

USAGI Installation Manual

What is USAGI?

USAGI(UniverSAl playground for Ipv6) Project works to deliver the production quality for the Linux system
Linux had original ipv6 stack in kernel for usable ipv6 network,
but ipv6 stack had some bugs and no implemented function .
As a result, USAGI was designed for purpose of stable IPv6 operation in linux kernel

USAGI install condition

OS : RedHat 7.3

Required server spec is same as RedHat 7.3

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Step1

Prepare installation

- log in super user
- make work operation directory

```
# cd /  
#mkdir soi  
#cd soi  
#mkdir soiasia
```

Step2.

Copy usagi kernel package from CD-ROM

```
#mount /mnt/cdrom  
#cd /mnt/cdrom  
#cp kernel-2.4.18-17.7.x_usagi_20021007.rpm /soi /soiasia
```

Step3.

Install of usagi

```
# cd/soi /soiasia  
#rpm -Uvh kernel-2.4.18-17.7.x_usagi_20021007.rpm
```

```
root@dhcp-143-231 local1# rpm -Uvh kernel-2.4.18-17.7.x_usagi_20021007.i686.rpm  
Preparing... ##### [100%]  
1:kernel ##### [100%]
```

Step4.

Edit lilo.conf

```
# vi /etc/lilo.conf
```

change two lines

```
'image = /boot/ vmlinuz-2.4.18-17.7.x_usagi_20021007'  
'initrd=/boot/ initrd-2.4.18-17.7.x_usagi_20021007.img'  
'root = /dev/hda2'  
'label = linuxIPv6'  
'read-only'
```

```
Tera Term - 203.178.143.176 VT  
ファイル名 編集 設定 コントロール ウィンドウ ヘルプ  
prompt  
timeout=50  
default=linux  
boot=/dev/hda  
map=/boot/map  
install=/boot/boot.b  
messages=/boot/messages  
linear  
  
image=/boot/vmlinux-2.4.18-17.7.x_usagi_20021007  
label=linux  
initrd=/boot/initrd-2.4.18-17.7.x_usagi_20021007.img  
read-only  
root=/dev/sda6  
  
"/etc/lilo.conf" 14L, 214C 11,2-8 All
```

Complement :lilo.conf detail instruction is written in RUNNING LINUX page of 136

Step5

Run lilo

```
# /sbin/lilo
```

Step6.

Edit network configuration file

```
# vi /etc/sysconfig/network  
add`NETWORKING_IPV6=yes`
```

```
NETWORKING=yes  
NETWORKING_IPV6=yes  
HOSTNAME=localhost.localdomain
```

```
~  
~  
~  
~  
~  
~  
~
```

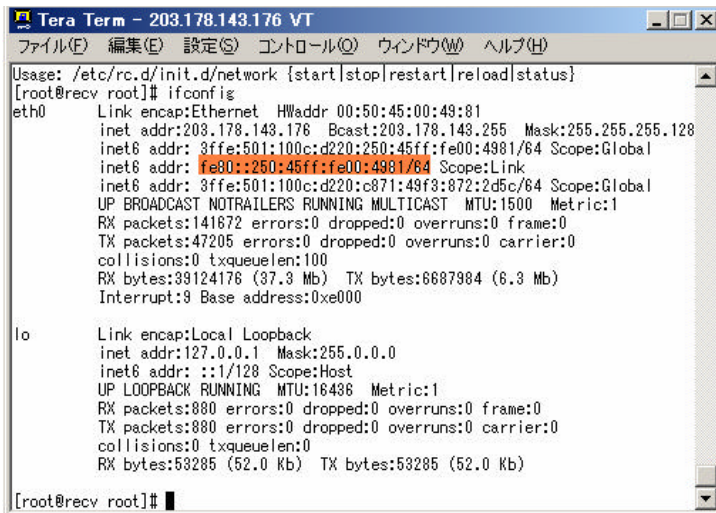
Step7.

machine reboot

```
# reboot
```

Step8. network test

```
# ifconfig
```

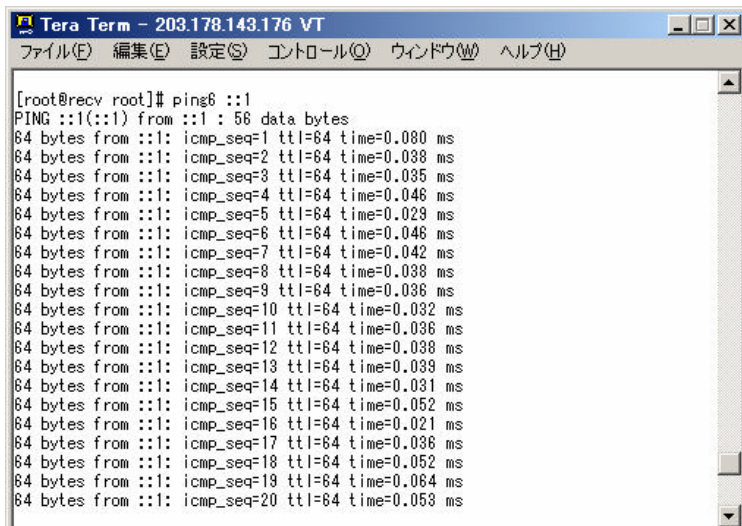


```
Usage: /etc/rc.d/init.d/network {start|stop|restart|reload|status}
[root@recv root]# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:50:45:00:49:81
          inet addr:203.178.143.178  Bcast:203.178.143.255  Mask:255.255.255.128
          inet6 addr: 3ffe:501:100c:d220:250:45ff:fe00:4981/64  Scope:Global
          inet6 addr: fe80::250:45ff:fe00:4981/64  Scope:Link
          inet6 addr: 3ffe:501:100c:d220:c871:49f3:872:2d5c/64  Scope:Global
          UP BROADCAST NOTRAILERS RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:141872 errors:0 dropped:0 overruns:0 frame:0
          TX packets:47205 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:100
          RX bytes:39124176 (37.3 Mb)  TX bytes:6687984 (6.3 Mb)
          Interrupt:9  Base address:0xe000

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128  Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:880 errors:0 dropped:0 overruns:0 frame:0
          TX packets:880 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:53285 (52.0 Kb)  TX bytes:53285 (52.0 Kb)

[root@recv root]#
```

```
# ping6 ::1
```



```
[root@recv root]# ping6 ::1
PING ::1(::1) from ::1 : 56 data bytes
64 bytes from ::1: icmp_seq=1 ttl=64 time=0.080 ms
64 bytes from ::1: icmp_seq=2 ttl=64 time=0.038 ms
64 bytes from ::1: icmp_seq=3 ttl=64 time=0.035 ms
64 bytes from ::1: icmp_seq=4 ttl=64 time=0.046 ms
64 bytes from ::1: icmp_seq=5 ttl=64 time=0.029 ms
64 bytes from ::1: icmp_seq=6 ttl=64 time=0.046 ms
64 bytes from ::1: icmp_seq=7 ttl=64 time=0.042 ms
64 bytes from ::1: icmp_seq=8 ttl=64 time=0.038 ms
64 bytes from ::1: icmp_seq=9 ttl=64 time=0.036 ms
64 bytes from ::1: icmp_seq=10 ttl=64 time=0.032 ms
64 bytes from ::1: icmp_seq=11 ttl=64 time=0.036 ms
64 bytes from ::1: icmp_seq=12 ttl=64 time=0.038 ms
64 bytes from ::1: icmp_seq=13 ttl=64 time=0.039 ms
64 bytes from ::1: icmp_seq=14 ttl=64 time=0.031 ms
64 bytes from ::1: icmp_seq=15 ttl=64 time=0.052 ms
64 bytes from ::1: icmp_seq=16 ttl=64 time=0.021 ms
64 bytes from ::1: icmp_seq=17 ttl=64 time=0.036 ms
64 bytes from ::1: icmp_seq=18 ttl=64 time=0.052 ms
64 bytes from ::1: icmp_seq=19 ttl=64 time=0.064 ms
64 bytes from ::1: icmp_seq=20 ttl=64 time=0.053 ms
```

Complement : Network detail instruction is written in RUNNING LINUX page of 514 to 533

USAGI kit install manual

Usagi Kit has usagi kernel source file. But this time, We parted usagi kernel package installation and usagi kit installation.

Because it is difficult for us to install usagi kernel installation of source file .

That is why we separately install usagi kernel binary package.

Step1

Copy usagi kit source file from CD-ROM

```
#cd /mnt/cdrom  
#cp usagi-linux24-stable-20030214.tar.bz2 /soi/soiasia
```

Step2

unzip the source file

```
#cd /soi/soiasia  
# bzip2 -dc usagi-linux24-stable-20030214.tar.bz2 | tar xvf -
```

Step3

install usagi kit

```
#cd /soi/soiasia/usagi  
#make prepare TARGET=linux24  
#cd usagi/libinet6  
#./configure  
#make  
#make install  
#make install-includes
```