PyVirtualDisplay Documentation

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ponty

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PyVirtualDisplay

Date December 02, 2012

PDF PyVirtualDisplay.pdf

Contents:

pyvirtualdisplay is a python wrapper for Xvfb, Xephyr and Xvnc

Links:

- home: https://github.com/ponty/PyVirtualDisplay
- documentation: http://ponty.github.com/PyVirtualDisplay

Features:

- python wrapper
- back-ends: Xvfb, Xephyr, Xvnc
- supported python versions: 2.5, 2.6, 2.7, 3.1, 3.2, PyPy

Warning: at least one back-end should be installed

Known problems:

- only a few back-end options are supported

Possible applications:

- GUI testing
- automatic GUI screenshot

CHAPTER

ONE

BASIC USAGES

Start Xephyr:

```
from pyvirtualdisplay import Display
xephyr=Display(visible=1, size=(320, 240)).start()
```

Create screenshot of xmessage with Xvfb:

```
from easyprocess import EasyProcess
from pyvirtualdisplay.smartdisplay import SmartDisplay
with SmartDisplay(visible=0, bgcolor='black') as disp:
    with EasyProcess('xmessage hello'):
        img = disp.waitgrab()
img.show()
```

CHAPTER

TWO

INSTALLATION

2.1 General

- install Xvfb or Xephyr or Xvnc.
- install pip
- optional: pyscreenshot and PIL should be installed for `smartdisplay` submodule
- install the program:

```
# as root
pip install pyvirtualdisplay
```

2.2 Ubuntu

```
sudo apt-get install python-pip
sudo apt-get install xvfb
sudo apt-get install xserver-xephyr
sudo apt-get install tightvncserver
sudo pip install pyvirtualdisplay
# optional
sudo apt-get install python-imaging
sudo apt-get install scrot
sudo pip install pyscreenshot
# optional for examples
sudo pip install entrypoint2
```

2.3 Uninstall

```
# as root
pip uninstall pyvirtualdisplay
```

CHAPTER

THREE

USAGE

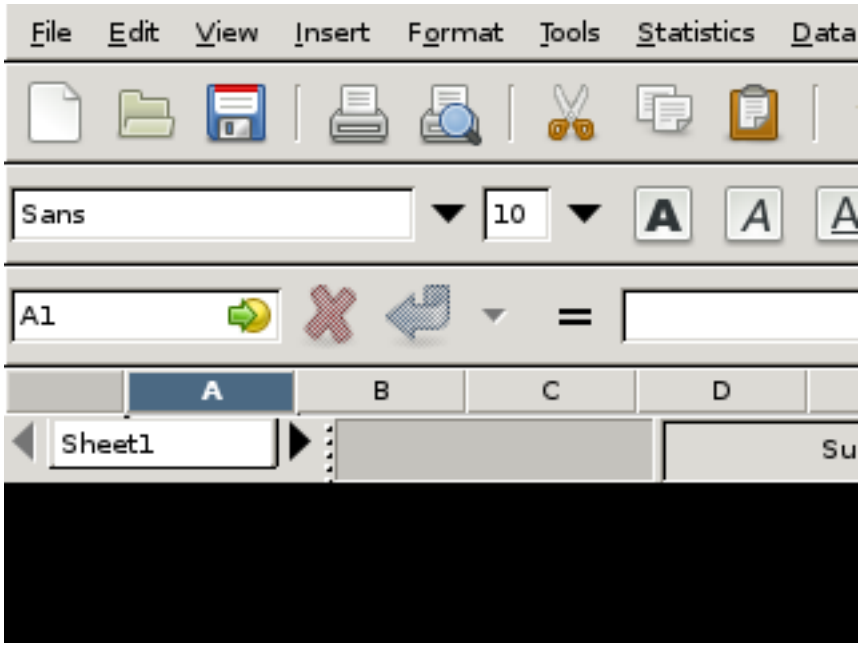
3.1 GUI Test

Testing `gnumeric` on low resolution:

```
from easyprocess import EasyProcess
from pyvirtualdisplay import Display

Display(visible=1, size=(320, 240)).start()
EasyProcess('gnumeric').start()
```

```
$ python -m pyvirtualdisplay.examples.lowres
```



3.2 Screenshot

Create screenshot of `xmessage` in background:

```
from easyprocess import EasyProcess
from pyvirtualdisplay.smartdisplay import SmartDisplay

disp = SmartDisplay(visible=0, bgcolor='black').start()
xmessage = EasyProcess('xmessage hello').start()
img = disp.waitgrab()
```

```
xmessage.stop()
disp.stop()
img.show()

$ python -m pyvirtualdisplay.examples.screenshot1
```

The same using `with` statement:

```
'''
using :keyword:'with' statement
'''
import logging
logging.basicConfig(level=logging.DEBUG)

from easyprocess import EasyProcess
from pyvirtualdisplay.smartdisplay import SmartDisplay

with SmartDisplay(visible=0, bgcolor='black') as disp:
    with EasyProcess('xmessage hello'):
        img = disp.waitgrab()


img.show()

$ python -m pyvirtualdisplay.examples.screenshot3
```

3.3 vncserver

examples/vncserver.py

```
'''
Example for Xvnc backend
'''

from easyprocess import EasyProcess
from entrypoint2 import entrypoint
from pyvirtualdisplay.display import Display

@entrypoint
def main(rfbport=5904):
    with Display(backend='xvnc', rfbport=rfbport) as disp:
        with EasyProcess('xmessage hello') as proc:
            proc.wait()
```

CHAPTER

FOUR

API

class pyvirtualdisplay.**Display**(*backend=None*, *visible=False*, *size=(1024*, *768)*, *color_depth=24*, *bgcolor='black'*, ***kwargs*)

Common class

Parameters

- **color_depth** – [8, 16, 24, 32]
- **size** – screen size (width,height)
- **bgcolor** – background color ['black' or 'white']
- **visible** – True -> Xephyr, False -> Xvfb
- **backend** – 'xvfb', 'xvnc' or 'xephyr', ignores `visible`

start()

start display

Return type self

stop()

stop display

Return type self

class pyvirtualdisplay.smartdisplay.**SmartDisplay**(*backend=None*, *visible=False*, *size=(1024*, *768)*, *color_depth=24*, *bgcolor='black'*, ***kwargs*)

autocrop(*im*)

Crop borders off an image.

Parameters

- **im** – Source image.
- **bgcolor** – Background color, using either a color tuple or a color name (1.1.4 only).

Returns An image without borders, or None if there's no actual content in the image.

grab(*autocrop=True*)

pyscreenshot_backend = None

waitgrab(*timeout=60*, *autocrop=True*, *cb_imgcheck=None*)

start process and create screenshot. Repeat screenshot until it is not empty and cb_imgcheck callback function returns True for current screenshot.

Parameters

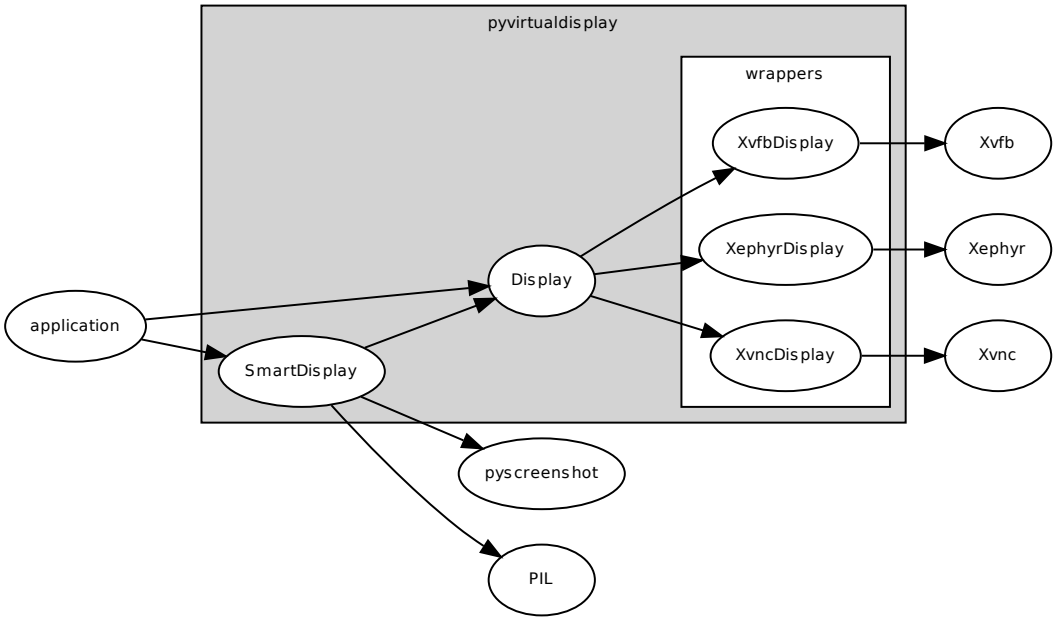
- **autocrop** – True -> crop screenshot
- **timeout** – int

- **cb_imgcheck** – None or callback for testing img, True = accept img, False = reject img

CHAPTER

FIVE

HIERARCHY



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