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

Sam Clark and Andrew Larson

CPFD Software

June 25, 2026

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Outline

Product Updates – Andrew Larson

Support and Training Updates – Sam Clark

Q&A

Product Updates

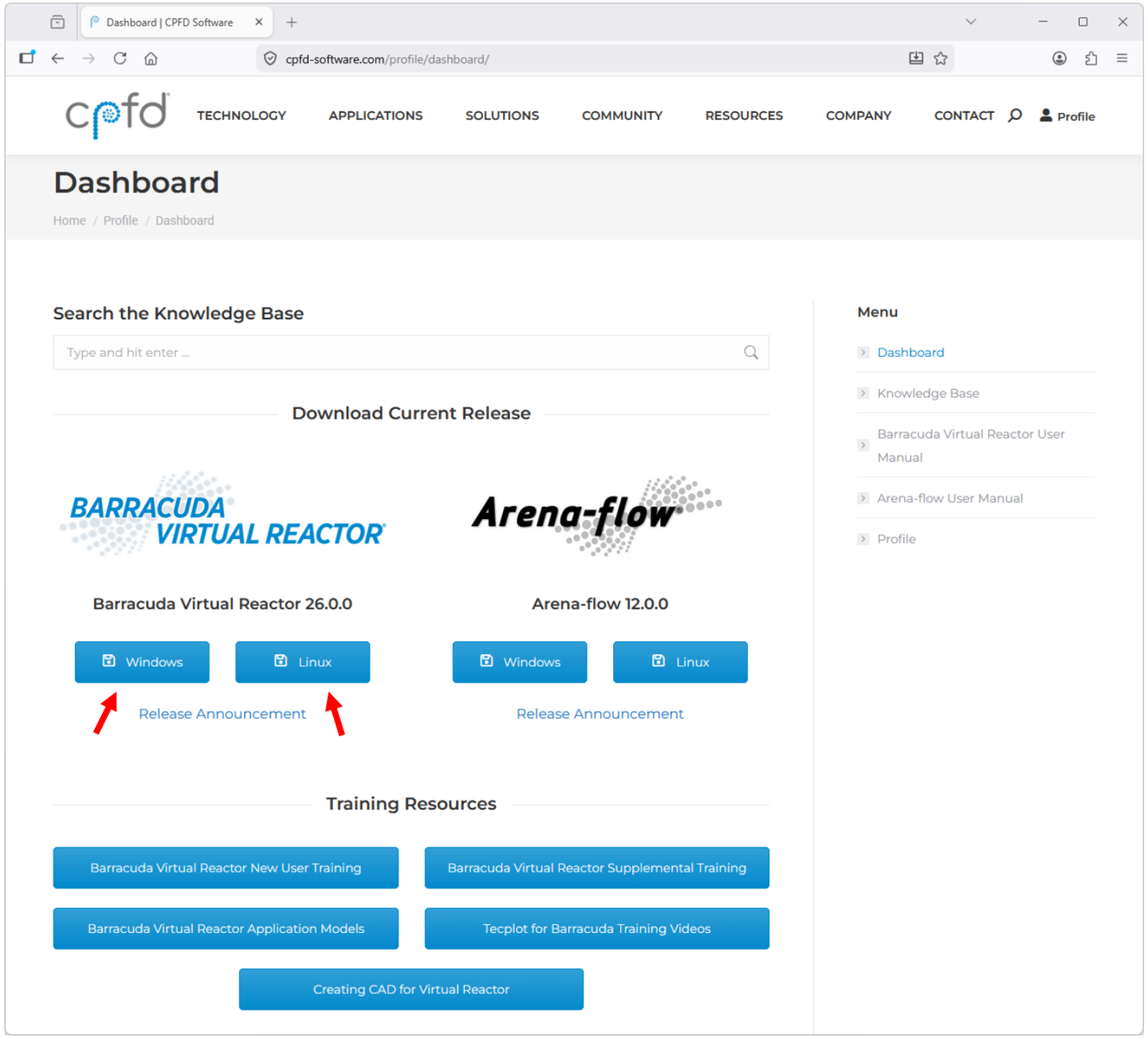
Two releases per year

- 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



Barracuda Virtual Reactor 24.1 Release

Cloud Resolution Updates

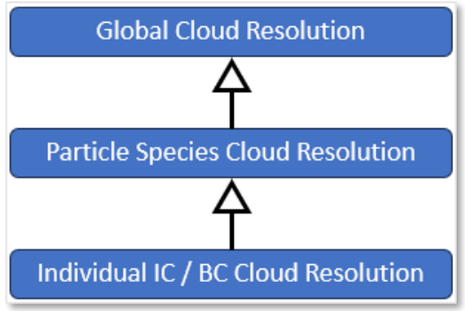
Directional Momentum Redirection Default

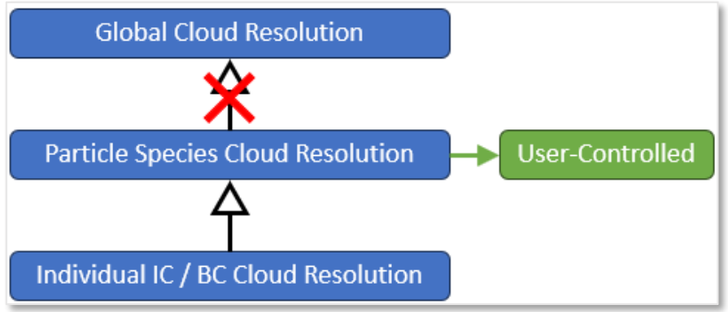
Injection BC Updates for Particle, Bubble, and Tracer Feed

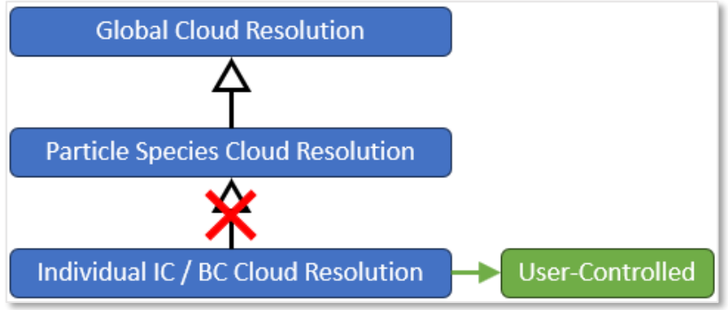
Thermal Wall BC Updates: Resistance and Direction Vector

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

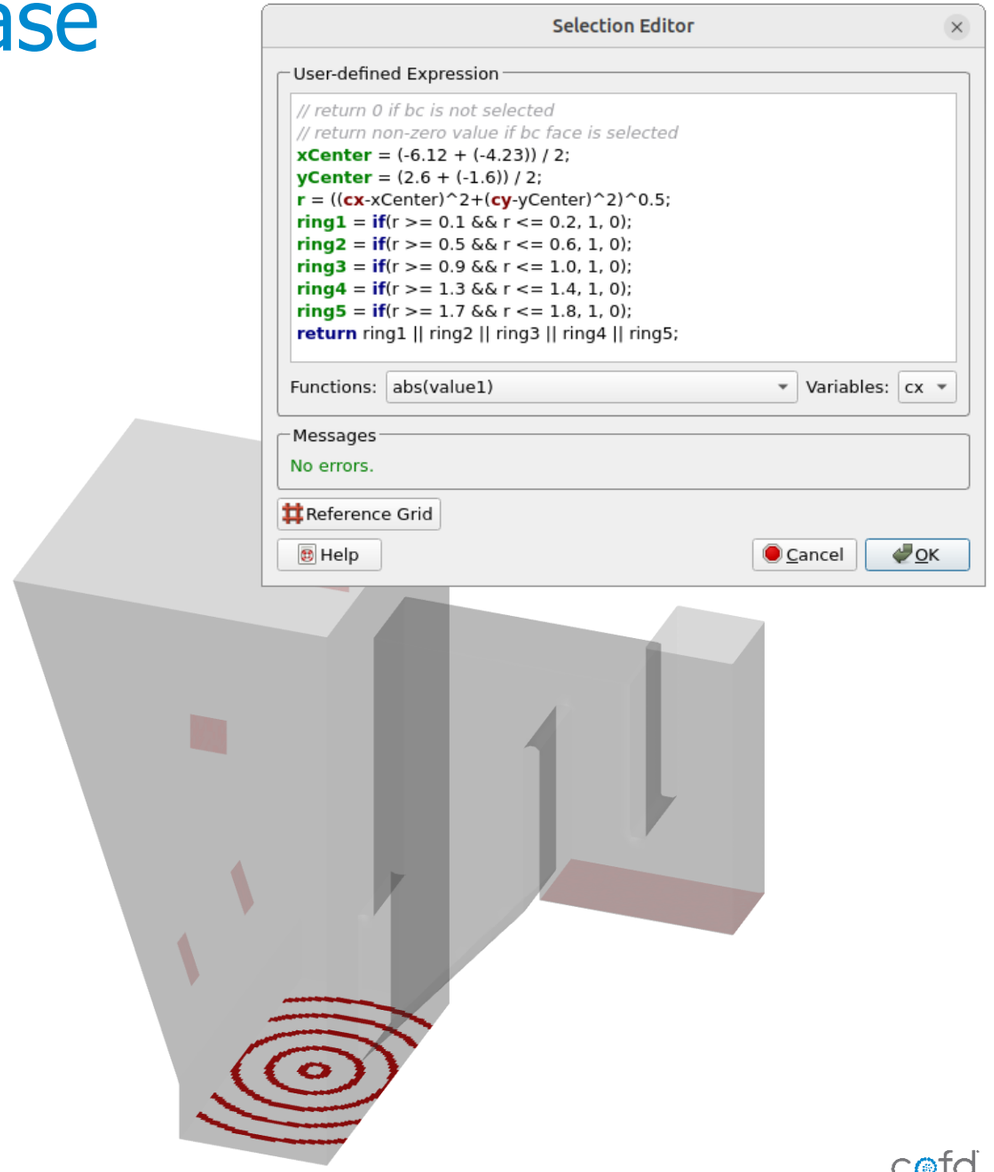
Thermal Wall GUI Redesign

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

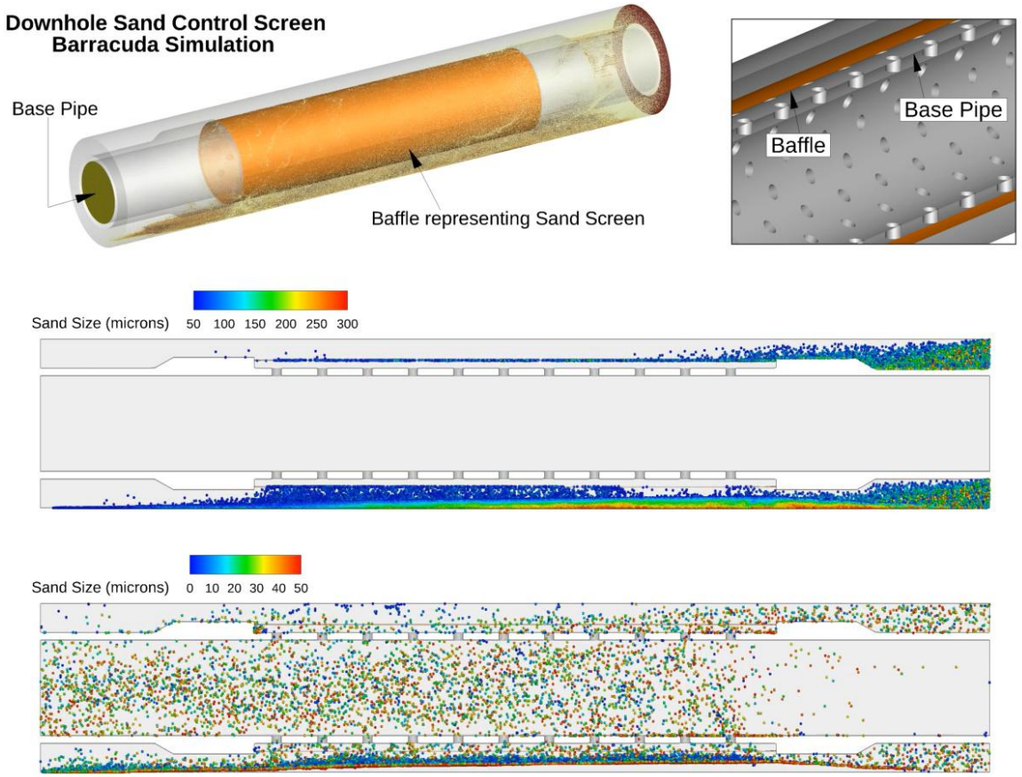
Rotate Output Data

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

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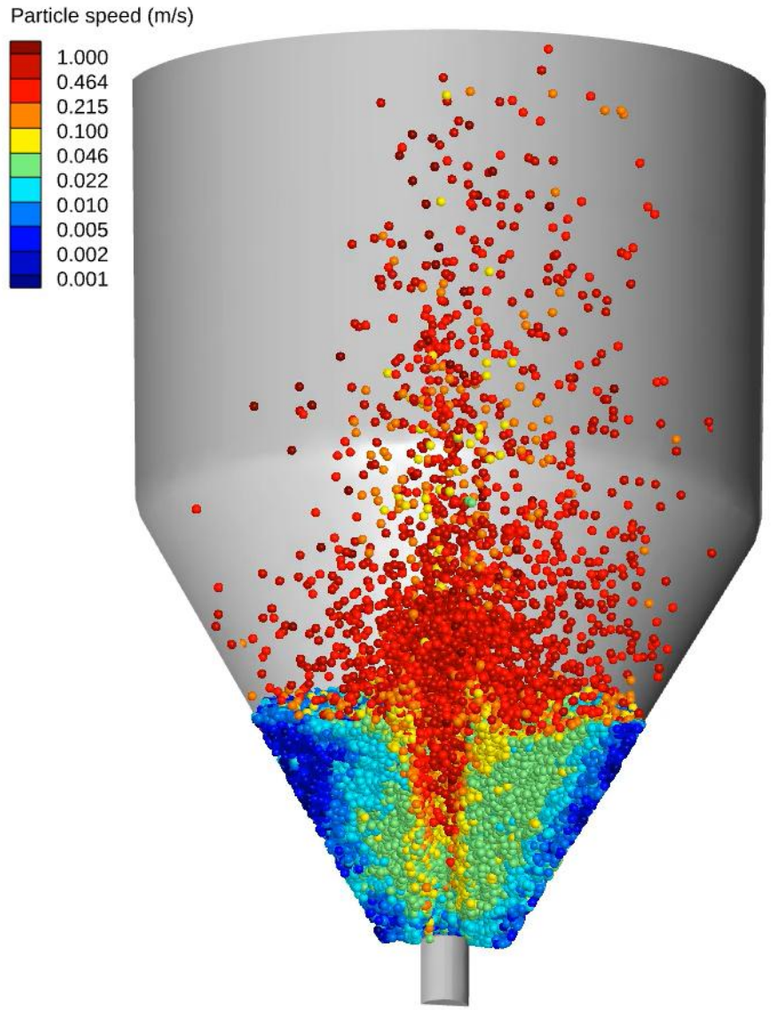


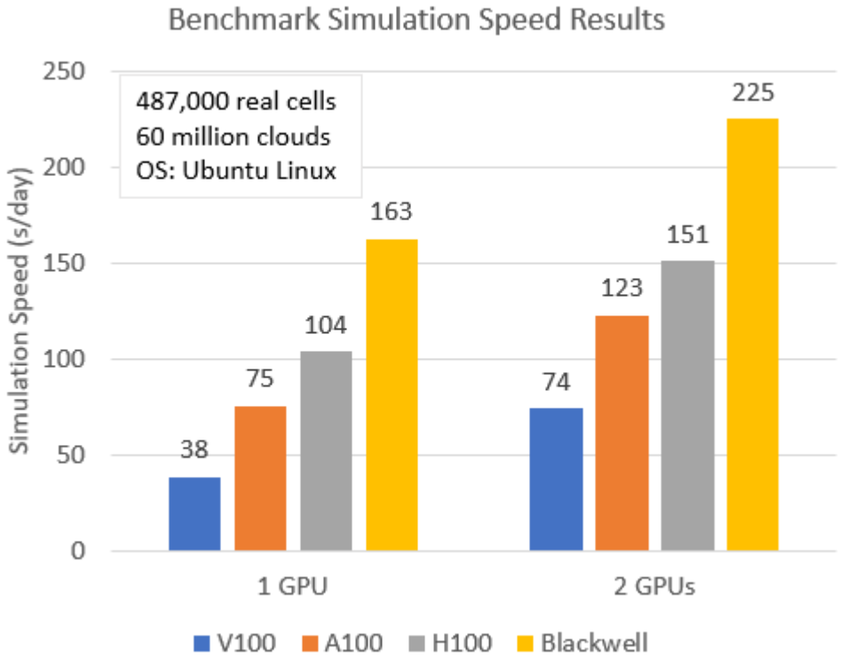
NVIDIA GPU Hardware Advancements

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



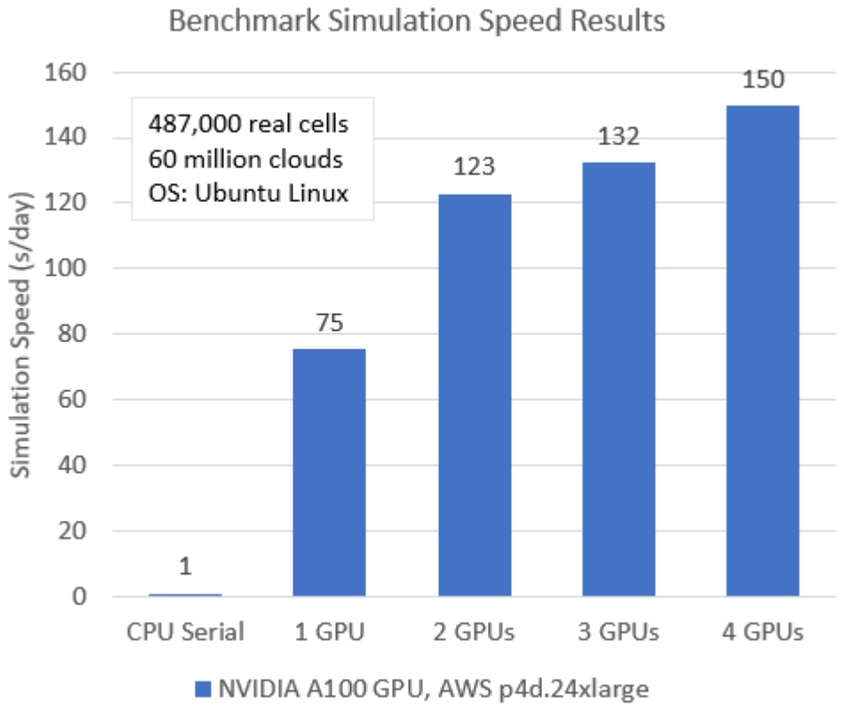
Virtual Reactor Multi-GPU Speedup

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

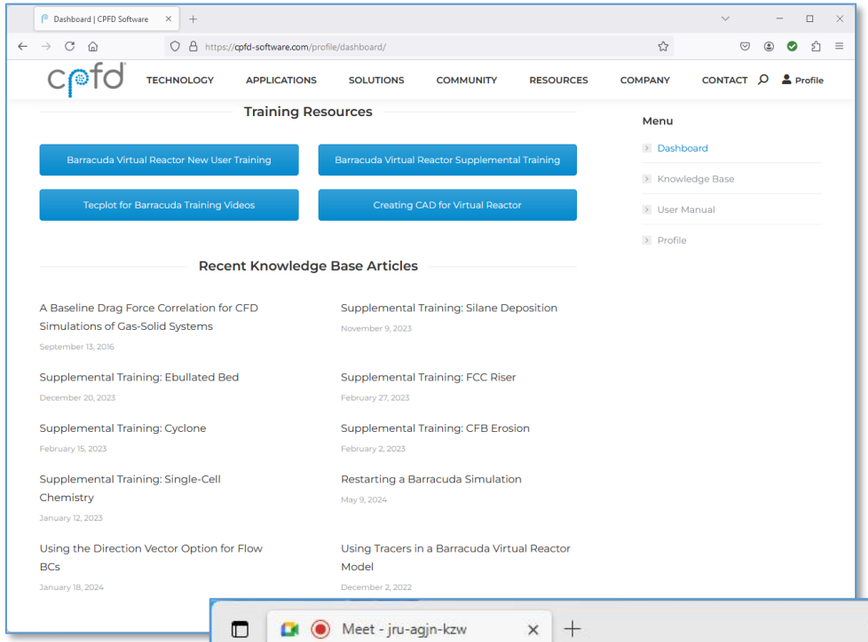


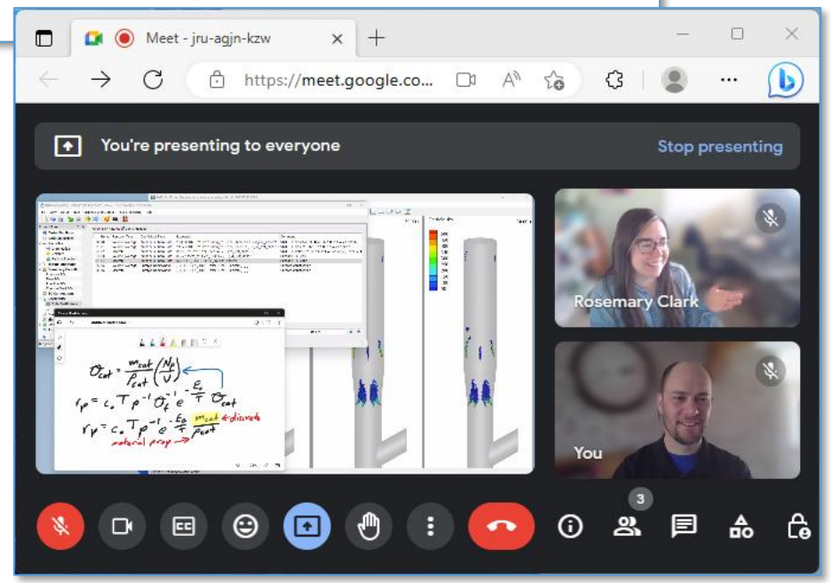
Support and Training Updates

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





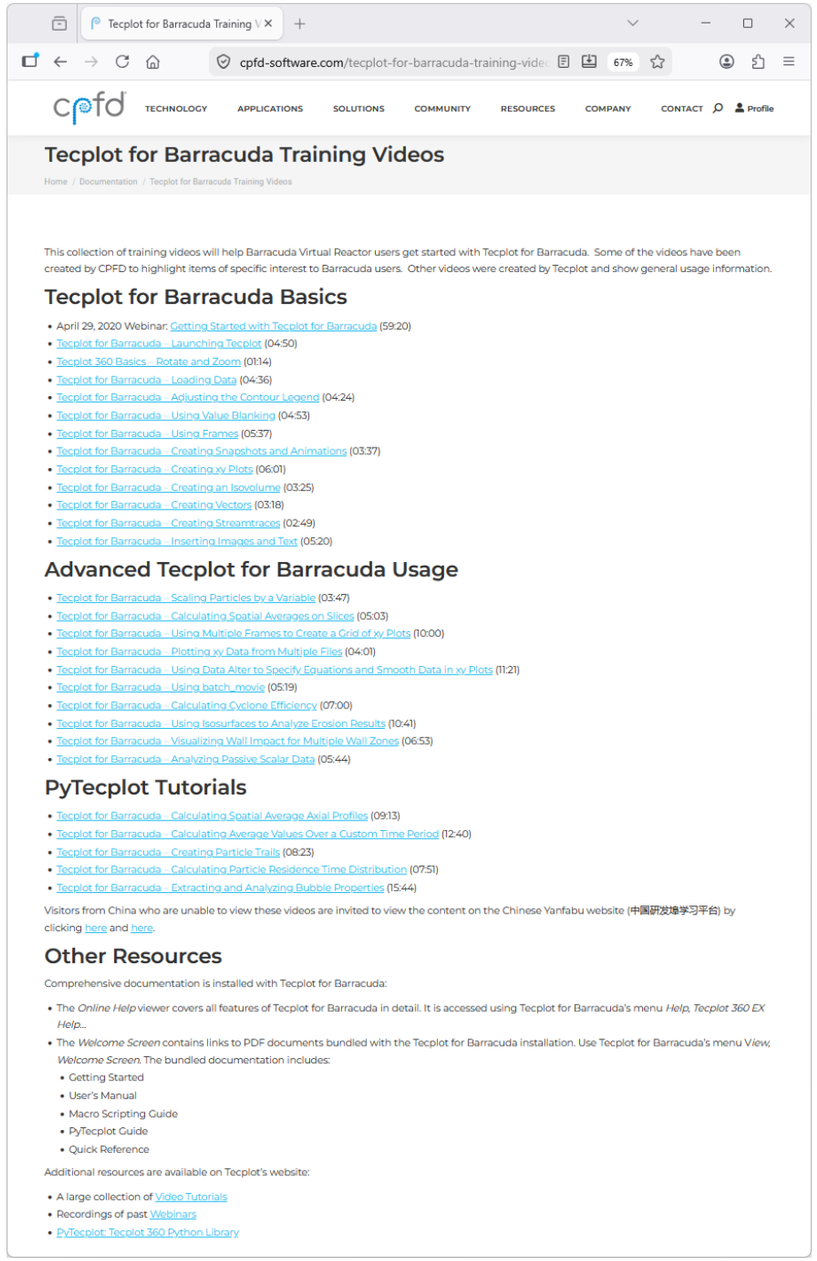
Tecplot for Barracuda Training Videos

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/

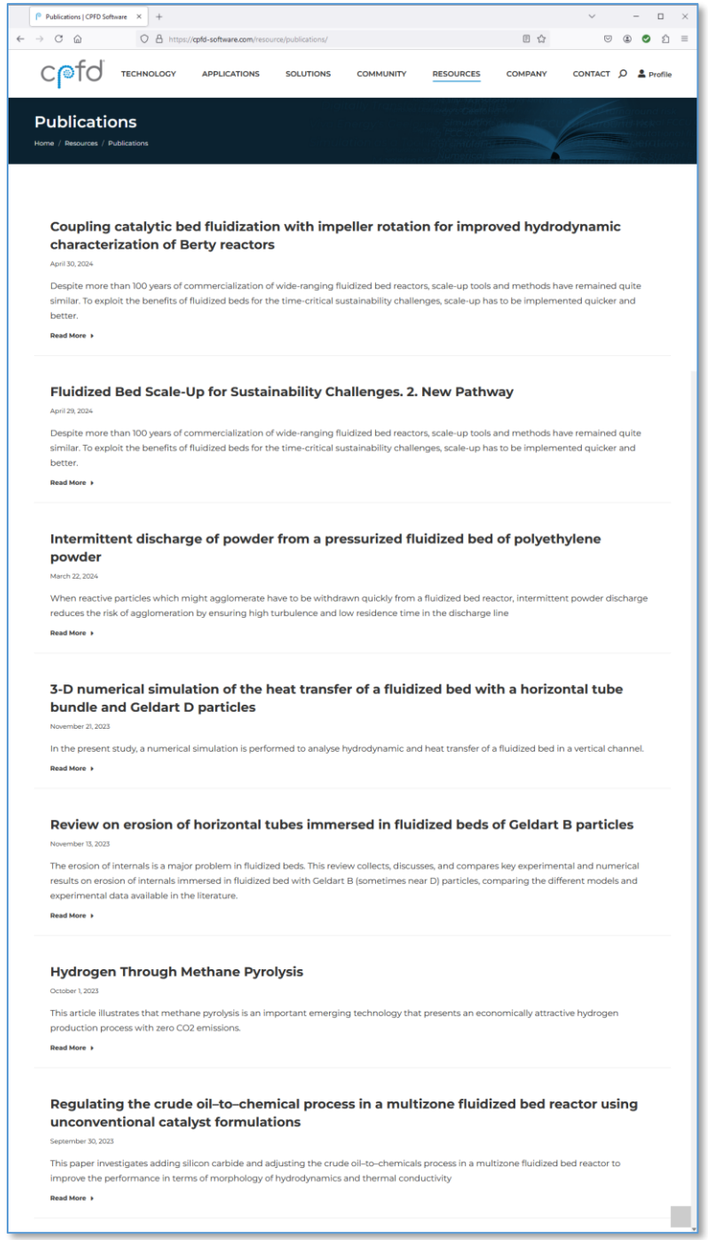


Publications on CPFD's Website

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 CPFD 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!

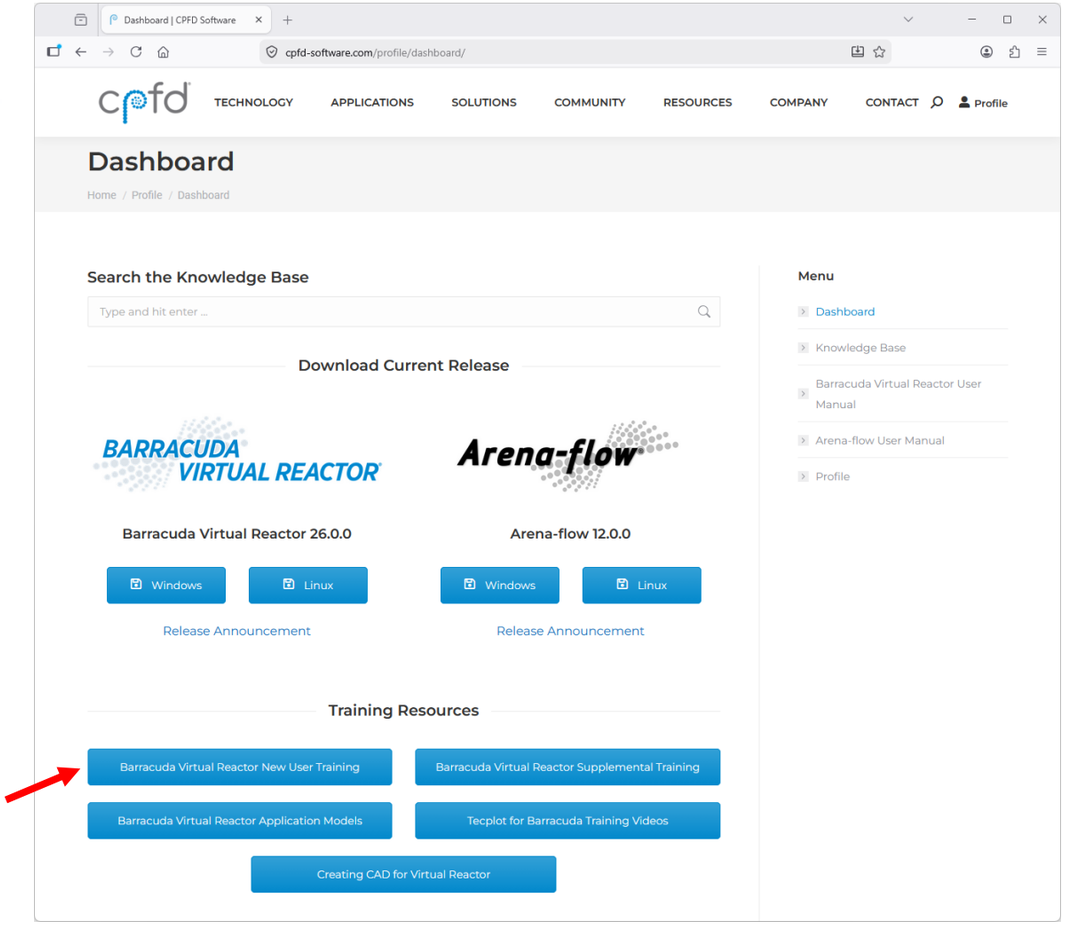


Barracuda Virtual Reactor New User Training

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

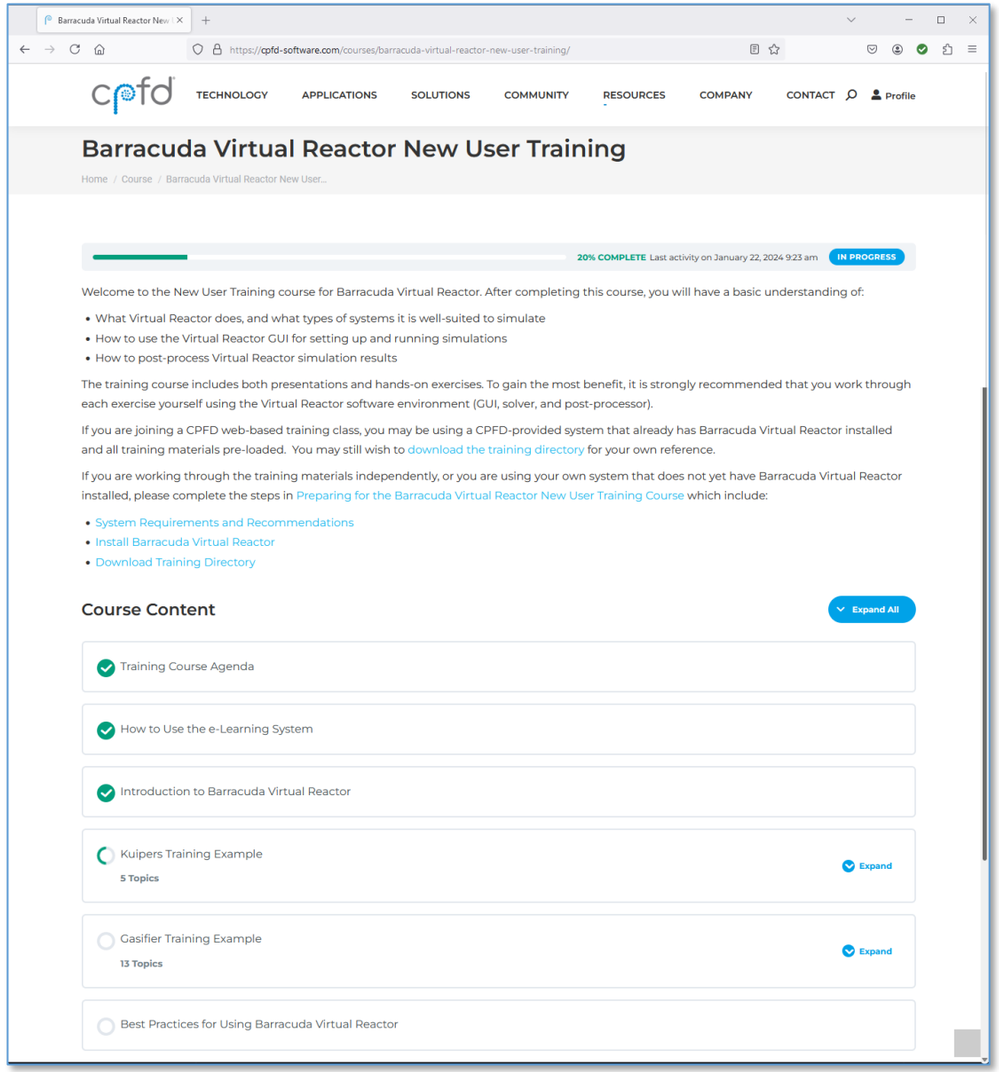


2026 New User Web-Based Training Class Schedule

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

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

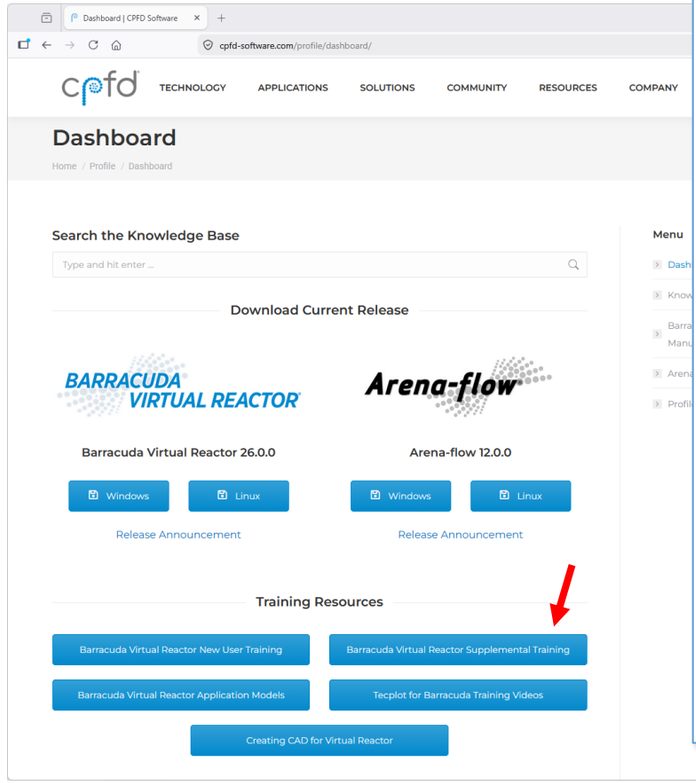
Contact us if you would like to participate in one of these classes!

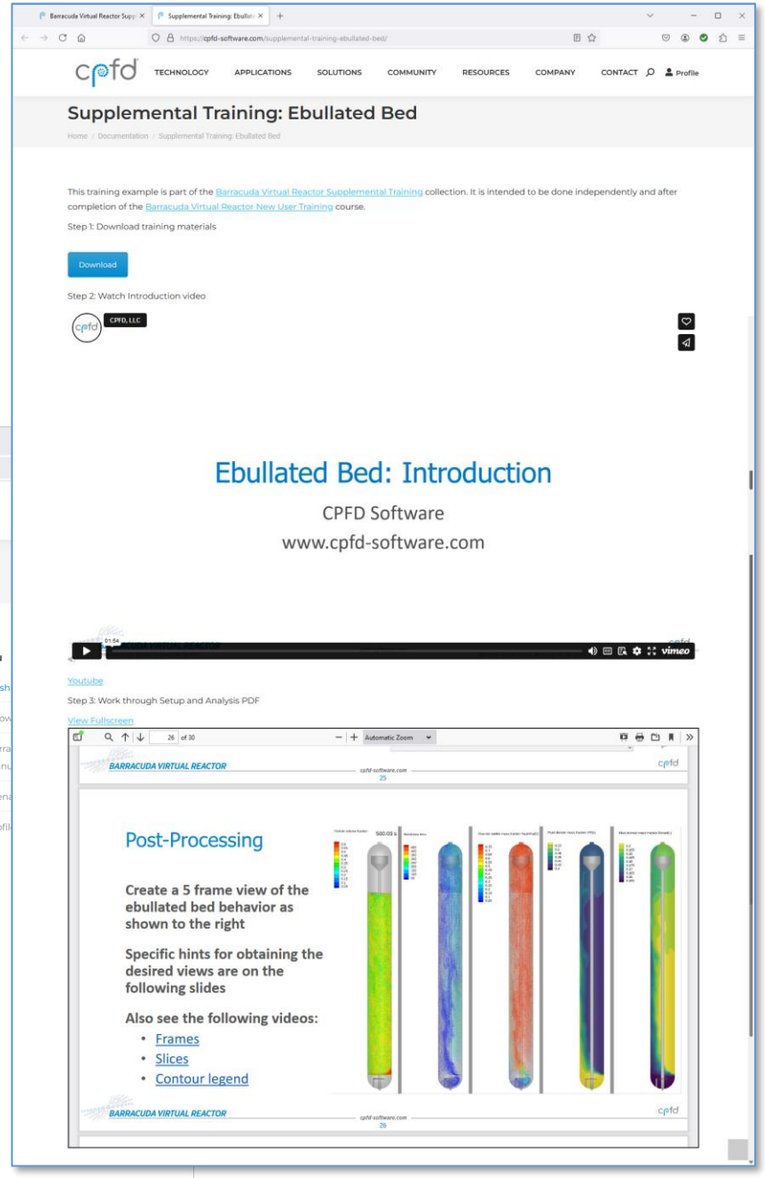


Supplemental Training Examples

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