
Subject: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [dolik.rce](#) on Sat, 08 Jan 2011 20:25:07 GMT

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Hi,

Some of the recent changes to maximize/minimize handling and/or SerializePlacement() causes that theide is no longer started in maximized state. The problem is, that now it doesn't restore correctly the state after restart, i.e. if I close maximized ide, it opens in normal state next time.

The logs from serialization say (only ide serialization related logs shown here for clarity):// Backup serialization before loading new data from file

TopWindow::SerializePlacement / write

minimized = false, maximized = true

rect = [0, 0] - [0, 0] : (0, 0), overlapped = [0, 0] - [0, 0] : (0, 0)

// LoadFromFile(ide); (ide/idewin.cpp:1003)

TopWindow::SerializePlacement / read

minimized = false, maximized = true

rect = [0, 15] - [1024, 600] : (1024, 585), overlapped = [0, 0] - [0, 0] : (0, 0)

// StoreToFile(ide); (ide/idewin.cpp:1031)

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minimized = false, maximized = false

rect = [8, 32] - [1016, 592] : (1008, 560), overlapped = [0, 0] - [0, 0] : (0, 0)

// StoreToFile(ide); (ide/idewin.cpp:1036)

TopWindow::SerializePlacement / write

minimized = false, maximized = false

rect = [8, 32] - [1016, 592] : (1008, 560), overlapped = [0, 0] - [0, 0] : (0, 0)

As you can see, the StoreToFile() is called twice and between the calls the ide.state changes its value. I tried to track down where the change occurs and got into ProcessEvents() call Then I got lost (couldn't find out which event triggers the change). The backtrace at this point

was:ProcessEvents () at /home/h/upp-production/uppsrc/CtrlCore/X11Wnd.cpp:362

Process (this=0xbffe4d88) at /home/h/upp-production/uppsrc/CtrlLib/Progress.cpp:199

Setxt (this=0xbffe4d88) at /home/h/upp-production/uppsrc/CtrlLib/Progress.cpp:206

Create (this=0xbffe4d88) at /home/h/upp-production/uppsrc/CtrlLib/Progress.cpp:183

Process (this=0xbffe4d88) at /home/h/upp-production/uppsrc/CtrlLib/Progress.cpp:193

Setxt (this=0xbffe4d88) at /home/h/upp-production/uppsrc/CtrlLib/Progress.cpp:206

Set (this=0xbffe4d88, apos=37, atotal=0) at

/home/h/upp-production/uppsrc/CtrlLib/Progress.cpp:221

Step (this=0xbffe4d88, n=1) at /home/h/upp-production/uppsrc/CtrlLib/Progress.cpp:236

SyncRefsDir (dir=0xaf104210 "/home/h/MyApps/Wizard", rel=..., pi=...) at

/home/h/upp-production/uppsrc/ide/Browser/TopicBase.cpp:178

SyncRefsDir (dir=0xaf10c518 "/home/h/MyApps", rel=..., pi=...) at

/home/h/upp-production/uppsrc/ide/Browser/TopicBase.cpp:198

SyncRefs () at /home/h/upp-production/uppsrc/ide/Browser/TopicBase.cpp:209

SetMain (this=0xbffe58c0, package=...) at /home/h/upp-production/uppsrc/ide/ide.cpp:140

OpenMainPackage (this=0xbffe58c0) at /home/h/upp-production/uppsrc/ide/ide.cpp:172

GuiMainFn_ () at /home/h/upp-production/uppsrc/ide/idewin.cpp:1030

main (argc=1, argv=0xbffff984, envptr=0xbffff98c) at

/home/h/upp-production/uppsrc/ide/idewin.cpp:731

I'm afraid that fixing this goes beyond my abilities Mirek, (or any other volunteer), could you have a look at it? It is not really that much annoying to maximize theide every time, but my desire for perfection suffers

BTW: In GUI_APP_MAIN there is (ide/idewin.cpp:839): Ide ide;

ide.Maximize();The call to Maximize is overwritten later, so it doesn't really matter and could be removed.

Best regards,

Honza

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [mirek](#) on Mon, 10 Jan 2011 21:48:22 GMT

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dolik.rce wrote on Sat, 08 January 2011 15:25Hi,

Some of the recent changes to maximize/minimize handling and/or SerializePlacement() causes that theide is no longer started in maximized state. The problem is, that now it doesn't restore correctly the state after restart, i.e. if I close maximized ide, it opens in normal state next time.

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As you can see, the StoreToFile() is called twice and between the calls the ide.state changes its value.

I do not see that...

Mirek

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [dolik.rce](#) on Mon, 10 Jan 2011 22:50:20 GMT

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Weird Anyone else having this kind of trouble? If not, then it might be specific to my system (Arch Linux, GCC 4.5.2) in which case I would probably have to do all the work to figure it out...

SerializePlacement() itself works well, I tested it using uppdev/X11minmax. I only see this happen in theide. From where I stopped last time when debugging it looks like theide receives an event changing state, but that should only from user interaction (which I obviously didn't do). I will try to check the logs from ProcessEvents, maybe it'll tell something usefull.

Honza

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [dolik.rce](#) on Tue, 11 Jan 2011 07:53:43 GMT

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I tracked it down. Theide receives WM_STATE event, which it properly digests and switches to overlapped mode. So the last question remains: Where the hell does that event come from?? I suspect my desktop environment, that is XFCE.

Honza

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [unodgs](#) on Tue, 11 Jan 2011 09:06:18 GMT

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In my desktop (gnome, sometimes kde) upp also doesn't restore maximized state properly. Window is almost maximized - that means it occupies the whole screen with padding 5 pixels and still can be maximized. Strange

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [dolik.rce](#) on Tue, 11 Jan 2011 10:44:22 GMT

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unodgs wrote on Tue, 11 January 2011 10:06 In my desktop (gnome, sometimes kde) upp also doesn't restore maximized state properly. Window is almost maximized - that means it occupies the whole screen with padding 5 pixels and still can be maximized. Strange

Finally someone who sees the problem The padding comes from
TopWindow::SerializePlacement(): Rect limit = GetWorkArea();

```
// ...
#ifdef PLATFORM_X11
    Rect fm = windowFrameMargin; //<this returns empty Rect...
    if((fm.left|fm.right|fm.top|fm.bottom) == 0)
        fm = Rect(8, 32, 8, 8); // ... so this is chosen as safe values
    limit.left += fm.left;
    limit.right -= fm.right;
    limit.top += fm.top;
    limit.bottom -= fm.bottom;
#endif
```

But now I am even more puzzled, since you are using different desktop environments than me. So what else could cause that Mirek doesn't see the problem? The version of X? I am using pretty new one: Xorg -version

This is a pre-release version of the X server from The X.Org Foundation.

It is not supported in any way.

Bugs may be filed in the bugzilla at <http://bugs.freedesktop.org/>.

Select the "xorg" product for bugs you find in this release.

Before reporting bugs in pre-release versions please check the latest version in the X.Org Foundation git repository.

See <http://wiki.x.org/wiki/GitPage> for git access instructions.

X.Org X Server 1.9.3.901 (1.9.4 RC 1)

Release Date: 2011-01-07

X Protocol Version 11, Revision 0

Build Operating System: Linux 2.6.36-ARCH i686

Current Operating System: Linux mrnous 2.6.37-ARCH #1 SMP PREEMPT Fri Jan 7 17:10:05 UTC 2011 i686

Kernel command line: root=/dev/disk/by-uuid/3d6a2cf7-1a7f-45f8-a6cb-ce2d9e12a03c
resume=/dev/sda4 ro

Build Date: 08 January 2011 11:27:31PM

Current version of pixman: 0.20.0

Before reporting problems, check <http://wiki.x.org>
to make sure that you have the latest version.

Honza

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [mirek](#) on Tue, 11 Jan 2011 13:53:32 GMT

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dolik.rce wrote on Tue, 11 January 2011 05:44

But now I am even more puzzled, since you are using different desktop environments than me. So what else could cause that Mirek doesn't see the problem?

Ah sorry, this is misunderstanding. I was only commenting to

"As you can see, the StoreToFile() is called twice and between the calls the ide.state changes its value."

Because from the log:

```
// StoreToFile(ide); (ide/idewin.cpp:1031)
TopWindow::SerializePlacement / write
minimized = false, maximized = false
rect = [8, 32] - [1016, 592] : (1008, 560), overlapped = [0, 0] - [0, 0] : (0, 0)
```

```
// StoreToFile(ide); (ide/idewin.cpp:1036)
TopWindow::SerializePlacement / write
minimized = false, maximized = false
rect = [8, 32] - [1016, 592] : (1008, 560), overlapped = [0, 0] - [0, 0] : (0, 0)
```

I see no differences. I will have yet to test (and hopefully fix) this in Linux.

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [unodgs](#) on Tue, 11 Jan 2011 14:29:14 GMT

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Quote:The version of X? I am using pretty new one:

I'm also using the newest possible (but stable) version. Maximizing is not the only problem. The best show starts with compiz enabled. Resizing the window causes intensive flickering and restored maximized window is shifted down (I can't see part of the bottom window and I cant do anything about it (move or maximize)).

But the most irritating problem under gome no matter if compiz is enabled or not is debugging. If I click on the debugged window after a short while the parent window (theide) pops up. Can anyone confirm that?

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux

Posted by [dolik.rce](#) on Tue, 11 Jan 2011 16:26:27 GMT

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mirek wrote on Tue, 11 January 2011 14:53dolik.rce wrote on Tue, 11 January 2011 05:44

But now I am even more puzzled, since you are using different desktop environments than me. So what else could cause that Mirek doesn't see the problem?

Ah sorry, this is misunderstanding. I was only commenting to

"As you can see, the StoreToFile() is called twice and between the calls the ide.state changes its value."Oops, my mistake I actually meant to say that "the ide.state changes between the LoadFromFile() and first SaveToFile() call". Sorry for confusion

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux
Posted by [mirek](#) on Tue, 11 Jan 2011 22:16:28 GMT

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OK, looks like everything is nuked after I have applied minimize/maximize patches. Confirming both problems.

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux
Posted by [mirek](#) on Tue, 11 Jan 2011 22:41:02 GMT

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Well, it looks like X11 tries to reposition windows on its own on create, that is what is causing the mess.

I have tried to fix this by ignoring first set of ConfigureNotify (while waiting for FocusIn), then placing the new position to the window. Ugly hack for ugly system....

Please check!

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux
Posted by [dolik.rce](#) on Wed, 12 Jan 2011 20:00:47 GMT

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mirek wrote on Tue, 11 January 2011 23:41Well, it looks like X11 tries to reposition windows on its own on create, that is what is causing the mess.

I have tried to fix this by ignoring first set of ConfigureNotify (while waiting for FocusIn), then placing the new position to the window. Ugly hack for ugly system....

Please check!

Thanks Mirek,
I can confirm that it now works as expected. I just still wonder why the desktop environment sends such event... Thinking of it now, theide is not the only program that makes problem, evince (PDF

viewer) usually starts shifted about half width to the left, off-screen. I suppose this is because xfce tries to position the windows to minimize overlaps (something like primitive tiling). It seems like not really well thought idea if it disrupts otherwise well written programs

Honza

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux
Posted by [mirek](#) on Wed, 12 Jan 2011 20:15:14 GMT

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I guess it is not so bad in Ubuntu, it actually tries to move windows to quite intelligent positions. The problem, of course, is that sometimes you want this and sometimes you do not...

But thankfully, now U++ can do both.

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux
Posted by [mr_ped](#) on Thu, 13 Jan 2011 09:02:03 GMT

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It's common behavior of *nix window managers, they *do* handle the placement of newly opened windows. Actually there are usually several options/strategies in desktop settings, how the window manager should place new windows on the desktop.

So it's not an defect, but effect.

Subject: Re: [BUG] TheIDE doesn't restore window state correctly on Linux
Posted by [sergeynikitin](#) on Tue, 21 Jun 2011 03:09:04 GMT

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Strange. Function void TopWindow::SyncState0() (file TopWinX11.cpp, line 124) need to have opened window.

Because Maximize don't work until window really not opened.

I use this code to work Maximize function:

```
void MainWindow::Setup(){
    if(splitter<1000 || splitter>9000) sp.SetPos(7700); else sp.SetPos(splitter);
    Open();
    Ctrl::ProcessEvent();
    LoadLocalSettings(); //Load settings from .cfg-file
    if (maximized) Maximize();
}
```

But in this case, filling of window content exposed to user.

Subject: Re: [SOLUTION FOUND!] TheIDE doesn't restore window state correctly on Linux

Posted by [sergeynikitin](#) on Tue, 21 Jun 2011 03:26:10 GMT

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Solution found! Please apply patch!

File TopWinX11.cpp
svn 3546

function
void TopWindow::Open(Ctrl *owner) (line 235-338)

Near end of function I add Line

SyncState0();

result function will be:

```
void TopWindow::Open(Ctrl *owner)
{
    GuiLock __;
    if(dokeys && (!GUI_AKD_Conservative() || GetAccessKeysDeep() <= 1))
        DistributeAccessKeys();
    UsrLogT(3, "OPEN " + Desc(this));
    LLOG("OPEN " << Name() << " owner: " << UPP::Name(owner));
    IgnoreMouseUp();
    bool weplace = owner && center == 1 || center == 2 || !GetRect().IsEmpty();
    if(fullscreen)
        SetRect(0, 0, Xwidth, Xheight);
    else
        CenterRect(owner);
    LLOG("Open NextRequest " << NextRequest(Xdisplay));
    Create(owner, false, false);
    xminsize.cx = xmaxsize.cx = Null;
    title2.Clear();
    if(!wepplace) {
        LLOG("SyncCaption");
        SyncCaption0();
    }
    LLOG("SyncSizeHints");
    size_hints->flags = 0;
    SyncSizeHints();
    Rect r = GetRect();
    size_hints->x = r.left;
    size_hints->y = r.top;
```



```

size_hints->width = r.Width();
size_hints->height = r.Height();
size_hints->win_gravity = StaticGravity;
size_hints->flags |= PPosition|PSize|PWinGravity;
if(owner) {
    ASSERT(owner->IsOpen());
    LLOG("XSetTransientForHint");
    XSetTransientForHint(Xdisplay, GetWindow(), owner->GetWindow());
}
LLOG("XSetWMNormalHints");
XSetWMNormalHints(Xdisplay, GetWindow(), size_hints);
Atom protocols[2];
protocols[0] = XAtom("WM_DELETE_WINDOW");
protocols[1] = XAtom("WM_TAKE_FOCUS");
LLOG("XSetWMProtocols");
XSetWMProtocols(Xdisplay, GetWindow(), protocols, 2);
String x = GetExeTitle().ToString();
const char *progrname = ~x;
class_hint->res_name = (char *)progrname;
class_hint->res_class = (char *)progrname;
XSetClassHint(Xdisplay, GetWindow(), class_hint);
LLOG("WndShow(" << visible << ")");
WndShow(visible);
if(visible) {
    XEvent e;
    LLOG("XWindowEvent");
    XWindowEvent(Xdisplay, top->window, VisibilityChangeMask, &e);
    ignoretakefocus = true;
    SetTimeCallback(500, THISBACK(EndIgnoreTakeFocus));
    LLOG("SetWndFocus");
    SetWndFocus();
    for(int i = 0; i < 50; i++) {
        // X11 tries to move our window, so ignore the first set of ConfigureNotify
        // and move the window into position after FocusIn - but not if we want WM to
        // place the window
        if(weplace)
            while(XCheckTypedWindowEvent(Xdisplay, top->window, ConfigureNotify, &e)) {
                if(e.xconfigure.window != top->window)
                    ProcessEvent(&e);
            }
        if(XCheckTypedWindowEvent(Xdisplay, top->window, FocusIn, &e)) {
            ProcessEvent(&e);
            if(e.xfocus.window == top->window)
                break;
        }
        Sleep(10);
    }
}

```

```

if(weplace) {
    WndSetPos0(GetRect());
    LLOG("SyncCaption");
    SyncCaption0();
}
LLOG(">Open NextRequest " << NextRequest(Xdisplay));
LLOG(">OPENED " << Name());
PlaceFocus();
StateH(OPEN);
Vector<int> fe = GetPropertyInts(top->window, XAtom("_NET_FRAME_EXTENTS"));
if(fe.GetCount() >= 4 &&
    fe[0] >= 0 && fe[0] <= 16 && fe[1] >= 0 && fe[1] <= 16 && //fluxbox returns wrong numbers -
quick&dirty workaround
    fe[2] >= 0 && fe[2] <= 64 && fe[3] >= 0 && fe[3] <= 48)
{
    GuiLock __;
    windowFrameMargin.left = max(windowFrameMargin.left, fe[0]);
    windowFrameMargin.right = max(windowFrameMargin.right, fe[1]);
    windowFrameMargin.top = max(windowFrameMargin.top, fe[2]);
    windowFrameMargin.bottom = max(windowFrameMargin.bottom, fe[3]);
}
if(IsOpen() && top)
    top->owner = owner;

int version = 5;
XChangeProperty(Xdisplay, GetWindow(), XAtom("XdndAware"), XA_ATOM, 32,
    0, (byte *)&version, 1);
SyncState0(); // ##### This Added line! #####
FixIcons();
}

```

After this correction, function Maximize work perfectly.
And function SerializePlacement(s) fully work.

PS

I'm not shure about place of call SyncState0() may be we must place it a bit early.

Subject: Re: [SOLUTION FOUND!] TheIDE doesn't restore window state correctly on Linux

Posted by [mirek](#) on Mon, 27 Jun 2011 19:52:05 GMT

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patch applied, thanks.

Mirek