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 bor-
der_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_unders. 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 speci-
fied 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 win-
dow 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