

CPFD Software Updates: Product, R&D, and Q&A

Sam Clark and Andrew Larson

CPFD Software

June 25, 2026

Outline

Product Updates – Andrew Larson

Support and Training Updates – Sam Clark

Q&A

Product Updates

Two releases per year

- April/October release schedule
- Latest release can always be downloaded on the Dashboard of the CPFD support site

<https://cpfd-software.com/profile/dashboard/>

Substantial physics improvements

Improved usability

Maintained GPU acceleration benefits

The screenshot shows the CPFD Software Dashboard at the URL cpfd-software.com/profile/dashboard/. The dashboard features a navigation menu with links for TECHNOLOGY, APPLICATIONS, SOLUTIONS, COMMUNITY, RESOURCES, COMPANY, CONTACT, and Profile. A search bar is available for the Knowledge Base. The main content area is divided into two columns. The left column is for Barracuda Virtual Reactor 26.0.0, and the right column is for Arena-flow 12.0.0. Each column has buttons for Windows and Linux, and a link for Release Announcement. Below these are sections for Training Resources, including links for Barracuda Virtual Reactor New User Training, Barracuda Virtual Reactor Supplemental Training, Barracuda Virtual Reactor Application Models, Tecplot for Barracuda Training Videos, and Creating CAD for Virtual Reactor. A sidebar menu on the right lists Dashboard, Knowledge Base, Barracuda Virtual Reactor User Manual, Arena-flow User Manual, and Profile.

Barracuda Virtual Reactor 24.1 Release

Cloud Resolution Updates

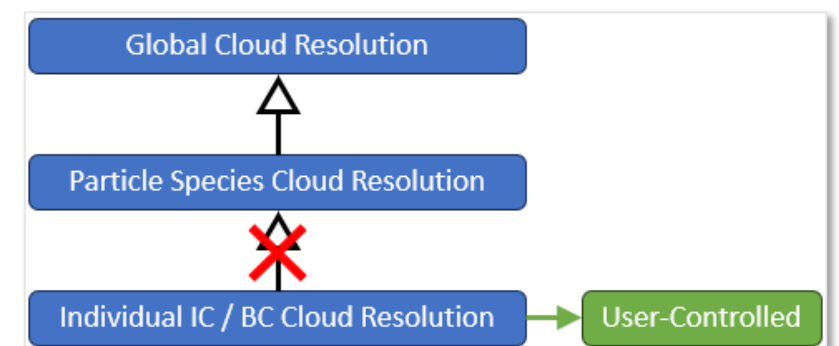
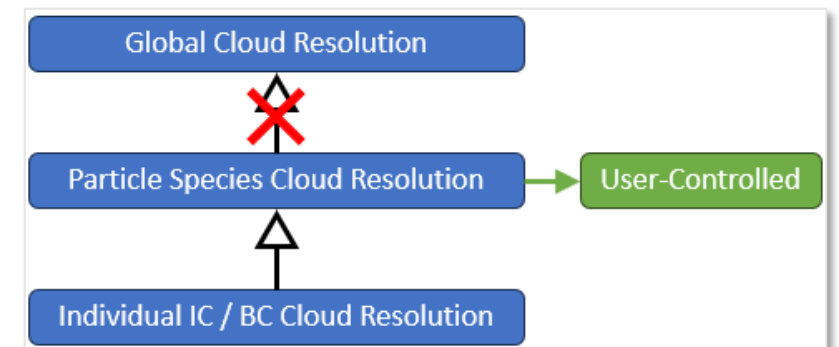
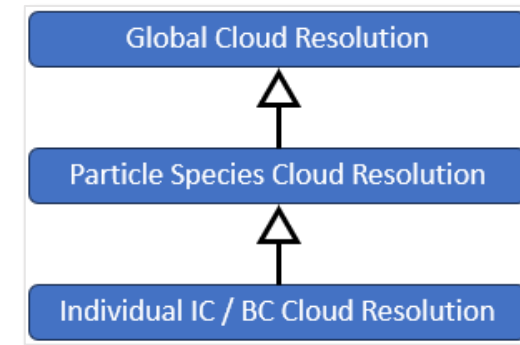
Directional Momentum Redirection Default

Injection BC Updates for Particle, Bubble, and Tracer Feed

Thermal Wall BC Updates: Resistance and Direction Vector

Volatile Species Output in Tecplot

<https://cpfd-software.com/getting-started-with-virtual-reactor-24-1/>



Barracuda Virtual Reactor 25.0 Release

Wall Impact Models

Hydrostatic Pressure at ICs and BCs

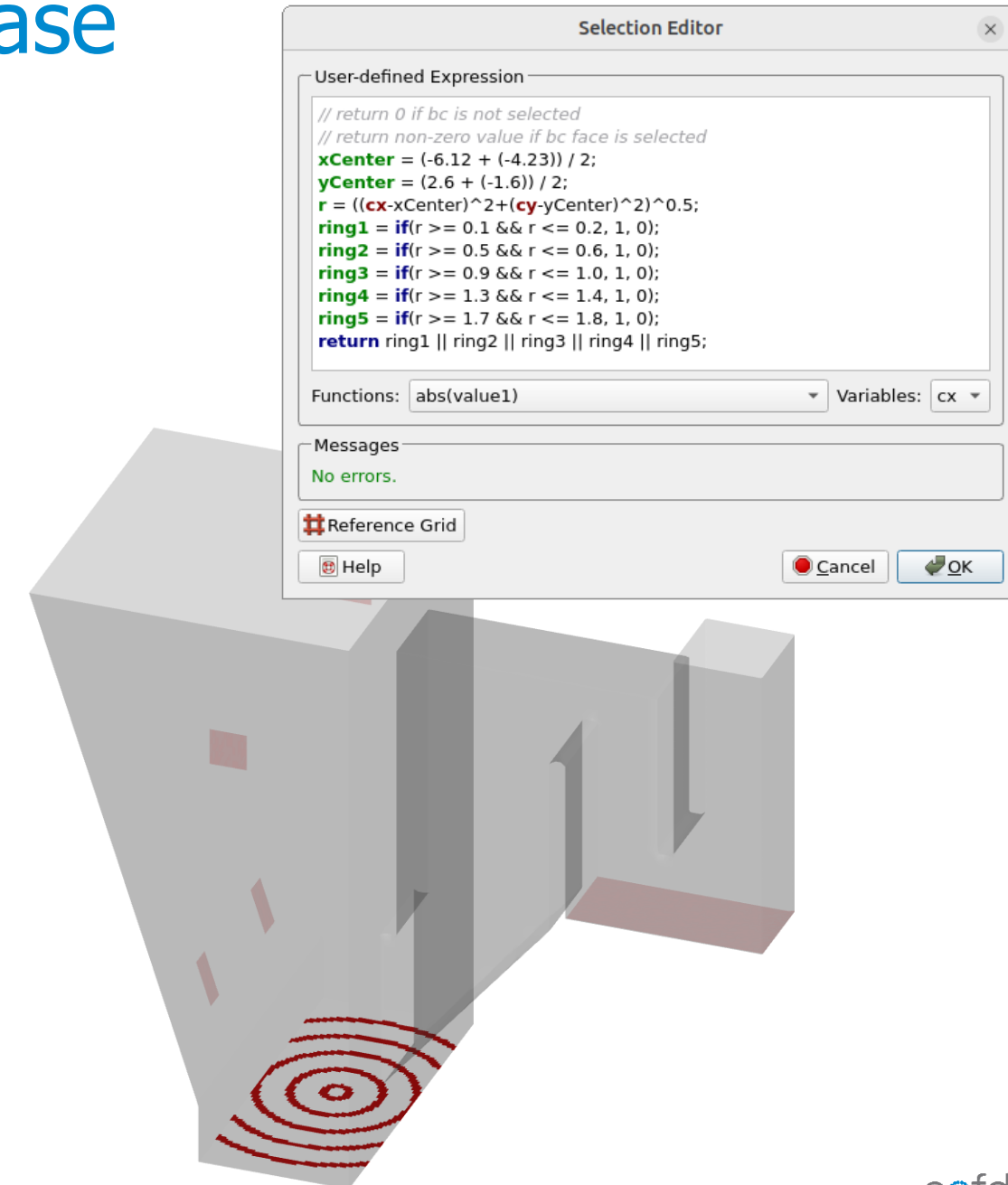
Thermal Wall GUI Redesign

Location User-defined Expression

Non-linear Fluid Temperature Solver

Chemistry Rate Limiter: Fluid Volume Ratio Change

<https://cpfd-software.com/getting-started-with-virtual-reactor-25-0/>



Barracuda Virtual Reactor 25.1 Release

Thermal Wall BC Updates

Baffles Updates

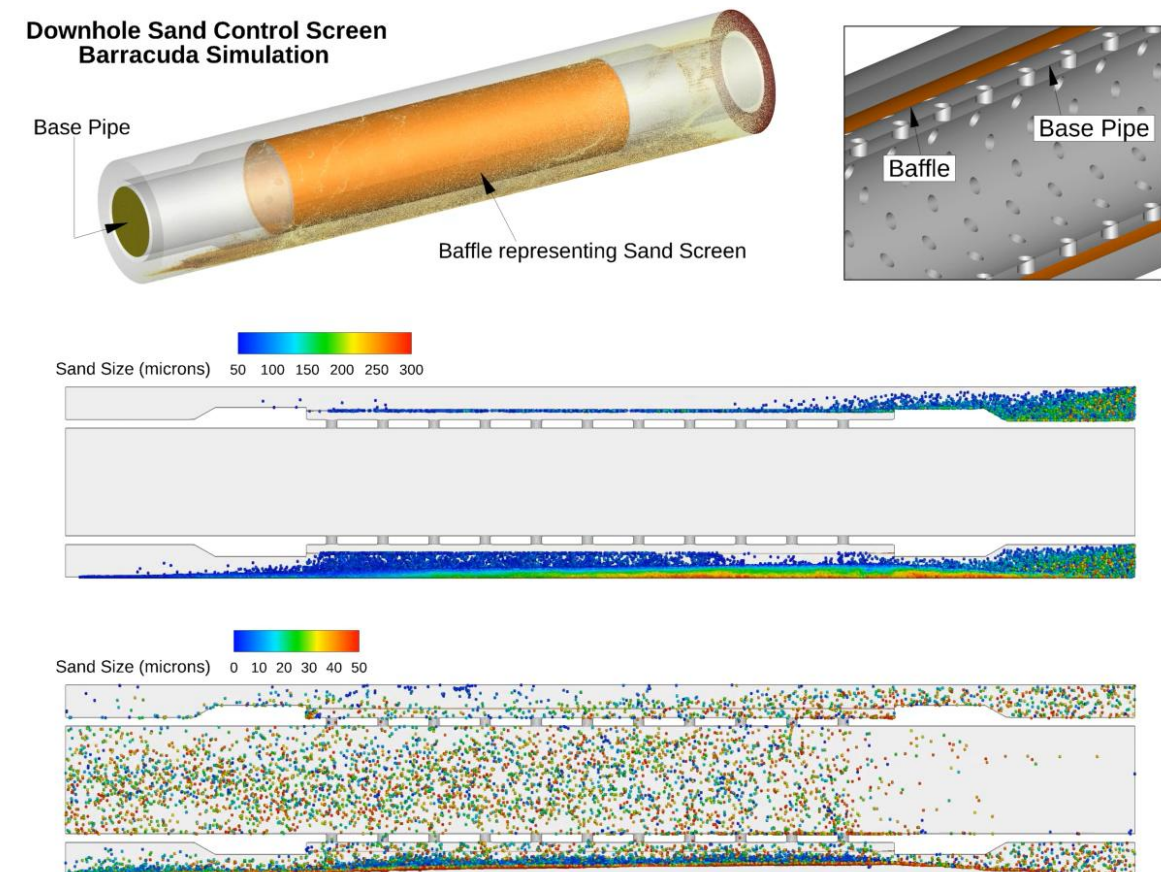
Rotate Output Data

Non-linear Temperature Solver Defaulted On

Particle Position in Raw Particle Data Flux Plane Files

Tecplot 2025 R1

<https://cpfd-software.com/getting-started-with-virtual-reactor-25-1/>



Barracuda Virtual Reactor 26.0 Release

Elastic Dense Collision Model

Particle Resolution Distribution

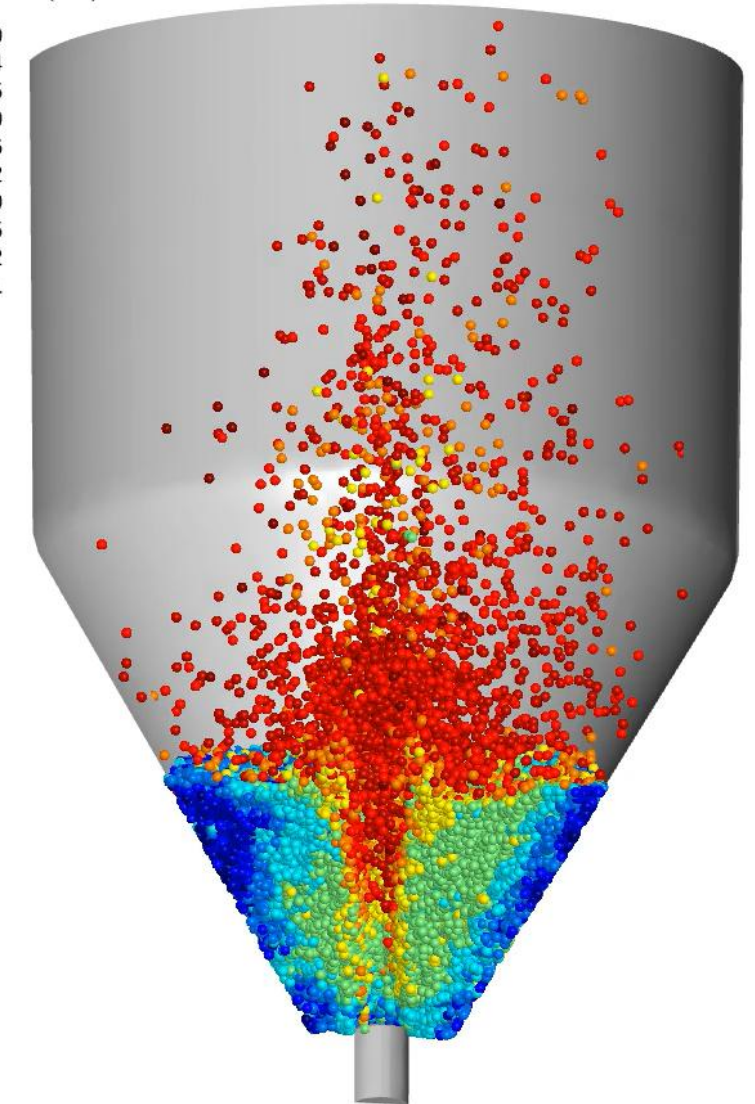
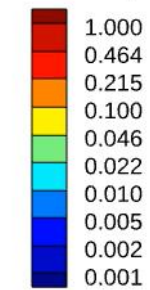
Injection BCs as Sinks

Faster Baffle Processing

Tecplot 2025 R2 with New Vulkan Graphics Engine

<https://cpfd-software.com/getting-started-with-virtual-reactor-26-0/>

Particle speed (m/s)



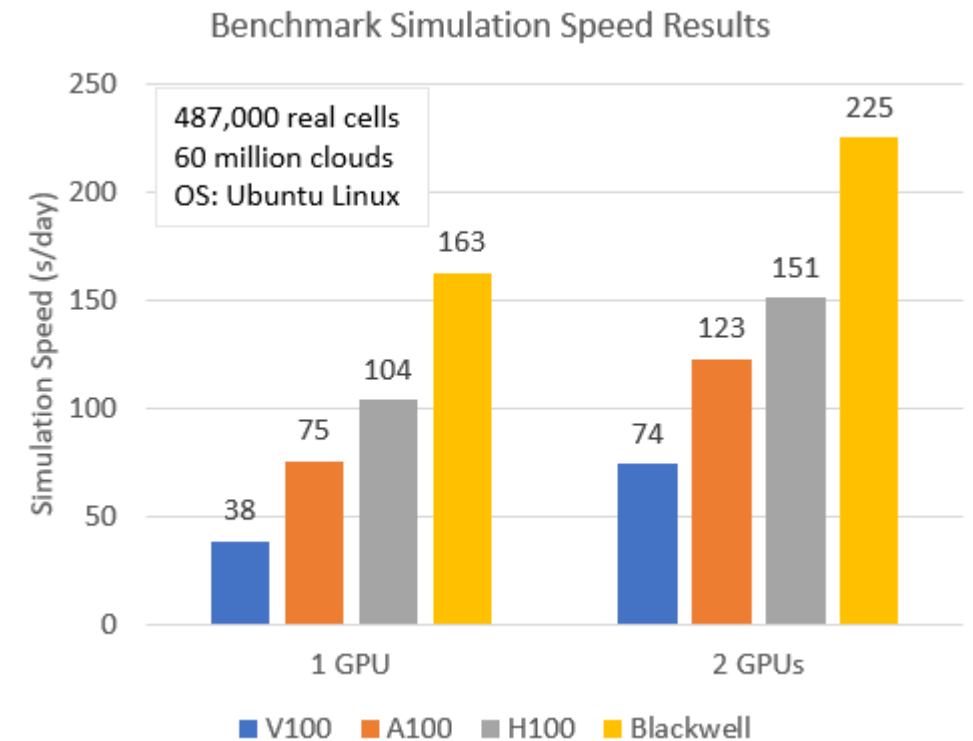
NVIDIA GPU Hardware Advancements

Latest-generation NVIDIA GPU cards give impressive speed boosts for Virtual Reactor simulations

For users with on-premise hardware:

- If you are currently running on a computer and/or GPU card more than 5 years old, we recommend upgrading to new hardware

Running Barracuda on the cloud allows users to access latest-generation GPU cards



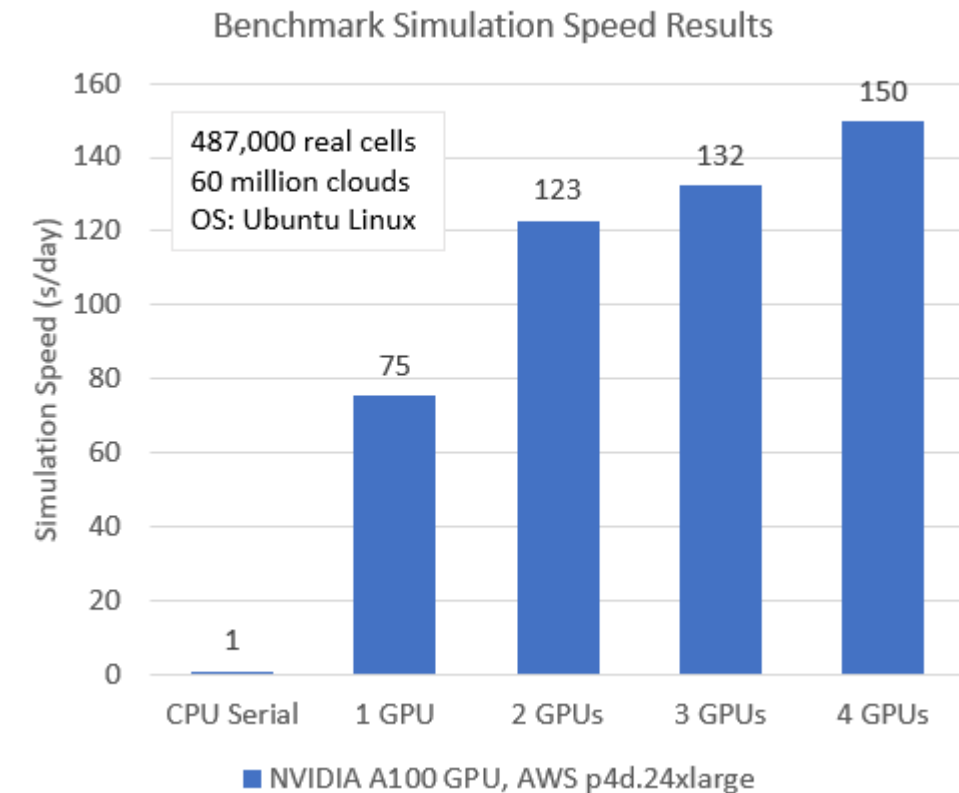
Virtual Reactor Multi-GPU Speedup

Multi-GPU acceleration enables fastest possible simulation speeds

- Only supported on Linux
- 1 GPU license required for each GPU card used

Metered licensing is supported

- Choose single- or multiple-GPU acceleration based on your needs
- Pairs well with cloud-based HPC

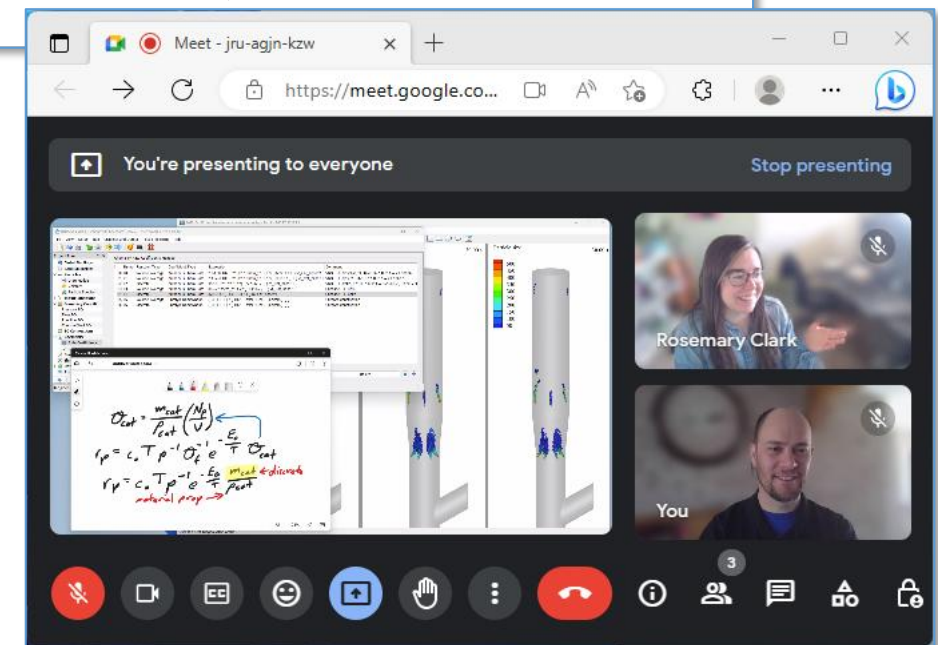
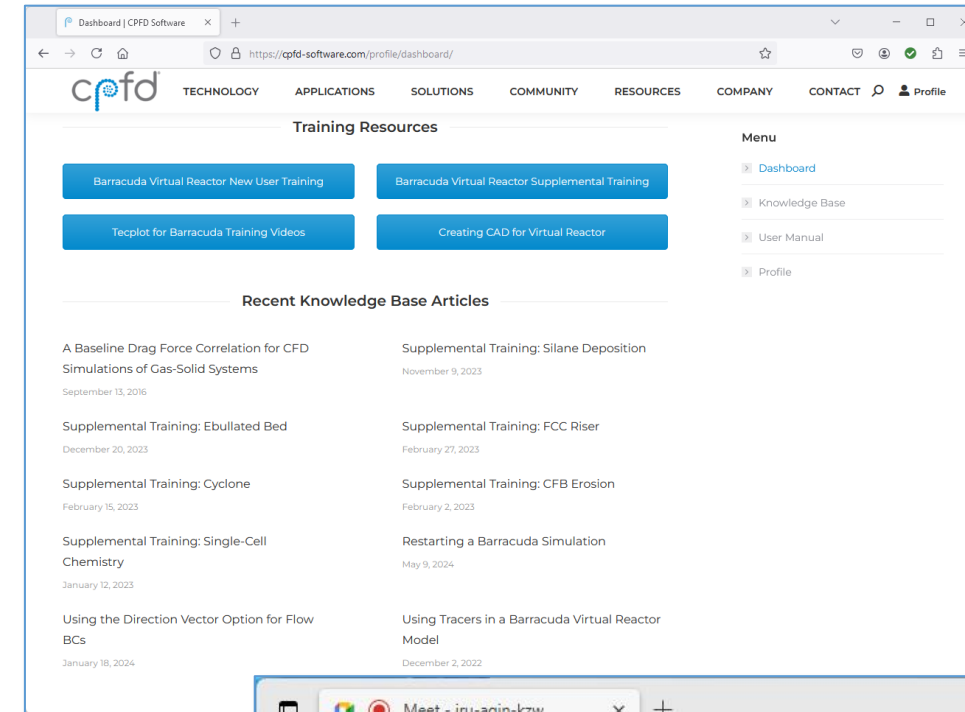


Support and Training Updates

CPFD's support team strives to provide excellent support to Barracuda Virtual Reactor users worldwide

Best way to contact us is via email:
support@cpfd-software.com

- We might have an answer already documented on our [support site](#)
- If live screen-sharing is helpful to help you solve a problem, we're happy to schedule web meetings



Tecplot for Barracuda Training Videos

Large collection of how-to videos on the CPFD support site for post-processing Barracuda Virtual Reactor simulations

- Most videos are < 10 minutes
- Range from basic to advanced usage

Let us know if there's a specific topic you'd like us to make a video about

<https://cpfd-software.com/tecplot-for-barracuda-training-videos/>

The screenshot shows a web browser window displaying the CPFD website. The page title is "Tecplot for Barracuda Training Videos". The navigation menu includes Technology, Applications, Solutions, Community, Resources, Company, Contact, and Profile. The main content area is titled "Tecplot for Barracuda Training Videos" and contains the following sections:

- Tecplot for Barracuda Basics**
 - April 29, 2020 Webinar: [Getting Started with Tecplot for Barracuda](#) (59:20)
 - [Tecplot for Barracuda - Launching Tecplot](#) (04:50)
 - [Tecplot 360 Basics - Rotate and Zoom](#) (01:14)
 - [Tecplot for Barracuda - Loading Data](#) (04:36)
 - [Tecplot for Barracuda - Adjusting the Contour Legend](#) (04:24)
 - [Tecplot for Barracuda - Using Value Blanking](#) (04:53)
 - [Tecplot for Barracuda - Using Frames](#) (05:37)
 - [Tecplot for Barracuda - Creating Snapshots and Animations](#) (03:37)
 - [Tecplot for Barracuda - Creating xy Plots](#) (06:01)
 - [Tecplot for Barracuda - Creating an Isovolume](#) (03:25)
 - [Tecplot for Barracuda - Creating Vectors](#) (03:18)
 - [Tecplot for Barracuda - Creating Streamtraces](#) (02:49)
 - [Tecplot for Barracuda - Inserting Images and Text](#) (05:20)
- Advanced Tecplot for Barracuda Usage**
 - [Tecplot for Barracuda - Scaling Particles by a Variable](#) (03:47)
 - [Tecplot for Barracuda - Calculating Spatial Averages on Slices](#) (05:03)
 - [Tecplot for Barracuda - Using Multiple Frames to Create a Grid of xy Plots](#) (10:00)
 - [Tecplot for Barracuda - Plotting xy Data from Multiple Files](#) (04:01)
 - [Tecplot for Barracuda - Using Data Alter to Specify Equations and Smooth Data in xy Plots](#) (11:21)
 - [Tecplot for Barracuda - Using batch_movie](#) (05:19)
 - [Tecplot for Barracuda - Calculating Cyclone Efficiency](#) (07:00)
 - [Tecplot for Barracuda - Using Isosurfaces to Analyze Erosion Results](#) (10:41)
 - [Tecplot for Barracuda - Visualizing Wall Impact for Multiple Wall Zones](#) (06:53)
 - [Tecplot for Barracuda - Analyzing Passive Scalar Data](#) (05:44)
- PyTecplot Tutorials**
 - [Tecplot for Barracuda - Calculating Spatial Average Axial Profiles](#) (09:13)
 - [Tecplot for Barracuda - Calculating Average Values Over a Custom Time Period](#) (12:40)
 - [Tecplot for Barracuda - Creating Particle Trails](#) (08:23)
 - [Tecplot for Barracuda - Calculating Particle Residence Time Distribution](#) (07:51)
 - [Tecplot for Barracuda - Extracting and Analyzing Bubble Properties](#) (15:44)

Visitors from China who are unable to view these videos are invited to view the content on the Chinese Yanfabu website (中国研发学习平台) by clicking [here](#) and [here](#).

Other Resources

Comprehensive documentation is installed with Tecplot for Barracuda:

- The *Online Help* viewer covers all features of Tecplot for Barracuda in detail. It is accessed using Tecplot for Barracuda's menu *Help, Tecplot 360 EX Help...*
- The *Welcome Screen* contains links to PDF documents bundled with the Tecplot for Barracuda installation. Use Tecplot for Barracuda's menu *View, Welcome Screen*. The bundled documentation includes:
 - Getting Started
 - User's Manual
 - Macro Scripting Guide
 - PyTecplot Guide
 - Quick Reference

Additional resources are available on Tecplot's website:

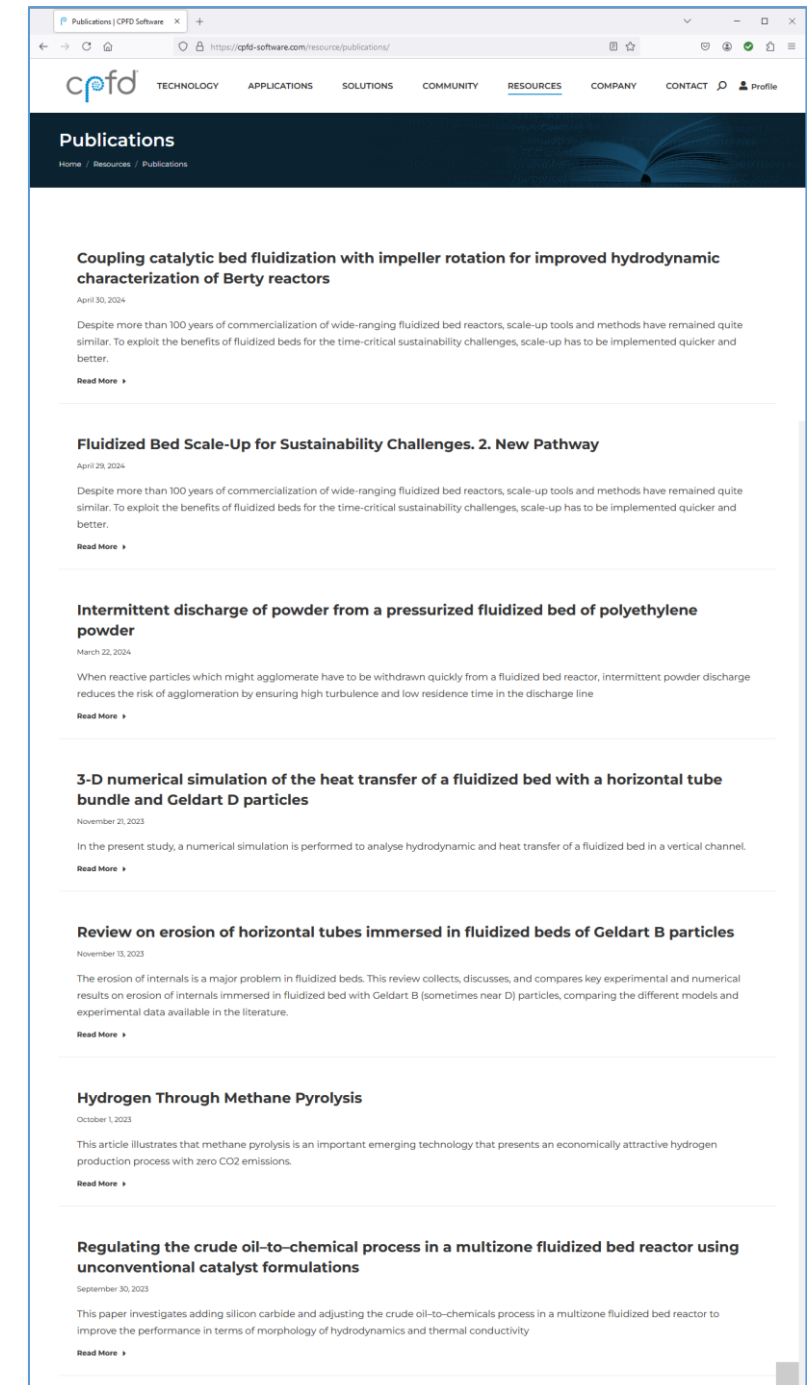
- A large collection of [Video Tutorials](#)
- Recordings of past [Webinars](#)
- [PyTecplot: Tecplot 360 Python Library](#)

Publications on CFPD's Website

Search our website's [Publications](#) list to find published papers and articles about a wide range of topics related to particle technology and simulation

- If CFPD holds the copyright, you will often be able to download the material directly
- If not, there will be a link to the original publisher's website

Contact us if you have publications you'd like us to include in our list!

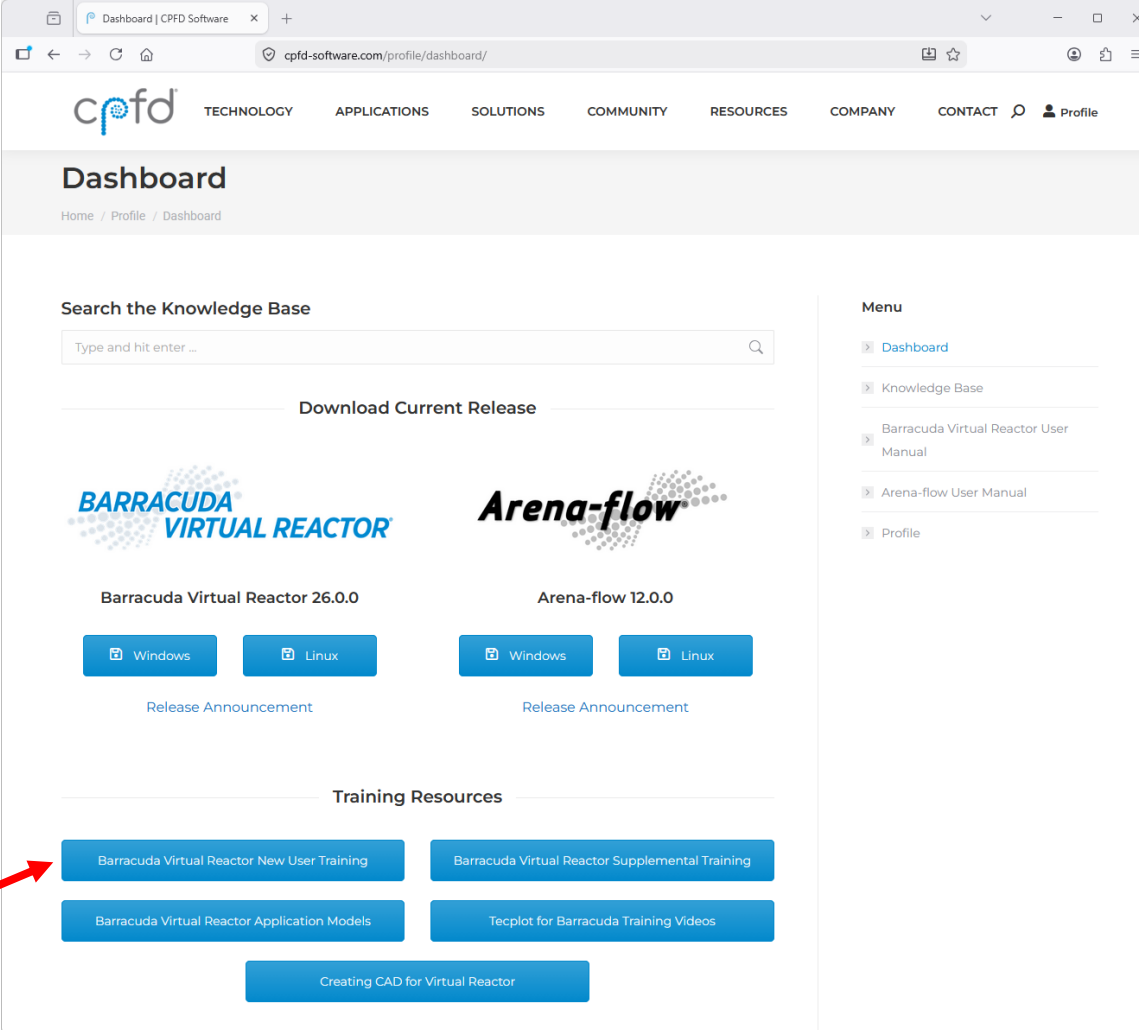


Barracuda Virtual Reactor New User Training

The [Barracuda Virtual Reactor New User Training](#) course is always available on our support site

- Can be completed as either:
 - A web-based, CPFD-led training class
 - A self-led, independent course
- Updated with each version release

Great resource for new employees who will be using Barracuda Virtual Reactor



The screenshot shows the CPFD Software Dashboard. The navigation bar includes links for TECHNOLOGY, APPLICATIONS, SOLUTIONS, COMMUNITY, RESOURCES, COMPANY, CONTACT, and Profile. The main content area features a search bar for the Knowledge Base, a section for downloading current releases of Barracuda Virtual Reactor 26.0.0 and Arena-flow 12.0.0 (with Windows and Linux options), and a Training Resources section. A red arrow points to the 'Barracuda Virtual Reactor New User Training' button in the Training Resources section.

2026 New User Web-Based Training Class Schedule

Web-based, CPFD-led training classes for the remainder of 2026:

- August 17-21
- September 21-25
- October 26-30
- December 7-11

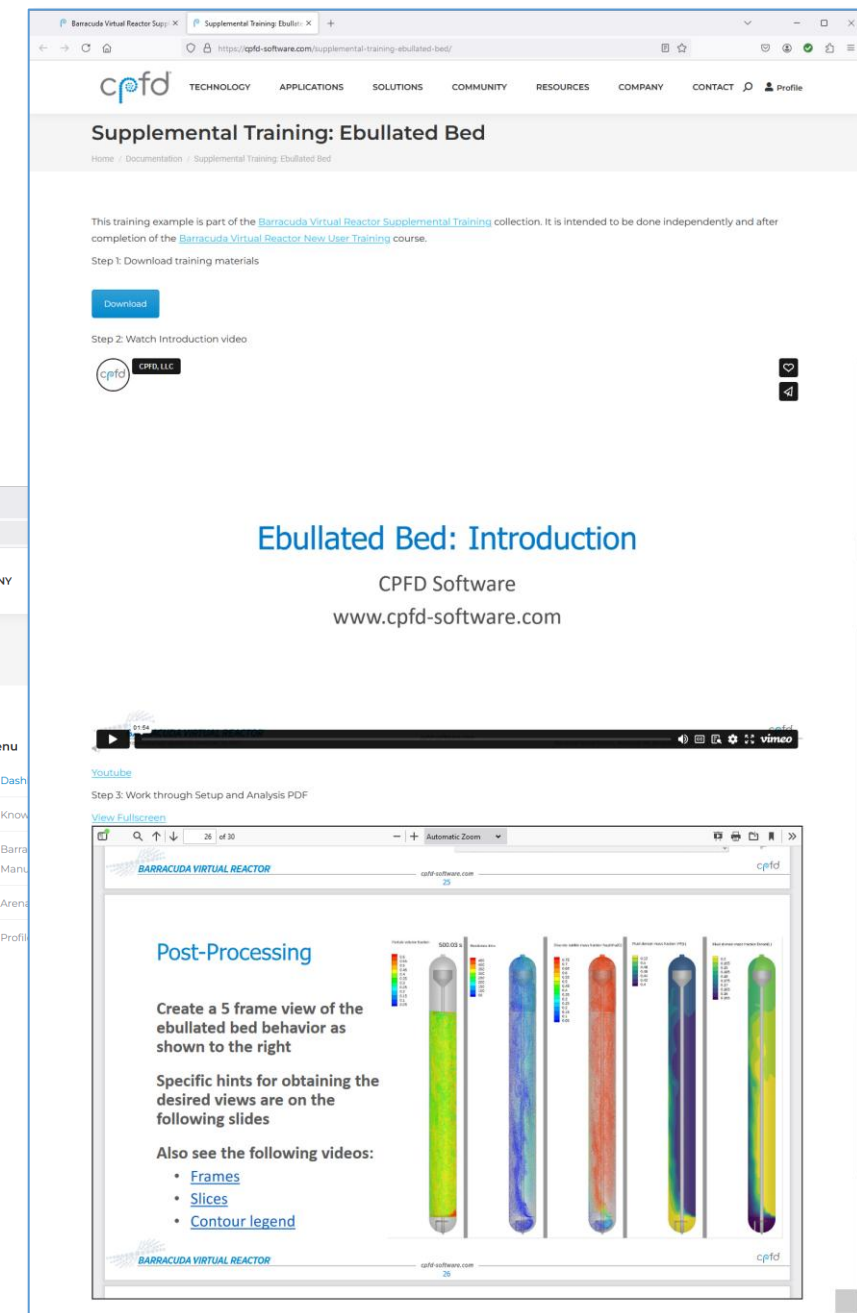
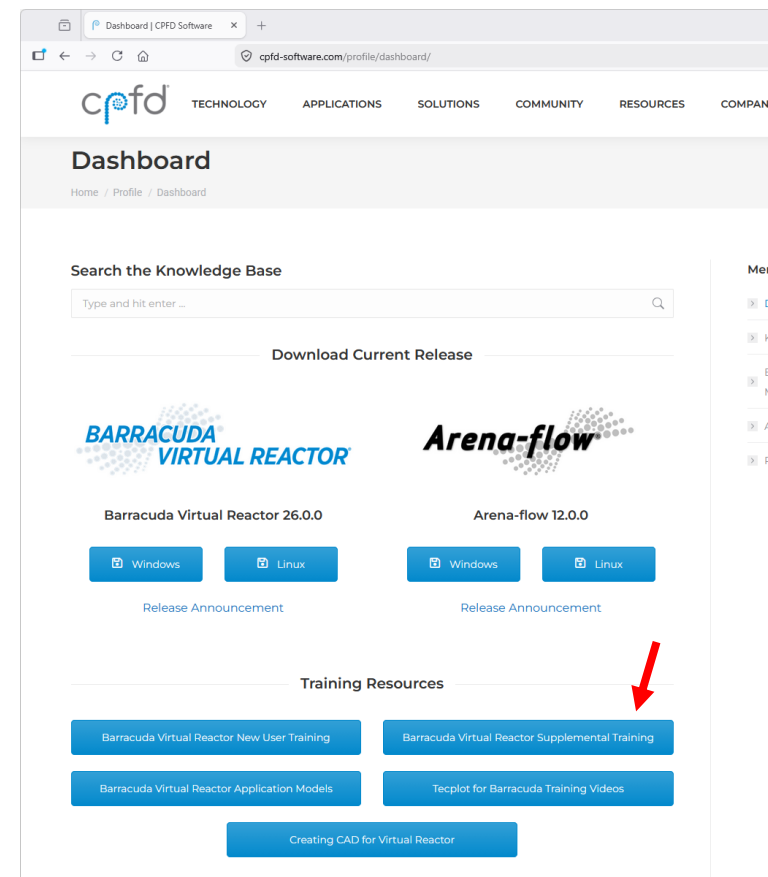
Contact us if you would like to participate in one of these classes!

The screenshot shows a web browser displaying the 'Barracuda Virtual Reactor New User Training' course page. The page features a progress bar at the top indicating '20% COMPLETE' with a last activity timestamp of 'January 22, 2024 9:23 am'. Below the progress bar, there is a welcome message and a list of learning objectives: 'What Virtual Reactor does, and what types of systems it is well-suited to simulate', 'How to use the Virtual Reactor GUI for setting up and running simulations', and 'How to post-process Virtual Reactor simulation results'. The page also includes instructions on how to use the training materials and a list of links for 'System Requirements and Recommendations', 'Install Barracuda Virtual Reactor', and 'Download Training Directory'. A 'Course Content' section is visible, listing several topics with expandable options: 'Training Course Agenda', 'How to Use the e-Learning System', 'Introduction to Barracuda Virtual Reactor', 'Kuijpers Training Example (5 Topics)', 'Gasifier Training Example (13 Topics)', and 'Best Practices for Using Barracuda Virtual Reactor'.

Supplemental Training Examples

Barracuda Virtual Reactor Supplemental Training

- Available to all customers with support site accounts
- Useful for those who have attended New User Training class and want to learn more advanced topics
- Cyclone, FCC Riser, Single-Cell Chemistry, CFB Erosion, Ebullated Bed, Silane Deposition



Q&A

We welcome your questions

For more information

- Visit our website: <https://cpfd-software.com>
- Follow CPFD on LinkedIn:
<https://www.linkedin.com/company/cpfd-software/>
- Email: info@cpfd-software.com
- Phone: +1-713-429-1252

