



INNOVATION
CONFERENCE

TAIWAN

Ansys 應用於伺服器產業之結構評估

Ryan Yang(楊博宇) / Sr. Engineer
Structure(S&V) team
Jabil / 捷普科技

Agenda

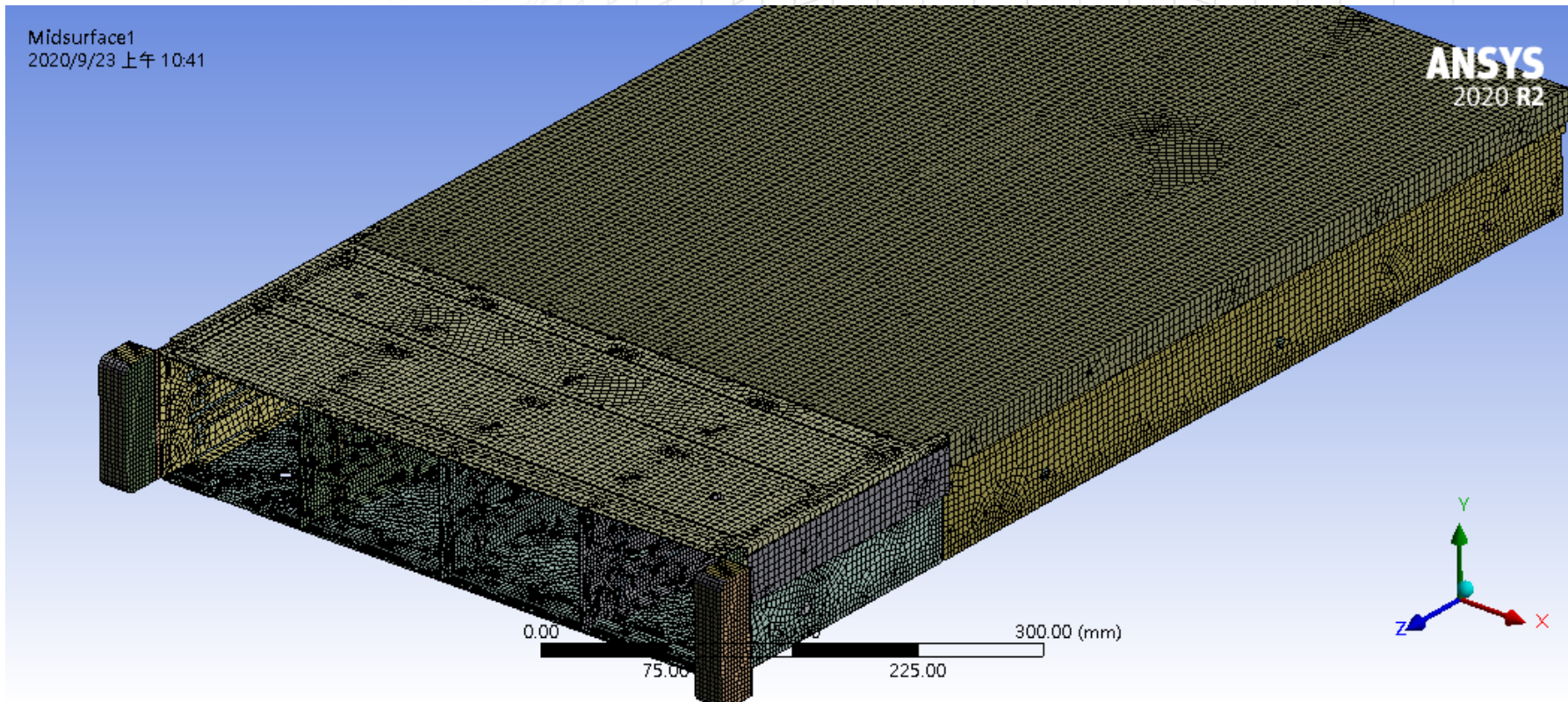
- Building Model
- Modal analysis
- Sag analysis
- Random vibration analysis

Building model

Building model

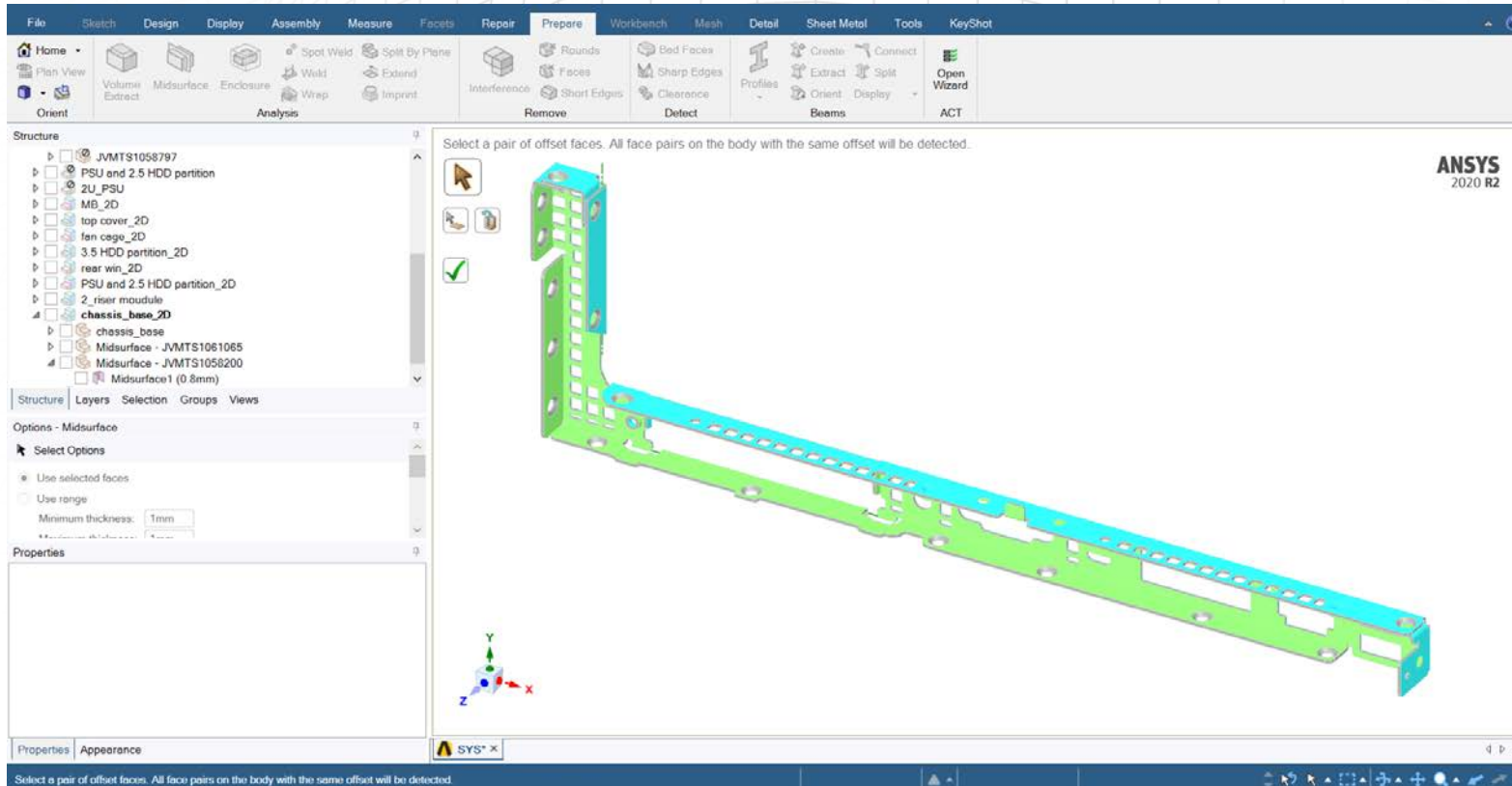
(Workbench)

CAD file => Spaceclaim => Mechanical



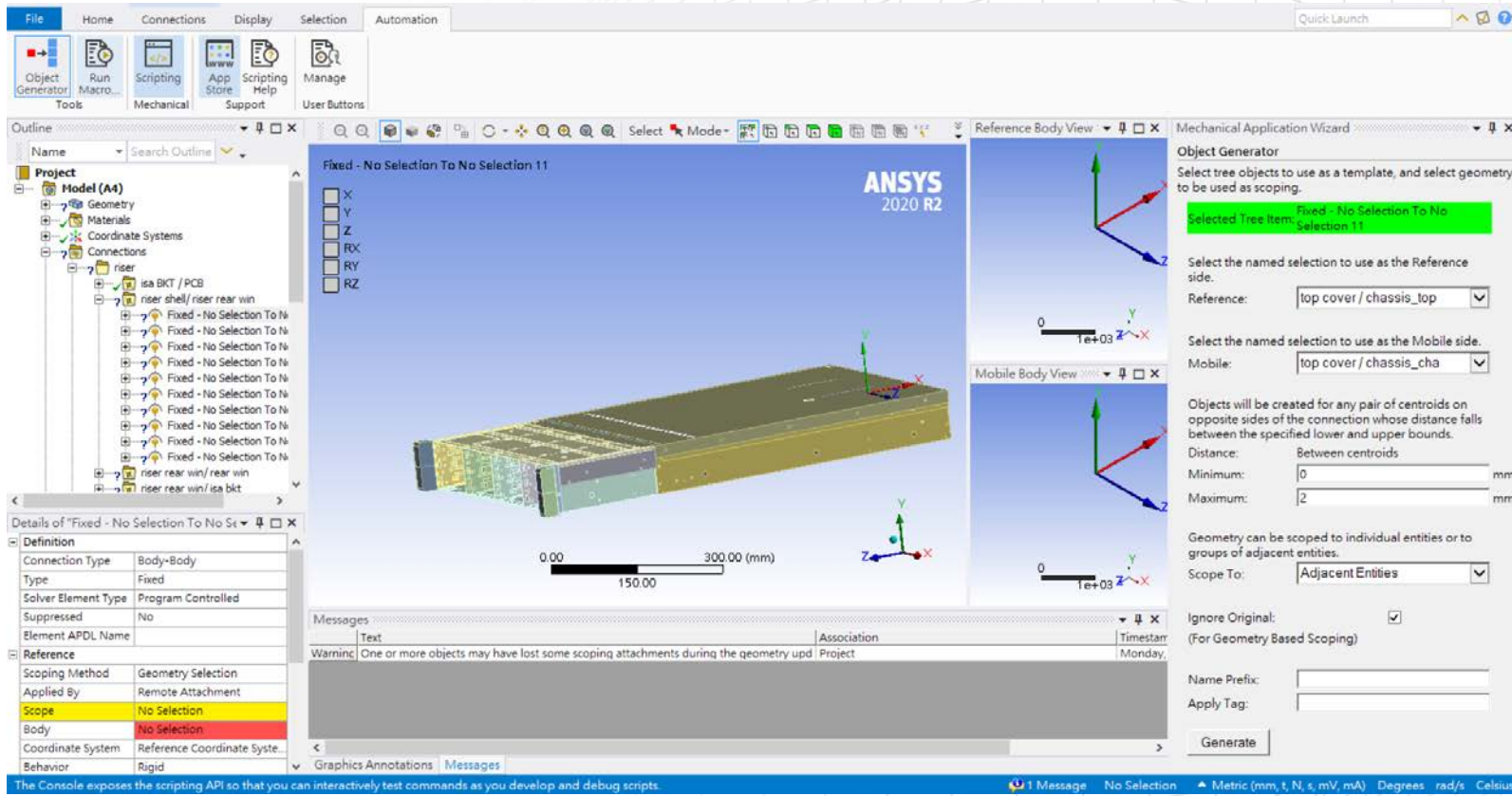
Powerful midsurface

- Convert sheet metal to shell element
- Extract middle surface.



MPCs(multi point constrains) automation

- Auto create MPCs.



A part's holes

B part's holes



A's named selection

B's named selection

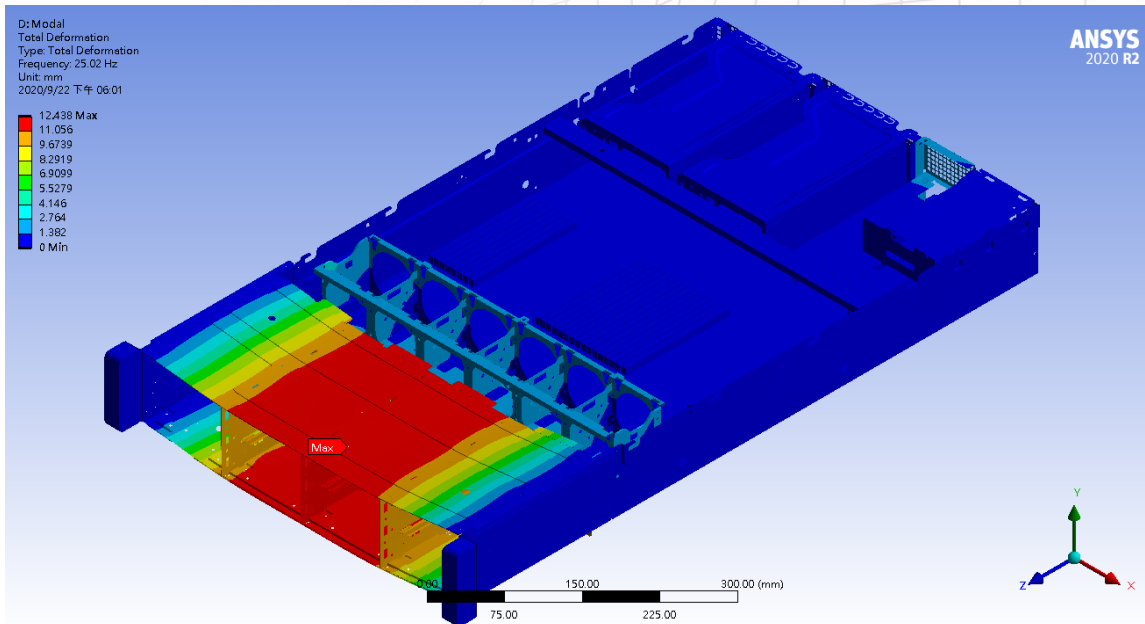


Object generator

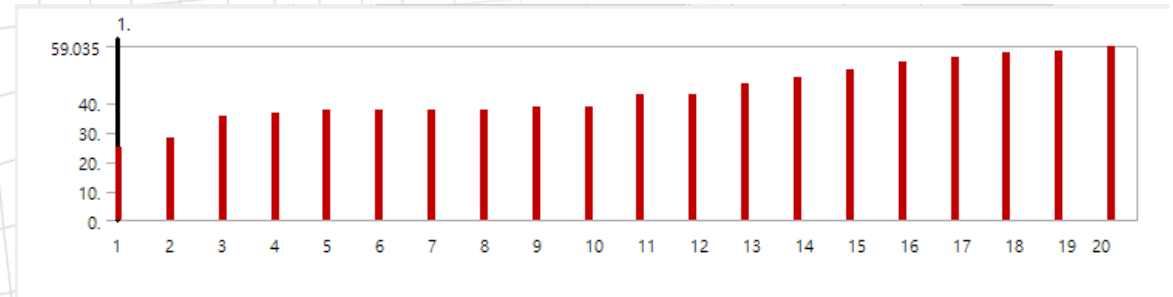
Modal analysis

Modal analysis

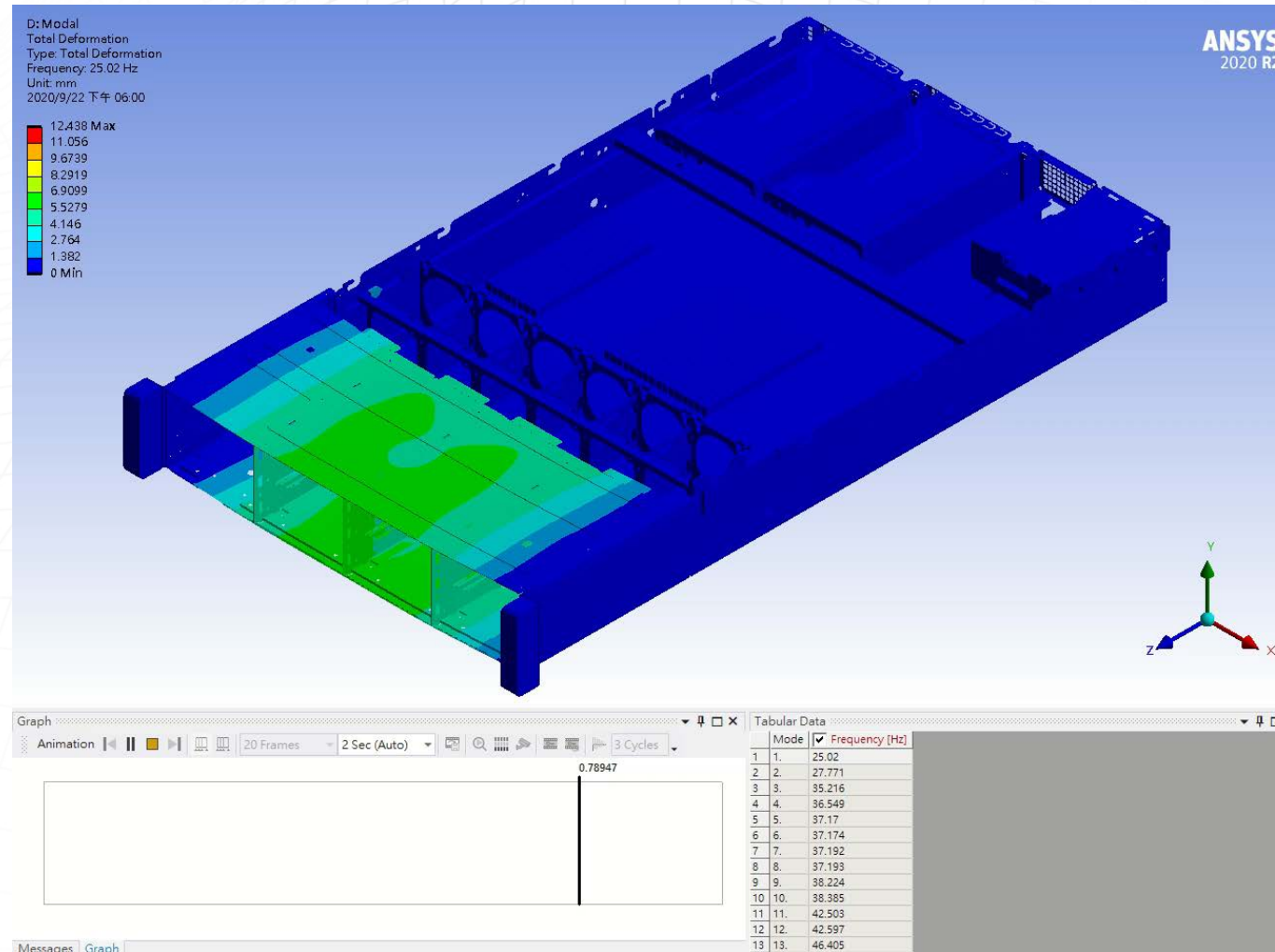
- Model diagnosis
- Defect detection
- Pre-analysis for random vibration



Frequency of first mode is 25.02Hz



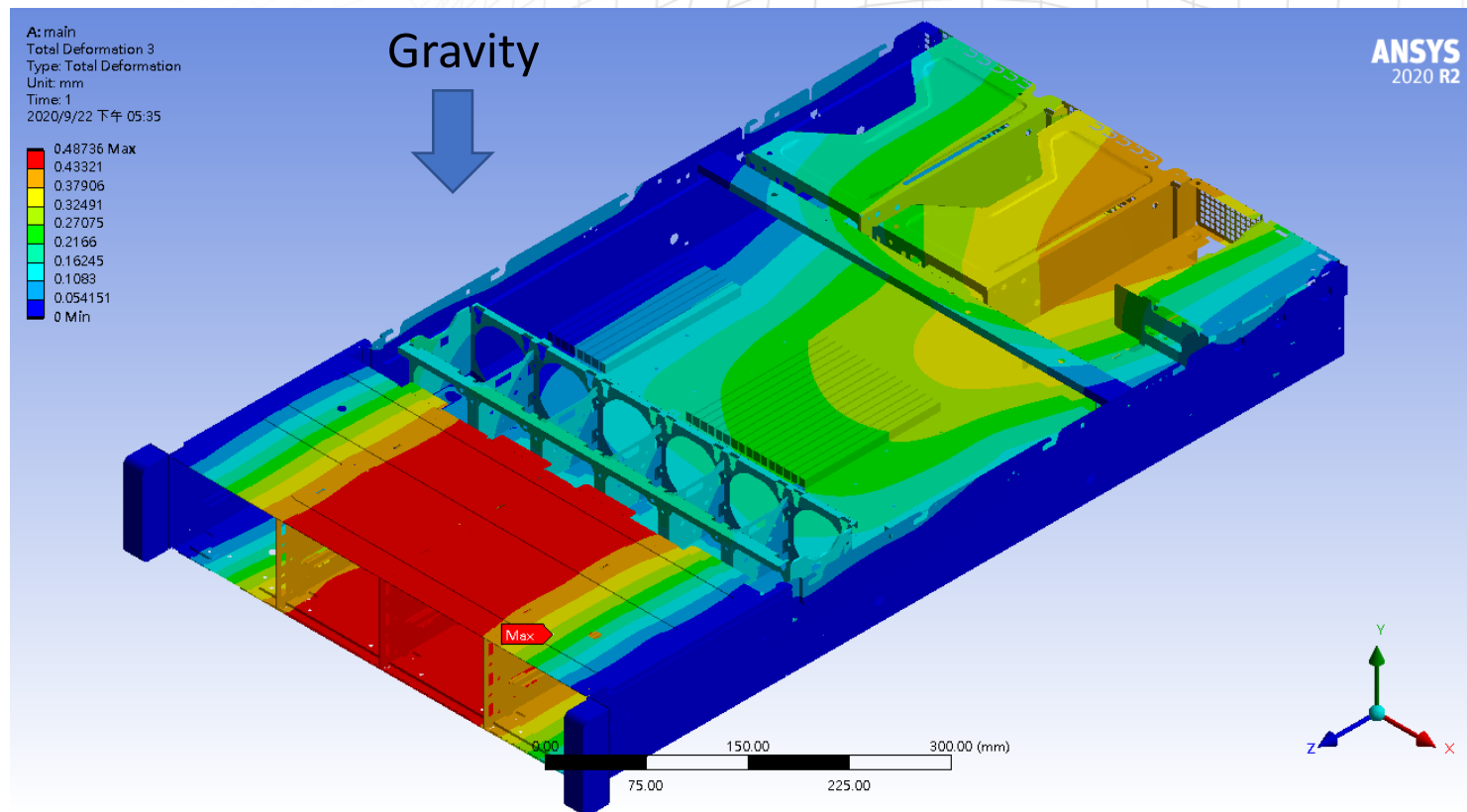
Modal analysis



Sag analysis

Sag analysis

- Sag evaluation

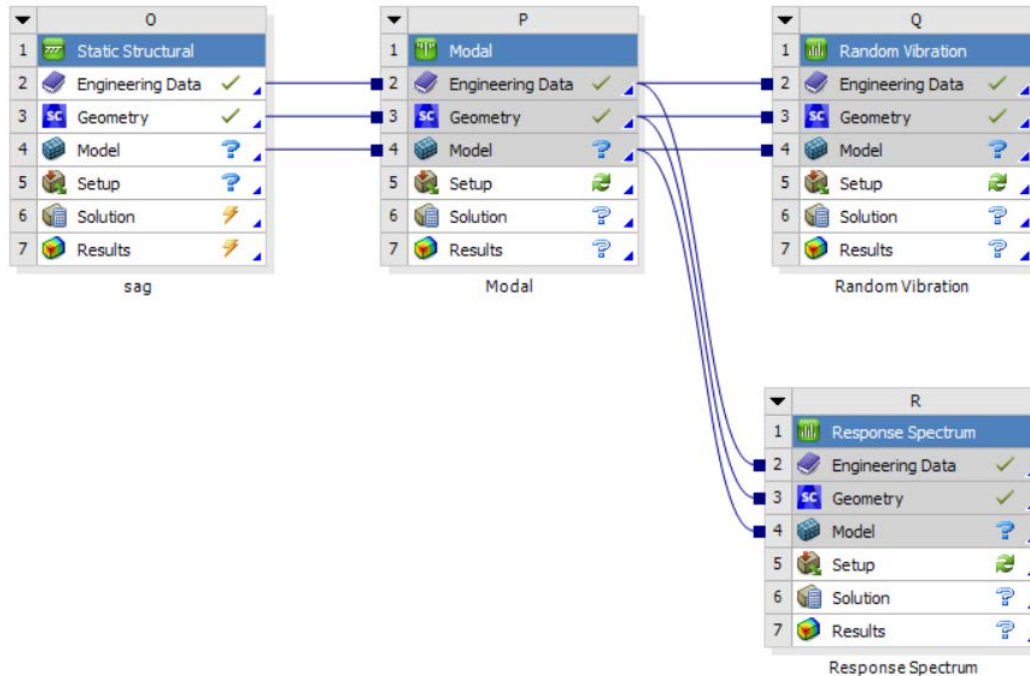


Random vibration analysis

Random vibration analysis

- Modal => Random vibration => fatigue

Workbench

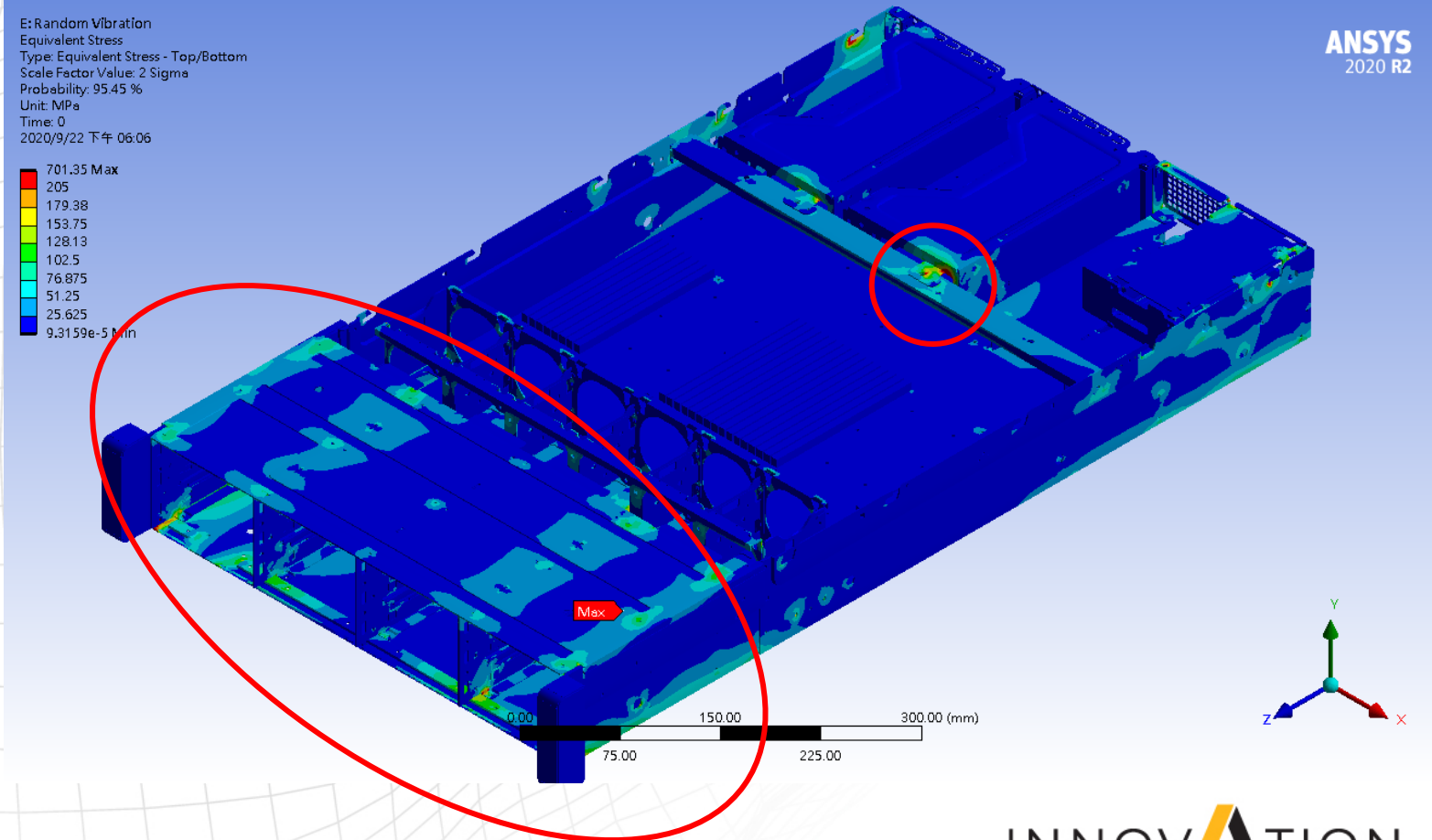
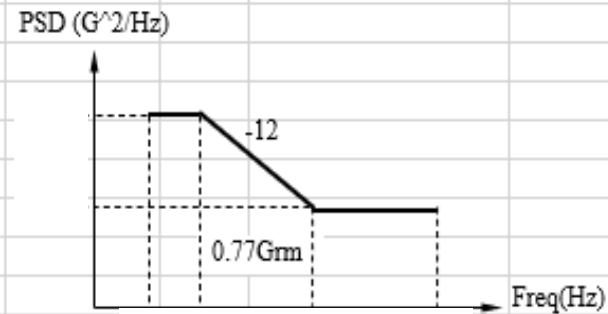


Random vibration

Modal analysis
result



PSD profile



ANSYS
2020 R2

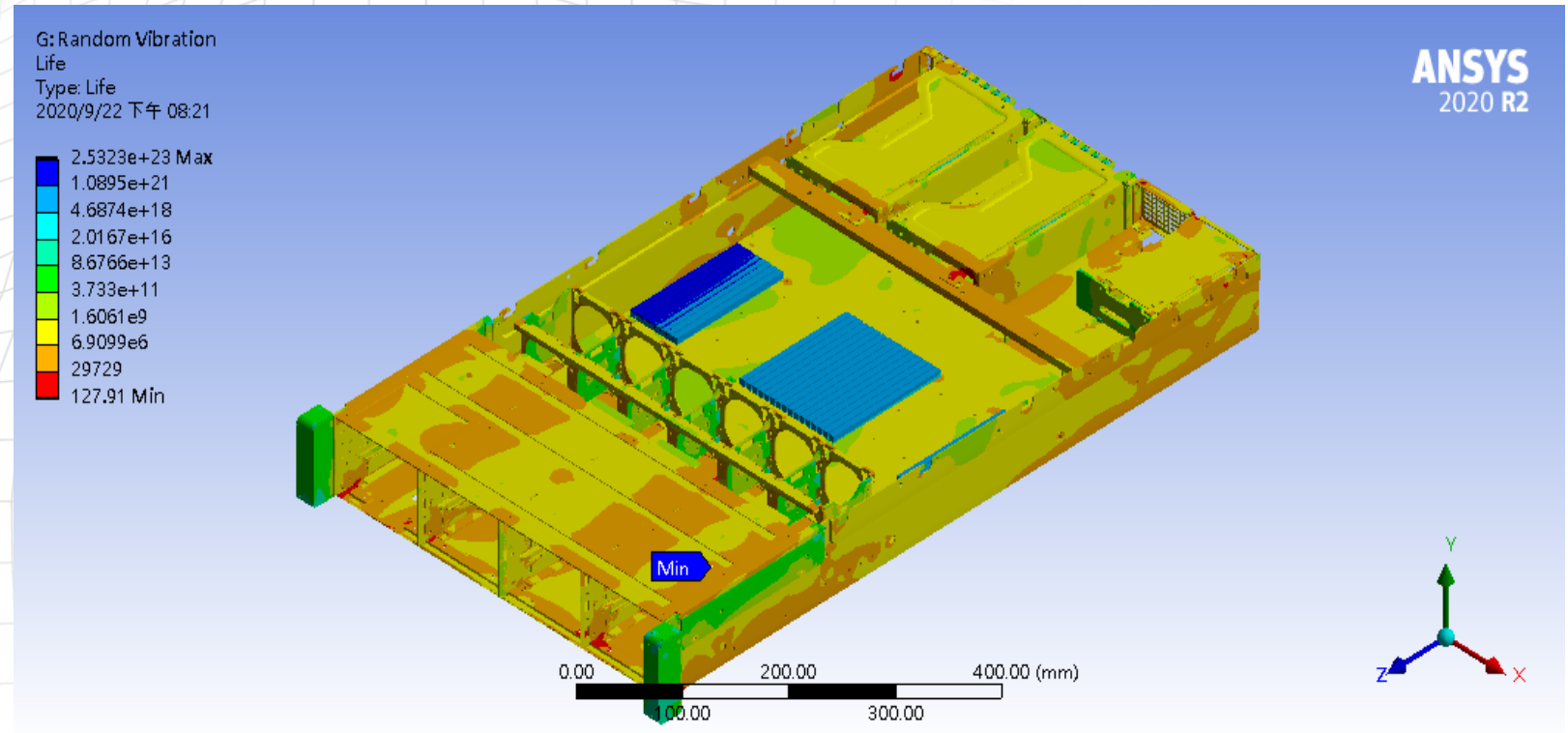
Fatigue

- Evaluate life of structure

Random vibration
result



Material SN curve



Thank you