



Release Notes

Tecplot RS 2020 R1

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Additional Resources

In addition to these Release Notes, Tecplot RS includes the following manuals and HTML Help Library to help you explore all of Tecplot RS's features. Your installation includes these manuals in the *doc* folder within your installation folder.

- [Installation Guide](#) This guide gives detailed instructions on how to install Tecplot RS on your machine.
- [Tutorial](#) Get started with Tecplot RS quickly by working with real-world data in a series of easy lessons.
- [User's Manual](#) This manual provides a complete description of working with Tecplot RS features.
- [Integrated Help Library](#) You can access indexed, searchable Tecplot RS information by choosing "Tecplot RS Help" from the **Help** menu.
- For additional resources or help using Tecplot RS, visit our Web site at <https://www.tecplot.com>.

My Tecplot

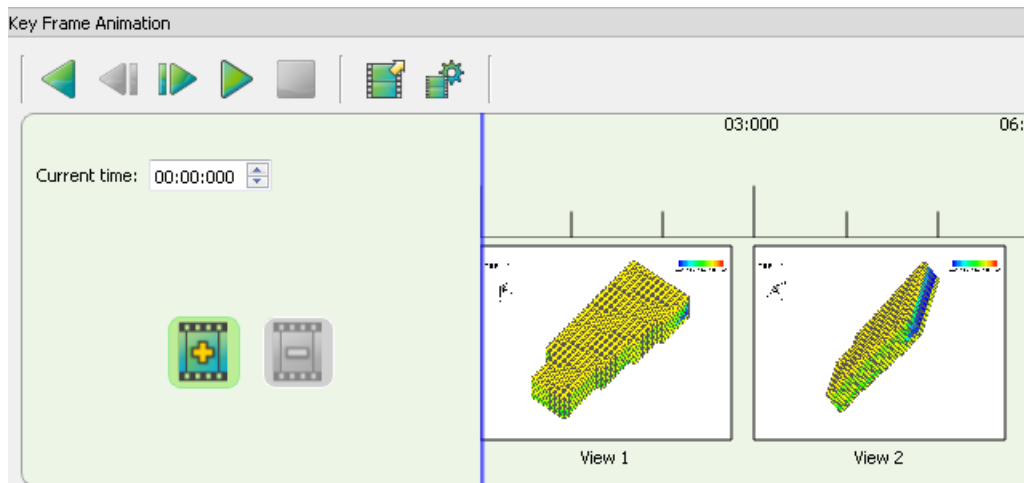
My Tecplot is Tecplot's one-stop portal that allows you to download software, manage your license keys, and more. Visit it at <https://my.tecplot.com/>.

Welcome to Tecplot RS 2020 R1!

What's New in Tecplot RS 2020 R1

- **Key Frame Animations**

Key Frame Animations allow users to easily animate a smooth progression through two or more specified views (key frames) and export them as an AVI or MP4. Users can zoom, rotate, and translate in these animations. This tool can be used to create reservoir “fly over” movies or even first person animations which scan the inside of the reservoir.



To access this dialog, select **View > Key Frame Animation**. From there, you can start creating animations. See the RS User's Manual for more information.

- **New Equations Dialog**

The XY and Grid Equations dialogs have been updated to improve usability and to limit past error dialogs. Users will now have control of what entities are applied to what equation. Each equation entered will have more clarity via the Applies to Entities column. Equations will be automatically checked for valid syntax with color-coded feedback. See the RS User's Manual for more information.

- **Reverse Axis Direction**

XY plots now have the ability to reverse the Y axis direction on every plot. The Axis direction can be changed from the Plot Options menu or from right-clicking the Y Axis and selecting the reverse axis direction. DEPTH variables will still be automatically reversed.

- **QT5 Update**

Tecplot RS has now been upgraded to the Qt5 framework which improves rendering for high DPI displays.

Bug Fixes and Enhancements

- Updated Help documentation to HTML5 for better cross-platform performance and usability for high DPI displays.
- Updated icons to SVG format for crisper feel on high DPI displays.
- Added a header to the Sim Input export for information about the user, time, and version of RS used in exporting.
- Added the capability of mesa rendering on Windows. If you are having trouble loading Tecplot RS on Windows VMs, move the `opengl32.dll` from the `bin/mesa` folder to the `bin` folder.
- Fixed bug where `unsmry` files did not correctly import the DATE variable.
- Fixed an issue where swap files did not properly work with VDB XY data.
- Improved compatibility with Rock Flow Dynamics' tNavigator `unsmry` output.
- Fixed bug where the OBSH files with YMD format had missing values causing a crash.
- Updated the default filter of the Equations dialog.
- Fixed bug where the scale wasn't accurately changing on the streamline legend.

What was New in Tecplot RS 2019 R1

Tecplot RS 2019 R1 includes a number of new features, bug fixes, and usability improvements requested by our valued customers.

• Well Path

The new Well Path feature in Tecplot RS lets users easily plot grid-solution values along any well path (regardless of orientation). With the new Well Path toggle (now accessible from the Tecplot RS sidebar) activated, click on any well, and the plot of the selected grid variable vs. well path distance will be displayed on the quick frame. Users have the option of changing the Y axis from well path distance to vertical depth.

• Enhanced Modify Wells Dialog

This dialog has always been a valuable tool to help users create new well trajectories and modify existing well paths for simulator input, but the dialog has never been easy to use. The enhancements made to this dialog make it more user-friendly and adds some useful functionality as well.

The well node information for each well has been moved to an interactive spreadsheet format. For existing wells that are read in from the simulator, users can interactively make changes to well trajectories and export the resulting changes in a format that can be read by your simulator. Survey wells that were imported during grid loads will be displayed here as well.

The process of creating new wells is easier and even a bit more interactive now. Users can manually enter the well node data for the new well in the spreadsheet. There are also tools available such as "Probe to Add Nodes" and "Add Series of Nodes" which make this process easier. The Modify Wells dialog can be accessed by going to *Data > Sim Input > Wells*.

• CMG SR3 Reader Update

We now read the newer CMG SR3 format. To load in this data, users will key off of the `*.sr3` extension which you'll see listed as a supported file type in the CMG loader.

• Improved Sidebar

The full "quick" menu in the sidebar contains many useful functions, including the new "well path" toggle. The sidebar has been reconfigured to make the "quick" menu workflows more efficient. Here are highlights of the changes:

- "Quick XY" toggle has been rebranded to "Time/History."
- "Quick RFT" toggle has been rebranded to "Depth."
- "Well Path" toggle has been added.
- Statistical Plots - Users are now able to activate both Histogram and Cross Plot simultaneously.

- Well and Cell Probe - for Time/History and Depth functions, a user has always been able to probe well data by ctrl-clicking on a well, or a left mouse click on a well to probe cell data. Users can now interactively activate these modes by choosing the appropriate icon to the left of the "quick" menu. The cursor will give the user a visible indication on what mode they are in (cell probe or well probe).

Bug Fixes and Enhancements

- Depth plots are now saved in the gallery
- Added PROMPTFORTEXT and PROMPTFORFILENAME in macro commands
- Current timestep is now saved in the RS project file
- Fixed Generic ASCII Reader so that space-delimited files may have fields with commas if the field is enclosed in double quotes
- "COMPLETION" is now recognized as an alias for "CMPLN" in CSV files
- Improved time to first image on all loaders
- Write Tecplot Data/Save Layout now remembers the last used file path
- Fixed quick plot display when loaded from project files
- Fixed "Show Connections" toggle on wells page
- Fixed well type legend to not show multiple identical symbols when comparing plots
- Fixed dual porosity display when both grids are compared
- Fixed NNC display for NNC variable
- Changed data spreadsheet to obey plot options dialog Time/Date formatting strings
- Show DATE on the probe status line when the X axis is set to DATE
- Fixed DATE display for freestyle plots
- Fixed CMG crash when CMG library reports no grids in the file. Now displays error.
- Time/Delta blanking now use original values for comparison
- Eclipse loader now supports new RNLF keyword
- Well names with spaces are now supported

What's New in Tecplot RS 2018 R1

Tecplot RS 2018 R1 includes a number of new features, bug fixes, and usability improvements requested by our valued customers.

• Stamp Plot

Well production data can be viewed simultaneously with the grid solution in the new Stamp Plot feature in Tecplot RS. When both the grid data and its associated production data are loaded into Tecplot RS, and the well display activated, the Stamp Plot can be viewed. Once the Stamp Plot is activated, Tecplot RS will display a small production plot at each specific well location.

In the Stamp Plot Options dialog, you can select the production and injection property you wish to display. The well type at a specific time step will determine what property is displayed.

The size of the Stamp Plot displayed at each well can be controlled. If a more detailed view of a specific Stamp is desired, the Quick XY functionality can be used. If the "Show enlarged stamp plot option" is chosen, Tecplot RS will force that chosen production/injection property to be displayed in the Quick XY view.

• Arbitrary Slice Enhancements

The process of creating an arbitrary slice is now easier than ever. Once the arbitrary slice inside view is selected and started, Tecplot RS will be in arbitrary slice creation mode. There are three types of slice definitions that can be chosen. The choice makes the creation process more efficient.

- Chain – slice through a continuous chain of points or wells
- Radial – slice coming out a single point or well (ie. slice coming out from an injector to its producers)
- Pair – slice between any 2 points or wells

"Show" toggle will automatically be activated and the slice will be displayed once the slice has been created.

• Cell Blanking Indicator

When Cell Blanking (either value or pick blanking) is activated, the blanking icon on the top toolbar will be illuminated with a green highlighter. This gives a visual indication that the blanking is active.

In the cell blanking dialog, each blanking constraint in value blanking will be illuminated green as a visual indicator that it is active.

Usage Notes

Graphics Drivers

For best results, please make sure that you are using the latest graphics drivers compatible with your hardware and operating system. These can be obtained from your graphics adapter vendor's Web site. Old versions may have issues with Tecplot RS, especially with larger data sets.

- NVIDIA: <https://www.nvidia.com/Download/index.aspx>
- ATI: <https://www.amd.com/en/support>
- Intel: <https://downloadcenter.intel.com/Default.aspx>

Usage Data Collection

To help us better understand how our customers use our products and improve them further, Tecplot RS includes an analytics feature that reports basic information about your operating system, product version, and license at each launch of Tecplot RS. This data is not collected if you do not have access to the Internet or if the Google Analytics service is blocked by a firewall. No other data about your use of the product is collected.

Windows Configuration

Tecplot RS uses OpenGL 3D graphics, and will utilize high-end 3D graphics cards. For best results, use a graphics card and operating system that supports OpenGL (almost all newer graphics cards do).

With certain system configurations, it is not uncommon to experience problems due to insufficient memory or issues with graphics drivers. If problems arise on your system, please attempt the following:

1. Temporarily set the Hardware Acceleration option to None. To do this, add the following line to your *tecplot.cfg* file:

```
$!Interface OpenGLConfig{AllowHWAcceleration= No}
```

If this fixes the problem, it is very likely your OpenGL driver was involved. We recommend you install the latest driver for your graphics card from the manufacturer's Web site. Setting Hardware Acceleration to None may substantially reduce drawing speed, so use this as the final solution only if nothing else works.

2. Try changing the Color Palette to 16-, 24-, or 32-bit color.
3. If operating on large data sets, you still may run into memory issues. If this is the case, try one of the alternative Graphics Cache settings: Cache Only Lightweight Graphics Objects, or Do Not Cache Graphics. Choose "Performance Options" from the **Options** menu. On the Rendering page of the **Performance** dialog, choose the desired Graphics Cache setting and click OK.

You can also make these your default settings by editing your *tecplot.cfg* file with a combination of commands. For Cache Only Lightweight Graphics, use:

```
$!Interface  
UseDisplayLists = Yes  
= Yes  
CacheLightWeightDisplayListOnly
```

For Do Not Cache Graphics, use:

```
$!Interface UseDisplayLists = No
```

Linux Configuration

- Qt Display Customization

The default display settings for Qt software on Linux platforms may cause Tecplot RS to display graphics at less than optimal speeds. You can customize your Qt display settings by using the `qtconfig` utility included in the standard Tecplot RS installation (in the `bin` folder).

- **Remote Display Issues**

If you have a **Network** or **Site** license, you can run Tecplot RS on one computer and display it on a second computer (via an X server). However, if you are running the OpenGL version of Tecplot RS, the X server must have the GLX extensions. If you are working with a large grid file remotely, try using the `-mesa` option to minimize the number of OpenGL commands sent across the network.

When displayed remotely, Tecplot RS may exhibit substantially lower drawing speeds than when it is displayed locally, especially for text and geometries.

- **Mesa Versions**

Mesa, an OpenGL-equivalent graphics library, performs 3D rendering in software. It is typically used when hardware acceleration is unavailable or when working with remote display of large data.

The Mesa version of Tecplot RS functions more slowly, especially for 3D plotting. If you must run the Mesa version and display remotely, you can speed up the rendering for XY Line and 2D plots by setting the environment variable below. (On some machines, this may improve the speed of 3D plotting.)

```
export MESA_BACK_BUFFER=Pixmap
```

Platform-Independent Issues

- **Sidebar docking**

If you have trouble re-docking the toolbar or dockable sidebar, double-click the title bar at the top of the sidebar, where it says "Plot Controls."