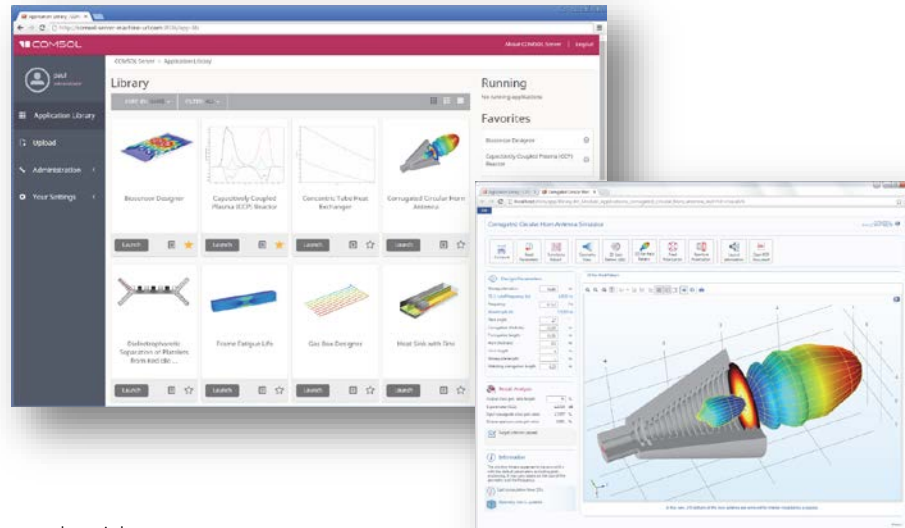


Introduction to the Application Builder and COMSOL Server™

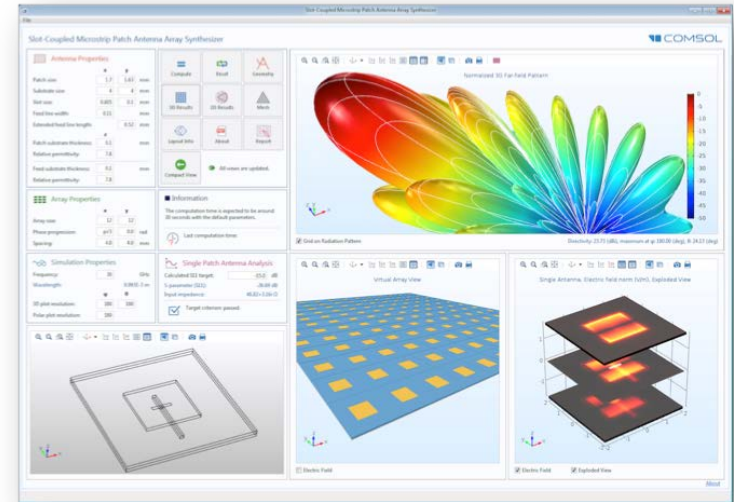


Andy Cai
COMSOL, Inc.



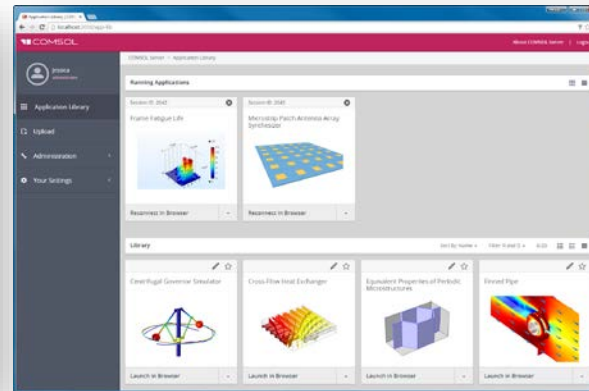
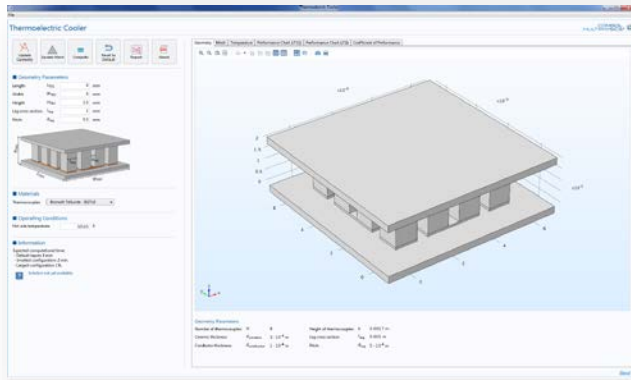
COMSOL Applications

- Application = physics model + user interface
- Can be password protected
- In COMSOL Multiphysics®
 - Double-click an MPH-file for
 - Editing apps
 - Running apps
- Or deploy with COMSOL Server™



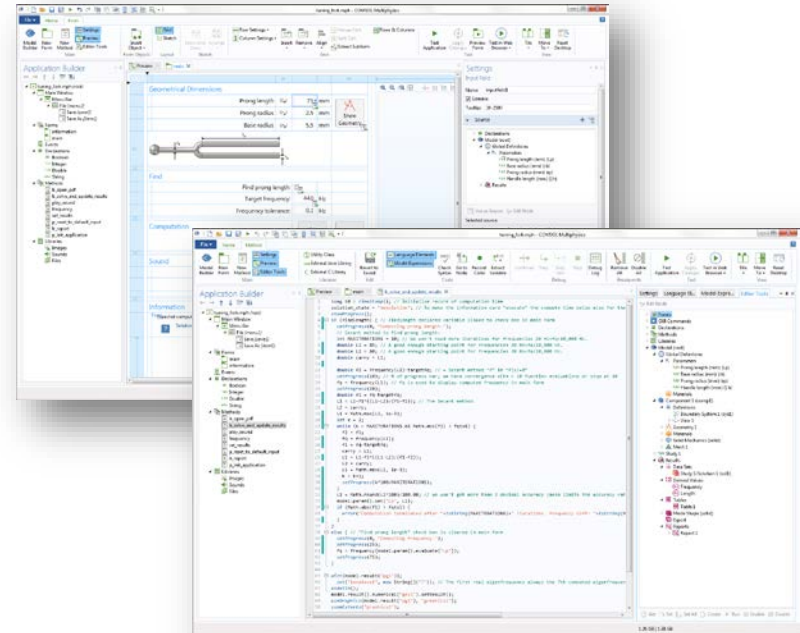
Application Builder

- Included in the Windows® version of COMSOL Multiphysics®
- It is possible to *run* applications with COMSOL Multiphysics® or COMSOL Server™
- Run with COMSOL Multiphysics® on Windows®, macOS, and Linux®
- Run with COMSOL Server™ on Windows®, macOS, Linux®, and any platform/OS supporting a web browser

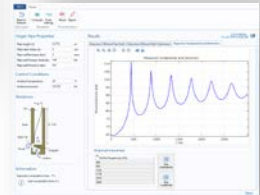
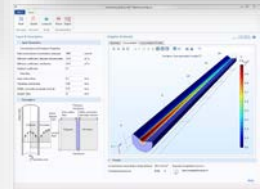
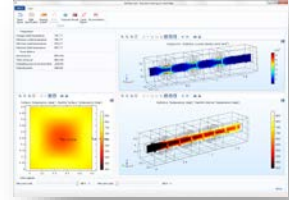
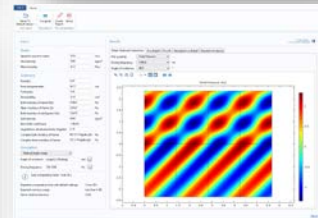
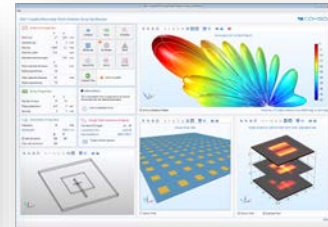
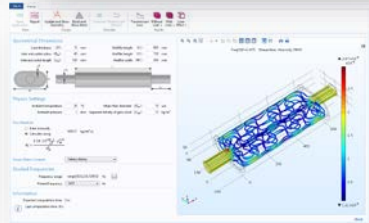
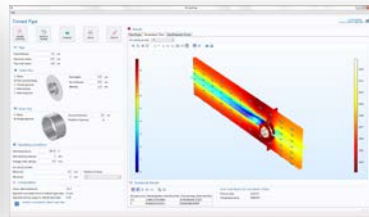
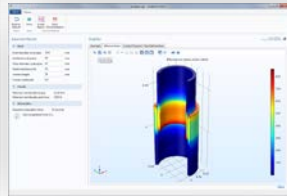
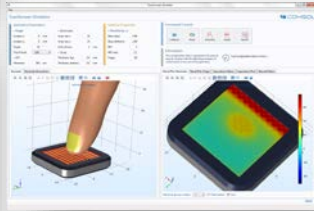
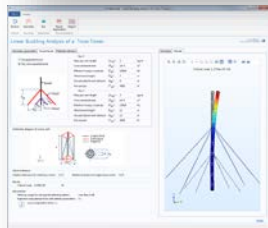
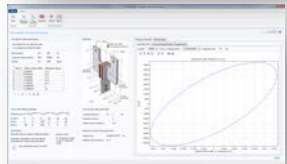
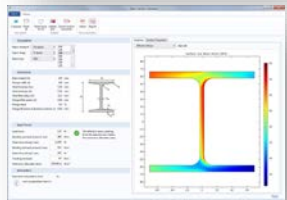


Two Editors

- The Form Editor
 - For user-interface design
- The Method Editor
 - For programming



The Application Libraries

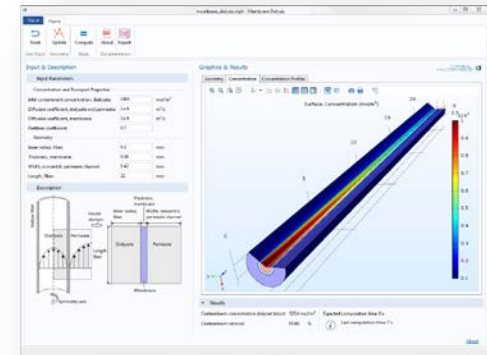


The Application Builder

Demo

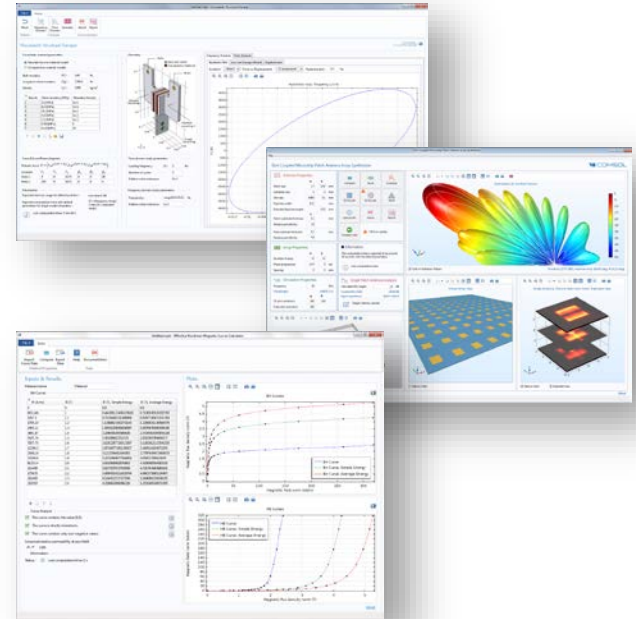
Different Uses for Simulation Apps

- Spreading the use of your simulations and fostering collaboration
- Visualizing results
- Sophisticated way of parameterizing your model
 - More powerful than traditional methods
 - Easy to pick up at a later time
- Automating modeling tasks
- Link to legacy code in C, Java[®] API, FORTRAN

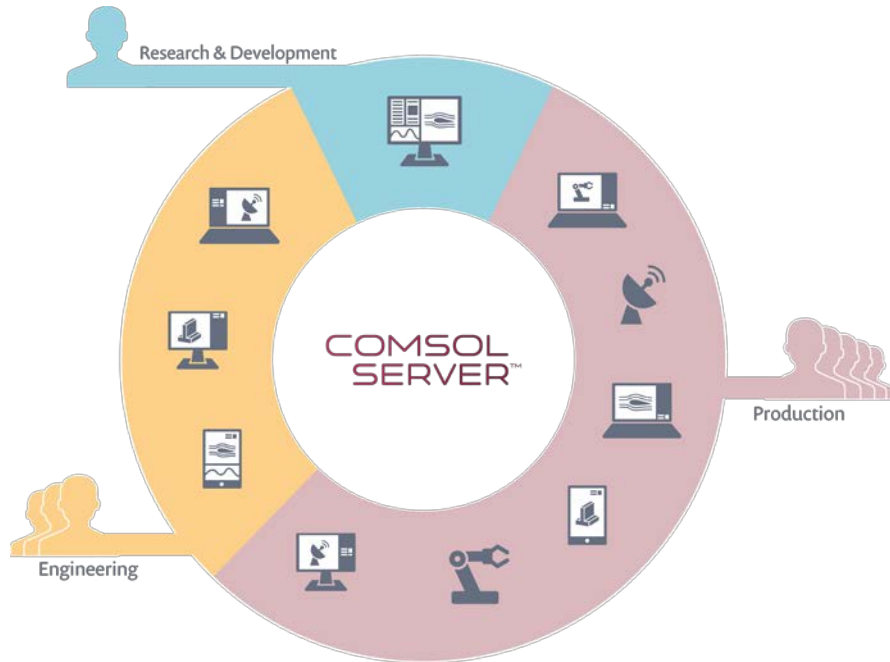


Building Apps Fosters Collaboration

- Creating an application often requires a collaborative effort by experts within the following areas:
 - Physics
 - Numerical analysis
 - Programming
 - User-interface and graphic design
- A well-crafted application...
 - ...avoids accidental user input errors
 - ...focuses on relevant output details

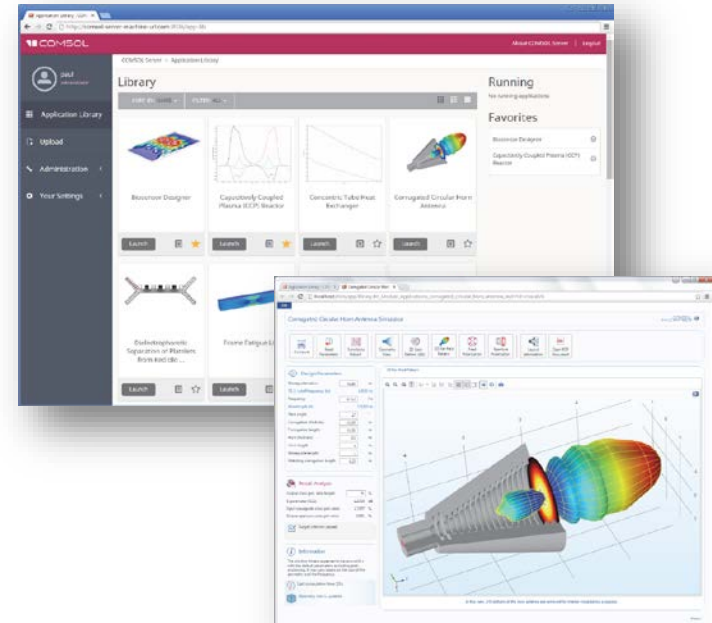


COMSOL Server™



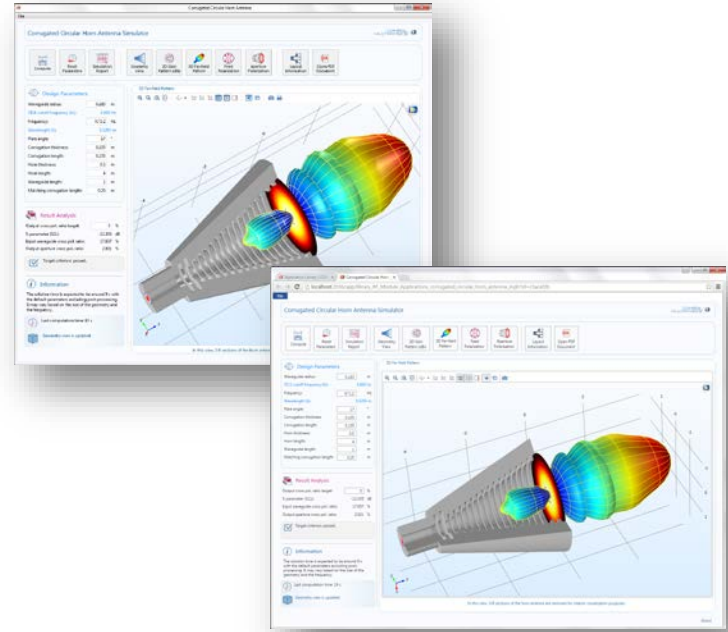
COMSOL Server™

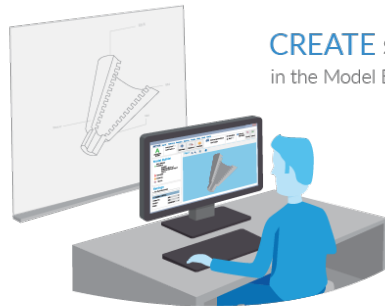
- Deploy COMSOL® applications
 - Throughout your organization
 - Worldwide access
 - Immediate access to application updates
- Administrative tools
 - Create user accounts and privileges
 - Create user groups
 - Configure for using one dedicated app only
 - ...and more



Run Applications in Two Ways

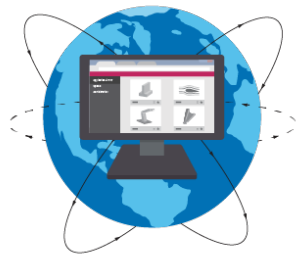
1. COMSOL Client for the Windows® operating system
 - Free download: 40 MB
 - Same look-and-feel as the COMSOL Desktop® environment
 - Run with LiveLink™ products for CAD
2. Web browser
 - No installation required
 - No browser extensions required
 - 1D, 2D, and 3D graphics
 - Interactive 3D graphics using the WebGL™ standard





CREATE simulations
in the Model Builder

BUILD specialized apps
in the Application Builder



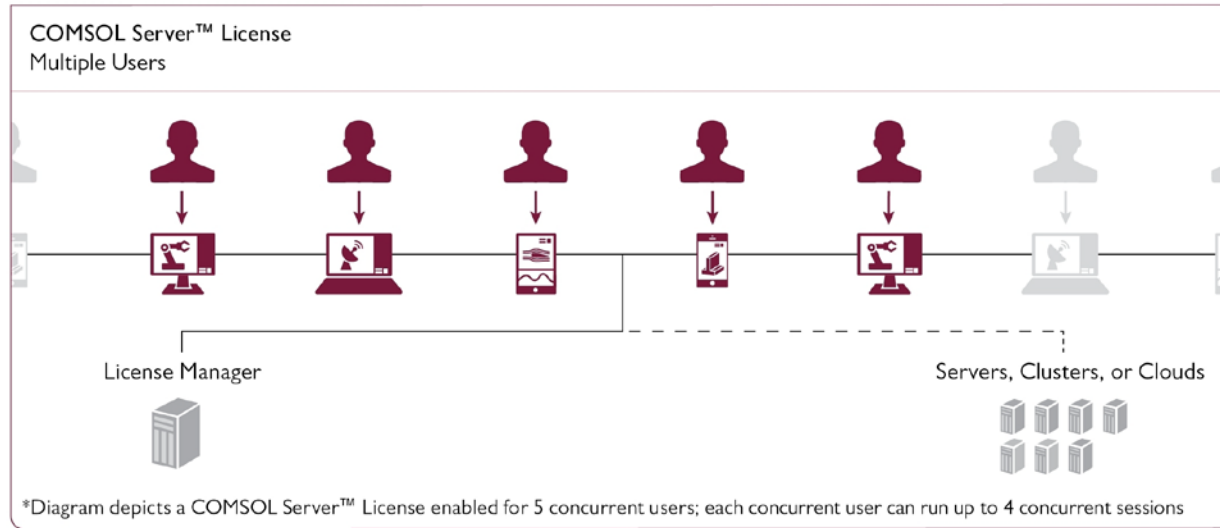
DISTRIBUTE multiple apps
with COMSOL Server

RUN simulation apps
in COMSOL Multiphysics or in a browser



License Options – COMSOL Server™

WORLDWIDE LICENSE

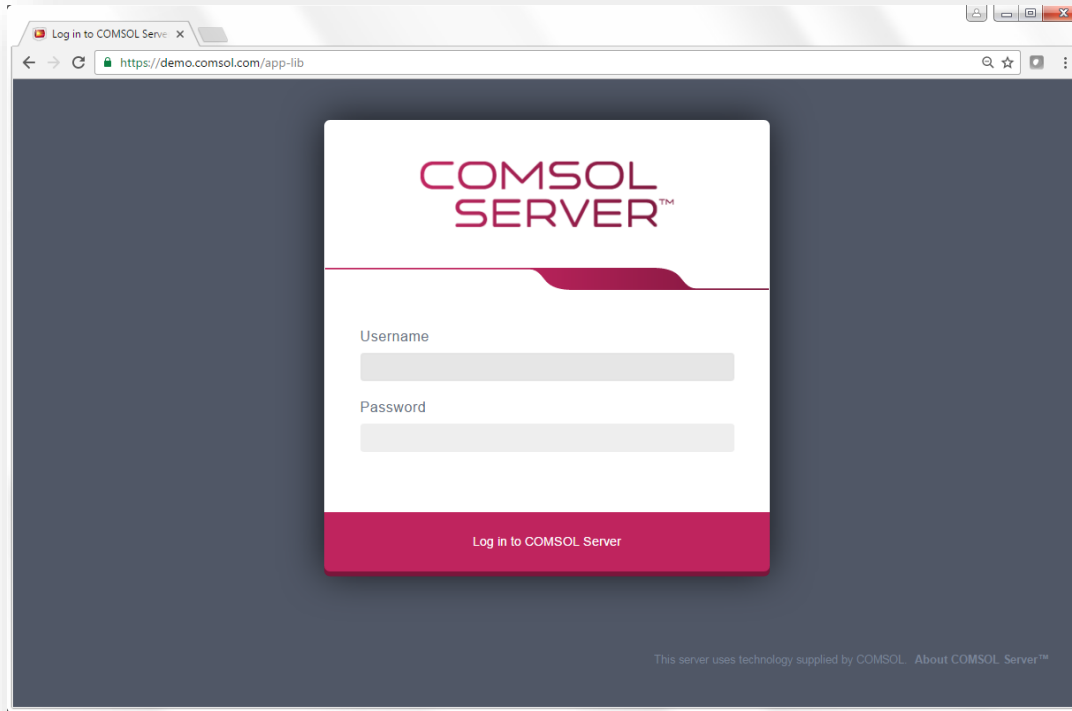


COMSOL Server™ is compatible with the Windows®, OS X, and Linux® operating systems.
An application can be run in many major web browsers on platforms such as Windows®, OS X, iOS, Linux®, and Android™.

COMSOL Server™

Demo of the Web Interface Components

The Login Screen



1. The first step is to log into the COMSOL Server™ installation
 - a) For this you need a username and password that you created during installation or received from your COMSOL Server™ administrator
2. You also need the web address (URL) to the COMSOL Server™ installation
 - a) In the picture to the left, the URL is:
<https://demo.comsol.com>