

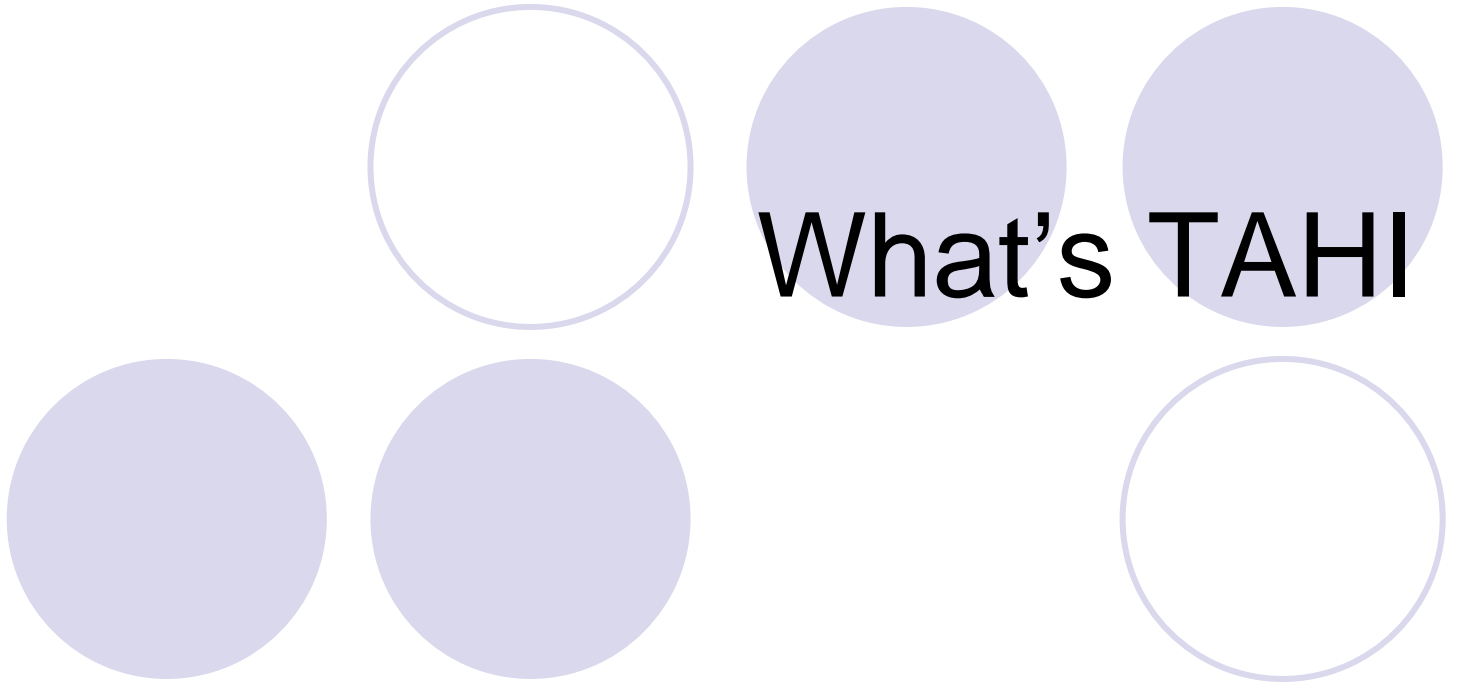
Introduction of TAHI DHCPv6 conformance testing tool

8th TAHI Test Event@Makuhari
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TAHI Project

TOC

- What's TAHI
- Tester Status
- Test Schedule

- Testing Report
- Discussion

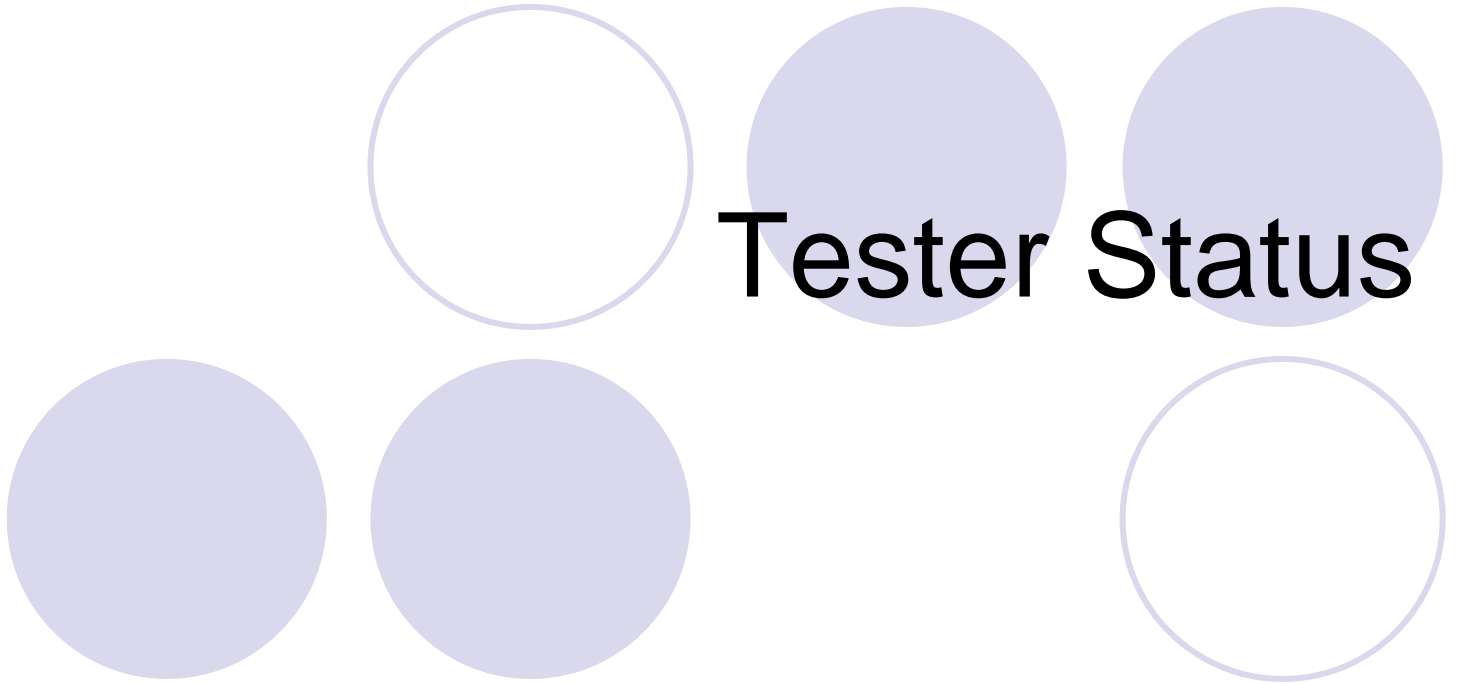


What's TAHI

TAHI Project

- TAHI Project is developing and providing test suites for IPv6.
 - <http://www.tahi.org/>
 - You can get and use them freely!!
- Activity
 - Developing conformance test tool
 - e.g. IPv6 core protocol, IPsec, MIPv6, etc...
 - Holding interoperability test event
 - Every year
 - Usually at Japan



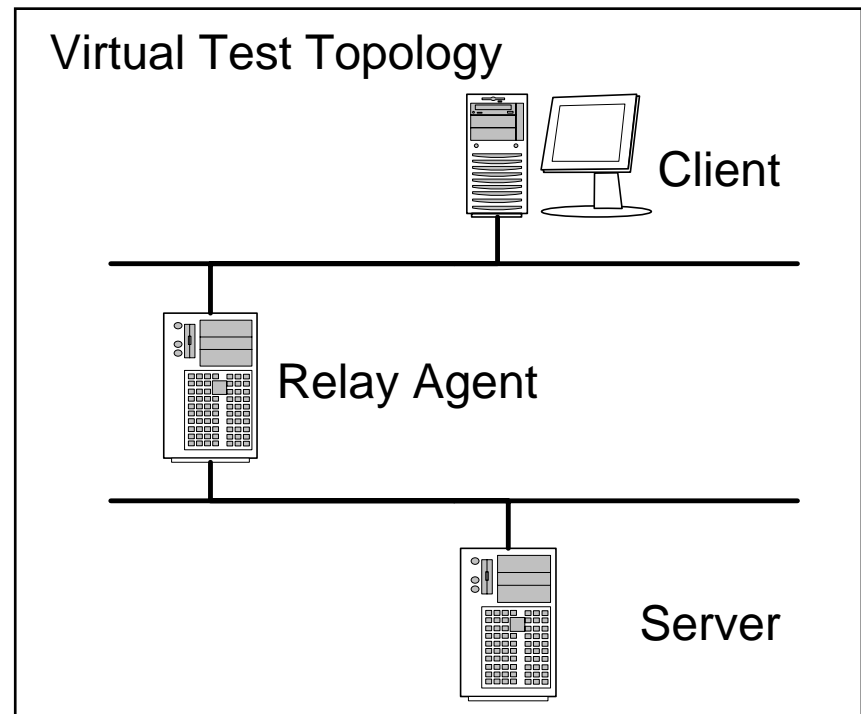


New release of TAHI DHCPv6 Test Tool

- TAHI Project released DHCPv6 Test Tool version 0.3 (Jan, 10th, 2006) !!
 - without functions related to “Authentication”.

● Test Target

- Server
- Relay Agent
- Client



Test Coverage



| | |
|---------|---|
| RFC3315 | Dynamic Host Configuration Protocol for IPv6 (DHCPv6) |
| RFC3633 | IPv6 Prefix Options for Dynamic Host Configuration Protocol (DHCP) version 6 |
| RFC3646 | DNS Configuration options for Dynamic Host Configuration Protocol for IPv6 (DHCPv6) |
| RFC3736 | Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6 |

*without functions related to “Authentication”.



Good News!

- “Authentication” function

- Now, we are developing even at this moment.

You can try to test this function in **THIS EVENT!**



Test Schedule

Schedule for conformance test

| Date | Time | DHCPv6 |
|----------|---------------|-----------------------------|
| 23, Jan. | 10:00 - 10:30 | <i>Opening and Briefing</i> |
| | 12:30 - 15:30 | Panasonic |
| | 16:00 - 19:00 | ALAXALA |
| | 19:00 - 21:00 | <i>Reception</i> |
| 24, Jan. | 9:00 - 12:00 | N/A |
| | 13:00 - 16:00 | N/A |
| | 17:00 - 20:00 | N/A |
| 25, Jan. | 9:00 - 12:00 | CISCO |
| | 13:00 - 16:00 | IJ |
| | 17:00 - 20:00 | |
| 26, Jan. | 9:00 - 12:00 | |
| | 13:00 - 16:00 | |
| | 17:00 - 20:00 | |
| 27, Jan. | 9:00 - 12:00 | <i>Reserved</i> |



Please book the slot

If you want to book the slot,

- Send e-mail

- Write down the preferred slot.

Mail to : book-ct@tahi.org

http://cert.v6pc.jp/8th-interop/schedule_conf.html

- Contact to member of TAHI Project

- Inform us directly which slot is preferred

Information Page



- DHCPv6 testing information at this event
<http://www.tahi.org/8th-interop/dhcpv6/>

- DHCPv6 conformance test tool
You can get more detail information
<http://www.tahi.org/dhcpv6/>

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Testing Report at Event

Test report on 6th ETSI Plugtests / 7th TAHI

(17th – 21th October, 2005, Sophia Antipolis, France) (1/2)

- Conformance Test (beta version)
 - Tester status
 - Supported only DUID-LLT as DUID
 - One Client was tested.
 - Found one issue regarding DUID

Test report on 6th ETSI Plugtests / 7th TAHI

(17th – 21th October, 2005, Sophia Antipolis, France) (2/2)

● Issue

○ DUID-LL/DUID-LLT (hardware type =1)

- Client used over 48bits length as link-layer address field.
- Already solved in IETF ML
 - Should be 48bits as link-layer address



Testing Report from users

Mailing list for TAHI DHCPv6 test tool users

- Mailing list for discussion
 - Discussion : dhcptest@tahi.org
 - Subscribe to : dhcp-ctl@tahi.org

This ML has the authors of DHCPv6 RFC!!

Ralph Droms, Bernie Volz etc...

You can discuss with them in this ML...

Bug in user implementation

- Server bug
 - IA address option is in the main part of message
 - ➡ Should be included in IA_* option
 - Using multicast address when server send the relay-reply message
 - ➡ Should be used unicast address
- Relay bug
 - Using link-local address in link-address field
 - ➡ Should be used global address

Etc...

Issue in RFC(1/3)

- How treat invalid option?

RFS says, “Clients and servers SHOULD discard any messages that contain options that are not allowed to appear in the received message.”

ISSUE : Almost implementations does not discard the message, just ignore the option.

Because, 1. It doesn't cause an issue of interoperability. 2. If new option is defined, It's require constant maintenance.

Should change “discard” to “ignore” in RFC?

Issue in RFC(2/3)

- Where is the position of Status Code option?

- NotOnLink : The prefix for the address is not appropriate for the link to which the client is attached

RFS says, “the server **MUST** return the IA to the client with a Status Code option with the value NotOnLink.”

ISSUE : This description is unclear, “with”.

This “with” means that “in main part of message” or “in IA_* option” or in “IA_address option”?

Issue in RFC(3/3)

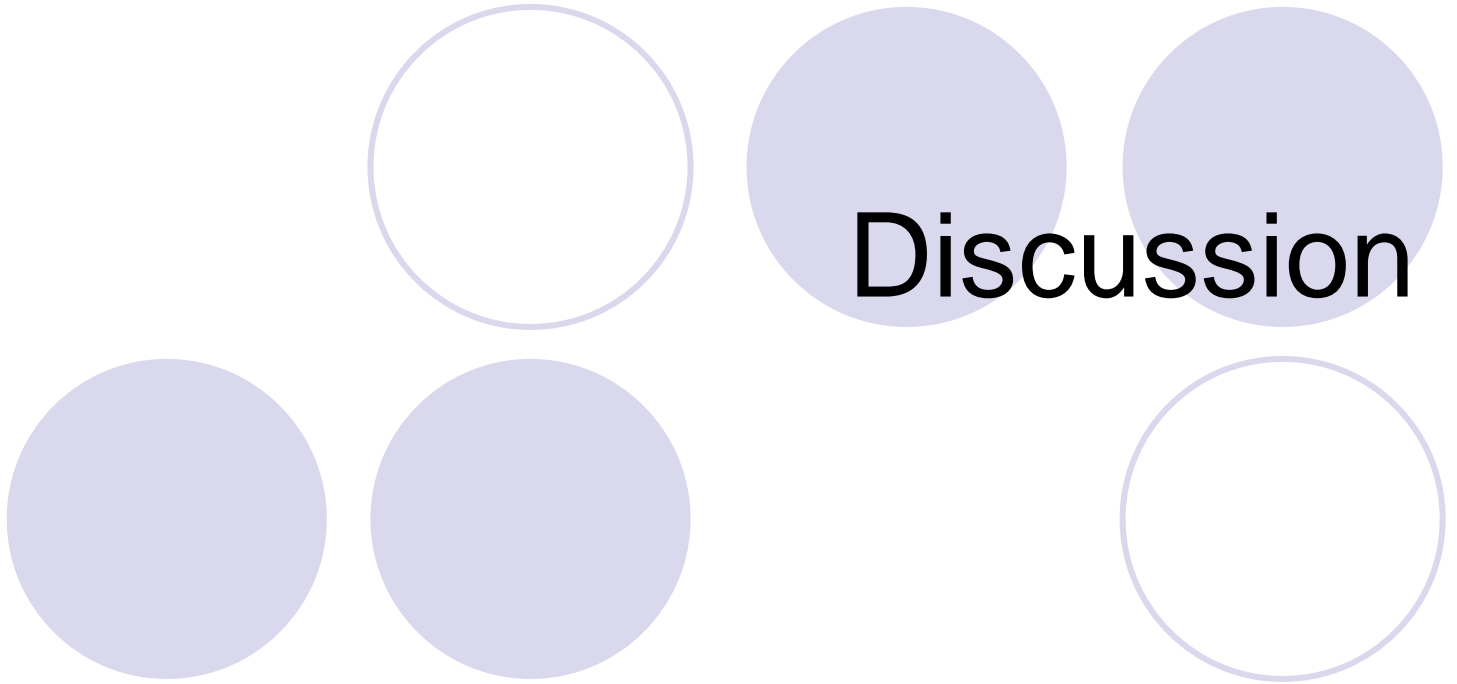
- Where is the position of Status Code option?

- Success : Success.

RFS says, “If the Status Code option does not appear in a message in which the option could appear, the status of the message is assumed to be Success. ”

Small ISSUE : If we use Success Status Code option, where should we set the option?

“in main part of message” or “in IA_* option” or in “IA_address option”?



We need discussion!!

- Test specification
 - Available on <http://www.tahi.org/dhcpv6/spec/>
- Test tool
 - Available on <http://www.tahi.org/dhcpv6/>
 - You can download Test Tool freely!!
- Mailing list for discussion
 - Discussion : dhcptest@tahi.org
 - Subscribe to : dhcp-ctl@tahi.org
 - Your comments to improve test tool and specification are welcome !!
 - Your feedback is welcome.



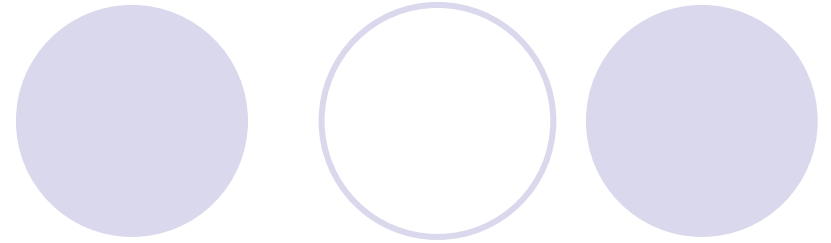
Big chance!

- 8th TAHI Test event give us discussion time.

- Let's use TAHI test tool, and discuss each other!!

- It is very useful to improve your implementation, and knowledge !!

More Big chance!!!



- Ralph Droms come to this event!!
 - Let's discuss with Ralph!
 - He is chair of DHC working group in IETF.
 - He wrote many RFCs regarding DHCP.

Enjoy 8th TAHI event !!

END

