

Knowledge Base

Information



Abaqus/Viewer plugin to write nodes and elements displayed in the viewport to an input file

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QUESTION

I would like to write an input file for just the part of my model displayed in the Visualization module viewport. Is it possible to do this operation?

ANSWER

(The following applies to Abaqus 6.11 and higher)

An Abaqus/Viewer plug-in application for this purpose is attached below.

This utility will create an input file from the nodes and elements currently shown in the viewport of the Visualization module of Abaqus/CAE. This can be useful for creating an arbitrary subset model after the entire geometry has been meshed and stored in an ODB file. Note that only the definitions of the nodes and elements will be written - the file will not include any step definitions or other data necessary to execute the model.

There are two versions of the plugin available: one that writes the coordinates of nodes of the initial configuration (file: `inputFile_initial_config_plugin.py` and folder: `abq_InputFile_initial_config`) and one that writes the coordinates of the nodes in the final deformed configuration - i.e., the last frame of the ODB file (file: `inputFile_deformed_config_plugin.py` and folder: `abq_InputFile_deformed_config`).

Installation

To install the plug-in, save the attached archive file to one of the following directories:

`abaqus_dir\code\python\lib\abaqus_plugins` where `abaqus_dir` is the Abaqus parent directory

`abaqus_dir\abaqus_plugins` where `abaqus_dir` is the Abaqus parent directory

`home_dir\abaqus_plugins` where `home_dir` is your home directory

`current_dir\abaqus_plugins` where `current_dir` is the current directory

Note that if the `abaqus_plugins` directory does not exist in the desired path, it must be created. The `plugin_dir` directory can also be used, where `plugin_dir` is a directory specified in the `abaqus_v6.env` file by the environment variable `plugin_central_dir`. You can store plug-ins in a central location that can be accessed by all users at your site if the directory to which `plugin_central_dir` refers is mounted on a file system that all users can access. For example,

```
plugin_central_dir = r'\\fileServer\sharedDirectory'
```

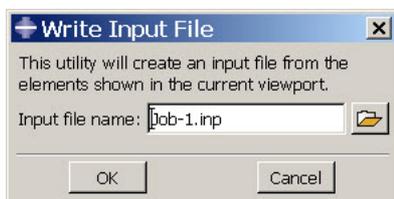
On Windows platforms, right click on the archive file and select **WinZip** → **Extract to here**. On Linux platforms, type **unzip writeInputFile.zip** at the command prompt. Folders named `abq_InputFile_initial_config` and `abq_InputFile_deformed_config` along with files named `inputFile_initial_config_plugin.py` and `inputFile_deformed_config_plugin.py` will be extracted.

Note that the plug-in will not function properly if this procedure is not followed.

Usage

Plug-in instructions:

1. Start Abaqus/Viewer or Abaqus/CAE Visualization module and open an ODB.
2. Use the **Display Group** tools to display just the elements of interest.
3. Invoke the plug-in by selecting **Plug-ins** → **Write Input File - Initial...** or **Plug-ins** → **Write Input File - Deformed...** to receive the following dialog:



4. Enter an input file name and click **OK**.

Disclaimer

The attachments to this article are subject to certain usage conditions. Please [click here](#) for details

KEYWORDS

5010

ATTACHMENT

- [answer_5010_figure1.jpg](#)
- [write_InputFile.zip](#)

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