

## Title: Excel Recalculation.

*Abstract: How to optimize re-calculation..*

<b>Product</b>	EasyReporting Toolset
<b>Suite</b>	General
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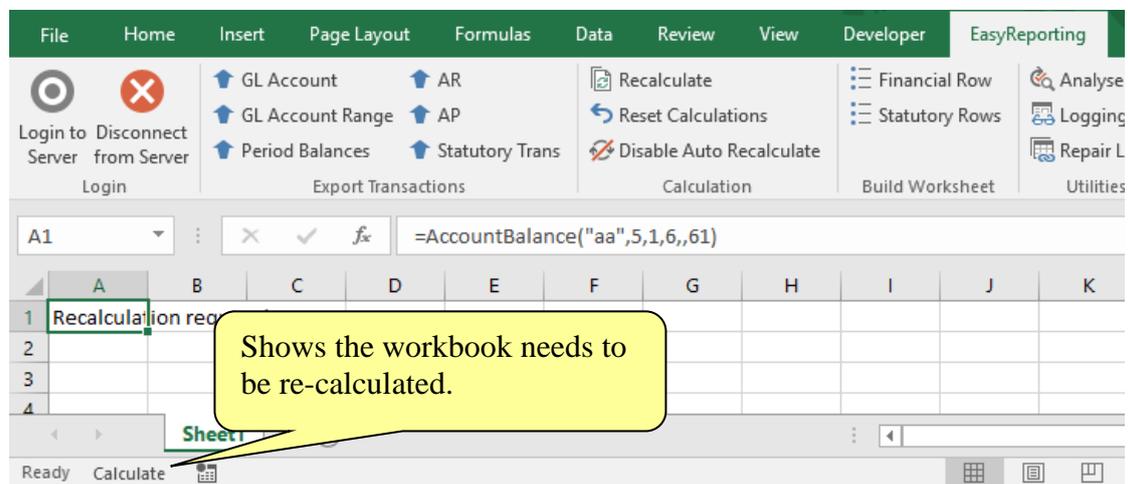
## General

Calculation is the process of computing formulas and then displaying the results as values in the cells that contain the formulas. By default, Microsoft Excel automatically calculates all open workbooks. However, you can control when calculation occurs.

**When are existing formulas recalculated?** Excel recalculates those cells that are dependent on other cells that contain values that have changed. This type of calculation helps to avoid unnecessary calculations. Excel also calculates workbooks each time they are opened or saved.

When using EasyReporting you will want to control when Excel calculates formulas. For example if you create a worksheet with hundreds of formulas, you will find that operations can slow to a snails pace while Excel does its thing. It is therefore necessary to change Excel's calculation mode to Manual. To change how or Excel calculates follow the instructions below.

NOTE. When you are in Manual calculation mode, Excel displays *calculate* in the status bar when you have uncalculated formulas as shown below.



## Manually changing when a worksheet or workbook calculates

1. In Excel, on the **Formula tab**, click on the large  icon labelled Calculation Options.
2. On the dropdown, click **Manual**.
3. Click to clear the **Recalculate before save** check box if you want no automatic recalculations at all.

## Getting EasyReporting to set the recalculation mode

EasyReporting has a checkbox on the “Connection Setup” when the “Set connection to Manual at login” is enabled, EasyReporting will disable the auto calculation feature at login and restore it to automatic when Excel is closed or the user logs out from the server.

## Short Cuts

- *F9* Calculates the formulas in all open workbooks (all versions of Excel).
- *Shift + F9* calculates only the formulas in the active worksheet. Other worksheets in the same workbook won't be calculated (all versions of Excel).
- *Ctrl+Alt+F9* Forces a full calculation of the data in all of the open workbooks (Excel 2000 and later).
- *Ctrl+Alt+Shift+F9* Forces a full calculation of the data in all of the open workbooks after checking the dependencies between formulas (Excel XP and later).

## What is the Recalculate option on the EasyReporting menu?

This will force a full recalculation of the date in all open workbooks.

## Calculation Optimisation?

Microsoft recommends that in order to optimise calculation times:

1. **Sheet naming and links**  
Minimize the number of links between worksheets and workbooks. Raw data, or data in supporting cells, should be contained in sheets that are first in alphabetical order within a workbook. Because Excel recalculates sheets based on alphabetical order, the sheets that have the most dependent cells on them should come alpha first, and sheets with the formulas that depend on them alpha last. In other words, sheets with cells that support cells on other sheets should come first, while sheets that don't support other sheets should be last.

Also, start the sheet names with letters not numbers; it sounds strange but the calc order with "001", "002", ..., "021" etc can be erratic.

2. **Excel 'prefers' its pages to calc left to right and top to bottom**

Bear in mind this rule, but don't get too carried away. You just need to keep the calc order across the page as simple as possible. I.e. avoid stating in the middle, then jumping up, then a bit on the bottom right, then some more middle etc.