

Creating a mesh and modifying and/or repairing it involves number of operations. TGrid provides tools for making boundary repairs, enabling you to perform primitive operations on the boundary mesh, such as creating and deleting nodes/faces, moving nodes, swapping edges, merging/smoothing nodes, collapsing nodes, edge(s), and face(s), etc.

These operations can be performed using the appropriate panels. However, if you are handling a large and complicated mesh, you may find it difficult to perform these operations repetitively using the panels. To make your task easy, several keyboard shortcuts are available in TGrid.

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To make use of the shortcut keys, display the geometry in the graphics window. Click in the graphics window and then press the key you want to use.

C.1 Arrow Keys

The arrow keys used in TGrid are described in the following table:

Arrow Keys	Description
Up arrow	Increases display bounds in the Display Grid panel.
Down arrow	Decreases display bounds in the Display Grid panel.
Right arrow	This allows you to view the skewed faces in the decreasing order of their skewness by finding the triangular face of next highest skewness value after the worst skewed face in the mesh/active group or the marked faces. When you press this button, the triangular face of the next highest skewness value will be displayed in the graphics window.
Left arrow	Clears the selection of skewed faces.

C.2 Help Keys

The various help keys available in TGrid are described in the following table:

Help Keys	Description
F2	Clears the previously selected entities in the Selections list of the Modify Boundary panel.
F3	Toggles between the mouse-dolly and the option currently selected for right-mouse button in the Mouse Buttons panel.
F4	Toggles the selection of the mouse probe function between polygon and the option selected in the Mouse Probe panel.
F5	Creates the selected entity in the Filter list in the Modify Boundary panel.
F6	Smooths the selected entity in the Filter list.
F7	Performs the split operation on the selected entity (only face and edge) in the Filter list.
F8	Performs the swap operation on the selected entity (only face and edge) in the Filter list.
F9	Allows you to merge the selected pair of nodes.
F11	Allows you to locate the worst skewed face in the mesh/active group. When you press this hot key, the graphics window will be updated to show only the worst skewed face and its ID. The skewness value is printed in the TGrid console.
F12	Undoes the latest operation performed on the mesh.

When modifying the boundary mesh it is not always possible to undo an operation.

C.3 Hot Keys

Hot Keys	Description
Ctrl + a	Adjusts the mesh position so that the mesh fits in the graphics window.
Ctrl + c	Selects cell as the Filter in the Modify Boundary panel. This option does not work on Windows version of TGrid.
Ctrl + d	Calculates the distance between the two selected entities and displays it in the TGrid console.
Ctrl + e	Selects edge as the Filter in the Modify Boundary panel.
Ctrl + f	Selects face as the Filter in the Modify Boundary panel.
Ctrl + g	Displays the neighboring face zones of the selected entity.
Ctrl + h	Prints the available hot keys in the TGrid console window.
Ctrl + l	Finds the centroid of the selected face.
Ctrl + n	Selects node as the Filter in the Modify Boundary panel.
Ctrl + o	Performs the rezone operation on the selected zone.
Ctrl + p	Projects selected nodes onto the selected zones.
Ctrl + s	Allows you to set a plane or line on which you can project the nodes. Set the plane or line either by selecting nodes or by selecting positions in the mesh.
Ctrl + u	Clears the marked faces selected.
Ctrl + v	Allows you to move the nodes from one position to another.
Ctrl + w	Deletes the selected entity without confirming.
Ctrl + x	Selects position as the Filter in the Modify Boundary panel.
Ctrl + z	Selects zone as the Filter in the Modify Boundary panel.
Ctrl + ^	Performs the collapse operation on the selected nodes, edges, or faces.
Ctrl + _	Displays the previous view in the graphics window.

Use Esc key to deselect the previously selected entity. You can also use the 'Ctrl + [' shortcut key.

