User Guides

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How to install TMS VCL Grid Excel bridge.

User Guide

How to use TMS VCL Grid Excel bridge.

TMS VCL Grid Excel bridge Install Guide

To install TMS VCL Grid Excel bridge,you need to install first TMS VCL UI Pack and TMS FlexCel.

> **IMPORTANT**
>
> Whenever you reinstall or update either FlexCel or FNC UI Pack, you need to reinstall the bridges, even if the bridges themselves didn't change.

Once you have both dependencies installed, you can now go through the setup and install the bridges.

TMS VCL Grid Excel bridge User Guide

Introduction

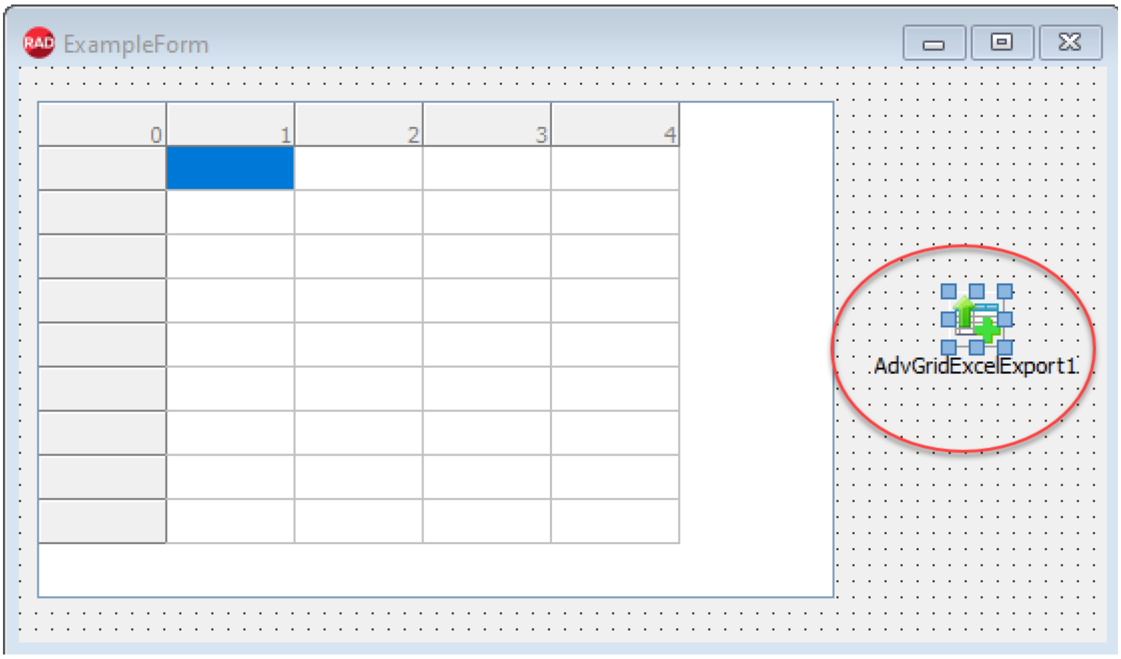
TMS VCL Grid Excel bridge is a distribution with two components: TAdvGridExcelExport and TAdvGridExcelImport.

You can use TAdvGridExcelImport to import an xls or xlsx file to a TMS grid, and you can use TAdvGridExcelExport to export a TMS grid to xls, xlsx, HTML, or PDF. The components use FlexCel Studio to read and write the Excel files, and don't require Excel to be installed in the machine.

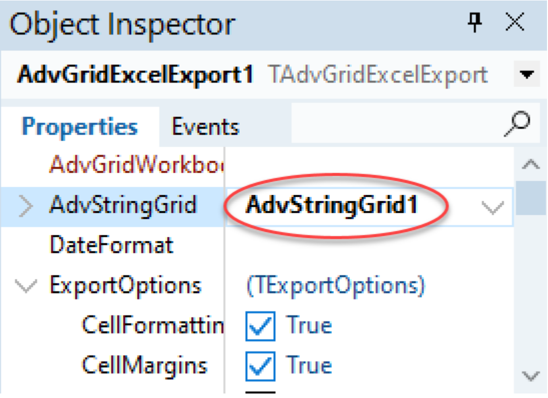
Exporting a grid to Excel

Getting started

Exporting a grid is simple. First, make sure to drop a TAdvGridExcelExport component in the form that has the grid you wish to export:



After that, associate the Grid to the TAdvGridExcelExport in the object inspector:



Finally, drop a button and write the following code:

```
AdvGridExcelExport1.Export('test.xlsx');
```

If everything went right, you should have created an xlsx file from the grid.

Customizing the export

The single-line export methods are the easiest to use. Just write a line of code, check the export option properties in the TAdvGridExcelExport component, and you are ready to go.

But sometimes you need more control over the generated files. Let's imagine for example that you wanted to export the grid into an existing xlsx file that is already customized with your branding. Or that you want to change things not available on the grid, like for example add some conditional formats. For those cases, you can export the grid directly into a FlexCel's TExcelFile object, using code like this:

```
uses ..., FlexCel.Core, FlexCel.XlsAdapter;
...
procedure TExampleForm.ExportGridToXlsFileObject;
var
  xls: TExcelFile;
  Ranges: TArray<TXlsCellRange>;
  Rules: TArray<IConditionalFormatRule>;
  CellIsRule: IConditionalCellIsRule;
  CFDef: TConditionalFormatDefStandard;
begin
  //Open a template with existing branding. We could also create a new file.
  xls := TXlsFile.Create('..\..\MyTemplate.xlsx', true);
  try
    //Export into the 3rd row of the existing template.
    AdvGridExcelExport1.LocationOptions.XlsStartRow := 3;

    //Export the grid to the xls object.
    //We will export insert the rows into an existing template
    AdvGridExcelExport1.Export(xls, TInsertInSheet.InsertRows);

    //Now you can do extra stuff with the xls file.
    //Adding rows, setting options, adding sheets
    //And exporting other grids. The code below
    //was generated with APIMate, and adds a conditional format
    //for column F that will paint the cell red if it is bigger than 3.

    Ranges := TArray<TXlsCellRange>.Create(
      TXlsCellRange.Create(1, 6, 1048576, 6)
    );

    Rules := nil;  //SetLength will resize the array in place. We set it to nil first to create a new array.
    SetLength(Rules, 1);
    CellIsRule := TConditionalCellIsRule_Create(1, false, TConditionType.GreaterThan, '=3', '');
    CFDef := CellIsRule.FormatDef;
    CFDef.ApplyFont.Color := true;
    CFDef.Font.Color := TExcelColor.FromArgb($9C, $00, $06);
    CFDef.ApplyFill.BgColor := true;
    CFDef.Fill.BgColor := TExcelColor.FromArgb($FF, $C7, $CE);
    Rules[0] := CellIsRule;

    xls.AddConditionalFormat(TConditionalFormat.Create(Ranges, Rules, false));


    // Finally save the xls object to a real file.
    xls.Save('MyFile.xlsx');

  finally
    xls.Free;
  end;
end;
```

Once you have a TExcelFile object with the grid, you can use the full FlexCel functionality to modify that object as you want.

> **NOTE**
> Always remember that you can use APIMate (a tool that is installed with FlexCel) to figure out exactly how to write the code to customize the TExcelFile object. To create the code above that sets the conditional formats, we just created the conditional format in Excel, then opened the file in APIMate and copied the code.

Exporting a grid to PDF or HTML

You can also export to PDF or HTML, using the methods TAdvGridExcelExport.ExportPdf and TAdvGridExcelExport.ExportHtml

Those methods will export to xlsx under the hood and then export the generated xlsx file to PDF or HTML. Same as when exporting to Excel, you can choose between exporting with one line, or using the corresponding FlexCel objects to allow further customization. The linked documentation in the methods contains code examples on how to use them.

Importing an Excel file

Importing an Excel file isn't conceptually different from exporting it. In this case, you drop a TAdvGridExcelImport component instead of TAdvGridExcelExport, and then call TAdvGridExcelImport.Import.

As was the case with exporting, you have two options to import a file. You can use a one-liner:

```
AdvGridExcelImport1.Import('test.xlsx', 'my sheet');
```

Or you can import an existing TExcelFile object:

```
uses ..., FlexCel.Core, FlexCel.XlsAdapter;
...
procedure TExampleForm.XlsxObjectImport;
var
  xls: TExcelFile;
begin
  //We will start by opening the file we want to import
  xls := TXlsFile.Create('..\..\MyTemplate.xlsx', true);
  try
    //You can manipulate the xls file before importing it.

    //Select the sheet we want to import.
    xls.ActiveSheetByName := 'My Sheet';

    //Convert the formulas to values, so there aren't formulas in the
    //imported file. Also recalculate the sheet before converting
    //(recalculation is only needed if the original file wasn't calculated)
    xls.ConvertFormulasToValues(false, true);

    AdvGridExcelImport1.Import(xls);
  finally
    xls.Free;
  end;
end;
```

Differences between a TMS Grid and Excel

Missing features

In an ideal world, you could import an xlsx file into the grid, then export the grid back to a separate xlsx file, and both files would be identical. But as you can guess, this is not the case, except maybe for very simple files. Imagine, for example, that the file we are importing has a macro. Once the file is imported into the grid, the macro will be gone. And when we export the file back to xlsx, the new file won't have the macro.

When we import the file into the grid, we will lose any features in the file that don't have a corresponding grid feature. If the file has a chart, the grid won't have it. It is the same for pivot tables, conditional formats, and another thousand things available in Excel but not in the grid. And when we export the grid into a file, we have the reverse problem. Say you have a fixed row in the middle of the grid. You can't have fixed rows in the middle when in Excel, so we can't export that feature.

> **NOTE**
> If you want to read a file, modify it and save it back, and you don't need to display it, you will be much better off using FlexCel alone. FlexCel won't do an xlsx->grid->xlsx conversion, and most of the stuff in the original file will be in the modified file. Only use TAdvGridExcelImport and TAdvGridExcelExport if you need to show the grid to the final user.

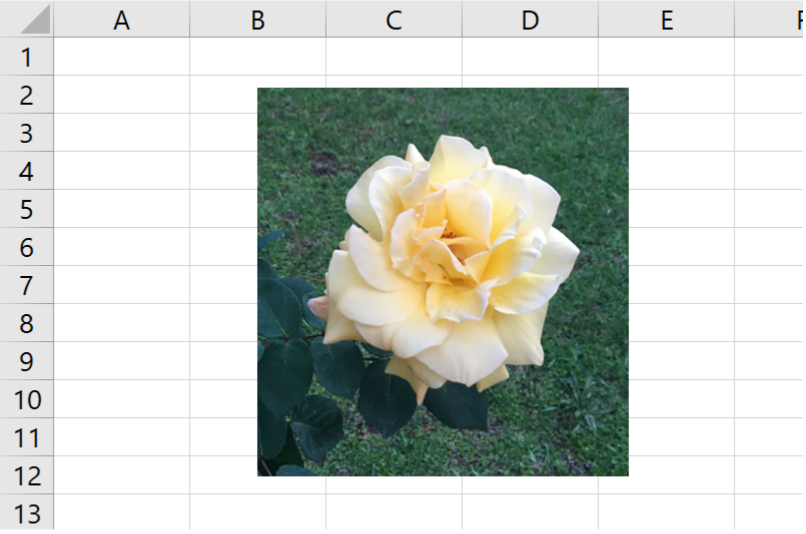
Features that behave differently

Sometimes, both the grid and Excel have a feature, but they aren't exactly compatible. In those cases, the bridge components will try to make their best effort to translate the feature from the grid to Excel or vice-versa, but sometimes it might need additional help. Here we will discuss some of those.

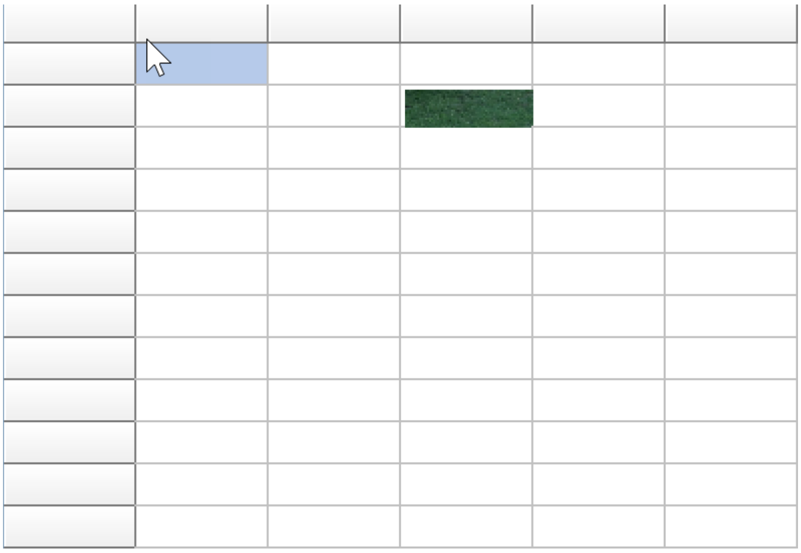
Images

Both Excel and the grid support images, but they behave differently. In Excel, images float over the cells. In the grid, images are inside a cell and can't span to a different cell.

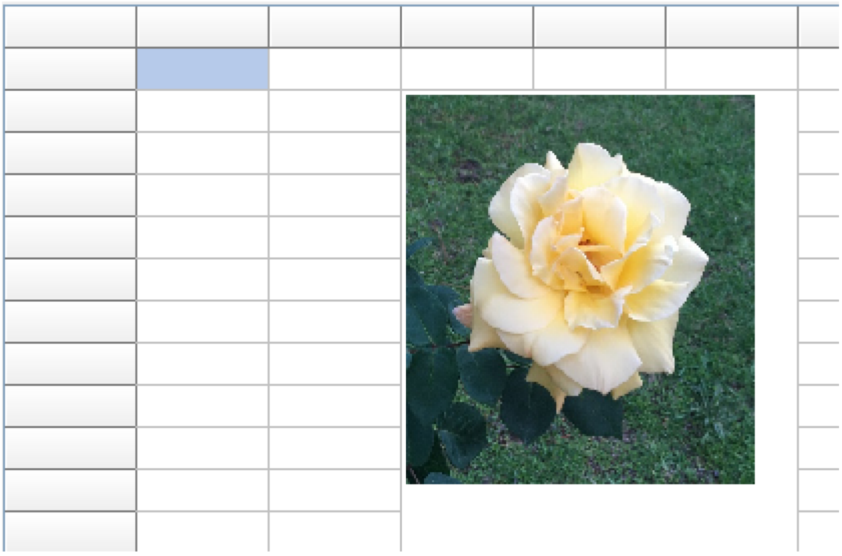
So if you have to import this image from Excel:



we would end up with the following:



To try avoiding this problem, TAdvGridExcelImport will merge the cells beneath the image:



But of course, this is not a 1-to-1 translation. If there were data in any of the cells we had to merge; those cells would be lost. And when you save the file back to xlsx, it will have merged cells behind the image, even if the original file didn't.

Cell Formats

By default, TAdvStringGrid uses Delphi format strings to format numbers. For example, if you have the number 10 and use the format "%.2f", it will display as "10.00". But in Excel, to show the number 10 as "10.00", you need to use the format string "0.00".

TAdvGridExcelExport doesn't know how to convert "Delphi format strings" to "Excel format strings", or vice-versa. You can use two ways to get your exported data formatted as it is on the grid.

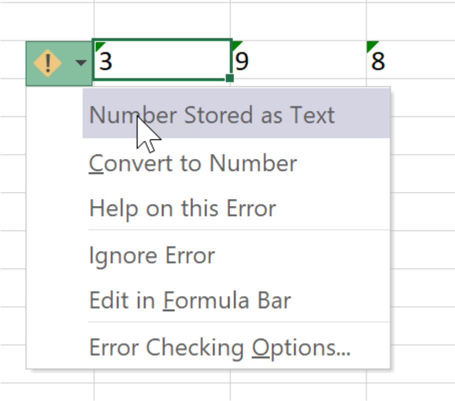
1. You can use the event TAdvGridExcelExport.OnExportCell and manually specify the "Excel format" used for every cell. If the cell is formatted as "%.2f", you can say, in the event, that the Excel format used should be "0.00".

2. **Currently only for TMS AdvStringGrid**: You can set the property `AdvStringGrid.FormatType := vtExcel;` and use Excel formatting in the grid. Instead of specifying "%.2f" in the grid, you set the format to "0.00". TAdvGridExcelExport will realize that you are using vtExcel, and pass that format to Excel when saving the file.

3. Finally, and as a last resort, you could export everything as strings. To do so you would use the property TExportOptions.CellsAsStrings

Exporting as strings is the simplest way to get the exact formatting as the grid, but it comes with significant caveats.

- First, the Excel cells won't have actual numbers. If in cell A1 you write the string "30", and in cell A2 you write "=Sum(A1)" the result will be 0, not 30.
- Second, you might run into localization issues. If you write the string "3,000", this might mean 3 or 3000 depending on the decimal separator used in the country. While if you stored the number 3000 in the cell, it will always be 3000 and will display with "," or "." depending on the machine locale.
- Finally, Excel will warn with a green triangle that the number is stored as text:



Cell Margins

TAdvStringGrid has margins around the cells, while Excel has not. So if a cell is 20 pixels in Excel, to fit the text in the grid, we might need 26 pixels. But now the column is 26 pixels wide, instead of the original 20. If you keep repeating import/export cycles, the column width will grow indefinitely. You can control the cell margin behavior with the property TExportOptions.CellMargins

Hyperlinks

In Excel, hyperlinks apply to the whole cell. In the grid, hyperlinks apply to the text. This means that you can't have more than one link per cell in Excel, while you can have multiple links inside a single cell in the grid. If a cell contains more than one link, only the first will be exported to Excel.

About

This documentation is for TMS VCL Grid Excel bridge v3.2.0

In this section:

What's new

Everything that changed since the last release.

Copyright information

Information about the third party copyrights and licenses of code used by TMS VCL Grid Excel bridge.

What's new in TMS VCL Grid-Excel Bridge

New in v 3.3.1

- **New property "MergeCellsUnderImages".** The new property MergeCellsUnderImages controls if we merge the cells below the images when importing.

New in v 3.3 - August 2024

- **Support for the "Modern C++" compiler in Rad Studio 12.1.** We added a WIN64X target.

New in v 3.2 - December 2023

- **Rad Studio 12 support.** Added Rad Studio 12 Support.

New in v 3.1 - September 2021

- **Rad Studio 11 support.** Added Rad Studio 11 Support.

New in v 3.0

- **Unified versioning.** Now we have a single versioning between VCL/FMX/FNC Grid-Excel bridges
- **New documentation system.** There are new and improved documentation and examples.

New in v 2.22.1

- **Bug Fix.** Fixed setup errors.

New in v 2.22

- **Bug Fix.** The installer could throw an exception when installing in old Delphi versions.

New in v 2.20

- **Support for VCL UI Pack.** The filters will now install in the VCL UI Pack, instead of in the TMS Component pack.

New in v 2.17.1

- **Fixed install error.** The setup could fail to find the component pack even if it was installed.

New in v 2.17

- **Support for Rad Studio 10.3 Rio.** Now the setup will install in Rad Studio 10.3 Rio.

New in v 2.16

- **High DPI support.** Filters now support high dpi.

New in v 2.15

- **Support for Rad Studio 10.2 Tokyo.** Now the setup will install in Rad Studio 10.2 Tokyo.
- **New property ImportOptions.HiddenSheets in TAdvGridExcelImport.** The property controls if the hidden sheets in the Excel file should be imported or not.
- **Now the property PrintSettings.Centered of TAdvStringGrid is imported and exported to and from Excel.** When ImportOptions.PrintSettings.Centered. is true, FlexCel and the Excel file is set to be horizontally centered, the print options of the grid will be set to centered. Same way, when exporiting and PrintSettings.Centered is true, the Excel file will be centered horizontally on the sheet when printing.
- **Now when exporting to a Workbook, the sheet selected in the exported file will be the same as the one in the workbook.** Before this version the sheet selected in the exported file would be the last. Now it is the sheet selected in the workbook.
- **Bug Fix.** Now when PageNumSep is empty in the grid, the filters won't export the total pages, same as in AdvStringGrid.

New in v 2.14

- **Setup will install 64 bit versions of the components.** Now the setup will offer to install for 64 bits, so there is no more need to do it manually.

New in v 2.13

- **TAdvStringGrid not detected if it was not installed as part of TMS pack or TMS Grid Pack.** If you had installed TAdvStringGrid only the filters would refuse to install.

New in v 2.12

- **Rad Studio 10.1 Berlin support.** Added support for Rad Studio 10.1 Berlin.

New in v 2.11

- **Setup would ask for Android installed even if it is not needed.** Now the setup won't check you have a valid Android setup in Rad Studio.

New in v 2.10

- **Rad Studio 10 Seattle Support.** Added support for Rad Studio 10 Seattle.

New in v 2.9

- **XE8 Support.** Added support for Rad Studio XE8.

New in v 2.8

- **Exported images now move with cells.** The exported images now aren't fixed to the cells and move when you insert rows.

New in v 2.7

- **XE7 Support.** Added support for Rad Studio XE7.

New in v 2.6

- **XE6 Support.** Added support for Rad Studio XE6.

New in v 2.5

- **XE5 Support.** Added support for Rad Studio XE5.

New in v 2.4.2

- **Bug Fix.** C++ Builder header files required explicit namespaces. Now namespaces are implicit.

New in v 2.4.1

- **Support for users who don't have TMS pack but AdvStringGrid alone.** Now the setup will install if you only have AdvStringGrid.

New in v 2.4

- **XE4 Support.** Rad Studio XE4 is now supported.

- **IgnoreNumericFormat property in the Import options.** If you set AdvGridExcelImport.IgnoreNumericFormat to true, it will load the full floats and dates into the grid, instead of the formatted values.

New in v 2.3

- **Export grid headers and footers.** Now when ExportPrintSettings is true, the grid title will be exported as headers or footers in Excel.

New in v 2.2

- **Improved import.** Now import ignores formatted but empty columns.

New in v 2.0

- **Support for exporting the grid to PDF.** Now you can export your grid to pdf with AdvGridExcelExport.ExportPdf
- **Support for exporting the grid to HTML.** Now you can export your grid to pdf with AdvGridExcelExport.ExportHtml
- **Support for exporting cell gradients.** Cell gradients in the grid will now be exported to Excel.

New in v 1.2

- **Support for exporting grid shapes.** Grid shapes will now be exported to Excel.

New in v 1.1.1

- **Bug Fix.** Issue with Flexcel 5.1 compatibility.

New in v 1.1

- **FlexCel 5.1 compatibility.** This new version now builds with FlexCel 5.1

New in v 1.0

- **First release.** This is the first release of the redesigned components to replace AdvGridExcelIO. With respect to AdvGridExcelIO, we now export checkboxes, html in cells, and multiple images. Support for xlsx in exporting and importing

Copyright information