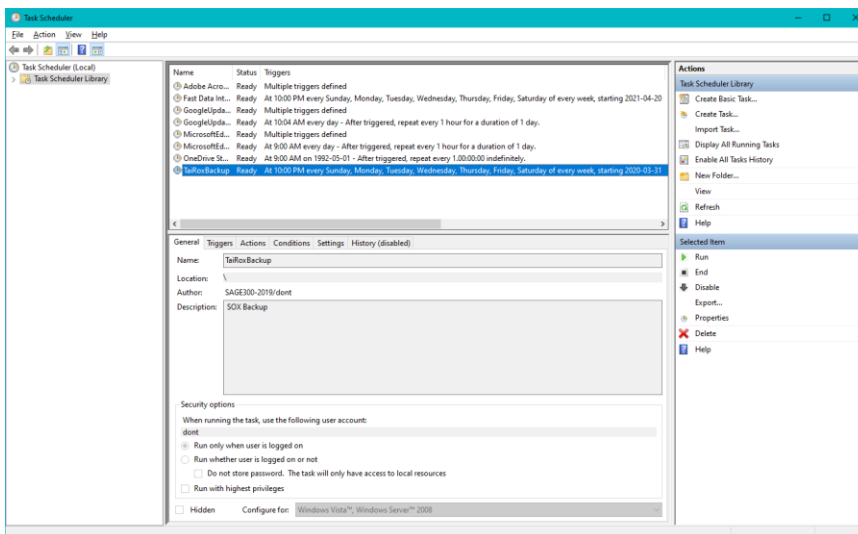
If a task with the same name already exists, the program will warn you that the task exists.



**Note:** Replacing the task means not retaining any existing task settings:

- Click the **Start Task Scheduler** button to open the Task Scheduler window.

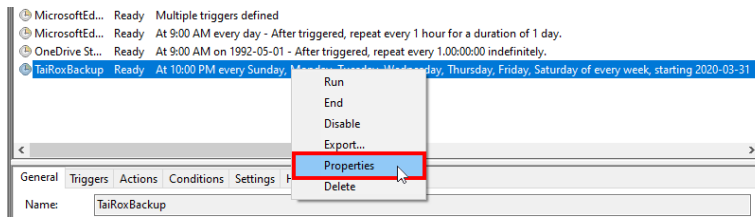
The Task Scheduler varies in appearance from one version of Windows to another.



- Click the **“Task Scheduler Library”** folder in the left panel, and then select the task you just created in the middle panel.

- Right-click the task entry and select **Properties** to edit the task settings.

**You MUST edit the properties to add the task user account password.** When you save the properties, the program will ask you to provide the password for the task user.



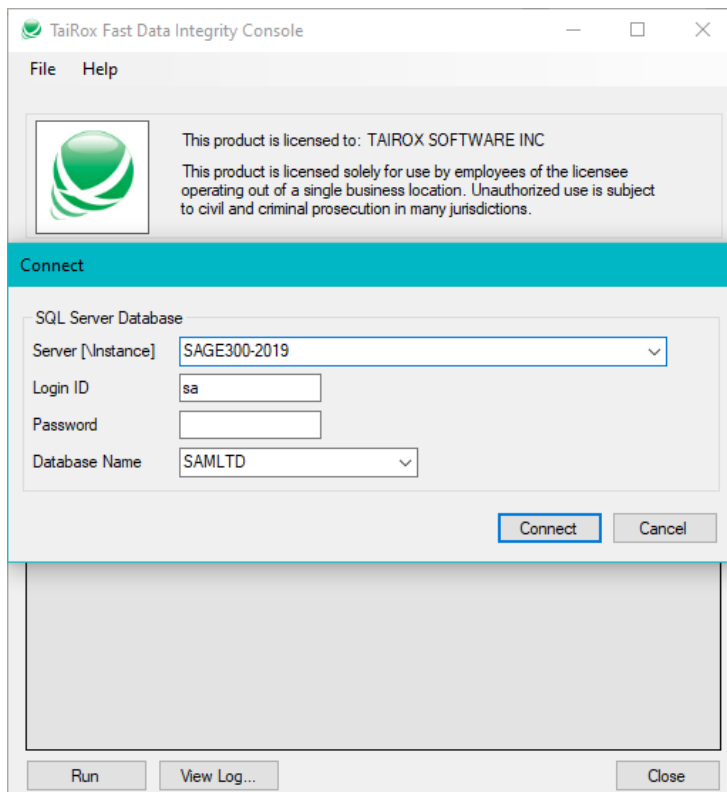
If the task does not run properly after set up, the problem is usually that some authentication has failed.

#### Some hints:

- The scheduler requires a user and password. Create Scheduled Task created the task with a task user, but it did not add the task user's password.  
You must edit the task properties to specify the password (when you click Save).  
You can also change the task user when you edit the task properties.
- An experienced Windows IT person should be able to solve any problems.
- Your error has occurred before – do an internet search specifying the error message.

## Running Fast Integrity Check Console

Launch Fast Data Integrity from **Start Menu > All Programs > TaiRox Software > Fast Data Integrity Console**, the following window will appear.



#### SQL Server Database:

Enter in the name of the SQL Server instance where the Sage 300 databases are stored.

Enter a SQL Server login name and password – typically the same one that you used in Database setup.

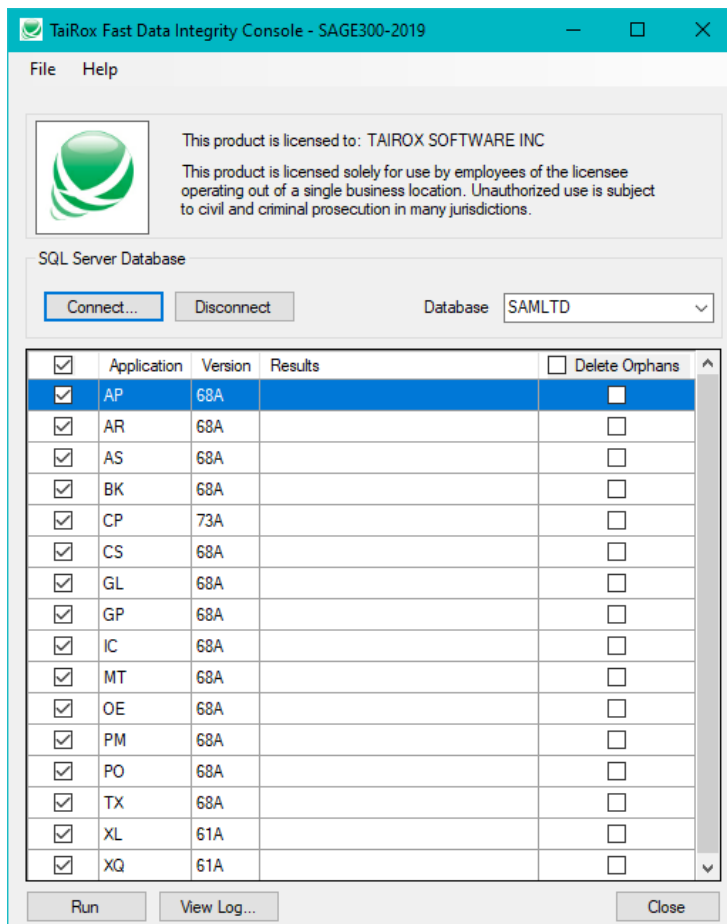
Select the database you want to check from the dropdown list.

- The list will include all databases on the server to which the login ID has access.
- The login will fail if the login ID or password is invalid.

Click the Connect button to continue.

## Select Applications

Select each of the applications that you want tested in the current database. You can also choose to fix orphan records for any of the applications that you select.



Click the Run button to check and/or fix the selected applications.

Click the View Log button to view the log files.

# Troubleshooting Scheduled Task Issues

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## Check the following settings for the scheduled windows task:

- If the path to the XML file has blanks and there are no quotes (") around the path+file name.
- That the user account for the task has logged onto the machine running the task and has a user profile.
- That you selected "Run whether user is logged on or not".
- That other task settings – e.g. run with highest privileges – have been properly set up.

**Note:** Make sure that your user account can run Fast Data Integrity interactively and can run a scheduled task. Even if using an Admin account, you may have to change Active Directory security settings to run the Fast Data Integrity scheduled task with your account.

- Whether another task for FastDataIntegrity.exe – created during testing – is already running. (Delete with Task Manager.)

## Diagnosing Issues with Scheduled Tasks

If you are setting up as a Windows Scheduled Task, a good strategy is to set up a task and run it on a small test database first – such as SAMLTD. If that works, then set up your production database.

- Set up Fast Data Integrity for the small test database (e.g. SAMLTD).
- ***Make sure that Fast Data Integrity works interactively before you set up the scheduled task.***
- Create a task using the Create Scheduled Task button in Fast Data Integrity to make sure that the paths are correct for the program and for the settings XML file. Incorrect path names are often the issue for tasks.
- Run the task from the Task Scheduler and see if it runs properly. This will prove that you have correct file names (with quotes if blanks are in paths).
- Set up the task to run in 5 minutes, then exit the Task Scheduler and log off. Check to see what happened in 6 minutes.
- Look at the Fast Data Integrity logs.
- Check the history of the task in the Task Scheduler. If tasks are still running, delete them.

Now set up the real databases and schedule tasks to run overnight. Come back and check the next day.

- If the notification emails didn't arrive, you'll have to see where they are being blocked.

## Example of Settings and Permissions Required to Run a Batch File from a Scheduled Task

See [Fix Scheduled Task -- from Help Desk Geek](#) for an example of the permissions and settings to check to fix a scheduled task that runs a batch file (\*.bat). If you can't run a batch file with your account, you cannot run Fast Data Integrity.

# Fast Data Integrity FAQ

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Read the user guide carefully in addition to reviewing this FAQ. The user guide provides specific guidelines for configuring Fast Integrity Check.

## Installation and Upgrade Issues

**Q: Where can I get release notes for Fast Data Integrity Check, and what will they tell me?**

*A: Click the [Release Notes](#) link in the upper left hand corner of the Fast Data Integrity product page on the TaiRox web site.*

*Among other things, the Release Notes will tell you about recent fixes and provide program compatibility information. For example:*

Build 2020-04-13 (7408)

Build 2020-04-10 (7405)

- Fixes a false positive error report that can occur for ICILOC Quantity Committed in some environments.

Build 2020-01-23 (7327) - Provides support for Orchid RMA up to RMA 2020.

## Email Notification Issues

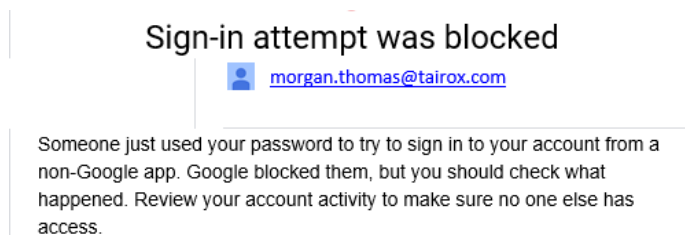
### **Note regarding “Enable SSL” if unsupported by the SMTP server**

If you select the “Enable SSL” checkbox, the program will first try to send a test email securely. If it does not succeed, it will try to send a test email insecurely. The program will display an error message if the secure test fails, but the insecure test is successful.

If this message appears, it means that:

- Your SMTP server does not support current email communication styles on the port provided. (The "Enable SSL" checkbox has different meanings for different email sending mechanisms, particularly older ones.)
- You should uncheck “Enable SSL” to send emails without SSL protection.

**Q: Why did Gmail reject my login credentials from Fast Data Integrity.**



*A: The server login was rejected because it didn't come from a “Google” application.*

If you are using a Gmail server for email notifications, your server administrator can change the access restrictions to let Sox Backup send notifications. Refer to Google support for details.

See Google support – for example,

<https://support.google.com/cloudidentity/answer/6260879?hl=en>

### Q: What port number should I use for the SMTP server?

A: A “typical” setting would be port 465 with SSL enabled. See the note, above, regarding “Enable SSL”.

The default SMTP server ports are as follows:

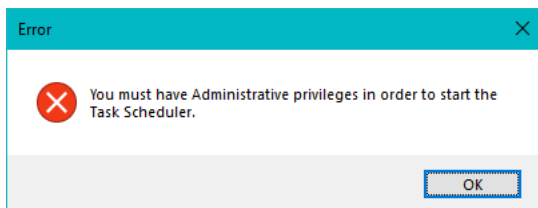
Default Ports:	Server:	Port:
SMTP Server (Outgoing Messages)	Non-Encrypted	25 (or 587)
	Secure (TLS)	587
	Secure (SSL)	465

Ports 465 and 587 are intended for email client to email server communication – sending out email using SMTP protocol.

Port 25 is generally used for communication between mail servers.

## Scheduled Task Issues

**Q: I’m running Windows 10. I get this message when I click “Start Task Scheduler”, and a similar message when I try to create a scheduled task. I am an administrator on the server, and I can start the Task Scheduler from the Windows Search field. What’s wrong?**



A: Try running Fast Data Integrity as an administrator. Go to Program Files (x86), right-click *FastDataIntegrity.exe*, and select Run As Administrator.

### Q Why does Fast Data Integrity hang when run as a scheduled task?

A: Check [Troubleshooting Scheduled Task Issues](#) in this guide.

When the program is executed, it uses a command-line parameter (an XML file name) to provide all configuration information for running.

If the XML filename parameter is missing from the command-line, the program starts and waits for you to provide further input – however, the Fast Data Integrity screen is hidden. If you open the Task Manager, you can see and end the task.

If the parameter is there but invalid, the program will generate an error and close (if running from the Task Scheduler).

**Q: Why did the scheduled task for Fast Data Integrity suddenly stop working?**

*A: Check the errors logged for the Windows task and try to run Fast Data Integrity interactively to confirm that it still works. For example, one common reason for a sudden failure is that the license has expired.*

Also check [Troubleshooting Scheduled Task Issues](#) in this guide.

**Q: FAIL: System Error. Exception occurred at Fast Data Integrity. Error='The requested security protocol is not supported.'. Please ensure to install all the latest Windows Updates to enhance your computer's security and performance.**

*A: This error message originates from the .NET framework. You can Google the message to see suggestions from other users.*

Check the versions of .NET Frameworks on your system and check that TLS 1.2 protocol is enabled on your server.

Note that although Fast Data Integrity uses .NET Framework 4, you also require .NET Framework 4.5 be installed if you are using some of the newer security protocols (TLS 1.2 specifically). Many websites now require that TLS 1.2 or later be used in order to communicate with them.

Install all Windows updates for your platform. For example, Googling shows that early versions of Windows Server 2012 SR2 and Windows 8 had TLS1.2 issues with other applications, typical support / update article:

<https://support.microsoft.com/en-ca/help/3140245/update-to-enable-tls-1-1-and-tls-1-2-as-default-secure-protocols-in-wi>

**Q: I changed several settings in Fast Data Integrity, then resaved the XML file under a new name. The name is correct in the UI, but the task continues to run as it did before the changes. What's going on?**

*A: The scheduled task is still using the previous XML file. You have to edit the scheduled task in the Task Scheduler and specify a new file name on the Actions tab for the task properties.*

## Integrity Check Issues

**Q: Why did the data integrity check miss some errors reported by Sage 300 Data Integrity Check?**

*A: Some errors reported by the Sage 300 Data Integrity Check that do not affect daily operation are not reported by TaiRox Fast Data Integrity.*

For example:

Fast Data Integrity does not check the ICSTATI table for non-existent items although the Sage 300 integrity program does. This is because items in statistics tables that no longer exist in inventory do not affect IC operations – and you may want to retain statistics for items previously sold even though you no longer sell the items and have deleted them.

Sage 300 allows the deletion of vendors, items and other entities, even though these entities may be present in "historical data", such as old posting journals or statistics tables. However, Sage 300 reports deleted items as errors because it validates these items during the integrity check in the same way that it validates items during data entry.

### **Q: What are these optional field errors and how do I fix them?**

```
Checking optional field count in table PMCONTT - Contracts...
Contract [1]: The number of optional fields is incorrect.
Contract [2]: The number of optional fields is incorrect.
Contract [3]: The number of optional fields is incorrect.
Contract [4]: The number of optional fields is incorrect.
Contract [5]: The number of optional fields is incorrect.

Checking optional field count in table PMCATGT - Contract Categories...
Contract Category [1, 32, 1000]: The number of optional fields is incorrect.
Contract Category [1, 32, 2000]: The number of optional fields is incorrect.
Contract Category [1, 64, 1000]: The number of optional fields is incorrect.
Contract Category [1, 64, 2000]: The number of optional fields is incorrect.
Contract Category [1, 96, 1000]: The number of optional fields is incorrect.
Contract Category [1, 96, 2000]: The number of optional fields is incorrect.
```

**A:** *Sage 300 has a header record for optional fields that includes a count of the number of optional field detail records for each optional field. If this count has been corrupted, you may see error message like this when you run TaiRox Fast Data Integrity.*

You can update and fix these counts by running the Update Optional Field Counts utility in TaiRox's Optional Field Manager. This utility recalculates and updates the optional field detail counts to correct the problem.