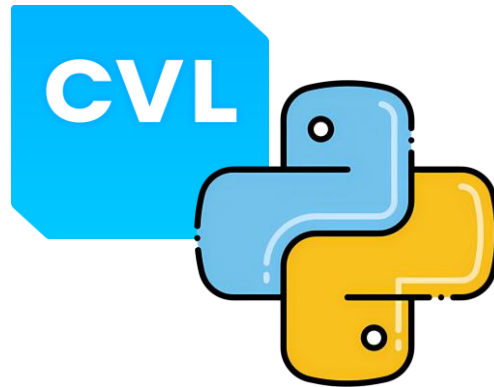


MIDAS x PYTHON



Soil Sensitivity Analysis
Automate Point Spring Scaling and Analyze Multiple Models

Required libraries

- [MIDAS Python Library](#)

What does the script do?

- Generates different models with specified Point Spring Dx, Dy and Dz factors
- Checks the analysis condition and analyses the newly created scaled models one-by-one

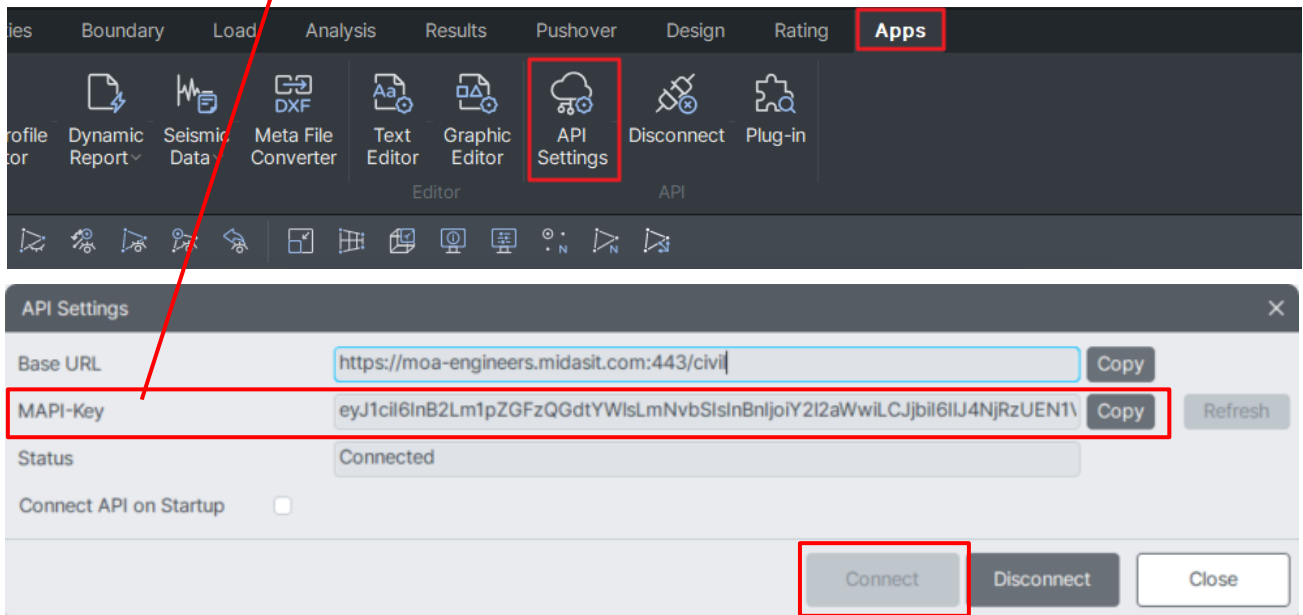
Guidelines:

For 'SSA-PS.py' script

1. MAPI Key

```
3 # Initialize API
4 MAPI_KEY("eyJ1ciI6InB2Lm1pZGFzQGdtYWlsLmNvbSIsI
```

Enter MAPI key here



Guidelines:

2. Point Spring scaling and Analysis condition

Enter scaling factors, separate them by commas(,)

```
7 FT = [[0.5,0.5,1],[1,1,1],[2,2,1]] # [Dx_factor, Dy_factor, Dz_factor] for each model
8 AN = [True, False, True] # Analysis flags for each model
```

Each [FT] list contains input for [Dx, Dy, Dz] factors

E.g. From above image

Model 1 = [Dx factor = 0.5, Dy factor = 0.5, Dz factor = 1.0]

Model 2 = [Dx factor = 1.0, Dy factor = 1.0, Dz factor = 1.0]

Model 3 = [Dx factor = 2.0, Dy factor = 2.0, Dz factor = 1.0]

Enter [AN] Analysis conditions for the models

True = Analyze the model

False = Do not Analyze

3. Model location

Enter prefix/name for new models

```
9 name = "New" # Base Name for models
10 path = "D:\\All about API\\Pyhton files\\lib_play\\spring scale\\New folder\\"
```

Enter path to save the new models

Note: Use double backslash (\\) in the address path. Refer image above

Creator Notes:

1. Software Used:

Developed for MIDAS CIVIL NX

2. Development Environment:

Script developed using Visual Studio Code as the Python interpreter environment