Spacecraft Assembly - Mesh

Authors: Rajesh Bhaskaran & Michael Mahoney, Cornell University

Mesh

In the first video, we generate a tetrahedral mesh. The number of nodes is over the ANSYS student product limit, so this mesh won't solve.

In the second video, we generate a "Hex Dominant" mesh which gives us predominantly hexahedral elements. The number of nodes is below the ANSYS student product limit.

The resulting mesh has 26,934 nodes. There are 3 degrees of freedom per node (displacements in x, y and z directions). So the ANSYS solver will generate 26,934*3 ~ 80k algebraic equations to solve our four coupled boundary values problems approximately.

To download a file with Geometry and Contact already included, please click here

Go to Step 4: Physics Setup

Go to all ANSYS Learning Modules