

Delegation Models for DELEG

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Considerations for the protocol design

- [draft-hoffman-deleg-roles](#)
- **Not** to become an RFC
- If we don't define the model **before** we design the protocol, the result will be messy

Primary target for DELEG information

- DNS resolvers
- Other targets are at a distant second
 - DNS researchers
 - Logging applications

Who will delegate with DELEG

- This can be (should be!) different than the current delegation model
- Three models
 - **Direct**: Parent delegates
 - **Indirect**: Parent hints to child, then child delegates
 - **Mixed**: Delegation information is found at both the parent and child

Direct: parent delegates

- DELEG records **only** in responses from the parent
- Child **never** publishes DELEG records
- A DELEG-aware resolver uses the DELEG records from the parent
 - Treats any DELEG records from the child to be ignorable/reportable errors

Indirect: Parent gives hints

- Parent includes **hint records** in responses that point to the child.
- **Only** the child has DELEG records
- A DELEG-aware resolver **follows** the hints from the parent to find the child, then **uses** the DELEG records from the child
 - Treats any non-hint DELEG records from the parent to be ignorable/reportable errors

Mixed: Delegation information is found at both the parent and child

- The parent **might** return DELEG records, **might** return hint records, or both
- Child **might** have DELEG records
- A DELEG-aware resolver that sees hint records from the parent **uses** those hints to get DELEG records from the child
- That DELEG-aware resolver then **mixes** any DELEG records it has seen from the parent and the child according to the resolver's configuration

Please choose exactly one

- The three options are mutually exclusive, and are (likely) a complete set of choices
- Please choose exactly one before adopting a protocol design