Addresses, Names, Routes, ....

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In the Beginning

- Addresses were global and stable
- Names were unique
- Routes were flat
- Routing was dynamic
- Multihoming was simple
After the Garden

- Global addresses were scarce
- Private addresses were common
- Names were not unique
- Routes were aggregated
- Routing was controlled by policy
- Multihoming was difficult and doesn’t scale
After the Flood

- IPv6 provides global (ISP based) addresses
- Non-ISP IPv6 addresses are needed
- Names are non-unique
- Routes are aggregated
- Routing is controlled by policy
- Multihoming is difficult and doesn’t scale
After the Exodus

• Hosts will have multiple addresses
  – Multihomed nodes and multihomed sites
  – Not all addresses will have same reachability
• Many sites will be multihomed via separate prefixes
• Peer-to-Peer services need non-server based
  – Service discovery
  – Name resolution
  – ….