

21 December 2022

Duane Wessels
Verisign Inc.
12061 Bluemont Way
Reston VA 20190
USA

By email

Implementation of ZONEMD in the DNS root zone

Dear Duane,

Thank you for the collaboration to date on implementation of “ZONEMD” support for the DNS root zone to add a new integrity protection for dissemination of root zone data. This work will realize the recommendation to add ZONEMD support contained in RZERC003.

Verisign has circulated draft plans on how it intends to operationalize ZONEMD in the root zone in the document “Draft Plan for Deploying ZONEMD in the Root Zone”, dated April 2022. ICANN org has reviewed the plan and is generally supportive of the described approach, with one significant exception. ICANN believes that using “ZONEMD” as the textual representation of the resource record type, instead of "TYPE63" as proposed, will lead to better long-term outcomes at the possible short-term risk that some implementations will have problems ingesting the text version of the zone file until they are updated.

In the section of the document titled “Presentation Format”, it currently states:

However, older software is more likely to parse the equivalent record in the unknown, or generic format as defined in RFC 3597, which states:

An implementation MAY also choose to represent some RRs of known type using the above generic representations for the type, class and/or RDATA, which carries the benefit of making the resulting master file portable to servers where these types are unknown.

For this reason, in the initial implementation, the ZONEMD record shall appear in the unknown / generic format on the internic.net servers. The ZONEMD record above in equivalent RFC 3597 generic format is:

. 86400 IN TYPE63 \# 54
7877914e01017d016e7badfd8b9edbf515deeb7a866bf972104fa06fece85402cc4ce
9b69bd0cbd652cec4956a0f206998bfb34483

We request that this be replaced with text along the lines of the following:

Such software will not work with the new text version of the root zone, which uses the ZONEMD presentation format.

Thus, the implementation of ZONEMD will use the “ZONEMD” textual representation of the resource record type in the text file representation of the DNS root zone.

Please let us know if you have any questions.

Yours sincerely,

Jennifer Bryce
Project Manager, Office of the Chief Technology Officer (OCTO)
ICANN