HIP DNS Extensions

draft-ietf-hip-dns-00.txt

Julien Laganier, Pekka Nikander

HIP WG, 61th IETF
Washington, DC, USA

Monday, November 8th, 2004

Goals

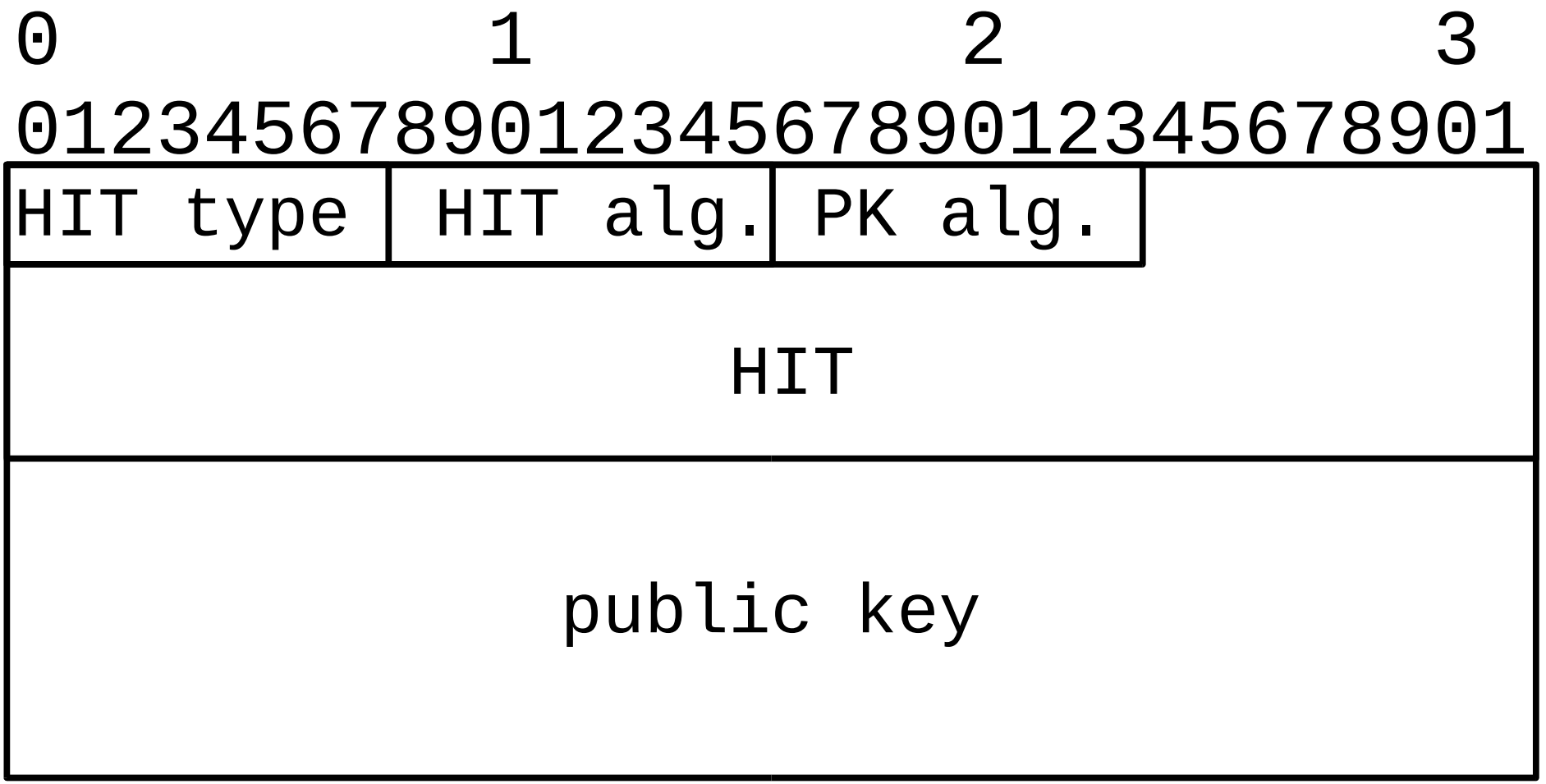
- Two news DNS RRs used by HIP nodes
- The HIPHI allows a HIP node to store:
  - Its HI and/or HIT
  - Similar to the public key field of an IPSECKEY RR
- The HIPRVS allows a HIP node to store:
  - Its Rendezvous Servers' FQDN or IP address
  - Similar to the gateway field of an IPSECKEY RR

Changelog

Since WG adoption

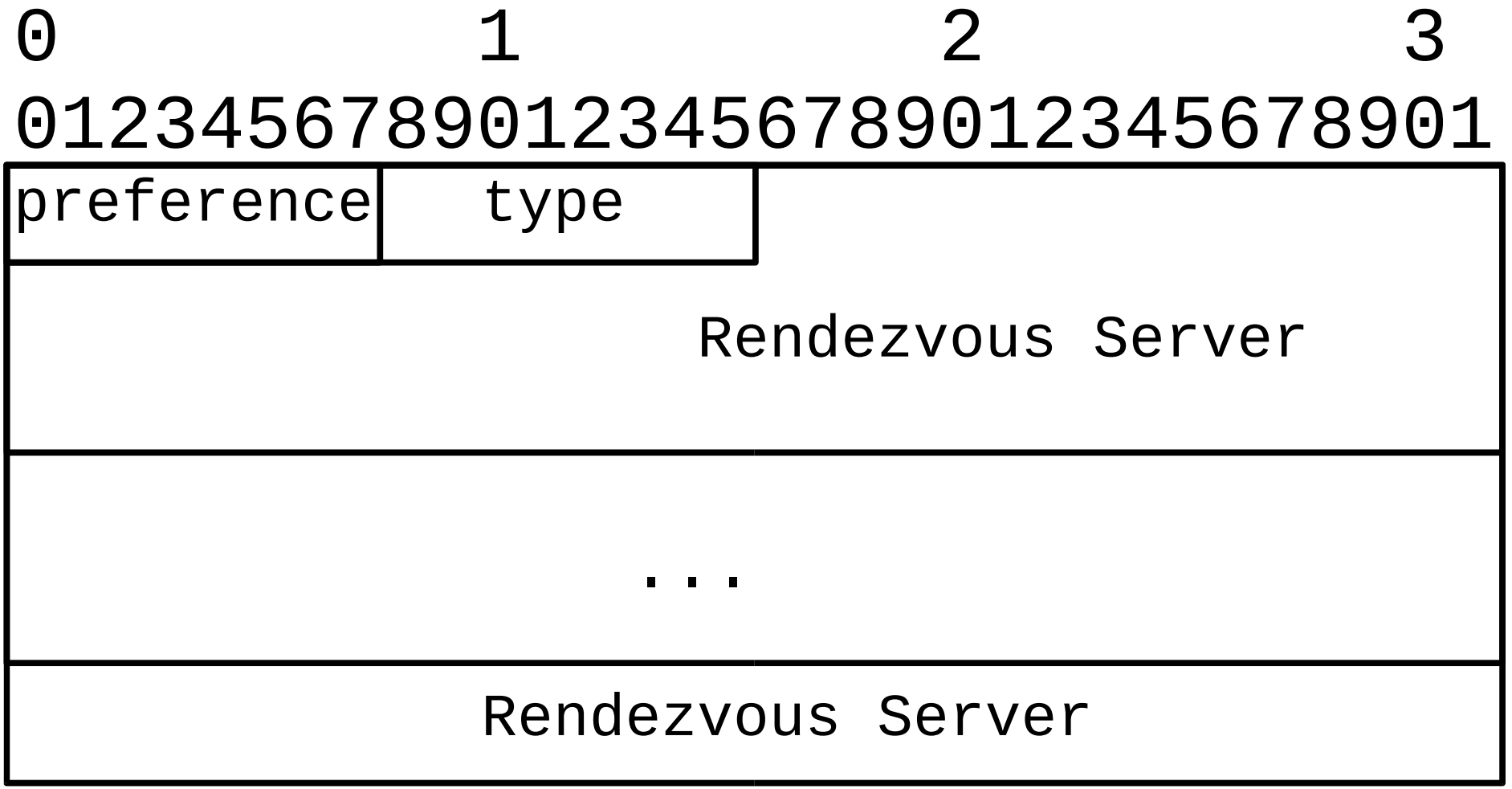
- Change HIT storage from
  - Variable type (1 and 2)
  - Fixed length (128 bits) and algorithm (SHA1)
- To :
  - Variable length, type and algorithm HITs
- Allow for several RVS in the same HIPRVS RR
- Reuse most of the type values and IANA registries defined for IPSECKEY RR
- Security Considerations section

HIPHI RR



HIT type={1,2} HIT alg.={SHA1}
PK alg.={RSA,DSA}

HIPRVS RR


0 1 2 3
0123456789012345678901234567890 1
preference
type
Rendezvous Server
...
Rendezvous Server

Using Multiple HIs and IPs

- What if:
  - A given FQDN maps to multiple HIs
  - Each HIs maps to a particular set of IP addresses
- Currently unspecified. Suggestions is:
  - A FQDN might map to multiples sub-FQDNs
  - Each of them mapping to a flat set of HIs and IPs

Next Steps

- Is something missing?
  - Multiple IPs and HIs for instance?
- If not then review specification with DNS expert:
  - Do we need separate RRs?
  - Or subtype on a single HIP RR?
    - www.example.com HIP HI 0x1236723...
    - www.example.com HIP RVS 195.123.12.34
    - www.example.com HIP RVS rvs.example.com

Questions or comments...

ju@sun.com