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IBM DB2 IS NOW ON AWS

We are delighted to announce the immediate availability of IBM Db2 as a fully managed service on Amazon RDS. The new Amazon RDS for Db2 offering allows customers to migrate their existing, self-managed Db2 databases to the cloud and accelerate strategic modernization initiatives. Read more...

TRANSACTION LOGS

In this presentation we understand the basics of transaction logs. We also understand and properly size the logs and explore options around it.

The role of transaction logging during recovery process has been discussed. We also see how logging plays part in HADR setup.

DB2 REST API

In this presentation we understand what RESTful API is and how it can be used for scenarios such as say, customers have use-cases where they would want to access data from non-traditional platforms like mobile apps etc. We see what Open Data Gateway is and what are various OData options along with examples. See a small tutorial on getting started with Db2 database with “magic” commands.

DB2 CONTINUITY SUPPORT

IBM announces the end of Continuing Support for Db2 effective 30 April 2024.

DB2 END OF SUPPORT DATES

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PERFORMANCE ISSUE DUE TO AIC

This time we will discuss a case study related to performance issue due to Asynchronous Index Cleanup

Issue originated when the customer dropped partitions on a partition table which kicked off AIC. There were a lot of asynchronous clean up jobs running as a result. And this caused a huge CPU utilization resulting in other Important Business jobs getting slowed down.

Idea was to stop/pause the AIC during the business hours and then to continue with this over weekend as it was affecting the performance on their production db.

In order to stop running AIC the following is required

db2set DB2_DISABL_ABP=ON

This disables AIC for the time being and gives immediate relief. In order to take into effect the variable needs an instance restart.

After "pausing" AIC during the crucial business hours it can be restarted over the weekend by :

db2set DB2_DISABL_ABP=OFF
followed by an instance restart.

Continued...

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PERFORMANCE ISSUE DUE TO AIC

Continued…

Now when we look at the issue we focus on the cause too and therefore a way to avoid this issue is to avoid detaching a lot of table partitions at once.
Another way is to reduce number of background applications and it's dynamic.

This link explains how does DB2 calculate background system applications:
https://www.ibm.com/support/pages/how-does-Db2-calculate-background-system-applications

DB2 starts background tasks (threads) to do database maintenance work such as AIC (asynchronous index cleanup).
There are also other background system applications such as admin task scheduler, health monitor etc.
The limit used to be between 20 and 500 in older versions.
Now with the newer versions the limit is determined dynamically based on the workload and if it is too low it can result in errors.

In order to set the limit on background system applications we need to use the following registry variable setting:
Db2set DB2_PMODEL_SETTINGS=MAX_BACKGROUND_SYSAPPS:200
This is a dynamic registry variable setting that will be picked up immediately without restarting the instance.

You can make use of the above link to check the upper bound (i.e. find out how we compute the number currently; derived from max_coordagents).
If you want a reduction in the abp agents you would need to set MAX_BACKGROUND_SYSAPPS to some value lower than whatever is automatically computed.