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From: Dalibor Milovanovic <dalibor.milovanovic@dominionvoting.com>
Sent: Thursday, August 6, 2020 11:59:23 PM
To: Goran Obradovic <goran.obradovic@dominionvoting.com>
Subject: RE: Issue with Export Packages on Standard Server

Hi Goran,

We performed exports for all export packages located in project "Gwinnett May 2020 General Primary-2020-03-04-10-53-53_package" (EMS 5.5.40.2)

- Express installation cannot reproduce the issue because it can allocate only 1GB of RAM memory.
- Standard installation on VM (Hyper-V or vmWare) cannot trigger parallelism because of small number of available CPU cores. (approximately less than 10)

In some specific exports, depending on temporary data size and available HW resources, SQL Server cardinality estimator and query optimizer decide to use parallelism as their technique for data manipulation. In case that particular temporary table does not have primary key (sorting key) it may lock himself and cause deadlock.

Parallelism is a desirable behavior of the SQL server, so it should be disabled only when it is really necessary.

To conclude:

I think we should notify only customers *if we confirm that they use some of export packages* identified as "sensitive" (**attached excel file**), and to prepare workaround (described below) to be ready for potential problems in case that export shows the "deadlock error" in RTR log file.

Best regards,

Dalibor Milovanovic | EMS Platform Team Lead

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From: Goran Obradovic <goran.obradovic@dominionvoting.com>
Sent: Thursday, August 6, 2020 3:08 PM
To: Dalibor Milovanovic <dalibor.milovanovic@dominionvoting.com>
Subject: Fwd: Issue with Export Packages on Standard Server