PCP Working Group

IETF 83 – Paris
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Logistics

• Note takers; jabber scribe
• Meeting Materials (Slides, Agenda, etc.)
  – http://tools.ietf.org/wg/pcp/agenda
• XMPP
  – pcp@jabber.ietf.org
• Mailing List
  – pcp@ietf.org
Agenda (1/2)

DAY 2 (TUE 1300-1500)

1300-1305 Chairs welcome  (Chairs, 5)

1305-1315 PCP Base cont. (security considerations)  (Margaret Wasserman, 10)

draft-ietf-pcp-base-24

1315-1330 PCP Authentication Mechanism  (Dacheng Zhang, 15)

draft-wasserman-pcp-authentication-02

1330-1340 PCP Proxy  (Dan Wing, 10)

draft-bpw-pcp-proxy-01

1340-1350 UPnP-IGD Interworking Function  (Mohamed Boucadair, 10)

draft-ietf-pcp-upnp-igd-interworking-01
Agenda 2/2

1350-1410 DS-lite Open Issues (Paul Selkirk, 20)
draft-dupont-pcp-dslite-01

1410-1430 PCP Extensions (Mohamed Boucadair, 20)
draft-boucadair-pcp-extensions-02
draft-boucadair-pcp-rtp-rtcp-03

1430-1440 Using PCP To Coordinate Between the CGN and Home Gateway Via Port Allocation (Tina Tsou, 10)
draft-tsou-pcp-natcoord-05

1440-1450 PCP Server Discovery with IPv4 traffic offload for Proxy Mobile IPv6 (Prashanth Patil, 10)
draft-rpcw-pcp-pmipv6-serv-discovery-00

1450-1500 Cases Study- PCP Deployment in Mobile Network (Gang Chen, 10)
draft-chen-pcp-mobile-deployment-00

POSTPONED Using PCP to Find an External Address in an NPTv6 Network (Dan Wing/Fred Baker, 10)
Document: draft-baker-pcp-nptv6-search-00
PCP Testing Suite (X.Deng, M. Boucadair)

• **Goal**
  – Validate the behavior of PCP Server and PCP Client implementations
  – More than 240 PCP test cases are defined for the PCP Server

• **Open source available soon:** [http://sourceforge.net/projects/pcptestingsuits/](http://sourceforge.net/projects/pcptestingsuits/)

• **Features**
  – Generate a malformed PCP message: e.g., reserved bits are skipped
  – Generate an invalid PCP message: e.g., use a multicast address as internal IP address, use a broadcast address as internal IP address, etc.
  – Issue an unsupported PCP OpCode
  – Ask for non TCP/UDP mappings
  – Insert an unsupported PCP Option
  – Insert several instances of the same Option
  – Insert FILTER Option in PEER OpCode
  – Request for an unauthorized operation: modify a static mapping, reduce the lifetime of a SYN created mappings, etc.
  – Send a request using an unsupported version
  – Handle non solicited PCP responses

• **Testing Suite components**
  – PCP Request: Behaving as PCP Client
  – PCP Response: Emulate a PCP Server
  – XML-formatted file as test case input and output
  – A Wireshark dissector for PCP
  – A commercial tool is used for performance testing
PCP Testing Suite

(1) Behaving as PCP Client

Port Control Protocol Testing Suite
- Generating PCP Request

Common Request Header
- Version: R: Opcode: Reserved:
- Requested Lifetime:
- PCP Client’s IP address:

- MAP @ PEER Opcode Request

Protocol: Reserved:
- Internal Port: External Port:
- Suggested External IP address:

Option(s)
- Add an Option Delete Filter

Generating a packet from a Hex value input?
- Yes No Input validation check?

Send packet Reset Form

Get All Mappings from PCP server

(2) Emulating as PCP Server

Port Control Protocol Testing Suite
- Generating PCP Response

Generating a packet from a Hex value input?
- Yes No Input validation check?

Send packet Reset Form

Get All Mappings from PCP server

(3) Import/export PCP test case

<?xml version="1.0" encoding="gb2312"?>

<version>1</version>
- rOcR/
- opcode1@opcode
- reserved1</reserved1>
- req lifetimes3600</req lifetimes>
- proto6</proto>
- reserved2</reserved2>
- sin port192.168.2.1</sin port>
- rempeerport10.0.0.1</rempeerport>
- reserved3</reserved3>
- rempeerport192.168.2.1</rempeerport>
- optselect1</optselect>
- opt2</opt>
- optcode2@optcode2
- optlen2@optlen2
- optcode2@optlen2
- optcode2@optlen2

(4) A Wireshark dissector for PCP