For the preparation and benchmarking the performance results of DataMigration scripts, below are pointers:

1. Preparation:

A.1. Tools: The DB Server should be configured to have **Statspack gathering on**. With auto snap every 30mins (once in a month try to get it cleaned) . Why it is necessary? The memory usage**, SGA and PGA usage** we can come to know offline as well. Charles can make it enabled easily.

A.2. Tools: nmon be enabled. This is to measure and record the CPU Usage. The interval of every 1min or 5min will be fine (no need to go for seconds or more than 5mins), as this is just to see the backup tool data other than Statspack. The nmon trigger and timing can be done by Tsukahara san, or as you know there is one script file which we can run ourselves as well. Why it is necessary: It will give CPU, I/O and Network I/O information also.

Using nmon analyzer we will get detail report.

Nmon execution command: java -DfontSize=16 -jar NMONVisualizer\_2018-04-10.jar

1. Configurations:

B.1:   **ReDoLog** size is 50MB (this will be default) ---> Change to 1GB  and 3 files ( of 1GB each ). Why it is necessary?  [This change done on PRD31 20200718]. In Instbil we observed lots of LGWR Switch (in Statspack), so we increased the size to 4GB [20200721] and 4 files, but you go with lower values to start with.

B.2: BufferSize would be 500MB.

B.3: SharedPool size is 0 : auto.

B.4: **Archive log must be OFF**. Let me **repeat, archive log has to be OFF**. Jitu, Prabhu, take a note of it. This will make your application rocket. If anyone has any doubt on this talk to me to discuss, but keep this as OFF.

B.5: Add  TEMP Tables space, 8GB.

B.6: **SGA would be 8GB and PGA: 8GB**. For 97K this sounds too much then, you can choose to keep 4GB or 2GB each.

B.7: Record the CPU count, and the memory of the machine. Prtconf: will give number of processor.

1. Benchmarking:

C.1: Before you run the scripts which we want to measure:  see the I/O, CPU using nmon. **Manually check that it is stable and not very high on I/O**. Why it is necessary? Sometimes because of lag in the Redo write to disk, even if we are not doing anything, Oracle in the background might be doing I/O write to redolog files, for the past actions.

C.2: Keep **bare minimum indexes** (drop unnecessary indexes, especially from GPMD, GBID, GXHI) and do run gatherstats with options=>’stale’.

C.3: Trigger with “select seq.nextVal into val from dual; :newUniqueNumber := val”, here from dual be removed “:newUniqueNumber := seq.NextVal”. This you know already but in the IG table some table still will be lingering with this issue, so keep checking it when there is slowness.

C.4: **Before running ensure that statspack is working**. Btw, for statspack whenever possible, before running the script take a snap manually also. Because, closer the snap of statspack around the execution (before and after) better accuracy of the data of statspack.

C.5: Then please keep recording the load which it has processed. Like for 97K we have say 200K records in the input table. So, just recoding the input data is enough. And we will get the performance benchmark that for 200K input with the above setting what is the resource usage and what is the time.

C.6: The format of recoding data, which I used for IG is at: [LinkOFBenchMarkReport](https://teams.microsoft.com/l/file/1C18ACAC-2995-4AA1-9A8E-6B0BCE908E85?tenantId=93f33571-550f-43cf-b09f-cd331338d086&fileType=xlsx&objectUrl=https%3A%2F%2Fdxcportal.sharepoint.com%2Fsites%2FZIG-Tech%2FShared%20Documents%2FPerformance%20Testing%2FP2_PE_Tracker.xlsx&baseUrl=https%3A%2F%2Fdxcportal.sharepoint.com%2Fsites%2FZIG-Tech&serviceName=teams&threadId=19:13f8f0e5c6bf46f0b3ccdb405fa3be68@thread.tacv2&groupId=40e9e066-1ae3-483f-8872-28a0d5779206)

But for DataMigration since, Java is not involved we can record following parameters only for DB server, in as simple way as possible without missing important values:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **InputLoad** | **TimeTaken** | **DBCPU Usage** | **SGA Usage** | **PGA Usage** | **AnyWaits** |
|  |  |  |  |  |  |

The **input load and time taken are the only thing which we many need to record manually rest all are from Statspack**.