Provide a listing of all the variable settings for your Linux login. Provide evidence of creating three unique variables for your Linux machine. Provide evidence of successfully retrieving each assigned value of each unique variables on your Linux machine. Provide evidence of creating three unique aliases for your Linux machine. Provide evidence of successfully retrieving each assigned value of your three unique aliases on your Linux machine.

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```
preuss@msctclinux:~>
```

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```
preuss@msctclinux:~> set
```

This same command works in the DOS and Windows environments.

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```
spwd ()
{
    ( IFS=/;
    set $PWD;
    if test $# -le 3; then
        echo "$PWD";
    else
        eval echo \"..\${$(($#-1))}/\${$#}\";
    fi )
}
startx ()
{
    test -x /usr/bin/startx || {
        echo "No startx installed" 1>&2;
        return 1
    };
    /usr/bin/startx ${1+"$@"} 2>&1 | tee $HOME/.xsession-errors
}
preuss@msctclinux:~>
```

The results of the set command do not fit on this screen.

preuss : bash

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```
{
    ( IFS=/;
    set $PWD;
    if test $# -le 3; then
        echo "$PWD";
    else
        eval echo \"..\${$(($#-1))}/\${$#}\";
    fi )
}
startx ()
{
    test -x /usr/bin/startx || {
        echo "No startx installed" 1>&2;
        return 1
    };
    /usr/bin/startx ${1+"$@"} 2>&1 | tee $HOME/.xsession-errors
}
preuss@msctclinux:~> cptr2224=B142
preuss@msctclinux:~> █
```

We created a variable named cptr2224. The value of the variable is B142.
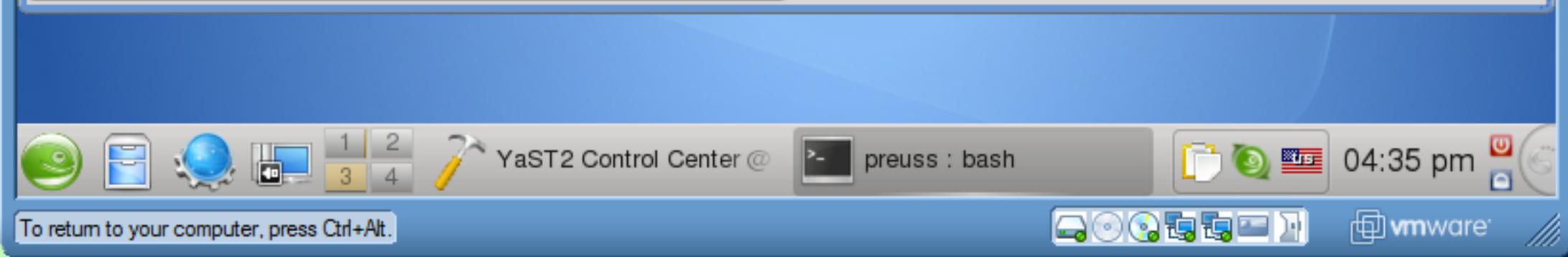
preuss : bash

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```
    ( IFS=/;
    set $PWD;
    if test $# -le 3; then
        echo "$PWD";
    else
        eval echo \"..\${$(($#-1))}/\${$#}\";
    fi )
}
startx ()
{
    test -x /usr/bin/startx || {
        echo "No startx installed" 1>&2;
        return 1
    };
    /usr/bin/startx ${1+"$@"} 2>&1 | tee $HOME/
}
preuss@msctclinux:~> cptr2224=B142
preuss@msctclinux:~> cptr2208=B150
preuss@msctclinux:~> █
```

We created another variable.

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```
    ( IFS=/;
    set $PWD;
    if test $# -le 3; then
        echo "$PWD";
    else
        eval echo \"..\${$(($#-1))}/\${$#}\";
    fi )
}
startx ()
{
    test -x /usr/bin/startx || {
        echo "No startx installed" 1>&2;
        return 1
    };
    /usr/bin/startx ${1+"$@"} 2>&1 | tee $HOME/.xse
}
preuss@msctclinux:~> cptr2224=B142
preuss@msctclinux:~> cptr2208=B150
preuss@msctclinux:~> office=B161
```

This is our third variable and value.

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preuss : bash

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```
    set $PWD;
    if test $# -le 3; then
        echo "$PWD";
    else
        eval echo \"..\${$(($#-1))}/\${$#}\";
    fi )
}
startx ()
{
    test -x /usr/bin/startx || {
        echo "No startx installed" 1>&2;
        return 1
    };
    /usr/bin/startx ${1+"$@"} 2>&1 | tee
}
preuss@msctclinux:~> cptr2224=B142
preuss@msctclinux:~> cptr2208=B150
preuss@msctclinux:~> office=B161
preuss@msctclinux:~> ▮
```

We have set three variables. The variable names are cptr2224, cptr2208, and office.

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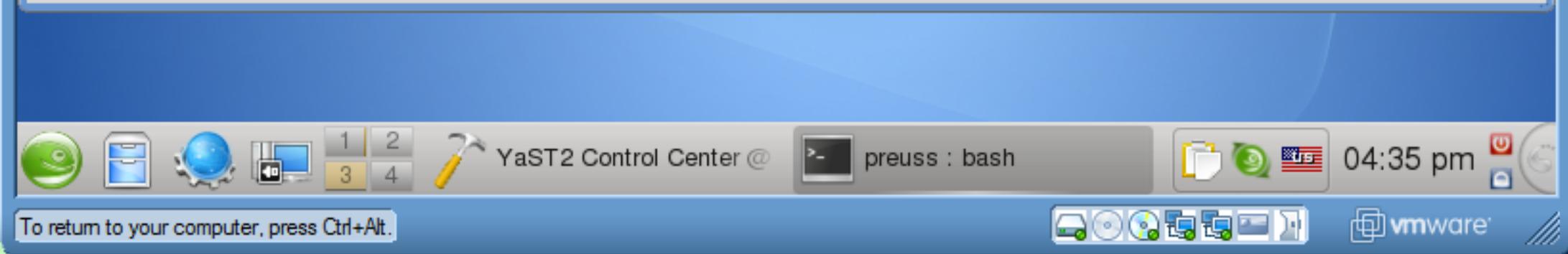
preuss : bash

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```
}
startx ()
{
    test -x /usr/bin/startx || {
        echo "No startx installed" 1>&2;
        return 1
    };
    /usr/bin/startx ${1+"$@"} 2>&1 | tee $HOME/.xsession-errors
}
preuss@msctclinux:~> cptr2224=B142
preuss@msctclinux:~> cptr2208=B150
preuss@msctclinux:~> office=B161
preuss@msctclinux:~> $cptr2224
bash: B142: command not found
preuss@msctclinux:~> $cptr2208
bash: B150: command not found
preuss@msctclinux:~> $office
bash: B161: command not found
preuss@msctclinux:~>
```

We checked our variable values. As you can see, our variable values are correct. Note, we need the $ in front of the variable name to get the variable value. This works inside of scripts.

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```
}
startx ()
{

    test -x /usr/bin/startx || {
        echo "No startx installed" 1>&2;
        return 1
    };
    /usr/bin/startx ${1+"$@"} 2>&1 | tee $HOME/.xsession-errors
}
preuss@msctclinux:~> cptr2224=B142
preuss@msctclinux:~> cptr2208=B150
preuss@msctclinux:~> office=B161
preuss@msctclinux:~> $cptr2224
bash: B142: command not found
preuss@msctclinux:~> $cptr2208
bash: B150: command not found
preuss@msctclinux:~> $office
bash: B161: command not found
preuss@msctclinux:~> alias█
```

We want to see the aliases already defined on our machine.

preuss : bash

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```
alias -='popd'
alias ..='cd ..'
alias ...='cd ../..'
alias beep='echo -en "\007"'
alias cd..='cd ..'
alias dir='ls -l'
alias l='ls -alF'
alias la='ls -la'
alias ll='ls -l'
alias ls='ls $LS_OPTIONS'
alias ls-l='ls -l'
alias md='mkdir -p'
alias o='less'
alias rd='rmdir'
alias rehash='hash -r'
alias unmount='echo "Error: Try the command: umount" 1>&2; false'
alias you='if test "$EUID" = 0 ; then /sbin/yast2 online_update ; else su - -
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> █
```

This is some of the aliases defined on our machine.

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```
alias beep='echo -en "\007"'
alias cd..='cd ..'
alias dir='ls -l'
alias l='ls -alF'
alias la='ls -la'
alias ll='ls -l'
alias ls='ls $LS_OPTIONS'
alias ls-l='ls -l'
alias md='mkdir -p'
alias o='less'
alias rd='rmdir'
alias rehash='hash -r'
alias unmount='echo "Error: Try the co                      e'
alias you='if test "$EUID" = 0 ; then                       ; else su - -
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> alias Eth0='ifcon
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig eth0'█
```

> We will define Eth0 to be /sbin/ifconfig eth0. Remember upper and lower case letters are different in Linux/Unix. Do not use the name of a command. We must have a single quote on the command because the command has spaces.

preuss : bash

preuss : bash

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```
alias cd..='cd ..'
alias dir='ls -l'
alias l='ls -alF'
alias la='ls -la'
alias ll='ls -l'
alias ls='ls $LS_OPTIONS'
alias ls-l='ls -l'
alias md='mkdir -p'
alias o='less'
alias rd='rmdir'
alias rehash='hash -r'
alias unmount='echo "Error: Try the command: umount" 1>&2; false'
alias you='if test "$EUID" = 0 ; then /sbin/yast2 online_update ; else su - -
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> alias Eth0='ifconfig eth0'
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig eth0'
preuss@msctclinux:~> █
```

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```
alias cd..='cd ..'
alias dir='ls -l'
alias l='ls -alF'
alias la='ls -la'
alias ll='ls -l'
alias ls='ls $LS_OPTIONS'
alias ls-l='ls -l'
alias md='mkdir -p'
alias o='less'
alias rd='rmdir'
alias rehash='hash -r'
alias unmount='echo "Error: T                    >&2; false'
alias you='if test "$EUID" =                    ne_update ; else su - -
c "/sbin/yast2 online_update"
preuss@msctclinux:~> alias Et
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig eth0'
preuss@msctclinux:~> Eth0█
```

We are testing the command Eth0

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```
alias rehash='hash -r'
alias unmount='echo "Error: Try the command: umo
alias you='if test "$EUID" = 0 ; then /sbin/yast
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> alias Eth0='ifconfig eth0'
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig
preuss@msctclinux:~> Eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:3C
          inet addr:192.168.5.7  Bcast:192.168.5.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:feee:773c/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2123 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1021 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2194520 (2.0 Mb)  TX bytes:75041 (73.2 Kb)

preuss@msctclinux:~> █
```

It works.

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preuss : bash

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```
alias rehash='hash -r'
alias unmount='echo "Error: Try the command: umount" 1>&2; false'
alias you='if test "$EUID" = 0 ; then /sbin/yast2 online_update ; else su - -
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> alias Eth0='ifconfig eth0'
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig eth0'
preuss@msctclinux:~> Eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:3C
          inet addr:192.168.5.7  Bcast:192.168.5.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:feee:773c/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2123 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1021 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2194520 (2.0 Mb)  TX bytes:75041 (73.2 Kb)

preuss@msctclinux:~> alias Eth1='/sbin/ifconfig eth1'█
```

preuss : bash

preuss : bash

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```
alias unmount='echo "Error: Try the command: umount" 1>&2; false'
alias you='if test "$EUID" = 0 ; then /sbin/yast2 online_update ; else su - -
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> alias Eth0='ifconfig eth0'
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig eth0'
preuss@msctclinux:~> Eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:3C
          inet addr:192.168.5.7  Bcast:192.168.5.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:feee:773c/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2123 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1021 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2194520 (2.0 Mb)  TX bytes:75041 (73.2 Kb)

preuss@msctclinux:~> alias Eth1='/sbin/ifconfig eth1'
preuss@msctclinux:~>
```

preuss : bash

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```
alias unmount='echo "Error: Try the command: umount" 1>&2; false'
alias you='if test "$EUID" = 0 ; then /sbin/yast2 online_update ; else su - -
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> alias Eth0='ifconfig eth0'
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig eth0'
preuss@msctclinux:~> Eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:3C
          inet addr:192.168.5.7  Bcast:192.168.5.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:feee:773c/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2123 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1021 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2194520 (2.0 Mb)  TX bytes:75041 (73.2 Kb)

preuss@msctclinux:~> alias Eth1='/sbin/ifconfig eth1'
preuss@msctclinux:~> alias Eth2='/sbin/ifconfig eth2'
```

preuss : bash

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```
alias you='if test "$EUID" = 0 ; then /sbin/yast2 online_update ; else su - -
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> alias Eth0='ifconfig eth0'
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig eth0'
preuss@msctclinux:~> Eth0
eth0      Link encap:Ethernet  HWaddr 0
          inet addr:192.168.5.7  Bcast:                              55.255.0
          inet6 addr: fe80::20c:29ff:fe
          UP BROADCAST RUNNING MULTICAS
          RX packets:2123 errors:0 drop
          TX packets:1021 errors:0 drop                             0
          collisions:0 txqueuelen:1000
          RX bytes:2194520 (2.0 Mb)  TX

preuss@msctclinux:~> alias Eth1='/sbin/ifconfig eth1'
preuss@msctclinux:~> alias Eth2='/sbin/ifconfig eth2'
preuss@msctclinux:~> █
```

We defined two more aliases.

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```
alias you='if test "$EUID" = 0 ; then /sbin/yast2 online_update ; else su - -
c "/sbin/yast2 online_update" ; fi'
preuss@msctclinux:~> alias Eth0='ifconfig eth0'
preuss@msctclinux:~> Eth0
bash: ifconfig: command not found
preuss@msctclinux:~> alias Eth0='/sbin/ifconfig eth0'
preuss@msctclinux:~> Eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:3C
          inet addr:192.168.5.7  Bcast:192.168.5.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:feee:773c/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2123 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1021 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2194520 (2.0 Mb)  TX bytes:75041 (73.2 Kb)

preuss@msctclinux:~> alias Eth1='/sbin/ifconfig eth1'
preuss@msctclinux:~> alias Eth2='/sbin/ifconfig eth2'
preuss@msctclinux:~> Eth1█
```

■ preuss : bash

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preuss : bash

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```
          RX packets:2123 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1021 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2194520 (2.0 Mb)  TX bytes:75041 (73.2 Kb)

preuss@msctclinux:~> alias Eth1='/sbin/ifconfig eth1'
preuss@msctclinux:~> alias Eth2='/sbin/ifconfig eth2'
preuss@msctclinux:~> Eth1
eth1      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:46
          inet addr:192.168.32.128  Bcast:192.168.32.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:feee:7746/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:95 errors:0 dropped:0 overruns:0 frame:0
          TX packets:23 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:15363 (15.0 Kb)  TX bytes:4057 (3.9 Kb)
          Interrupt:18 Base address:0x1424

preuss@msctclinux:~> █
```

preuss : bash

```
        RX packets:2123 errors:0 dropped:0 overruns:0 frame:0
        TX packets:1021 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:2194520 (2.0 Mb)  TX bytes:75041 (73.2 Kb)


preuss@msctclinux:~> alias Eth1='/sbin/ifconfig eth1'
preuss@msctclinux:~> alias Eth2='/sbin/ifconfig eth2'
preuss@msctclinux:~> Eth1
eth1      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:46
          inet addr:192.168.32.128  Bcast:192.168.32.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:feee:7746/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:95 errors:0 dropped:0 overruns:0 frame:0
          TX packets:23 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:15363 (15.0 Kb)  TX bytes:4057 (3.9 Kb)
          Interrupt:18 Base address:0x1424


preuss@msctclinux:~> Eth2
```

preuss : bash

File   Edit   View   Scrollback   Bookmarks   Settings   Help

```
        collisions:0 txqueuelen:1000
        RX bytes:2194520 (2.0 Mb)  TX bytes:75041 (73.2 Kb)

preuss@msctclinux:~> alias Eth1='/sbin/ifconfig eth1'
preuss@msctclinux:~> alias Eth2='/sbin/ifconfig eth2'
preuss@msctclinux:~> Eth1
eth1      Link encap:Ethernet  HWaddr 00:0C:29:EE:77:46
          inet addr:192.168.32.128  Bcast:192.168.32.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:feee:7746/64 S
          UP BROADCAST RUNNING MULTICAST  MTU:1500
          RX packets:95 errors:0 dropped:0 overruns
          TX packets:23 errors:0 dropped:0 overruns
          collisions:0 txqueuelen:1000
          RX bytes:15363 (15.0 Kb)  TX bytes:4057 (
          Interrupt:18 Base address:0x1424

preuss@msctclinux:~> Eth2
eth2: error fetching interface information: Device not found
preuss@msctclinux:~> █
```

> Our second two aliases worked as they should.

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