

NAME

XGetWindowAttributes, XGetGeometry, XWindowAttributes – get current window attribute or geometry and current window attributes structure

SYNTAX

```
Status XGetWindowAttributes(Display *display, Window w, XWindowAttributes *window_attributes_return);
```

```
Status XGetGeometry(Display *display, Drawable d, Window *root_return, int *x_return, int *y_return, unsigned int *width_return, unsigned int *height_return, unsigned int *border_width_return, unsigned int *depth_return);
```

ARGUMENTS

border_width_return

Returns the border width in pixels.

d

Specifies the drawable, which can be a window or a pixmap.

depth_return

Returns the depth of the drawable (bits per pixel for the object).

display

Specifies the connection to the X server.

root_return

Returns the root window.

w

Specifies the window whose current attributes you want to obtain.

width_return

height_return

Return the drawable's dimensions (width and height).

window_attributes_return

Returns the specified window's attributes in the **XWindowAttributes** structure.

x_return

y_return

Return the x and y coordinates that define the location of the drawable. For a window, these coordinates specify the upper-left outer corner relative to its parent's origin. For pixmaps, these coordinates are always zero.

DESCRIPTION

The **XGetWindowAttributes** function returns the current attributes for the specified window to an **XWindowAttributes** structure. It returns a nonzero status on success; otherwise, it returns a zero status.

XGetWindowAttributes can generate **BadDrawable** and **BadWindow** errors.

The **XGetGeometry** function returns the root window and the current geometry of the drawable. The geometry of the drawable includes the x and y coordinates, width and height, border width, and depth. These are described in the argument list. It is legal to pass to this function a window whose class is **InputOnly**. It returns a nonzero status on success; otherwise, it returns a zero status.

STRUCTURES

The **XWindowAttributes** structure contains:

```
typedef struct {
    int x, y;          /* location of window */
    int width, height; /* width and height of window */
    int border_width;  /* border width of window */
    int depth;         /* depth of window */
    Visual *visual;    /* the associated visual structure */
    Window root;       /* root of screen containing window */
    int class;         /* InputOutput, InputOnly*/
    int bit_gravity;   /* one of the bit gravity values */
    int win_gravity;   /* one of the window gravity values */
    int backing_store; /* NotUseful, WhenMapped, Always */
    unsigned long backing_planes; /* planes to be preserved if possible */
};
```

```

    unsigned long backing_pixel; /* value to be used when restoring planes */
    Bool save_under; /* boolean, should bits under be saved? */
    Colormap colormap; /* color map to be associated with window */
    Bool map_installed; /* boolean, is color map currently installed*/
    int map_state; /* IsUnmapped, IsUnviewable, IsViewable */
    long all_event_masks; /* set of events all people have interest in*/
    long your_event_mask; /* my event mask */
    long do_not_propagate_mask; /* set of events that should not propagate */
    Bool override_redirect; /* boolean value for override-redirect */
    Screen *screen; /* back pointer to correct screen */
} XWindowAttributes;

```

The `x` and `y` members are set to the upper-left outer corner relative to the parent window's origin. The width and height members are set to the inside size of the window, not including the border. The `border_width` member is set to the window's border width in pixels. The `depth` member is set to the depth of the window (that is, bits per pixel for the object). The `visual` member is a pointer to the screen's associated **Visual** structure. The `root` member is set to the root window of the screen containing the window. The `class` member is set to the window's class and can be either **InputOutput** or **InputOnly**.

The `bit_gravity` member is set to the window's bit gravity and can be one of the following:

ForgetGravity	EastGravity
NorthWestGravity	SouthWestGravity
NorthGravity	SouthGravity
NorthEastGravity	SouthEastGravity
WestGravity	StaticGravity
CenterGravity	

The `win_gravity` member is set to the window's window gravity and can be one of the following:

UnmapGravity	EastGravity
NorthWestGravity	SouthWestGravity
NorthGravity	SouthGravity
NorthEastGravity	SouthEastGravity
WestGravity	StaticGravity
CenterGravity	

For additional information on gravity, see section 3.3.

The `backing_store` member is set to indicate how the X server should maintain the contents of a window and can be **WhenMapped**, **Always**, or **NotUseful**. The `backing_planes` member is set to indicate (with bits set to 1) which bit planes of the window hold dynamic data that must be preserved in backing_stores and during save_under. The `backing_pixel` member is set to indicate what values to use for planes not set in `backing_planes`.

The `save_under` member is set to **True** or **False**. The `colormap` member is set to the colormap for the specified window and can be a colormap ID or **None**. The `map_installed` member is set to indicate whether the colormap is currently installed and can be **True** or **False**. The `map_state` member is set to indicate the state of the window and can be **IsUnmapped**, **IsUnviewable**, or **IsViewable**. **IsUnviewable** is used if the window is mapped but some ancestor is unmapped.

The `all_event_masks` member is set to the bitwise inclusive OR of all event masks selected on the window by all clients. The `your_event_mask` member is set to the bitwise inclusive OR of all event masks selected by the querying client. The `do_not_propagate_mask` member is set to the bitwise inclusive OR of the set of events that should not propagate.

The `override_redirect` member is set to indicate whether this window overrides structure control facilities and can be **True** or **False**. Window manager clients should ignore the window if this member is **True**.

The `screen` member is set to a screen pointer that gives you a back pointer to the correct screen. This makes it easier to obtain the screen information without having to loop over the root window fields to see which

field matches.

DIAGNOSTICS

BadDrawable A value for a Drawable argument does not name a defined Window or Pixmap.

BadWindow A value for a Window argument does not name a defined Window.

SEE ALSO

XQueryPointer(3), XQueryTree(3)

Xlib – C Language X Interface