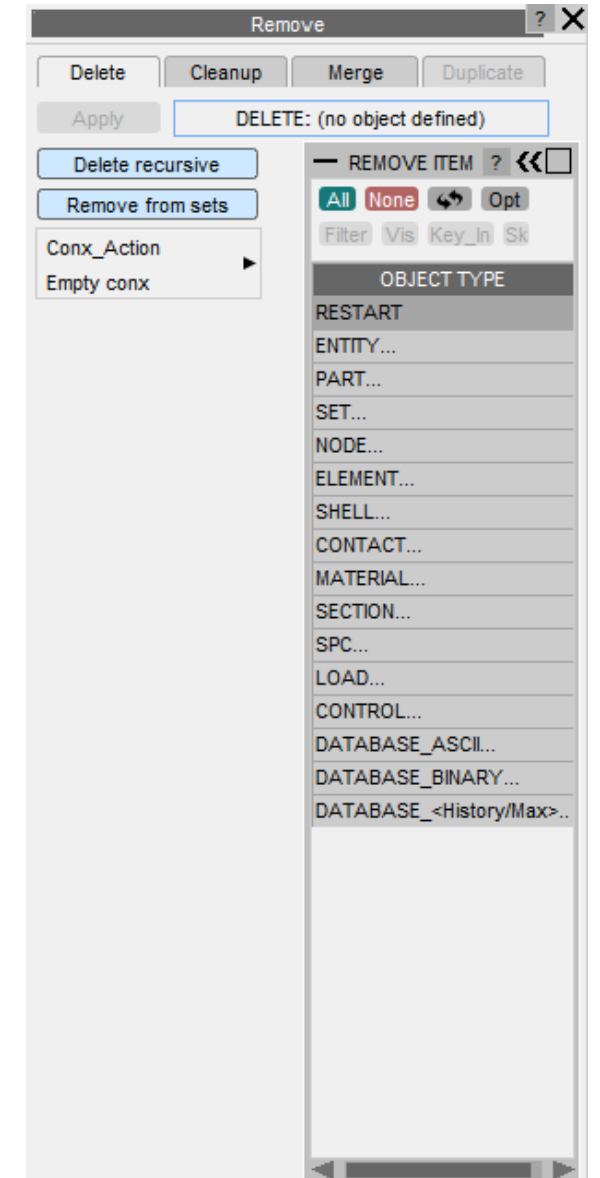


Remove



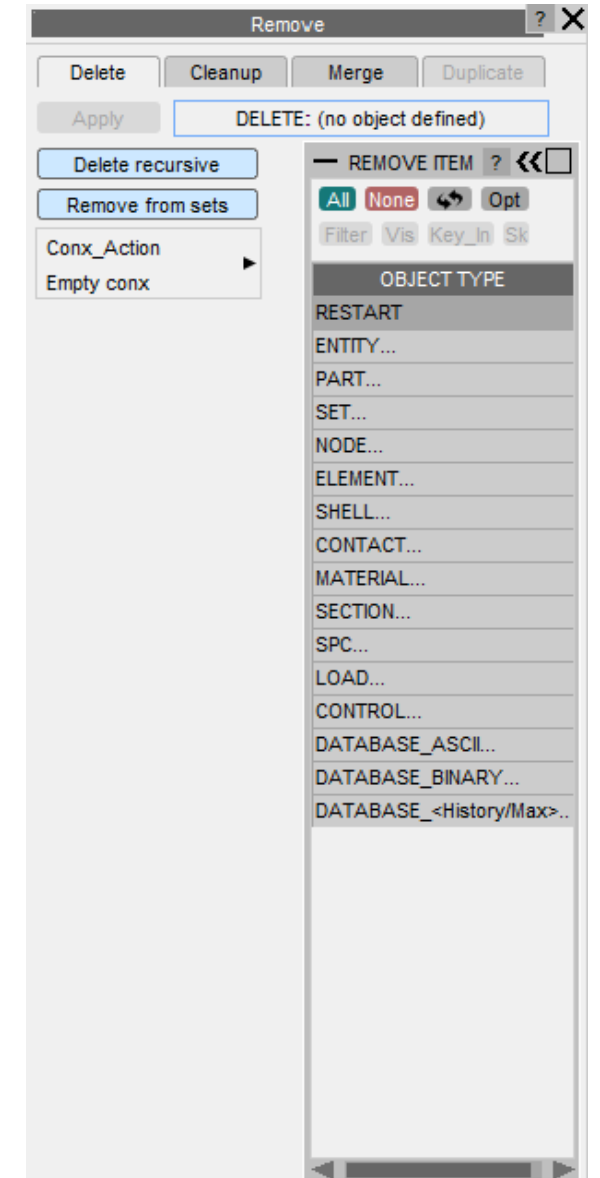
What is the remove tool?

- The remove tool is invoked from the Tools panel.
- There are three options within the panel:
- **Delete** – Delete unwanted entities from any model.
- **Cleanup** – Remove unused non-structural entities from the model.
- **Merge** – Combine together nodes within a certain tolerance.



Remove - Delete

- To delete model entities use **Delete**.
- This option can be used to delete anything from entire models to individual items, using the standard PRIMER hierarchy.
- If any items are **locked** in PRIMER these will not be deleted using the normal delete function.
- A **locked** entity is one that is referenced by another entity which itself is not being deleted.
- PRIMER also has a feature where you can **Force Delete** entities.
- Using **Force Delete** will delete items whether they are **locked** or not.
- Force delete should be used carefully because if used to forcibly delete items that are locked PRIMER will remove these items then replace them with a **Latent** (empty) definitions of the same type, meaning the deck will not initialise in LS-Dyna.



Remove - Delete

• Delete recursive:

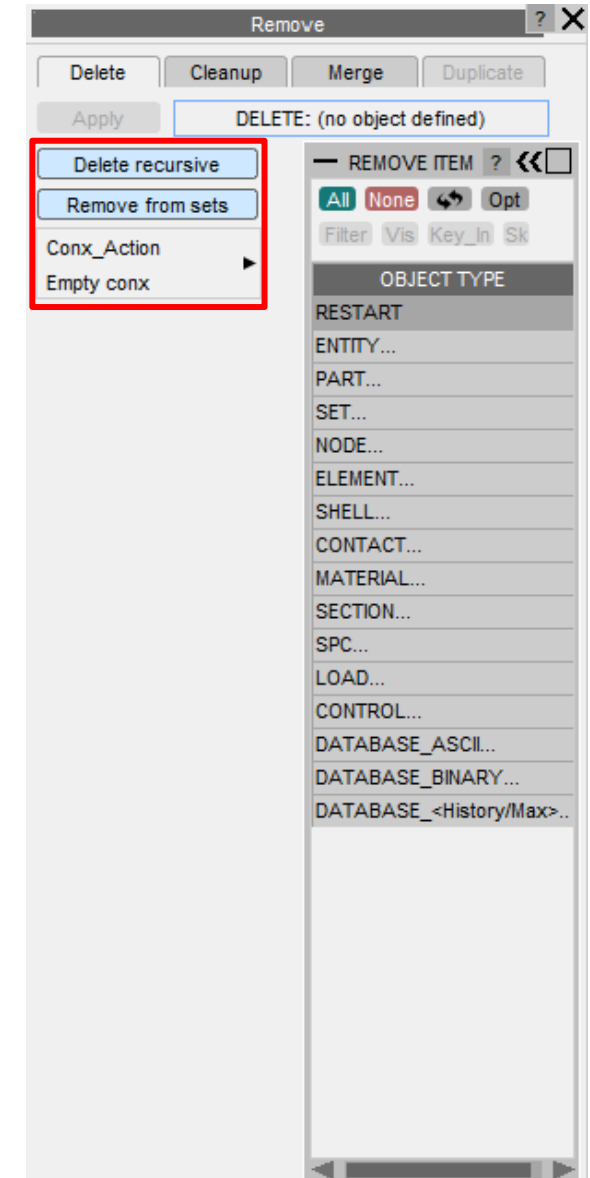
- This affects the selection of entities to be deleted.
- For example, if parts are selected for deletion and recursive deletion is switched on then all entities associated with that part will also be deleted (elements, nodes for example).
- Without recursion only the chosen parts selected for deletion and only those which are not referenced by any entities will in fact be deleted.

• Remove from sets:

- If this button is selected then PRIMER removes the deleted entities from sets that reference them.

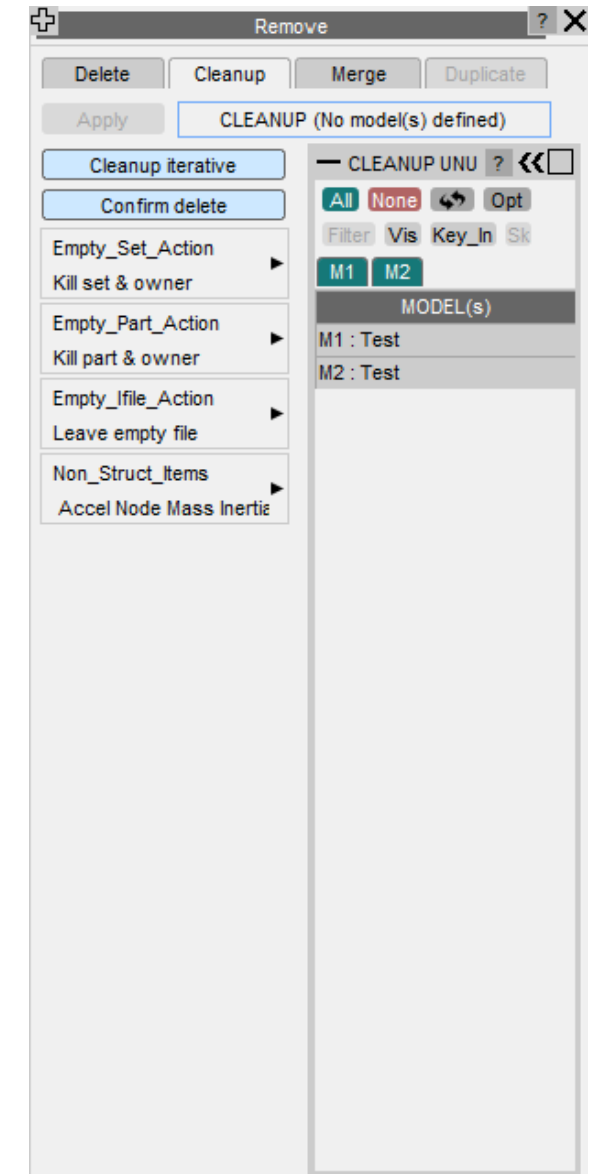
• CONX actions:

- This pop up allows you to set what action to do when PRIMER needs to consider connections that are attached/tied to parts or shells that you select for deletion.
 - **No Action:** PRIMER will not take any special action.
 - **Empty conx:** PRIMER will delete the entities that make up the connection and leave the connection latent.
 - **Remove conx:** PRIMER will delete connection and its' entities.
 - **Remove layer(s):** PRIMER will delete the entities that make up the connection and remove the layer containing the part of the connection. If only one layer exists the connection will be deleted.



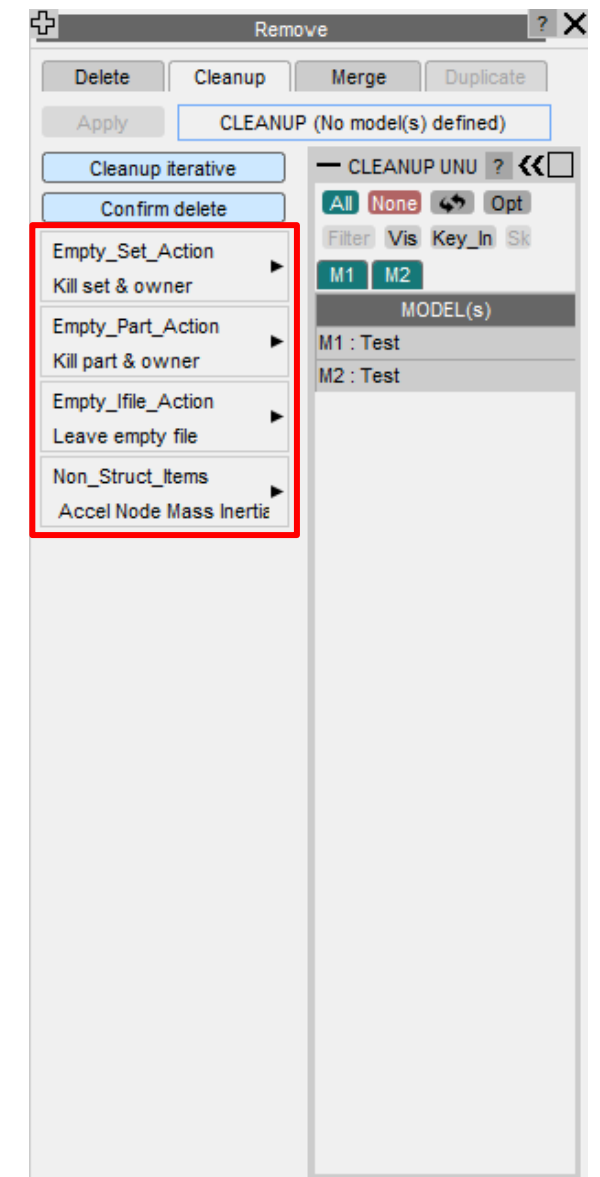
Remove - Cleanup

- **Cleanup unused** removes redundant entities from models. For example loadcurves that are not referenced by anything, non-structural nodes, etc.
- On entering cleanup menu from the remove menu the user is prompted to define which models to cleanup.
- More than one model can be cleaned up at once but you may find it safer to clean up a single model at a time.



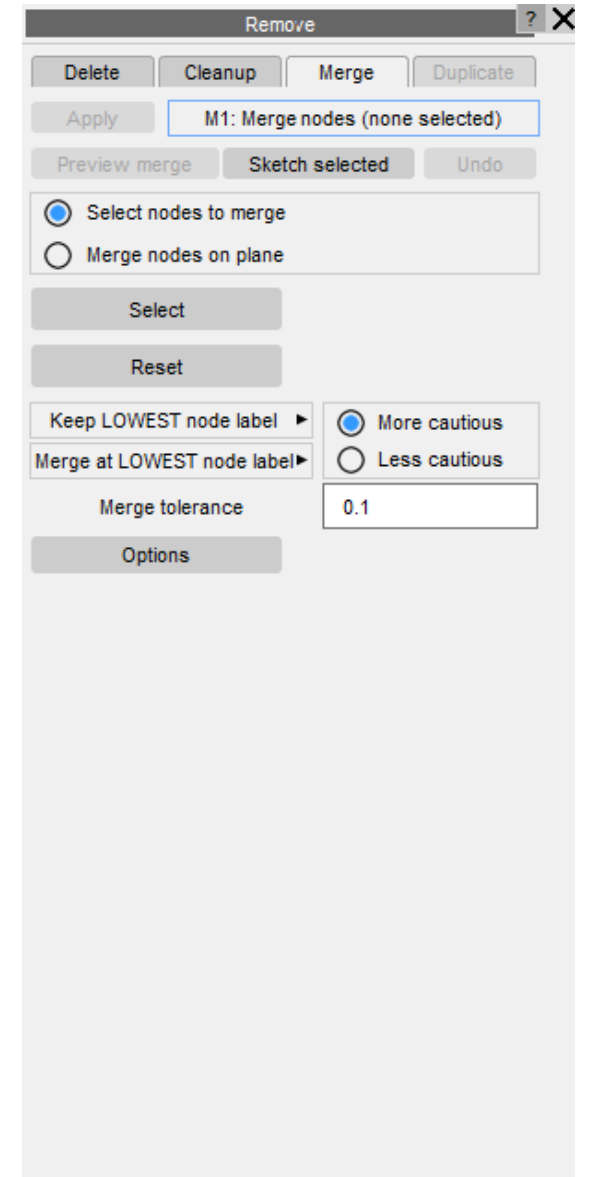
Remove – Switches controlling Cleanup

- **Empty_Set_Action** – When all contents of a set have been removed (following a remove operation) the empty set definition itself may remain.
- **Empty_Part_Action** – If all the elements have been deleted from (or transferred out of) a part then it will be empty.
- **Empty_Ifile_Action** – If the cleaning up of a model will leave empty include files the historic behaviour has been not to remove these, but rather to leave the *INCLUDE card referencing the empty file.
- **Non_Struct_Items** – Following the removal of other things you can be left with valid and legal objects which are nevertheless “non-structural” meaning that they will not play any part in the analysis.



Remove – Merge Nodes

- This operation will permit coincident (and/or close) nodes to be merged.
- The merge nodes tool is applied to a selection of nodes or on a global plane, using user defined tolerance.
- When using the merge nodes tool it will retain the lowest/highest node label and also will merge at lowest/highest node or at average position.
- The preview merge button will highlight the nodes to be merged.
- When merging nodes there is also the function to collapse quad shells into triads, by default this is switched off.



Contact us

Global / UK

T: +44 121 213 3399

E: dyna.support@arup.com

India

T: +91 40 69019723 / 98

E: india.support@arup.com

China

T: +86 21 3118 8875

E: china.support@arup.com

USA

T: +1 415 940 0959

E: us.support@arup.com

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