



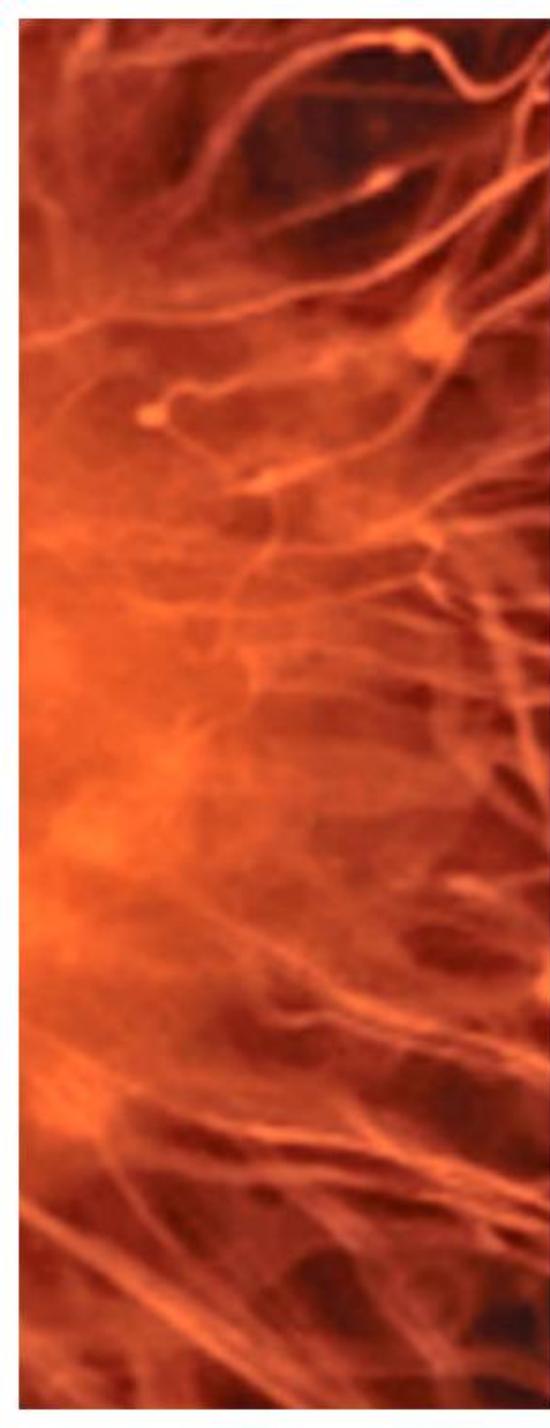
Instalación IC

Debian 6 en Hyper-V R2



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Instalación IC Debian 6

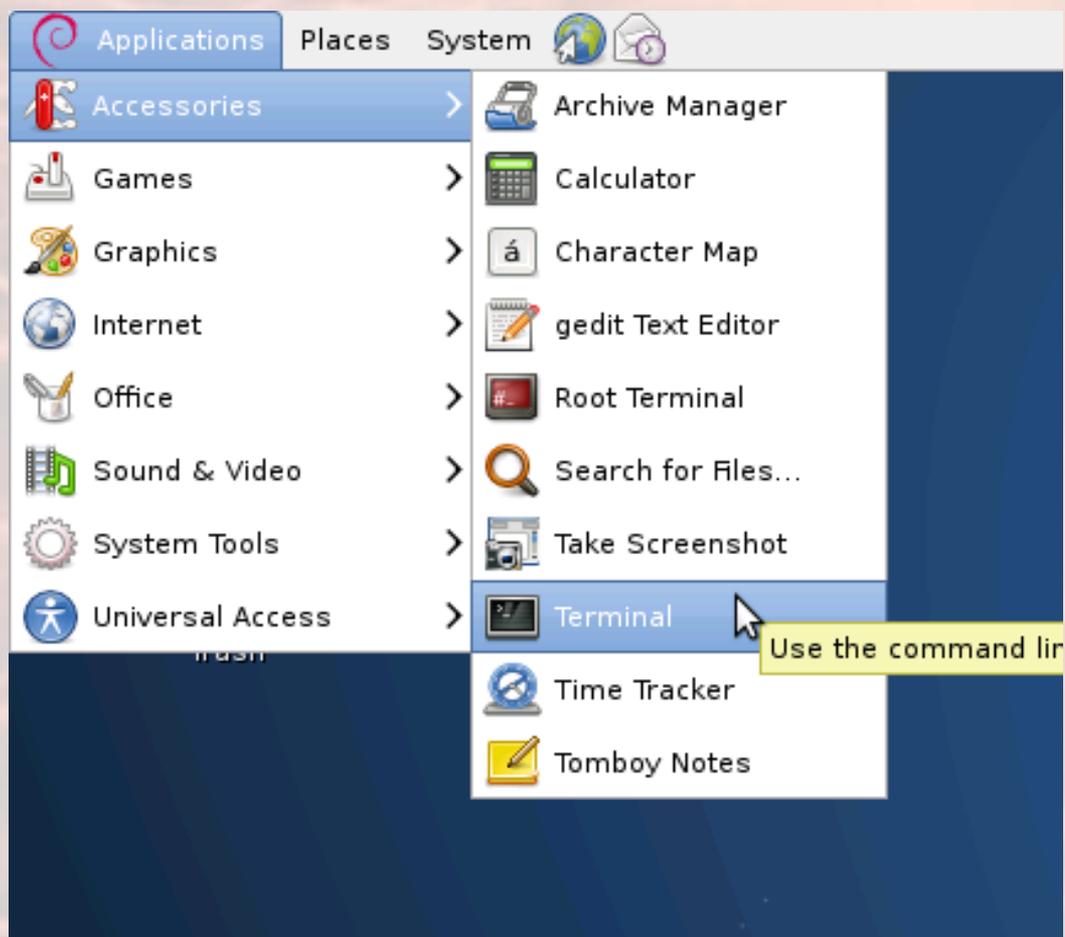
- Una vez que tenemos instalado Debian 6 en Hyper-V R2, para obtener el máximo rendimiento es fundamental instalar las herramientas de integración de Linux para Hyper-V R2 (Linux IC) – (NO SOPORTADO)
- Requisitos:
 - Debian 6 Instalado con Placa Legacy
 - Conexión a Internet



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En principio si esta habilitado el modo grafico voy a pasar Debian a modo texto -> Applications -> Accessories -> Terminal





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Ejecutar su y validar las password de root (administrador)

```
guillermo@debian6: ~  
File Edit View Terminal Help  
guillermo@debian6:~$ su  
Password:  
root@debian6:/home/guillermo#
```

Editar el archivo /etc/inittab cambiar id:2:initdefault (predeterminado)

A id:3:initdefault:

```
guillermo@debian6: ~  
File Edit View Terminal Help  
# /etc/inittab: init(8) configuration.  
# $Id: inittab,v 1.91 2002/01/25 13:35:21 miquels Exp $  
  
# The default runlevel.  
id:2:initdefault:  
  
# Boot-time system configuration/initialization script.  
# This is run first except when booting in emergency (-b) mode.  
si::sysinit:/etc/init.d/rcS
```



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Luego del cambio guardar el archivo inittab

```
guillermo@debian6: ~  
File Edit View Terminal Help  
# /etc/inittab: init(8) configuration.  
# $Id: inittab,v 1.91 2002/01/25 13:35:21 miquels Exp $  
  
# The default runlevel.  
id:3:in[ltdefault:
```

Eliminar el archivo /etc/rc3.d/S05gdm3

```
guillermo@debian6: ~  
File Edit View Terminal Help  
guillermo@debian6:~$ su  
Password:  
root@debian6:/home/guillermo# cd /etc/rc3.d  
root@debian6:/etc/rc3.d# rm S05gdm3  
root@debian6:/etc/rc3.d# █
```



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Reiniciar el equipo con el comando -> shutdown -rf now

```
guillermo@debian6
File Edit View Terminal Help
root@debian6:/etc# shutdown -rf now
```

Ya tenemos Debian en modo texto en caso de necesitar utilizar el modo grafico ejecutar el comando -> startx

```
Starting OpenBSD Secure Shell server: sshd.
Starting periodic command scheduler: cron.
Starting kerneloops:
Starting Samba daemons: nmbd smbd.
Starting MTA: exim4.
Starting the Winbind daemon: winbind.

Debian GNU/Linux 6.0 debian6 tty1

debian6 login: _
```



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Editamos el archivo /etc/apt/source.list

```
# deb cdrom:[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-  
10322-16:05]/ squeeze contrib main  
  
#deb cdrom:[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1  
0322-16:05]/ squeeze contrib main  
  
deb http://security.debian.org/ squeeze/updates main contrib  
deb-src http://security.debian.org/ squeeze/updates main contrib  
deb http://ftp.debian.org/debian/ squeeze-updates main contrib  
deb-src http://ftp.debian.org/debian/ squeeze-updates main contrib  
  
# Repositorio Oficial  
deb http://http.us.debian.org/debian/ squeeze main contrib non-free  
deb-src http://http.us.debian.org/debian/ squeeze main contrib non-free
```



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Ingresar al equipo con el usuario root

```
debian6 login: root
Password:
Linux debian6 2.6.32-5-amd64 #1 SMP Fri Sep 9 20:23:16 UTC 2011 x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@debian6:~#
```

Montar el ISO de Debian -> Ejecutar el comando -> apt-get update

```
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@debian6:~# apt-get update
```



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Validamos el correcto funcionamiento

```
'Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 20110322-16:05
,
in the drive '/media/cdrom/' and press enter

Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05]/ squeeze/contrib Translation-en
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05]/ squeeze/contrib Translation-en_US
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05]/ squeeze/main Translation-en
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05]/ squeeze/main Translation-en_US
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05] squeeze Release
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05] squeeze/contrib amd64 Packages/DiffIndex
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05] squeeze/main amd64 Packages/DiffIndex
Get:3 http://security.debian.org squeeze/updates/main Sources [60.8 kB]
Hit http://security.debian.org squeeze/updates/contrib Sources
Get:4 http://security.debian.org squeeze/updates/main amd64 Packages [196 kB]
Get:5 http://security.debian.org squeeze/updates/contrib amd64 Packages [678 B]
Fetched 346 kB in 2min 37s (2,194 B/s)
Reading package lists... Done
root@debian6:~#
```



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Ejecutamos el comando -> aptitude update

```
'Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 20110322-16:05
in the drive '/media/cdrom/' and press enter

Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05]/ squeeze/contrib Translation-en
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05]/ squeeze/contrib Translation-en_US
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05]/ squeeze/main Translation-en
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05]/ squeeze/main Translation-en_US
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05] squeeze Release
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05] squeeze/contrib amd64 Packages/DiffIndex
Ign cdrom://[Debian GNU/Linux 6.0.1a _Squeeze_ - Official amd64 DVD Binary-1 201
10322-16:05] squeeze/main amd64 Packages/DiffIndex
Get:3 http://security.debian.org squeeze/updates/main Sources [60.8 kB]
Hit http://security.debian.org squeeze/updates/contrib Sources
Get:4 http://security.debian.org squeeze/updates/main amd64 Packages [196 kB]
Get:5 http://security.debian.org squeeze/updates/contrib amd64 Packages [678 B]
Fetched 346 kB in 2min 37s (2,194 B/s)
Reading package lists... Done
root@debian6:~# aptitude update_
```



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Ejecutar el comando

```
apt-get install build-essential ncurses-dev kernel-package kernel-package fakeroot  
linux-headers-2.6.32 linux-source-2.6.32
```

```
root@debian6:~# apt-get install build-essential ncurses-dev kernel-package kerne  
l-package fakeroot linux-headers-2.6.32 linux-source-2.6.32
```

Validamos que el comando se ejecuto correctamente

```
linux-headers-2.6.32-5-all is already the newest version.  
linux-headers-2.6.32-5-all-amd64 is already the newest version.  
linux-headers-2.6.32-5-amd64 is already the newest version.  
linux-headers-2.6.32-5-common is already the newest version.  
linux-headers-2.6.32-5-common-openvz is already the newest version.  
linux-headers-2.6.32-5-common-vserver is already the newest version.  
linux-headers-2.6.32-5-common-xen is already the newest version.  
linux-headers-2.6.32-5-openvz-amd64 is already the newest version.  
linux-headers-2.6.32-5-vserver-amd64 is already the newest version.  
linux-headers-2.6.32-5-xen-amd64 is already the newest version.  
linux-source-2.6.32 is already the newest version.  
build-essential is already the newest version.  
fakeroot is already the newest version.  
kernel-package is already the newest version.  
libncurses5-dev is already the newest version.  
0 upgraded, 0 newly installed, 0 to remove and 55 not upgraded.  
root@debian6:~#
```



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Ejecutar los siguientes comandos:

```
cd /usr/src
```

```
wget -c http://www.kernel.org/pub/linux/kernel/v2.6/linux-2.6.36.tar.bz2
```

```
root@debian6:/usr/src# wget -c http://www.kernel.org/pub/linux/kernel/v2.6/linux-2.6.36.tar.bz2
--2012-01-10 13:58:24-- http://www.kernel.org/pub/linux/kernel/v2.6/linux-2.6.36.tar.bz2
Resolving www.kernel.org... 149.20.4.69
Connecting to www.kernel.org|149.20.4.69|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 70277083 (67M) [application/x-bzip2]
Saving to: 'linux-2.6.36.tar.bz2'

100%[=====>] 70,277,083 268K/s in 4m 32s

2012-01-10 14:02:58 (253 KB/s) - 'linux-2.6.36.tar.bz2' saved [70277083/70277083]

root@debian6:/usr/src#
```



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Ejecutar ->

```
bzip2 -d linux-2.6.36.tar.bz2
```

```
tar xf linux-2.6.36.tar
```

```
root@debian6:/usr/src# bzip2 -d linux-source-2.6.32.tar.bz2
root@debian6:/usr/src# tar xf linux-source-2.6.32.tar
root@debian6:/usr/src# wget -c http://www.kernel.org/pub/linux/kernel/v2.6/linux-2.6.36.tar.bz2
--2012-01-10 13:58:24--  http://www.kernel.org/pub/linux/kernel/v2.6/linux-2.6.36.tar.bz2
Resolving www.kernel.org... 149.20.4.69
Connecting to www.kernel.org|149.20.4.69|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 70277083 (67M) [application/x-bzip2]
Saving to: 'linux-2.6.36.tar.bz2'

100%[=====>] 70,277,083  268K/s  in 4m 32s

2012-01-10 14:02:58 (253 KB/s) - 'linux-2.6.36.tar.bz2' saved [70277083/70277083]

root@debian6:/usr/src# bzip2 -d linux-2.6.36.tar.bz2
root@debian6:/usr/src# tar xf linux-2.6.36.tar
root@debian6:/usr/src# █
```



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Ejecutar ->

`cd linux-2.6.36/`

`cp /boot/config* ./config`

```
root@debian6:/usr/src# bzip2 -d linux-2.6.36.tar.bz2
root@debian6:/usr/src# tar xf linux-2.6.36.tar
root@debian6:/usr/src# cd linux-2.6.36/
root@debian6:/usr/src/linux-2.6.36# cp /boot/config* ./config
```

Ejecutar -> `make menuconfig`

```
root@debian6:/usr/src/linux-2.6.36# make menuconfig
```



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Buscar -> Device Drivers -> Staging Drivers -> Microsoft Hyper-V Client Drivers
Seleccionar -> Exit -> Exit -> Exit

```
.config - Linux Kernel v2.6.36 Configuration
```

```
----- Staging drivers -----
Arrow keys navigate the menu. <Enter> selects submenus --->.
Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes,
<M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </>
for Search. Legend: [*] built-in [ ] excluded <M> module < >
+-----v(-)-----+
| <M>   VIA Technologies VT6656 support
| < >   Displaylink USB Framebuffer support
| <M>   Microsoft Hyper-V client drivers
| <M>   Microsoft Hyper-V virtual storage driver (NEW)
| <M>   Microsoft Hyper-V virtual block driver (NEW)
| <M>   Microsoft Hyper-V virtual network driver (NEW)
| <M>   Microsoft Hyper-V Utilities driver (NEW)
| < >   VME bridge support --->
| < >   Industrial I/O support --->
| < >   Compressed RAM block device support
| < >   Agere Systems HERMES II Wireless PC Card Model 0110
+-----v(+)+
|
| <Select> < Exit > < Help >
```



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Seleccionar -> Yes para salvar la configuración

```
.config - Linux Kernel v2.6.36 Configuration
```

```
Do you wish to save your new kernel configuration?  
<ESC><ESC> to continue.
```

```
< Yes >
```

```
< No >
```



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Ejecutar -> make-kpkg

```
root@debian6:/usr/src/linux-2.6.36# make-kpkg clean
exec make kpkg_version=12.036+nmu1 -f /usr/share/kernel-package/ruleset/minimal.mk clean
===== making target minimal_clean [new prereqs: ]=====
This is kernel package version 12.036+nmu1.
test ! -f .config || cp -pf .config config.precious
test ! -e stamp-building || rm -f stamp-building
test ! -f Makefile || \
    make ARCH=x86_64 distclean
make[1]: Entering directory `/usr/src/linux-2.6.36'
  CLEAN  scripts/basic
  CLEAN  scripts/kconfig
  CLEAN  include/config include/generated
  CLEAN  .config .config.old
make[1]: Leaving directory `/usr/src/linux-2.6.36'
test ! -f config.precious || mv -f config.precious .config
rm -f modules/modversions.h modules/ksyms.ver scripts/cramfs/cramfsck scripts/cramfs/mkcramfs
root@debian6:/usr/src/linux-2.6.36#
```



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Compilamos el kernel con el siguiente comando (toma su tiempo dependiendo del equipo)

```
fakeroot make-kpkg --initrd --append-to-version=hyper-v kernel_image  
kernel_headers
```

```
root@debian6:/usr/src/linux-2.6.36# make-kpkg clean  
exec make kpkg_version=12.036+nmu1 -f /usr/share/kernel-package/ruleset/minimal.  
mk clean  
=====  
making target minimal_clean [new prereqs: ]=====  
This is kernel package version 12.036+nmu1.  
test ! -f .config || cp -pf .config config.precious  
test ! -e stamp-building || rm -f stamp-building  
test ! -f Makefile || \  
    make ARCH=x86_64 distclean  
make[1]: Entering directory `/usr/src/linux-2.6.36'  
  CLEAN scripts/basic  
  CLEAN scripts/kconfig  
  CLEAN include/config include/generated  
  CLEAN .config .config.old  
make[1]: Leaving directory `/usr/src/linux-2.6.36'  
test ! -f config.precious || mv -f config.precious .config  
rm -f modules/modversions.h modules/ksyms.ver scripts/cramfs/cramfsck scripts/cr  
amfs/mkcramfs  
root@debian6:/usr/src/linux-2.6.36# fakeroot make-kpkg --initrd --append-to-vers  
ion=hyper-v kernel_image kernel_headers
```



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Se termino de compilar el kernel de Linux

```
rol
dpkg-shlibdeps: warning: dependency on libncurses.so.5 could be avoided if "/usr
/src/linux-2.6.36/debian/linux-headers-2.6.36hyper-v/usr/src/linux-headers-2.6.3
6hyper-v/scripts/kconfig/conf" were not uselessly linked against it (they use no
ne of its symbols).
test ! -e debian/control~ || rm -f debian/control~
dpkg-gencontrol -isp -DArchitecture=amd64 -plinux-headers-2.6.36hyper-v \
-P/usr/src/linux-2.6.36/debian/linux-h
eaders-2.6.36hyper-v/
create_md5sums_fn () { cd $1 ; find . -type f ! -regex './DEBIAN/.*' ! -regex './
/var/.*' -printf '%P\n' | xargs -r0 md5sum > DEBIAN/md5sums ; if [ -z "DEBI
AN/md5sums" ] ; then rm -f "DEBIAN/md5sums" ; fi ; } ; create_md5sums_fn
/usr/src/linux-2.6.36/debian/linux-headers-2.6.36hyper-v
chown -R root:root /usr/src/linux-2.6.36/debian/linux-headers-2
.6.36hyper-v
chmod -R og=rX /usr/src/linux-2.6.36/debian/linux-headers-2
.6.36hyper-v
dpkg --build /usr/src/linux-2.6.36/debian/linux-headers-2
.6.36hyper-v ..
dpkg-deb: building package `linux-headers-2.6.36hyper-v' in `../linux-headers-2.
6.36hyper-v_2.6.36hyper-v-10.00.Custom_amd64.deb'.
cp -pf debian/control.dist debian/control
make[2]: Leaving directory `/usr/src/linux-2.6.36'
make[1]: Leaving directory `/usr/src/linux-2.6.36'
root@debian6:/usr/src/linux-2.6.36#
```



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Ejecutamos los comandos ->

`cd ..`

`dpkg -i linux-headers-2.6.36hyper-v_2.6.36hyper-v-10.00.Custom_amd64.deb`

`Dpkg -i linux-image-2.6.36hyper-v_2.6.36hyper-v-10.00.Custom_amd64.deb`

```
linux-headers-2.6.32-5-vserver-amd64/
linux-headers-2.6.32-5-xen-amd64/
linux-headers-2.6.36hyper-v_2.6.36hyper-v-10.00.Custom_amd64.deb
root@debian6:/usr/src# dpkg -i linux-headers-2.6.36hyper-v_2.6.36hyper-v-10.00.C
ustom_amd64.deb
Selecting previously deselected package linux-headers-2.6.36hyper-v.
(Reading database ... 160558 files and directories currently installed.)
Unpacking linux-headers-2.6.36hyper-v (from linux-headers-2.6.36hyper-v_2.6.36hy
per-v-10.00.Custom_amd64.deb) ...
Setting up linux-headers-2.6.36hyper-v (2.6.36hyper-v-10.00.Custom) ...
Examining /etc/kernel/header_postinst.d.
root@debian6:/usr/src# dpkg -i linux-image-2.6.36hyper-v_2.6.36hyper-v-10.00.Cus
tom_amd64.deb
Selecting previously deselected package linux-image-2.6.36hyper-v.
(Reading database ... 172179 files and directories currently installed.)
Unpacking linux-image-2.6.36hyper-v (from linux-image-2.6.36hyper-v_2.6.36hyper-
v-10.00.Custom_amd64.deb) ...
Done.
Setting up linux-image-2.6.36hyper-v (2.6.36hyper-v-10.00.Custom) ...
Running depmod.
Examining /etc/kernel/postinst.d.
run-parts: executing /etc/kernel/postinst.d/initramfs-tools 2.6.36hyper-v /boot/
vmlinuz-2.6.36hyper-v
update-initramfs: Generating /boot/initrd.img-2.6.36hyper-v
```



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Editamos el archivo `/etc/initramfs-tools/modules`
y le agregamos las siguientes líneas

```
# List of modules that you want to include in your initramfs.
# They will be loaded at boot time in the order below.
#
# Syntax:  module_name [args ...]
#
# You must run update-initramfs(8) to effect this change.
#
# Examples:
#
# raid1
# sd_mod
# Modulos Hyper-V R2
hv_vmbus
hv_storvsc
hv_blkvsc
hv_netvsc
# Fin Modulos Hyper-V R2
```



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Ejecutamos el comando desde la carpeta /usr/src

update-initramfs -u -k 2.6.36hyper-v

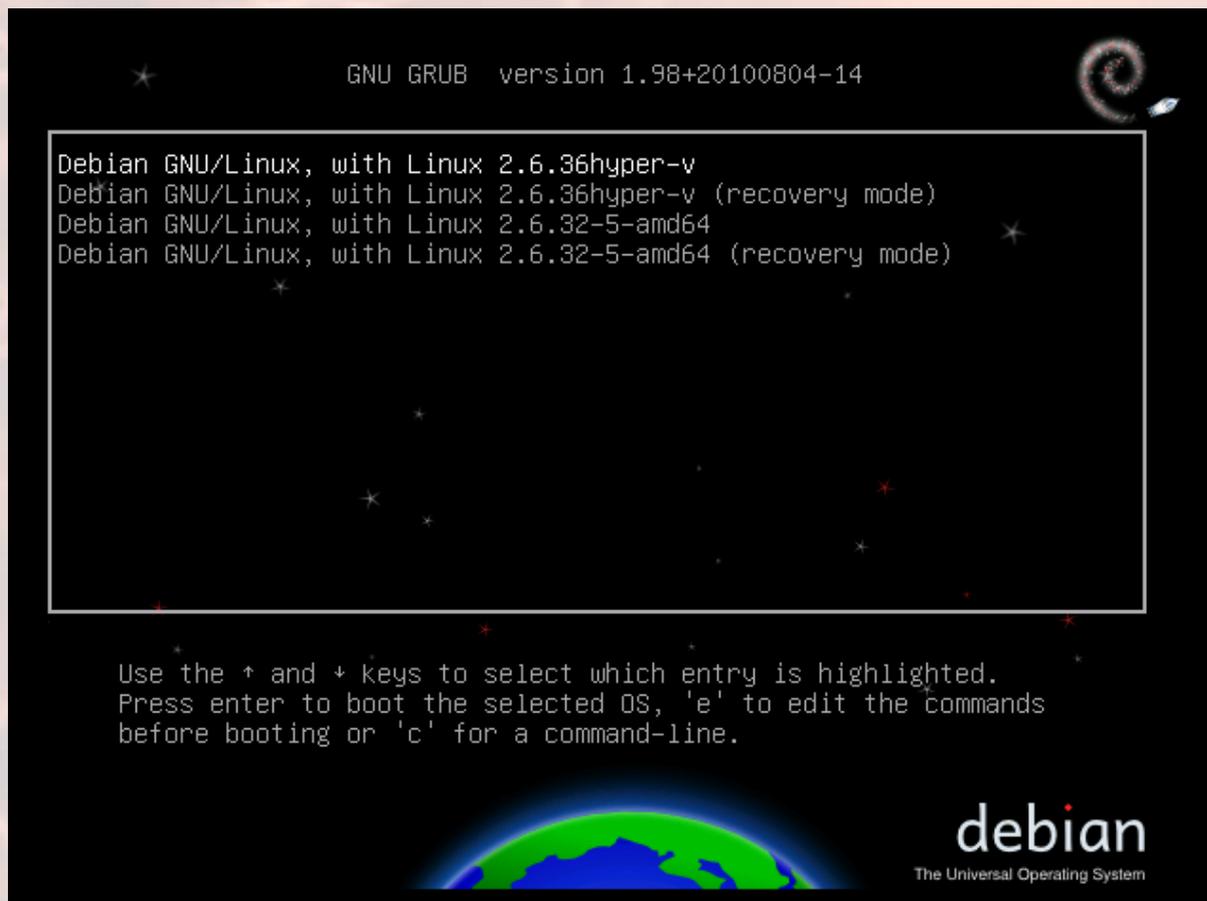
```
Unpacking linux-image-2.6.36hyper-v (from linux-image-2.6.36hyper-v_2.6.36hyper-
v-10.00.Custom_amd64.deb) ...
Done.
Setting up linux-image-2.6.36hyper-v (2.6.36hyper-v-10.00.Custom) ...
Running depmod.
Examining /etc/kernel/postinst.d.
run-parts: executing /etc/kernel/postinst.d/initramfs-tools 2.6.36hyper-v /boot/
vmlinuz-2.6.36hyper-v
update-initramfs: Generating /boot/initrd.img-2.6.36hyper-v
run-parts: executing /etc/kernel/postinst.d/pm-utils 2.6.36hyper-v /boot/vmlinuz
-2.6.36hyper-v
run-parts: executing /etc/kernel/postinst.d/update-notifier 2.6.36hyper-v /boot/
vmlinuz-2.6.36hyper-v
run-parts: executing /etc/kernel/postinst.d/zz-update-grub 2.6.36hyper-v /boot/v
mlinuz-2.6.36hyper-v
Generating grub.cfg ...
Found background image: /usr/share/images/desktop-base/desktop-grub.png
Found linux image: /boot/vmlinuz-2.6.36hyper-v
Found initrd image: /boot/initrd.img-2.6.36hyper-v
Found linux image: /boot/vmlinuz-2.6.32-5-amd64
Found initrd image: /boot/initrd.img-2.6.32-5-amd64
done
root@debian6:/usr/src# update-initramfs -u -k 2.6.36hyper-v
update-initramfs: Generating /boot/initrd.img-2.6.36hyper-v
root@debian6:/usr/src#
```



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Reiniciamos el equipo, tenemos disponible el nuevo kernel con los
modulos de Hyper-V R2





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Nos logueamos con root y ejecutamos los siguientes comandos

uname -r (validar version del kernel)

lsmod | grep hv (validar los módulos de Hyper-V R2)

```
root@debian6:~# uname -r
2.6.36hyper-v
root@debian6:~# lsmod | grep hv
hv_utils                2563  0
hv_timesource           1047  0 [permanent]
hv_blkvsc                20325  0
hv_storvsc              14592  0
scsi_mod                 157913  3 hv_blkvsc,hv_storvsc,libata
hv_netvsc                23393  0
hv_vmbus                 38091  4 hv_utils,hv_blkvsc,hv_storvsc,hv_netvsc
root@debian6:~# █
```

Solo queda apagar el equipo eliminar la placa de red legacy ajustar los valores de la placa eth0 y reiniciar nuestro equipo