

#1332: OptiStruct – Restarting a Nonlinear Analysis

Product: OptiStruct

Product Version: OptiStruct 2017.0 or above

Topic Objective

Restarting a nonlinear analysis with OptiStruct.

Topic Detail

A nonlinear analysis can be restarted or continued from the last point at which the previous analysis was interrupted. When running an analysis, you can write the model information and analysis state information which can be used for restart.

Restart a Nonlinear Analysis Run with RESTARTW and RESTARTR Entries

RESTARTR: The RESTARTR entry can be used in the I/O Options section to define the reading requests for nonlinear restart.

RESTARTW: The RESTARTW entry can be used in the I/O Options section to define the control parameters for nonlinear restart.

Scenarios

- Restart from interruption – continue an interrupted nonlinear analysis due to a power outage and so on → v2017
- Restart for subcase appending – append steps to the load history after a successful nonlinear analysis → v2017.1
- Restart for subcase truncation and appending – continue a nonlinear analysis from an intermediate point and change the remaining load history → v2017.1
- Restart for reusing nonlinear solution in linear perturbation – append linear buckling/preloading steps after a successful nonlinear analysis → v2017.1

Support adding bulk data (listed below) in restart run

- SPCADD, SPC, SPC1
- LOADADD, FORCE
- DLOAD, TLOAD1, TLOAD2, RLOAD1, RLOAD2, DAREA
- NLPARM, NLADAPT, NLMON, NLOUT, TSTEPNL, TSTEP, SOLVTYP
- CNTSTB, MODCHG
- EIGRL, EIGRA, EIGRC
- FREQ, FREQ2
- TABLED1, TABLED2, TABLED3, TABLED4