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DNS Backend Serial Zone Version Option

Abstract

The DNS Backend Serial Zone Version Opion is a way to get information about the version of a DNS zone in the backend. For example when a DNSSEC signer for a zone generates a new SOA serial, because it has created new RRSIG records, the original data has not changed, but this is not visible to anyone looking at the zone via DNS. This document will make it possible show the zone information which is the source of the presented data.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

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This Internet-Draft will expire on 14 February 2026.

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1. Discussion Venues

This note is to be removed before publishing as an RFC.

Source for this draft and an issue tracker can be found at https://github.com/SIDN/ietf-zoneversion-extended.git .

2. Introduction

The DNS Backend Serial Zone Version Option is a way to get information about the version of a DNS zone in the backend. For example when a DNSSEC signer for a zone generates a new SOA serial, because it has created new RRSIG records, the original data has not changed, but this is not visible to anyone looking at the zone. This document makes it possible to retreive the backend version that is the source of data in the DNS response.

3. Terminology and Definitions

The key words "**MUST**", "**MUST NOT**", "**REQUIRED**", "**SHALL**", "**SHALL NOT**", "**SHOULD**", "**SHOULD NOT**", "**RECOMMENDED**", "**NOT RECOMMENDED**", "**MAY**", and "**OPTIONAL**" in this document are to be interpreted as described in BCP 14 [RFC2119][RFC8174] when, and only when, they appear in all capitals, as shown here.

4. Relation to the ZONEVERSION option

This document extends the original DNS Zone version Option [!@RFC9660] to include an extra ZONEVERSION type.

5. The backend serial in the zone

To make the backend serial available in the ZONEVERSION, it must be available in the zone itself. Because creating an out of bound solution would be to much work. This document defines a label where the backend serial will be available to be used in the ZONEVERSION.

The backend serial will be published in a _backend-version label under the zone apex.

For example:

```
_backend-version.example.nl IN TXT "2025101099"
```

The setting of the value of the _backend-version label is out of scope for this document. The RDATA is not limited to a 32-bit number, like the SOA-SERIAL. It can be any string.

There **MUST** only be one _backend-version label.

6. The backend serial ZONEVERSION type

This document defines a new ZONEVERSION option TYPE, which can be constructed from RDATA in the zone.

The mnemonic for this type is "BACKEND-SERIAL".

The VERSION value for the BACKEND-SERIAL type **MUST** come from the RDATA of the _backend-version label in the zone. Unless the software already knows the backend serial, then it **SHOULD** use that. If there are multiple _backend-version labels at the zone apex, these **MUST** be ignored.

7. Security and Privacy Considerations

TODO

8. IANA Considerations

8.1. ZONEVERSION TYPE value

This document defines a new item for the ZONEVERSION TYPE option, entitled BACKEND-SERIAL (see Section 6), and assigns a value of <TDB> from the ZONEVERSION TYPE Values space:

ZONEVERSION TYPE	Mnemonic	Reference
<TBD>	BACKEND-SERIAL	[this document]

Table 1

8.2. _backend-version Underscore Name

Per [RFC8552], IANA is requested to add the following entries to the "Underscored and Globally Scoped DNS Node Names" registry:

RR Type	_NODE NAME	Reference
TXT	_backend-version	[this document]

Table 2

9. Acknowledgements

Many thanks to original authors of [RFC9660].

10. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <https://www.rfc-editor.org/info/rfc2119>.

[RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <https://www.rfc-editor.org/info/rfc8174>.

[RFC8552] Crocker, D., "Scoped Interpretation of DNS Resource Records through "Underscored" Naming of Attribute Leaves", BCP 222, RFC 8552, DOI 10.17487/RFC8552, March 2019, <https://www.rfc-editor.org/info/rfc8552>.

[RFC9660] Salgado, H., Vergara, M., and D. Wessels, "The DNS Zone Version (ZONEVERSION) Option", RFC 9660, DOI 10.17487/RFC9660, October 2024, <https://www.rfc-editor.org/info/rfc9660>.

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