# Installing a screensaver that displays screen captures of websites on Linux

This documentation describes the steps taken to create a program that takes screen captures of various internet pages and saves them to a Pictures directory for use as a screensaver for Linux computers. Since there is a built-in screensaver for Linux that shows all pictures in the "Pictures" folder, all that was needed was a program that would take screen captures of the websites and store them into the Pictures folder automatically every few minutes.

In this implementation, the free command line utility "CutyCapt" was used to take the screen captures. A bash script was written to combine all of the necessary captures into one script. Finally, crontab was used to run the script at regular intervals.

## Installing the CutyCapt utility

The CutyCapt command line utility can be found at http://cutycapt.sourceforge.net. It was highly recommended to add the CutyCapt directory to the path, which can be done via the command:
PATH=<cutycaptdirectory>:$PATH
This utility can be tested by trying the command:
xvfb-run --server-args="-screen 0, 1024x768x24" /home/gridops/Pictures/cutycapt/CutyCapt/CutyCapt --url=http://www.google.com --out=/home/gridops/Pictures/test.bmp

## Creating a Script To Do All of the Captures

- Contents of the script:

```
#!/bin/sh -v
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/home/gridops/Pictures/cutycapt/CutyCapt

#OSG
xvfb-run --server-args="-screen 0, 1024x768x24" /home/gridops/Pictures/cutycapt/CutyCapt/CutyCapt --url=http://myosg.grid.iu.edu/map?all_sites=on --zoom-factor=0.80 --min-width=1024 --min-height=768 --out=/home/gridops/Pictures/osgsites.bmp

#DIAGNOSTICS
xvfb-run --server-args="-screen 0, 1024x768x24" /home/gridops/Pictures/cutycapt/CutyCapt/CutyCapt --url=http://uscms1.fltech-grid3.fit.edu/diagnostics.php --zoom-factor=0.80 --min-width=1440 --min-height=900 --out=/home/gridops/Pictures/diagnostics.bmp
xvfb-run --server-args="-screen 0, 1024x768x24" /home/gridops/Pictures/cutycapt/CutyCapt/CutyCapt --url=http://uscms1.fltech-grid3.fit.edu/diagnostics.php --zoom-factor=0.80 --min-width=1440 --min-height=900 --out=/home/gridops/Pictures/diagnostics.bmp
#GANGLIA
```

xvfb-run --server-args="-screen 0, 1024x768x24" /home/gridops/Pictures/cutycapt/CutyCapt/CutyCapt --url=http://uscms1.fltech-grid3.fit.edu/ganglia --zoom-factor=0.80 --min-width=1440 --min-height=900 --out=/home/gridops/Pictures/ganglia.bmp
xvfb-run --server-args="-screen 0, 1024x768x24" /home/gridops/Pictures/cutycapt/CutyCapt/CutyCapt --url=http://uscms1.fltech-grid3.fit.edu/ganglia --zoom-factor=0.80 --min-width=1440 --min-height=900 --out=/home/gridops/Pictures/ganglia.bmp

echo $(date) >> /home/gridops/cron_screensaver.log
echo $PATH >> /home/gridops/cron_screensaver.log

<end of script>
Attempts were made to shorten the script, but it seems that the capture must be done twice to ensure that the command goes through. The settings used in the CutyCapt commands were found through experimentation. At the end, the script echos the date and path to a log file for debugging purposes.
This script can be eventually improved by creating an array of URLs to capture and using a foreach loop to run the command with each URL. Attempts were made to do this, but the CutyCapt command does not seem to work unless called the long way.

## Using the crontab to run the script

The following crontab command was used to run the script once a minute:
* * * * * /home/gridops/snapshot.sh 2>> /home/gridops/cron_screensaver.log
Any errors from the script will be written to a file in the home folder.