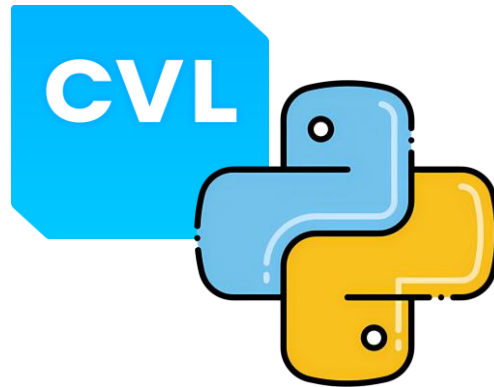


MIDAS x PYTHON



Soil Sensitivity Analysis
Automate P-Y Scaling and Analyze Multiple Models

Required libraries

- [MIDAS Python Library](#)

What does the script do?

- Generates different models with specified P-Y scaling (e.g. 50%, 200%)
- Checks the analysis condition and analyses the newly created scaled models one-by-one

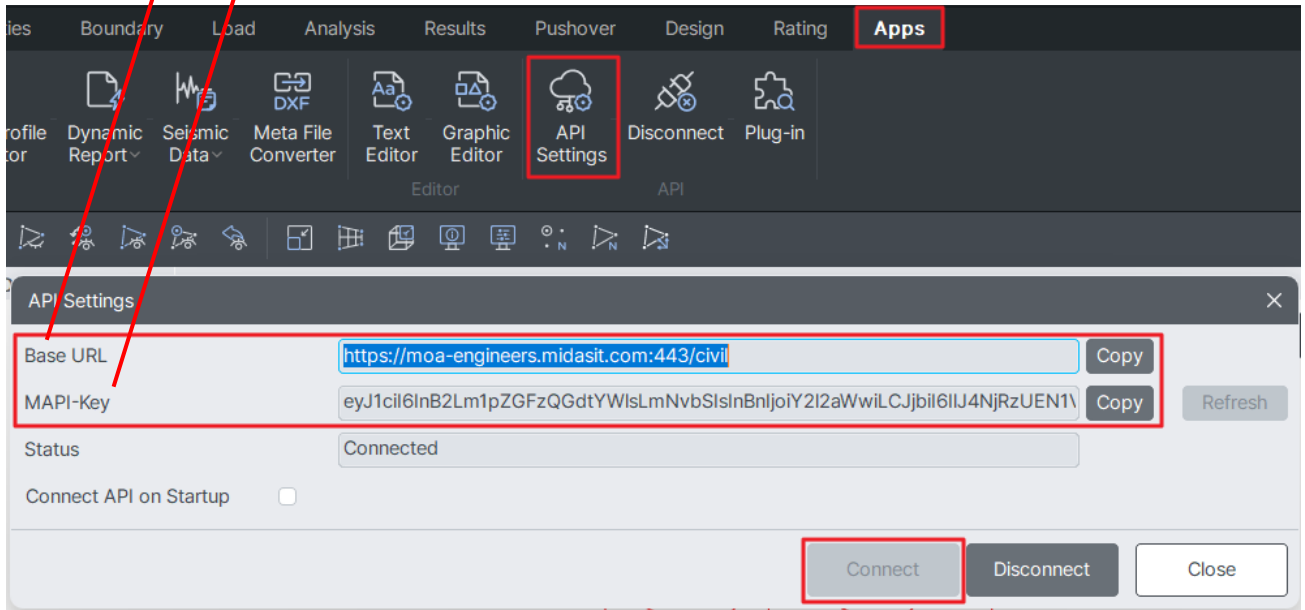
Guidelines:

For 'it1.py' script

1. MAPI Key

```
7 base_url = "https://moa-engineers.midasit.com:443/civil"  
8 mapi_key = "eyJ1ciI6InB2Lm1pZGFzQGdtYWlsLmNvbSI6InBnIjoY"
```

Enter Base URL and MAPI key here



For 'SSA-FT.py' script

1. P-Y scaling and Analysis condition

Enter scaling percentages, separate them by commas(,)

```
9 FT = [50, 100, 200] # in percentage  
10 AN = ['itr', 'an', 'none'] # 'itr' - analysis with ITRS # 'an' - just analy
```

Enter Analysis conditions for the models

'itr' = Analyze with ITRS

'an' = Normal Analysis

'none' = Do not Analyze

Guidelines:

For 'SSA-FT.py' script

2. Model location

Enter prefix/name for new models

```
11 name = "New" # Give name
12 path = "D:\\All about API\\Pyhton files\\lib_play\\New folder\\" #
```

Enter path to save the new models

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

3. ITRS inputs

```
72 iterative_response_spectrum('RS Boundary Group','RY',0.01,[],None,0,model_name)
```

Enter exact Boundary Group name, Response Spectrum case and tolerance ratio

Creator Notes:

1. Software Used:

Developed for MIDAS CIVIL NX

2. Development Environment:

Script developed using Visual Studio Code as the Python interpreter environment

3. Integrated Analysis Method:

This automation includes an [Iterative Response Spectrum \(ITRS\)](#) analysis script. If the 'itr' analysis command is specified, users should have basic understanding of how ITRS works, as it influences model behavior during analysis.

4. Error handling & Input validation

Minimal error flags are included for script input checking; therefore, ensure inputs are correct to avoid unexpected behavior.