

# Element

An **element** is a generic class that can represent almost all in-game entities. The built-in element types are:

- Player
- Ped
- Vehicle
- Object
- Pickup
- Marker
- Collision shape
- Blip
- Radar area
- Projectile
- Team
- Server console
- GUI widgets:
  - Button
  - Checkbox
  - Combobox
  - Edit field
  - Gridlist
  - Memo
  - Progress bar
  - Radio button
  - Scrollbar
  - Scrollpane
  - Static image
  - Tab panel
  - Tab
  - Text label
  - Window
- TXD
- DFF
- COL
- Sound
- Material
  - Texture
  - Shader
- DX font
- GUI font
- Weapon
- Camera
- Effect
- Browser
- Light
- Searchlight
- Water

Any other element type can be created as an abstract element, not referring to any game entity. For example, **resource** and **map** elements are created when resources and maps are loaded to group entities they create as their children. Elements share common functions such as type and list retrieval, a destroy operation to remove both the element and the game entity it is linked to (except for some elements which can't be destroyed, for example client elements), element data storing and retrieval, and many more common operations. All elements are stored internally in a tree structure, and as such every element except the **root** element has a parent element, that can be the **root** element, a **resource**, **map** or another element. This is purely for declaring the scope of function calls.

## Related scripting functions

### Client

- attachElements
- createElement
- destroyElement
- detachElements

ADDED/UPDATED IN VERSION 1.6.0 r21695:

- getAttachedElements
- getElementAlpha
- getElementAngularVelocity
- getElementAttachedOffsets
- getElementAttachedTo
- getElementBoneMatrix
- getElementBonePosition
- getElementBoneRotation
- getElementBoundingBox
- getElementByID
- getElementChild
- getElementChildren
- getElementChildrenCount
- getElementCollisionsEnabled
- getElementColShape
- getElementData
- getElementDimension
- getElementDistanceFromCentreOfMassToBaseOfModel
- getElementHealth
- getElementID
- getElementInterior
- getElementLighting
- getElementMatrix
- getElementModel
- getElementParent
- getElementPosition
- getElementRadius
- getElementRotation
- getElementsByType
- getElementsWithinColShape
- getElementsWithinRange
- getElementType
- getElementVelocity
- getLowLODElement
- getRootElement
- isElement
- isElementAttached
- isElementCallPropagationEnabled
- isElementCollidableWith
- isElementDoubleSided
- isElementFrozen
- isElementInWater
- isElementLocal
- isElementLowLOD
- isElementOnScreen
- isElementStreamable
- isElementStreamedIn
- isElementSyncer
- isElementWaitingForGroundToLoad
- isElementWithinColShape
- setElementAlpha
- setElementAngularVelocity
- setElementAttachedOffsets
- setElementBoneMatrix
- setElementBonePosition
- setElementBoneRotation
- setElementCallPropagationEnabled
- setElementCollidableWith
- setElementCollisionsEnabled
- setElementData
- setElementDimension
- setElementDoubleSided
- setElementFrozen
- setElementHealth
- setElementID
- setElementInterior
- setElementMatrix
- setElementModel
- setElementParent
- setElementPosition
- setElementRotation
- setElementStreamable

- setElementVelocity
- setLowLODElement
- updateElementRpHAnim

## Server

- addElementDataSubscriber
- attachElements
- clearElementVisibleTo
- cloneElement
- createElement
- destroyElement
- detachElements
- getAllElementData
- getAttachedElements
- getElementAlpha
- getElementAttachedOffsets
- getElementAttachedTo
- getElementCollisionsEnabled
- getElementByID
- getElementByIndex
- getElementChild
- getElementChildren
- getElementChildrenCount
- getElementColShape
- getElementData
- getElementDimension
- getElementHealth
- getElementID
- getElementInterior
- getElementMatrix
- getElementModel
- getElementParent
- getElementPosition
- getElementRotation
- getElementSyncer
- getElementType
- getElementVelocity
- getElementZoneName
- getElementsByType
- getElementsWithinColShape
- getElementsWithinRange
- getLowLODElement
- getRootElement
- hasElementData
- hasElementDataSubscriber
- isElement
- isElementAttached
- isElementCallPropagationEnabled
- isElementDoubleSided
- isElementFrozen
- isElementInWater
- isElementLowLOD
- isElementVisibleTo
- isElementWithinColShape
- isElementWithinMarker
- removeElementData
- removeElementDataSubscriber
- setElementAlpha
- setElementAngularVelocity
- getElementAngularVelocity
- setElementAttachedOffsets
- setElementCallPropagationEnabled
- setElementCollisionsEnabled
- setElementData
- setElementDimension
- setElementDoubleSided
- setElementFrozen
- setElementHealth
- setElementID
- setElementInterior
- setElementModel
- setElementParent

- setPosition
- setRotation
- setSyncer
- setVelocity
- setVisibleTo
- setLowLODElement