

GStreamer *Documentation*

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GstElement

GstElement is the abstract base class needed to construct an element that can be used in a GStreamer pipeline. Please refer to the plugin writers guide for more information on creating [GstElement](#) subclasses.

The name of a [GstElement](#) can be get with [gst_element_get_name](#) and set with [gst_element_set_name](#). For speed, [GST_ELEMENT_NAME](#) can be used in the core when using the appropriate locking. Do not use this in plug-ins or applications in order to retain ABI compatibility.

Elements can have pads (of the type [GstPad](#)). These pads link to pads on other elements. [GstBuffer](#) flow between these linked pads. A [GstElement](#) has a [GList](#) of [GstPad](#) structures for all their input (or sink) and output (or source) pads. Core and plug-in writers can add and remove pads with [gst_element_add_pad](#) and [gst_element_remove_pad](#).

An existing pad of an element can be retrieved by name with [gst_element_get_static_pad](#). A new dynamic pad can be created using [gst_element_request_pad](#) with a [GstPadTemplate](#). An iterator of all pads can be retrieved with [gst_element_iterate_pads](#).

Elements can be linked through their pads. If the link is straightforward, use the [gst_element_link](#) convenience function to link two elements, or [gst_element_link_many](#) for more elements in a row. Use [gst_element_link_filtered](#) to link two elements constrained by a specified set of [GstCaps](#). For finer control, use [gst_element_link_pads](#) and [gst_element_link_pads_filtered](#) to specify the pads to link on each element by name.

Each element has a state (see [GstState](#)). You can get and set the state of an element with [gst_element_get_state](#) and [gst_element_set_state](#). Setting a state triggers a [GstStateChange](#). To get a string representation of a [GstState](#), use [gst_element_state_get_name](#).

You can get and set a [GstClock](#) on an element using [gst_element_get_clock](#) and [gst_element_set_clock](#). Some elements can provide a clock for the pipeline if the [GST_ELEMENT_FLAG_PROVIDE_CLOCK](#) flag is set. With the [gst_element_provide_clock](#) method one can retrieve the clock provided by such an element. Not all elements require a clock to operate correctly. If the [GST_ELEMENT_FLAG_REQUIRE_CLOCK\(\)](#) flag is set, a clock should be set on the element with [gst_element_set_clock](#).

Note that clock selection and distribution is normally handled by the toplevel [GstPipeline](#) so the clock functions are only to be used in very specific situations.

GstElement

```
graph TD
  GObject --> GInitiallyUnowned
  GInitiallyUnowned --> GstObject
  GstObject --> GstElement
  GstElement --> GstBin
```

GStreamer element abstract base class.

GstElement

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Plugins documentation

- hotdoc plugin for GStreamer plugins
- Very simple to document new plugins:

```
gstaudiomixer = library('gstaudiomixer',  
    audiomixer_sources, orc_c, orc_h,  
    c_args : gst_plugins_base_args,  
    include_directories : [configinc],  
    dependencies : [audio_dep, gst_base_dep, orc_dep],  
    install : true,  
    install_dir : plugins_install_dir,  
    )  
plugins += [gstaudiomixer]
```

<https://gststreamer.freedesktop.org/documentation/>