

# AIM Lid-Driven Cavity - Results

Author(s): Sebastian Vecchi, ANSYS Inc.

## Problem Specification

1. Pre-Analysis & Start-Up
2. Geometry
3. Mesh
4. Physics Setup
5. Results
6. Verification & Validation

## Results

Press the **Results** button in the Workflow to extract information from the simulation. In order to find information that can be readily used, first press **Evaluate Results**. AIM will automatically calculate the solution and evaluate the results. Once the evaluation is complete, AIM will automatically output a velocity vector field in the **Results** section under **Objects**. **The arrows in the velocity vector field are initially too small to see.**

Select the velocity Vector to edit its settings. **Change Symbol distribution to Based on mesh, set the Symbol length to Constant and press Evaluate.** If desired, change the value **At every Nth item** to more than 1 and change the **Symbol sizing** in the **Appearance** section to alter how big the arrows are. Press the play button in the model window to see how these velocity vectors develop over time. **The image below is created by creating a plane which bisects the flow and is set to be the location for our velocity vectors.** In order to create a plane **select the Add plane button in the top right of the model window** (shown below) and **use the arrows to drag it to the middle of the box.** Travel back to the velocity vector and change the **location** to the newly created plane.

To plot the pressure change, a contour on the mid-plane of the flow volume will most accurately represent a pressure contour of the flow. **Select Contour in the Add menu, choose the newly created plane to map the contour onto, and assign the Variable to be Total Pressure.**

The same thing can be done to plot the velocity change as a contour. **Repeat the steps above to create the contour, but make the variable Velocity Magnitude instead of Total Pressure.** In the **Appearance** section change the **Coloring to Banded** and the **Number of colors to 20.**

**Go to Step 6: Validation**

Go to all ANSYS AIM Learning Modules