

TaiRox™ Memo

Fixing Sage 300 Data Integrity Errors

Summary

This document introduces Fast Data Integrity and describes different types of application errors that can occur in a Sage 300 company database. We describe how consultants or users fix the errors. The examples are representative, not a complete list.

Why Fast Data Integrity: A Brief History

When Sage 300 was originally published as "ACCPAC for Windows", a program attached to each entity (e.g., account, customer, vendor, item, etc.) checked the validity of data as it was being entered and stored in one or more rows in one or more tables in the database. The ACCPAC developers "dual-purposed" these data-entry checking programs by calling them from the "data integrity check" program used to check all important tables in the database.

Advantage: The validity of the data was always checked the same way. **Disadvantage:** The data integrity checking program fetched data from the database one entity at a time.

As databases grew larger in size, fetching entities one at a time meant that the data integrity checking program took a long time to run: first hours and then days. For many companies, Sage's data integrity checking program became impractical to use. To address this problem, in 2013, TaiRox introduced Fast Data Integrity, turning hours of running time into minutes.

Common Data Integrity Errors

User Does Not Exist

This error arises when a Sage 300 user is deleted and that user is referenced in tables. For many years, the only database references to users were in "audit stamps". However, recent versions of Sage 300 added fields such as "Entered by User" for orders, and several third-party products stored user IDs. You may find that reports referencing a non-existent user might not work as expected. **How to Fix:** Add the user ID back to Sage 300 and make it inactive so the user cannot log in.

Orphan Records

Orphan records are inaccessible records that exist in database tables because something went wrong or a procedure was done incorrectly. For example, orphan order detail records can be created if an order header is accidentally deleted using SQL Server. **How to Fix:** First, you have to examine the specific situation. In the above example, you might want to recreate the order rather than blindly delete the orphaned details. Or, if orphans have existed for months or years, you can delete them by running TaiRox's Fast Data Integrity Console, or use Sage's slower Data Integrity Check program with the fix option turned on.

Item Does Not Exist

Companies often evolve over time to have hundreds or thousands of inventory items that they no longer sell and wish to delete, but can't – because the Sage user interface will not allow them to delete an item that is in use. Someone then deletes the item rows directly in SQL Server, creating this error in orders, purchase orders, and other – typically older – entities. **How to Fix:** The easiest fix is to add missing items back into Sage 300, and let your Item Finder fill up with unused items. A better solution can be to clear history using TaiRox Fast Clear History or Sage's slower operation. After running clear history, you can probably delete many more items. Another solution some companies try is to combine the old items using the Item Number Change program.

Mismatched Totals

The sum of the detail lines may not match the total stored in the header. This can occur for many header-detail entities, such as orders, receipts, invoices, and purchase orders. **How to Fix:** Sage's Data Integrity Check program will "fix" these errors by setting the header total to the sum of the detail lines. We recommend that the entities with errors be examined in detail first. For example, if some action has already been taken on an order that refers to the head total (for example shipping confirmation) then that action may also need to be adjusted.

Illegal Character in Field

These errors can occur if data is written directly into the database – for example, by copy and paste operations in external systems. **How to Fix:** Use the Sage program to edit the entry and correct the field. Note that the illegal character may be "invisible", so you might need to clear the entire field and then type the visible characters again.

Disastrous

An extremely rare data corruption may cause Sage 300 to be unusable. For example, it may no longer be possible to post an order. In a worst-case scenario, the first symptom might be that a particular order cannot be posted - but over days this error "cascades" to include other orders, and eventually all orders. **How to Fix:** If such a data corruption occurs, there are only two ways forward: restore a known good backup copy or have an expert fix the database tables directly. Manipulating the database can be impractical and risky. In addition, if a database has a large number of integrity problems, data manipulation will take longer to do and to check. **How to Be Prepared:** Run a data integrity check every day as part of your backup process and check that it reports no errors. In the event that a backup is required, you will know that it has passed the integrity checks and will be usable. Finding out as soon as data corruption occurs limits damage and repair costs.

Taking Action

Most Sage Authorized Resellers are familiar with TaiRox products and can assist you with Fast Data Integrity setup and with diagnosing any errors that it reports.