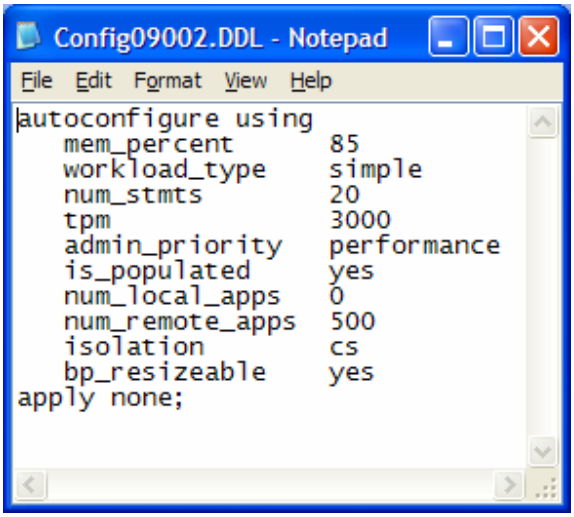
LAB 09 – CONFIGURATION ADVISOR

A. RUN AUTO CONFIGURE (COMMAND LINE)

1. Get in a DB2 Command Window
2. Go to the directory `C:\POT\09 Config\`
3. Execute the command `Config09001` to run Auto Configure Command contained in `Config09002.DDL`. We will use the SAMPLE database to recommend configuration parameters.

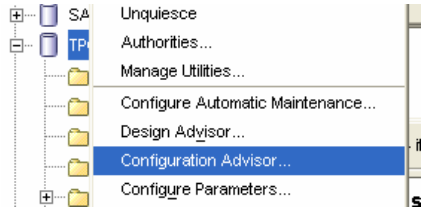
```
C:\POT\07 Backup>Config09001
```



4. Review the output in `Config09001_OUTPUT.TXT` file
5. You can modify the `Config09002.DDL` to change APPLY parameter from NONE to DB AND DBM to apply changes in database manager and database configuration parameters.

B. RUN AUTO CONFIGURE (GUI)

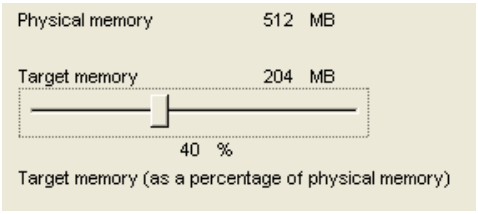
1. We can also run Configuration advisor GUI from the control center. Please right click on the SAMPLE database and select “Configuration Advisor”.



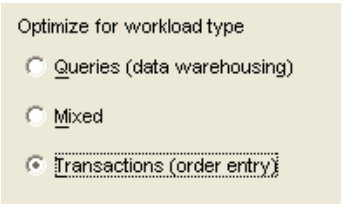
2. The configuration advisor wizard starts and it will collect information for all 10 input parameters that it uses to recommend 50 or more database manager and database configuration parameters. Click button “Next”.

   Note: The configuration advisor automatically takes into consideration server hardware and database features to suggest new configuration parameters.

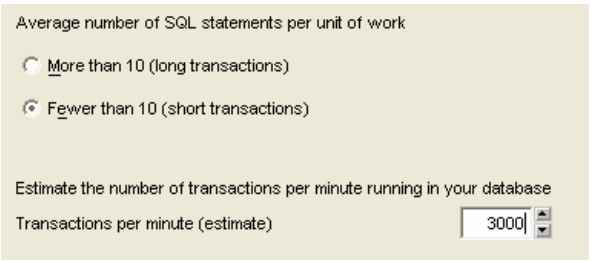
3. The second screen asks for a percentage of memory that the current DB2 instance should use. In a production environment, you would most often use only one instance and it is recommended to use 80% or more memory for the DB2 instance. If you have multi instances of DB2 running on the same machine, you should divide the memory accordingly. If we have two instance of DB2 running on a practice laptop, we can use 40% memory for use by current instance. Go on to next screen.



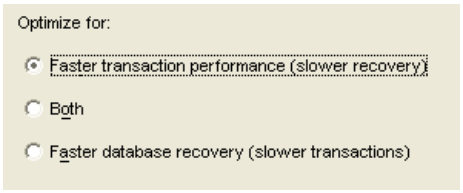
4. Choose the type of workload. Let us choose the Transactions (OLTP) environment.



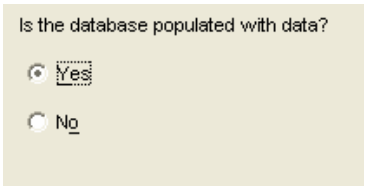
5. In the next screen, specify the number of average SQL statements in a single unit of work. The number of transactions can also be specified per minute. If it is a web application reporting status of an order, let us assume that there are fewer than 10 SQL statements per UOW and a peak work load is 3000 transactions per minute.



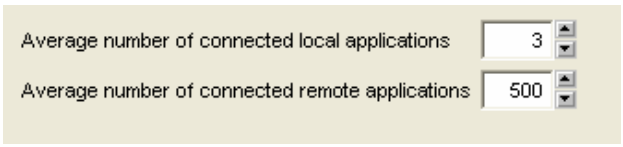
6. In the next screen, specify database administration priority. Let us assume that this system has a split mirror for a backup database. We need a faster transaction performance as backup/recovery is already taken care through spilt mirror, and a system is available 24x7.



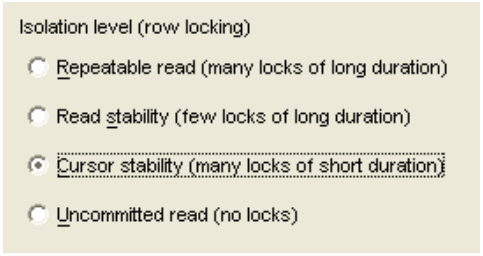
7. The next screen asks if the database is already populated with data. Our database is populated with data.



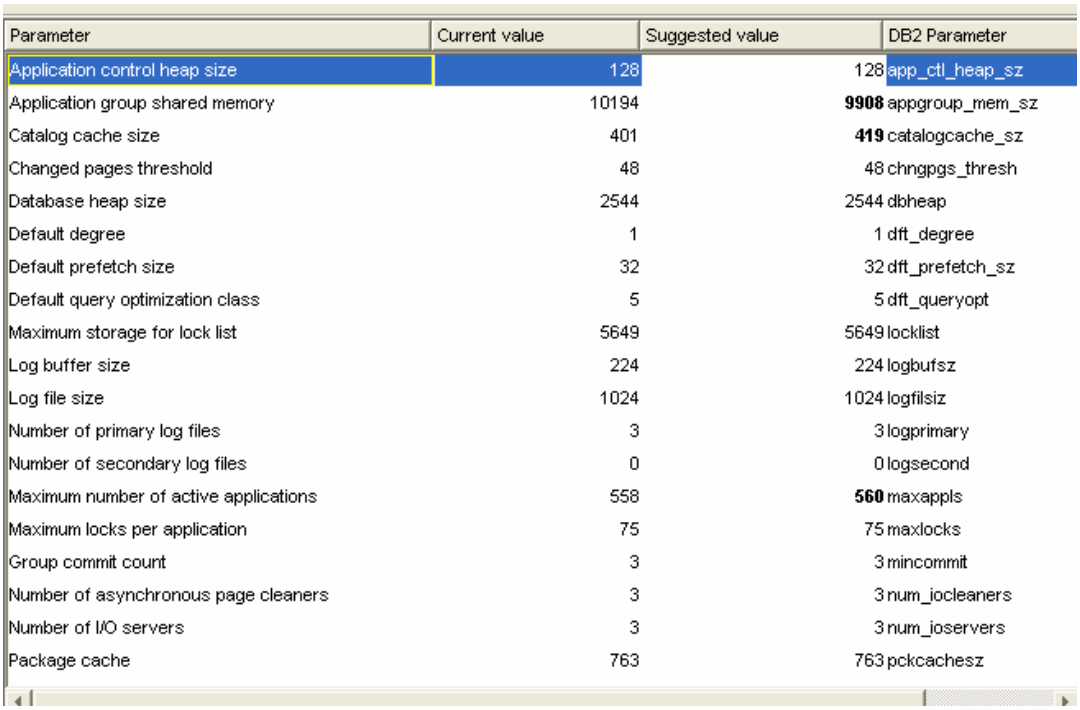
8. The next screen asks for server and remote connections. Let us assume that our web application is configured for 500 concurrent connections and we run 3 batch processes with 2 CLP sessions for DBAs.



9. In the next screen, select the isolation level for the application. Assume that we have designed our web application using cursor stability isolation level.



10. Now we have specified all the input parameters, configuration advisor is ready to run its heuristic algorithm to calculate optimum parameters using server and database characteristics. Review the recommendations of the parameters and apply them to the database.



Parameter	Current value	Suggested value	DB2 Parameter
Application control heap size	128	128	app_ctl_heap_sz
Application group shared memory	10194	**9908**	appgroup_mem_sz
Catalog cache size	401	**419**	catalogcache_sz
Changed pages threshold	48	48	chngpgs_thresh
Database heap size	2544	2544	dbheap
Default degree	1	1	dft_degree
Default prefetch size	32	32	dft_prefetch_sz
Default query optimization class	5	5	dft_queryopt
Maximum storage for lock list	5649	5649	locklist
Log buffer size	224	224	logbufsz
Log file size	1024	1024	logfilsiz
Number of primary log files	3	3	logprimary
Number of secondary log files	0	0	logsecond
Maximum number of active applications	558	**560**	maxappls
Maximum locks per application	75	75	maxlocks
Group commit count	3	3	mincommit
Number of asynchronous page cleaners	3	3	num_iocleaners
Number of I/O servers	3	3	num_ioservers
Package cache	763	763	pckcachesz