

Requirements for IPv6 Routers

draft-ietf-v6ops-ipv6rtr-reqs-00

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Purpose

- Take advantage of the v4/v6 transition to think through changes in the 'net architecture
- Provide a set of suggestions from providers to implementers around IPv6 support

Outline (changes in bold)

- **Lots of SHOULD/MUST changes**
- Review of the Internet Architecture
 - Robustness principle, Complexity, Layered Structure, Routers
- Requirements related to device management and security
 - Programmable device access (YANG primary, SNMP secondary)
 - Human readable device access (SSH default)
 - **Ethernet console support**
- Zero Touch Provisioning
 - **DHCPv6 MUST be supported**
 - **SLAAC MUST be supported and enabled by default**
 - **Lots of new text here**

Organization (2)

- Protection against DDoS
- Requirements related to telemetry
 - Device state and traceability (YANG, Syslog, gRPC)
 - Topology state and traceability (YANG, BGP-LS)
 - Flow Traceability (no text yet)
- Requirements related to IPv6 forwarding and addressing
 - The IPv6 address is not a host identifier
 - Router handling of IPv6 addresses
 - MTU and Jumbo Frames
 - ICMP Considerations
 - Machine access to the forwarding table (YANG)
 - Processing extension headers (no text yet)
 - IPv6 only operation

Organization (3)

- Future Considerations
 - Segment routing (no text yet)
- Security Considerations
 - Robustness and Security
 - Programmable device access and security
 - Zero touch provisioning and security
- Conclusion

Next Steps

- Accepted as WG doc
 - Please look and suggest text for empty sections
 - Please read and give us suggestions on anything else