Using The WKP 64:ff9b::/96 To Represent Non-Global IPv4 addresses

draft-ietf-v6ops-nat64-wkp-1918

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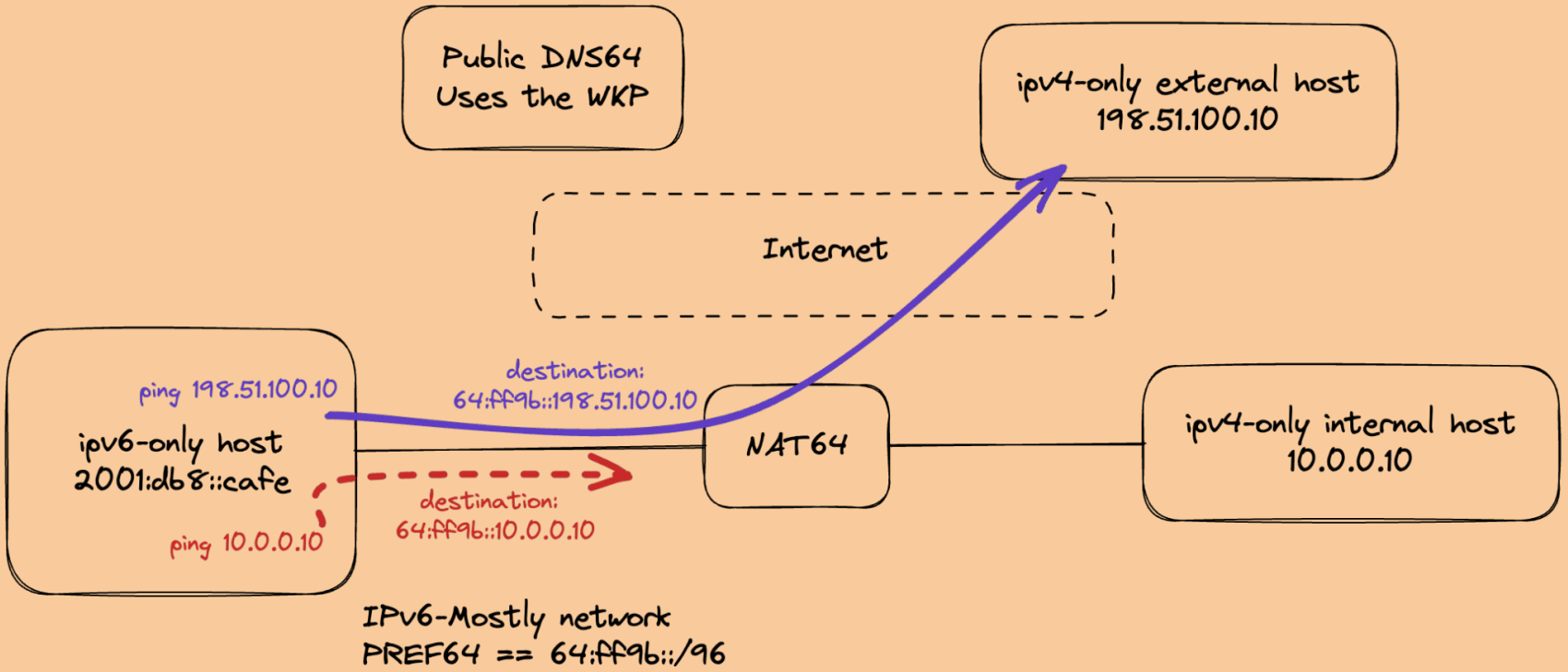
Quick Recap

RFC6052 says:

- 64:ff9b::/96 MUST NOT be used to represent private IPv4 addresses
- Translators MUST drop those packets

Results: operational issues (see IETF124 slides)

Typical Enterprise/SMB Deployment



Proposed Solution

Relax "MUST NOT represent/MUST drop", allowing:

- 64:ff9b::/96 to be used to represent private IPv4
- Translators to process (translate) such packets

Fun fact: In 20218, Fred Baker filled eid5547 which removes those restrictions.

Changes Since IETF124

Updates to RFC6052

NEW TEXT:

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The Well-Known Prefix **MAY** be used to represent non-global IPv4 addresses, such as those defined in [RFC1918] or listed in Section 3 of [RFC5735]. Address translators **MUST** translate packets in which an address is composed of the Well-Known Prefix and a non-global IPv4 address unless configured otherwise. Implementations **MAY** choose not to translate such packets by default. Such implementation **SHOULD** have a configuration knob to enable translation for such packets.

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Allows the WKP to be used with RFC1918 (stop prohibiting it)

Does not break existing deployments (managed and unmanaged devices)

Operational Considerations

- "Translate or not to translate": a policy question
- Discussing existing behavior
- More text on why using the NSP is not always feasible

Security Considerations

Existing deployments might rely on current behavior

Recommendations:

- existing implementations:
  - not to change the default behaviour
  - introduce a config knob
- Administrators: apply explicit policies if those packets need to be dropped

Comments?

WGLC?