

Remote forwarding of Human-Machine interface for industrial controls

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Why?

Application running on the server




Human-Interface is on your computer




Why?

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Microsoft Alternatives

Assessing an Open Software Strategy for Core Services at CERN



Why change Philosophy?

A strategic move towards CERN's philosophy of Open Software for Services.

[More](#)



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ssh -X user@ip
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X Persistent Remote Applications

How does it work?

On the server you start your application with HM interface:

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$ xpra start :100 --start=firefox
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And on the client you can attach to this session:

```
$ xpra attach ssh://ip_server:12345
```

We need to test it

Software	Terminal	HTML5 ¹	Comments
chromium-browser	✔	✔	
firefox	⚠	⚠	Tabs are perpetually crashing
gimp	✔	✔	
vlc sample320x640.mp4	✔	⚠	Browser makes the video slower
vlc sample4K.mp4	⚠	⚠	Lag
blender	✔	✔	
inkscape	✔	✔	
gnome-control-center	⚠	⚠	Works but options don't appear
emacs	✔	⚠	Cannot resize window
libreoffice	✔	✔	
thunderbird	✔	✔	
nautilus	✔	✔	
shotwell	✔	✔	
gnome-calculator	✔	✔	Buttons are flatten and grayish
gnome-screenshot	✘	✘	For some reasons the server terminates without screening

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- ▶ Efficient even for graphics intensive application
- ▶ Only Minor Glitches

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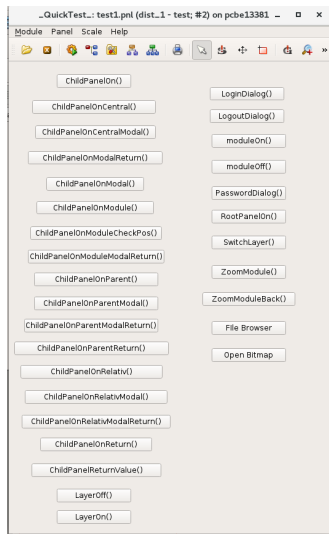
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- ▶ Efficient even for graphics intensive application
- ▶ Only Minor Glitches
- ▶ Similar on Linux and Windows

A more accurate test: WinCCOA

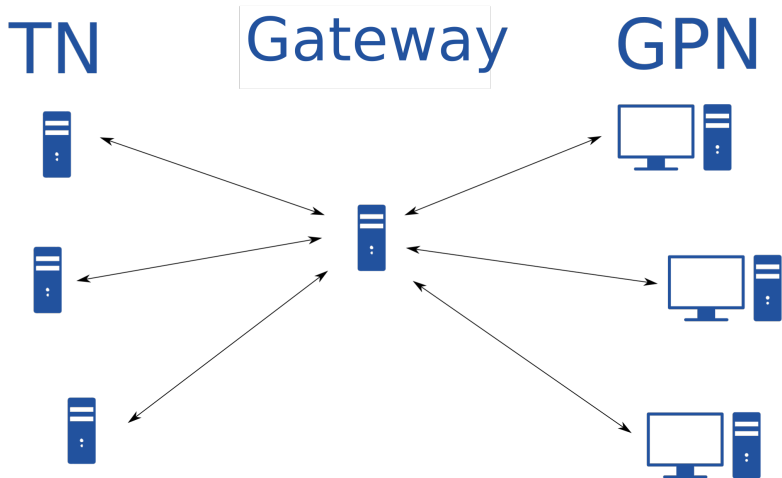


A more accurate test: WinCCOA



- ▶ Functionality work as expected
- ▶ Modal window: has been corrected!
- ▶ StayOnTop: we have work around

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- ▶ It's possible to connect via a proxy to an existing session
- ▶ Several types of authentication are allowed (sqlite, kerberos...)
- ▶ Starting a session on a remote server via proxy is not possible

Xpra: Good and bad points

Good

- ▶ Developers are responsive
- ▶ Highly configurable
- ▶ Can be used through a proxy

Bad

- ▶ Documentation is not exhaustive
- ▶ Proxy is not straightforward to configure
- ▶ Needs a lot of bandwidth

Thank you!