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Top Level Domain Security Checklist

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Focus of Presentation

- This presentation is focusing on proper configuration and deployment of TLD name servers.
- This presentation does not address physical security, hardening of operating systems or data integrity between registrars and registries.

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Security Checklist for Top Level Domains

- ✓ Software version
- ✓ Recursion
- ✓ SOA records
- ✓ Consistent NS records
- ✓ Authoritative answers
- ✓ Restricted zone transfers
- ✓ Name servers on multiple networks

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Software version

- ✓ Does the name server software have known vulnerabilities?
- ✓ Is someone monitoring for new threats and vulnerabilities?
  - CERT/CC Advisories
  - Vendor Advisories
  - Public news groups and mailing lists

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Recursion

- ✓ **Do the name servers use recursion?**
  - **Recursion leaves name servers vulnerable to cache poisoning.**

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SOA records

- ✓ Do the name servers have a Start of Authority (SOA) record for the TLD?

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Consistence NS records

- ✓ Do all the name servers listed in the root answer authoritative for the TLD?
  - Lame Delegations
- ✓ Do the name servers' NS records match the NS records offered by the root?

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Authoritative answers

- ✓ Do the name servers give authoritative answers?

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Restricted Zone Transfers

- ✓ **Do the name servers restrict zone transfers to authorized parties?**

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DNS on multiple networks

- ✓ **Are name servers distributed across multiple networks?**
  - **Different networks**
  - **Multiple upstream providers**

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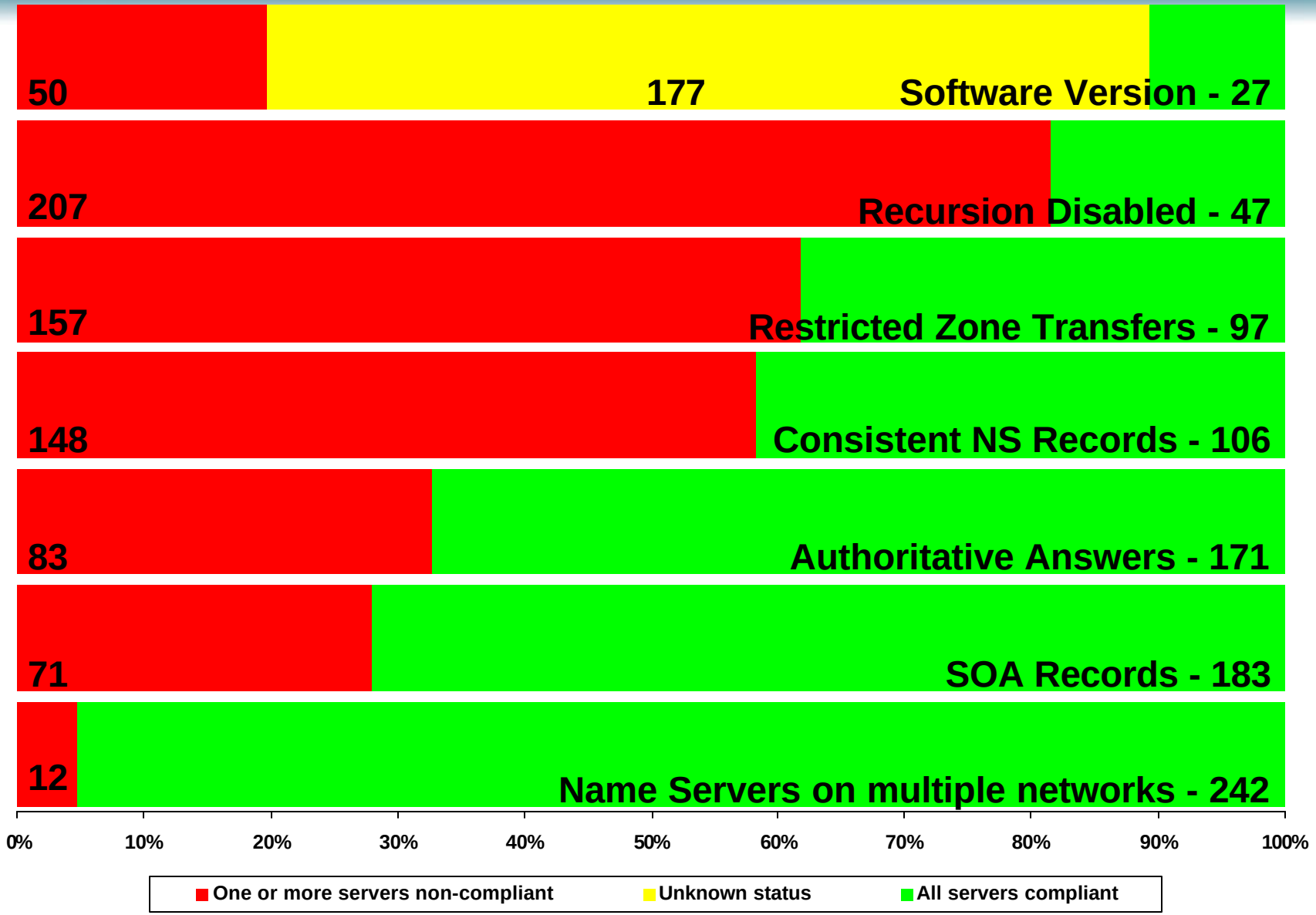

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