

HIP-WG meeting, IETF62

Using HIP with Legacy Applications (draft-henderson-hip-applications-00.txt)

March 9, 2005

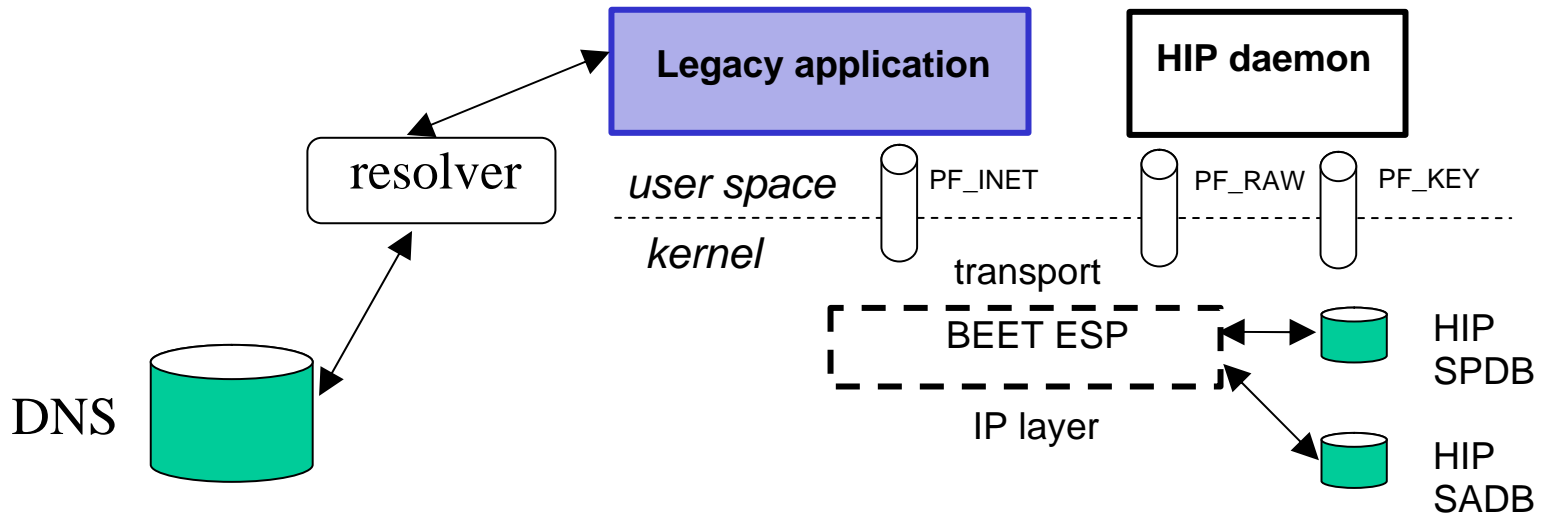
Tom Henderson

Draft scope

- Intended to replace the Appendix A of the base specification
- Should not be required for HIP interoperability
- Does not cover HIP-aware applications and API
 - assumes that applications are not recompiled for HIP
- Eventually intended to be suitable for an Informational RFC

Architecture and terminology

Referral: When an application passes what it assumes to be an IP address to another application on another host (e.g., FTP PORT command)

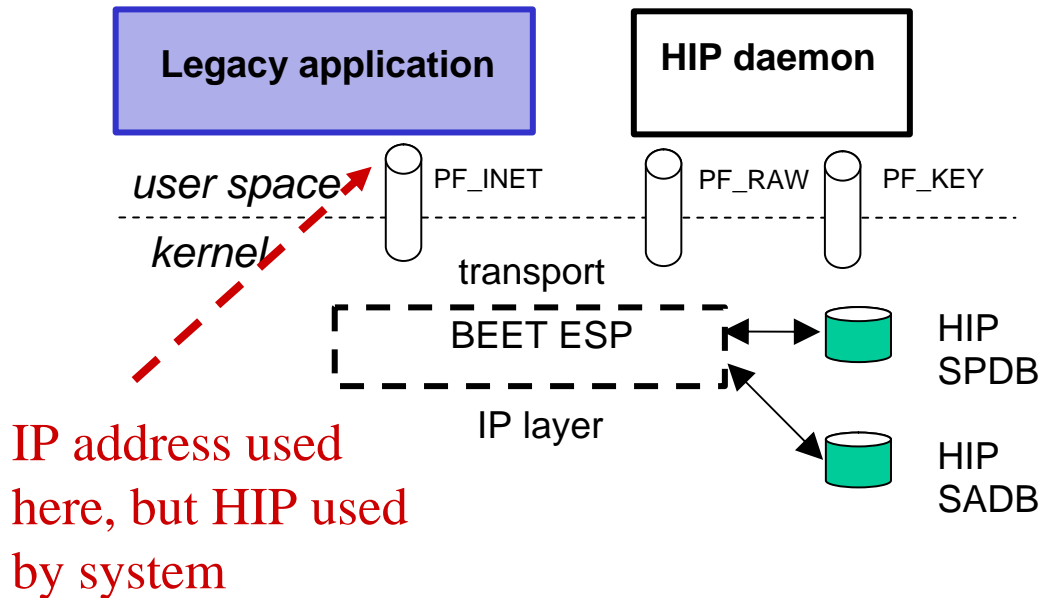


Possibilities

How does application or user cause HIP to be invoked?

1. Applications use IP addresses
2. Applications use DNS names
3. Applications use IP address-sized HITs or LSIs

1. IP address

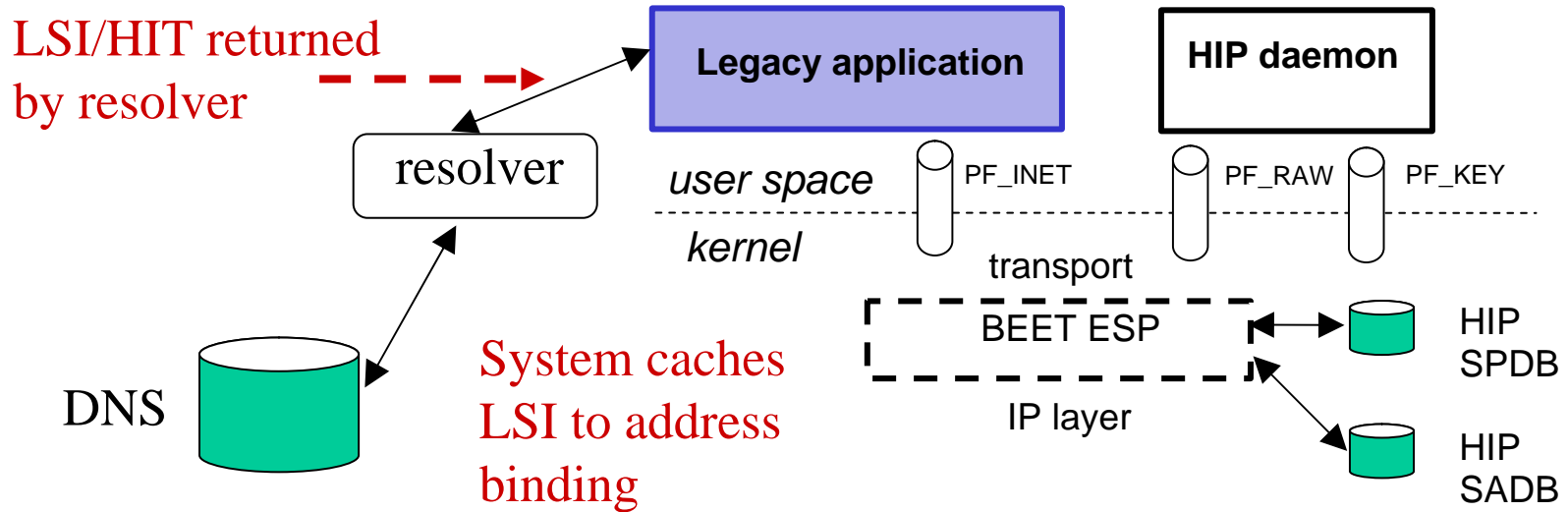


- Manually configure address-to-HIT binding
- Opportunistically (don't care about peer HIT)
- Use reverse+forward DNS lookup

Pros: Naturally supports application-level referrals

Cons: May have weaker security properties than use of HITs (depends on several factors); may be cumbersome (manual configuration)

2. DNS hooks



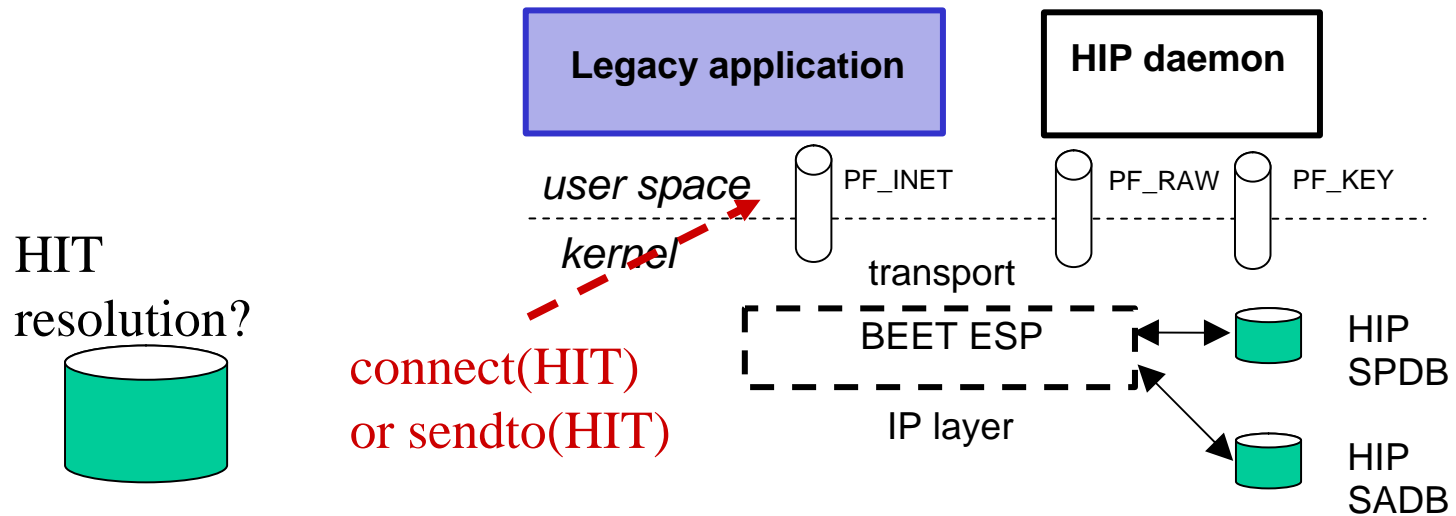
Options:

1. Have resolver return LSIs (HITs) instead of IP addresses
2. Use HIP-suffix in FQDN (e.g., `www.ietf.org.hip`)

DNS issues

- Should we spoof IP addresses in resolver calls?
- Referrals
 - Non-routable LSIs do not support referrals
 - Routable LSIs may work, but may require infrastructure support
- When should system garbage-collect the LSI to address bindings?

3. Connecting to HITs directly



Pros: Most direct and secure naming semantics

Cons: Application-level referrals; HIT-to-address resolution; distinguishing between HIT and IPv6 address

Next steps

- Pekka provided initial security section
- Suggest to move LSI material from base specification to this draft