

Realtek

IPv6 Ready Logo

User Guide V1.0

Change History

version	Date	Remark
1.0	2012/07/24	Create file of ipv6 ready logo user guide

1.TAHI IPv6 Conformance Test Environment Setup on FreeBSD version 7.4

1.1 Self_Test version 5-0-0 (reference INSTALL.ct file)

Install mcast-tools-20050926 the packet's port directory

```
cd /usr/ports/net/mcast-tools && make && make install
```

1.2 IPv6 Conformance Test Tool-v6eval-3.3.2.tar.gz (reference INSTALL.v6eval file)

install them from the package's ports directory

```
cd /usr/ports/lang/p5-Expect && make install
```

```
cd /usr/ports/security/p5-Digest-MD5 && make install
```

```
cd /usr/ports/textproc/p5-YAML && make install
```

IPv6 Conformance Test Program Package => ct-2.1.1.tar.gz

1.3 Configurations on Freebsd

/etc/rc.conf

```
ipv6_enable="YES"
ipv6_gateway_enable="YES"
ifconfig_em0="up"
ifconfig_msk0="up"
ipv6_network_interfaces="em0 msk0"
ipv6_default_interface="em0"
ipv6_prefix_em0="3ffe:501:ffff:100"
ipv6_prefix_msk0="3ffe:501:ffff:101"
```

/usr/local/v6eval/etc/tn.def

```
RemoteDevice    cuad0
RemoteDebug      0
RemoteIntDebug   0
RemoteLog        1
RemoteSpeed      0
RemoteLogout     0
RemoteMethod     serial
Link0    em0    00:00:00:00:01:00
Link1    msk0    00:00:00:00:01:01
```

/usr/local/v6eval/etc/nut.def

```
System          manual
TargetName      FreeBSD/i386 6.1-RELEASE
HostName        target.tahi.org
Type            router
User            root
Password        v6eval
Link0    br0    00:e0:4c:81:96:c1
Link1    eth1    00:e0:4c:81:96:c9
```

1.4 Configurations on AP router

IPv6 Basic Setting config IPv6 Addr setting

Br0 => 3ffe:0501:ffff:0100:02e0:4cff:fe81:96c1/64

Eth1 => 3ffe:0501:ffff:0101:02e0:4cff:fe81:96c9/64

1.5 Run the test

cd \$somewhere/Self_Test_5-0-0/spec.p2 (spec.p2/addr.p2/icmp.p2/nd.p2/pmtu.p2)

make clean

make ipv6ready_p2_router

you can see the test spec result at \$somewhere/Self_Test-5-0-0/index.html

2. Commands used in TAHI IPv6 Conformance Test

2.1 spec TEST

route -A inet6 add default gw fe80::0200:00ff:fe00:0100 dev br0

route -A inet6 delete default

test-73~

route -A inet6 add default gw fe80::0200:00ff:fe00:a0a0 dev br0

route -A inet6 delete default

Run PIMv6 daemon

(default enable ecmh daemon)

Stop PIMv6 daemon

killall ecmh

2.2 pmtu TEST

route -A inet6 add default gw fe80::0200:00ff:fe00:0100 dev br0

ping6 -c 1 -s 1452 -I br0 FF1E::1:2

ping6 -c 1 -s 1352 -I br0 FF1E::1:2

(enter run after console prompts #)

2.3 icmp TEST

route -A inet6 add default gw fe80::0200:00ff:fe00:0100 dev br0

ping6 -c 1 -s 2 -I br0 fe80::0200:00ff:fe00:0100

(enter run after console prompts #)

route -A inet6 delete default

Start RA

radvd -C /var/radvd.conf

(from ui setting ra default value)

Stop RA

killall radvd

ifconfig br0 add fec0::2e0:4cff:fe81:96c1/64

ifconfig br0 del fec0::2e0:4cff:fe81:96c1/64

ifconfig eth1 mtu 1280

ifconfig eth1 mtu 1500

Run PIMv6 daemon

(default enable ecmh daemon)

Stop PIMv6 daemon

killall ecmh

2.4 addr TEST

reboot

no sys signature at 00020000! 按 enter run

```
ifconfig br0 add 8000::2e0:4cff:fe81:96c1/64
```

```
ifconfig br0 add fec0::2e0:4cff:fe81:96c1/64
```

2.5 nd TEST

```
route -A inet6 add default gw fe80::0200:00ff:fe00:a0a0 dev br0
```

```
route -A inet6 delete default
```

Start RA

don't restart after modify radvd's parameters

```
radvd -C /var/radvd.conf
```

Stop RA

```
killall radvd
```

```
ifconfig br0 add 3ffe:501:ffff:0:2e0:4cff:fe81:96c1/64
```

```
ifconfig br0 add 3ffe:501:ffff::/64
```

```
ifconfig br0 del 3ffe:501:ffff::/64
```

```
ifconfig br0 del 3ffe:501:ffff:0:2e0:4cff:fe81:96c1/64
```

```
route -A inet6 add 3ffe:501:ffff::/64 gw fe80::0200:00ff:fe00:a0a0 dev br0
```

```
route -A inet6 delete 3ffe:501:ffff::/64 gw fe80::0200:00ff:fe00:a0a0 dev br0
```

RADVD default values

```
AdvSendAdvert on;
```

```
MaxRtrAdvInterval 600;
```

```
MinRtrAdvInterval 198;
```

```
MinDelayBetweenRAs 3;
```

```
AdvLinkMTU 0;
```

```
AdvReachableTime 0;
```

```
AdvRetransTimer 0;
```

```
AdvCurHopLimit 64;
```

```
AdvDefaultLifetime 1800;
```

```
AdvDefaultPreference medium;
```

```
prefix 3ffe:0501:ffff:0100:0000:0000:0000:0000/64
```

```
{
```

```
AdvOnLink on;  
AdvAutonomous on;  
AdvValidLifetime 2592000;  
AdvPreferredLifetime 604800;  
};
```

```
ping [ -LRUbdnqrvVaAB ] [ -c count ] [ -i interval ] [ -l preload ] [ -p pattern ] [ -s packetsize ] [ -t ttl ] [ -w  
deadline ] [ -F flowlabel ] [ -I interface ] [ -M hint ] [ -Q tos ] [ -S sndbuf ] [ -T timestamp option ] [ -W  
timeout ] [ hop ... ] destination
```