**UNIVERSITY SOUTHERN CRUISE**

**FACULDADE - UDF**

**TECHNOLOGO IN ANALYSIS AND DEVELOPMENT OF SYSTEMS**

###### INTERNET KIOSK BASED ON LINUX DEBIAN 5 SYSTEM

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Summary

This Project consists of customization through routine management scripts in the Debian Linux Operating System 5,to be used as an Internet Kiosk, made available to the general public.

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# **Introduction**

In some places like schools, colleges, airports, shopping malls, cafes, hotels, and many others, have themselves the demand to stay connected. With this demand arises the concept of Internet Kiosks.

The Internet Kiosk is a Debian 5 Linux-based system recognized for renowned security and stability, is a lightweight, robustsystem, locked for eternal, high-security, modular changes that offers total security and anonymity to the user, and that allows internet access only using the free version of mozilla fir browser and fox (Iceweasel) to surf the internet and eventually other applications. The system does not save browsing histories or passwords, as well as content control and high level of reliability, guaranteed by the most modern means of security.

In this project I will demonstrate how to prepare and customizethe Linux Operating System Debian 5,for use andm computers made available tothe public, "Internet Kiosks"!

# **2. JUSTIFICATION**

We know that today, in the Age of *Smartphones*  people are increasingly connected, yet there is still a good portion of the population that is not yet able to pay for internet, mobile or fixed access or even have a phone device or other device that allows internet access.

Inthis scenario, it was thought to create a simple, robust and reliable operating system that brought the feature to be able to solve the needs of connection to this portion of the population,being made available in publicenvironments through internet totems (kiosks).

Customization consists, in a large way, the elimination of several packages and the creation and inclusion of some scripts for system routine control and navigation, as well as including some tools to ensure system stability and security.

# **Objectives**

This project aims to bring a portion of the population closer to a service as essential as the Internet and the various services offered by it.

This access can be done through a customized Linux operating system located at strategic points to function as an internet kiosk.

In addition to its functionality as an Internet Kiosk, this system can be used with advertising, warnings, still images (photos) and *streaming* videos such as application terminals and many other applications.

# **4- DEVELOPMENT**

* 1. **- System used**

The system used was GNU/Linux Debian 5 (Lenny), for its renowned robustness, security and trust.

* 1. **- SSH**

# apt-get install ssh

* 1. **- Rowingof packages:**  **cups, evolution and nautilus.**

# apt-get remove cups evolution nautilus

After removing these packages, you will be asked if you do not want to remove the remaining pacotes from the system, with the command: apt-get autoremove,  do not do so,as this will remove gnome from the system.

* 1. **- Instalation of java and flashplayer packages**

Add in the /etc/apt/sources.list repository

deb [http://www.debian-multimedia.org lenny main](http://www.debian-multimedia.org/)

# aptitude install restricted-extras

* 1. **- Criação of 2 user accounts**

Admin Account - user com administrative privileges.

User Account - kiosk user - no terminal and no privileges.

* 1. **- Blocking creating icons on the desktop**

Go to System > Administration > Login Window > General tab > in Standard Section, switch to the G interfacename in safemode.

**- Blocking keyboard shortcuts (ctrl+alt+backspace) among others.**

# nano /etc/X11/xorg.conf

Include the lines;

Section "ServerFlags"Option "DontVTSwitch" "true"Option "DontZap" "true"Option "DontZoom" "true"  
EndSection

* 1. **- Leave Iceweasel (Firefox) in perpetuo mode, script firefoxperpetuo.sh**

If theirefox F is closed, the browser process runs again.

Place the script on /usr/bin/firefoxperpetuo.sh and give execution permission to the file:

chmod +x /usr/bin/firefoxperpetuo.sh

#!/bin/bash

xsetroot -solid white &

# firfox in perpetual mode

while true ; do

#/usr/bin/firefox-3.0

/usr/bin/iceweasel

done

* 1. **- Inclusion of "self-management" script of the kiosk - testafirefox.sh**

Test whether the Iceweaselprocess is without generatingr cache, more than 15 minutes, if the response is positive, start the browser process.

Place the script in /bin/, give execution permission to the file

chmod +x /bin/testafirefox.sh,

Colocar in the user crontab "User", with the following line:

0-59/10 6-23 \* \* 1-5 /bin/testafirefox.sh

Script testafirefox.sh

| #!/bin/bash  if [ -z `/usr/bin/find /home/kioskcpd/.mozilla/firefox/t3o49nmw.default/Cache -name \*001\* -mtime -1` ] ; then  # cache older than one day  /usr/bin/killall firefox-bin  else  if [ -z `/usr/bin/find /home/kioskcpd/.mozilla/firefox/t3o49nmw.default/Cache -name \*001\* -mmin -15` ] ; then  # cache older than 15 minutes  /usr/bin/killall firefox-bin  else  # cache in the air  echo ""  fi  fi  exit |
| --- |
|  |

* 1. **- Inclusion of "self-management" script of the kiosk - testaperpetuo.sh**

Test whether the firefoxperpetuo.sh process is in the air, if the response is positive, start the browser process.

Place the script in the /bin/folder, give pexecutionerron in the file: testaperpetuo.sh

chmod +x /bin/testaperpetuo.sh

and put in the user crontab "User" the following line:

|  |
| --- |
| #!/bin/bash  # This Script tests whether firefoxperpetuo is in the air.  var=`/bin/ps -u kioskcpd | /bin/grep firefoxperpetuo | /usr/bin/wc -l`  if [ $var == 1 ] ; then  echo " "  else  /bin/reboot  fi |

0-59/10 6-23 \* \* 1-5 /bin/testaperpetuo.sh

* 1. **- Installation of**  **Plug-ins from the navigator Iceweasel (Firefox)**

**Plug-in In Script:** Plug-in to block unauthorized scripts in the browser.

Instalar o complemento No Script, no navegador.

Set up the plug-in so as not to show when to block content.

**Plug-in R-kiosk (the soul of the kiosk):** plug-in to make the Iceweasel, get com full screen and blocks the browser menu bar.

***IMPORTANT: The only way to*** unlock the R-kiosk plug-in is with the command:

firefox -safe-mode

Place the menu bar in the browser, set up the file /etc/iceweasel/pref/iceweasel.js

Include line:

pref(“kiosk.navbar”,true);

* 1. **- Configurations of the navigator Iceweasel (Firefox)**
* Open Firefox in Edit > Preferred, in the Main tab, clear open the downloads window when receiving a file. Change the download destination to /home/unb34/Documents.
* Open Firefox in Edit > Preferred, in Tabs always mark display the tab bar.
* Open Firefox in Edit > Preferred, in Privacy clear, keep history, memorize data provided to forms and search fields, memorize downloads and ask before clearing personal data, mark clear personal data when leaving Firefox.
* Open Firefox in Edit > Preferred, in the Security clear tab: remember website passwords.
* Open Firefox in Edit > Preferred, in the Advanced tab go for updates and disable all Firefox update options, installed add-ons, and search engines.
  1. **- Make**  **Debian Linux**  **5** when you start always load **the user's desktop without**  **Administrativeprivileges.**

In System>Administration>login window >security > change to always start logging into the user without administrative privileges.

* 1. **- Removal of the Gnome Interface Panel.**

- Remove the full top Gnome Panel

- Remove from the lower Gnome Panel, control workspaces and recycle bin.

***Important:*** To have access to the G Interface menuname andconsequently the Terminal, right-click the Gnome Panel and add the menu, **DON'T FORGET TO TAKE THE MENU AS SOON AS YOU FINISH THE SERVICE.**

# **5 - FINAL CONSIDERATIONS**

The Debian 5 Linux-based Internet Kiosk system is a robust and stable system, already tested in the field at the University of Brasilia, where it was in the air for a long time, I did this project in 2008, when I worked for the Computer Center of the University of Brasilia, however, has been updated some questions to improve the stability and security of it, such as proxy inclusion and firewalls, to filter out porn content and sites that pose danger to the network from which it is connected.

Its practical use at the time was to serve as support for students and community of the University of Brasilia, since in 2008, not all people had internet access as we have today, other possible uses are: advertising, informative, display of *slide shows* of photos and presentations and promotional videos, etc.

# 

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