



IESVE

Trial Support
Material

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ApacheSim:
Space Grouping

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Space Groups within ModelIT are an excellent way to organise your model. They allow you to switch off zones, which can be particularly useful for larger models when assigning templates and constructions.

Space Names

Before grouping spaces, it is useful to name the spaces to aid in grouping.

To rename a single space: select it in the model tree, then double-click on the space name in the object bar at the bottom of the screen and type in a replacement.



Alternatively, you can open the **Tabular Space Data** and rename spaces here - only the selected spaces will be listed, so you can narrow the selection as required.

To quickly rename more than 1 space, select a group of spaces in the model or model tree, then right click on one of the highlighted spaces in the model tree and click on **Rename** to rename all. There is a find and replace option here, and the option to either add or remove space numbers. Click **OK** and the changes will be applied. Changing the space name, will not alter the Space ID, used for reference within IES.

Adding Named Spaces



Add voids/Split space(s) vertically

If you use the **Add voids/Split spaces vertically** tool after naming your spaces, some grouping will follow through:

- Spaces split vertically for modelling thermal stratification, will retain the space name, followed by a designation eg. Upper 1; 2;3 in brackets.
- Supply air plenums will be listed as SA plenum and shown in the model browser directly above the space
- Return air plenums will be listed as RA plenum and shown in the model browser directly below the space
- Floor and ceiling voids will be similarly shown in the browser with the designations f-void and c-void.

You can easily alter the default designation names for these spaces.



Create Storeys

Similarly, if you use the **Create Storeys** tool, you choose the total number of storeys you would like, and whether you need a ceiling void/RA plenum above, and/or a floor void/SA plenum below each storey. Enter what heights you would like them to be, and the total storey height, with an option to re-size the selected space to match. The new storeys will all be created with associated voids or plenums, with the same naming conventions in the model tree.



Create perimeter zones

And if you use the **Create perimeter zones** tool, then you need to choose what depth perimeter zone you would like to create, and whether or not you want it to be divided from the core zone with partitions.

If you would like to re-name the resultant spaces, enter your chosen designation into the relevant boxes and this will be applied in brackets after the space name. If you choose to add this to the perimeter zones, they will also be numbered if you tick the option to add an index.

Space Groups

Once your spaces are named, it is easier to group them for later assignment of data or model manipulation.

If you are using the VE for compliance models, it is important to name rooms suitably, then group them so that it is easy to assign any standard templates required.

Space grouping can also speed up the application of the assignment of templates and profiles within Apache.

For example, if you wish to use the PRM Navigator for ASHRAE 90.1, the grouping of rooms becomes a critical step in the overall process. The assignment of thermal templates later on in the navigator relies on the correct grouping of room types. The configuration of HVAC systems also relies on the early stage grouping of rooms into AHU groups. This step in the navigator may not be applicable to all models as it may be just as easy to manually assign model zones to the relevant prototype grouping schemes.

It is advisable to also group rooms in terms of which AHU they are supplied by. This step is not essential but it will make it quicker and easier to assign rooms to their required HVAC systems later on.

https://help.iesve.com/ve2019/room_zone_group_assignment_1.htm

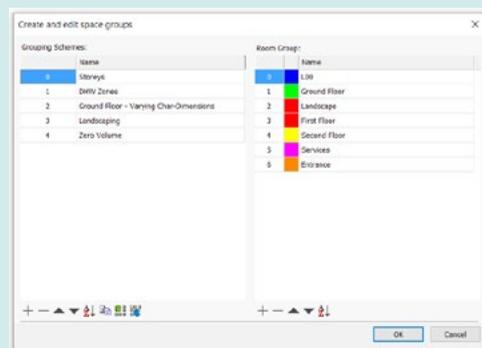
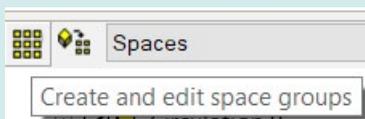
Typical Grouping Schemes used in a project include:

- Storeys/Floors
- DHW Zones
- Shading
- HVAC Systems
- Activity Type

THERE ARE 3 WAYS OF CREATING SPACE GROUPS

1. Click on the Create and Edit Space Groups icon.

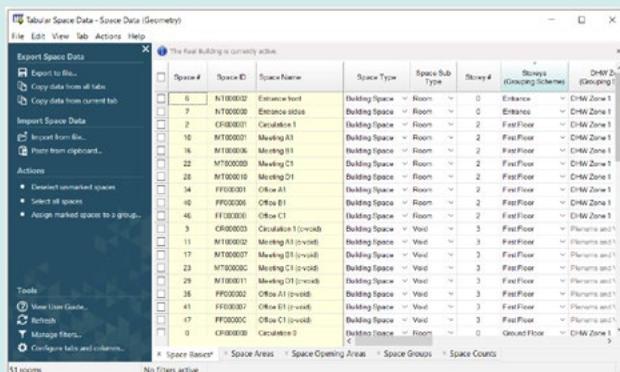
The create and edit space groups dialog box will appear. Click on the + (Add) Button on the left to add a Grouping Scheme and then click on the + (Add) Button on the right to add the Room Groups associated with that Scheme.



2. The tabular space data link lets you select which space to assign to which group by clicking on them, either individually, or for a selection, then using the drop down menus to change their assignment.

It has the added benefit of being able to copy this information to a spreadsheet to track changes.

You can also customise the columns to suit, and sort by column.



3. Alternately, you could use the ASHRAE 90.1 navigator to import prototype data from 90.1 into the project, including the room groups and intelligent spaces. It also has 90.1 building area methods, as well as space-by-space methods for room grouping strategies.

https://help.iesve.com/ve2019/space_groups.htm