

GL01: PATROL for iSeries – Predict Lab Exercises



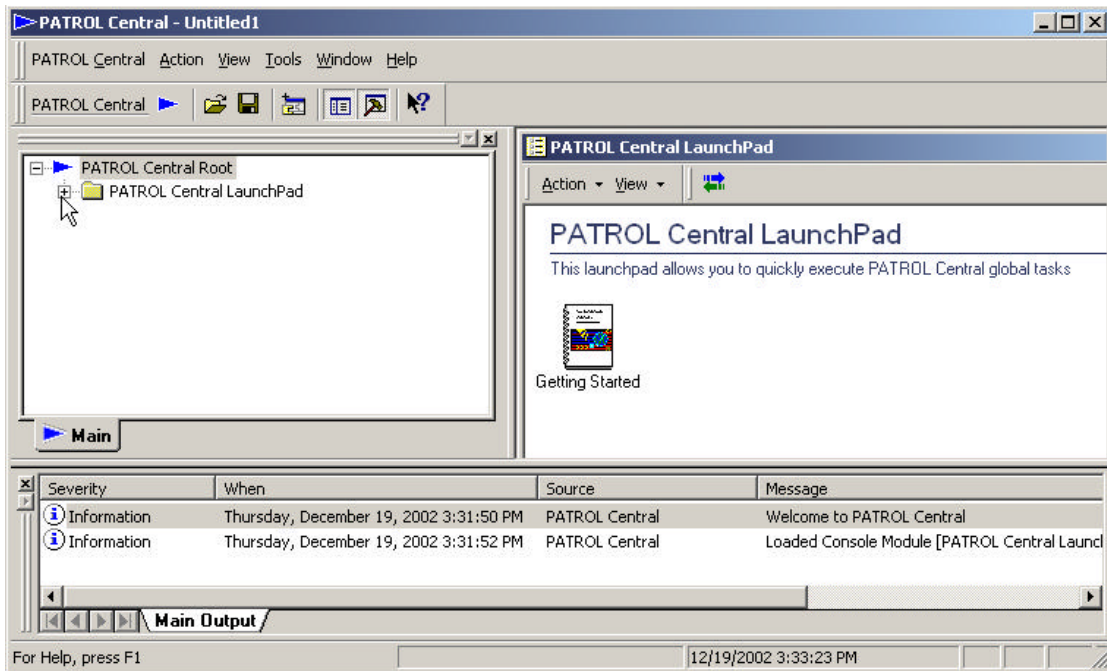
ITSO iSeries Technical Forum 2003

LAB-01: Getting Started

During this exercise, you will initiate the application, configure the application, and begin utilizing its functionality in order to complete the other tasks/labs below.

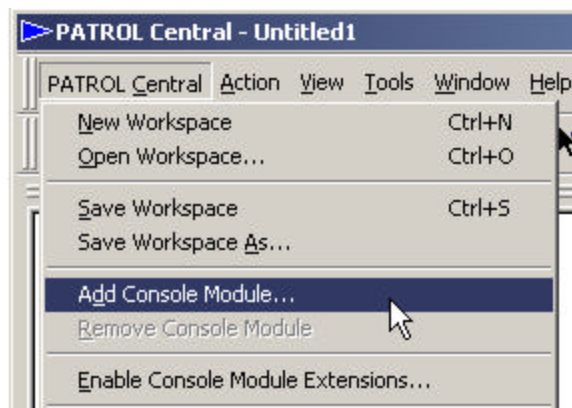
1.1 Launch the PATROL for iSeries - Predict Application

- a. Start->Programs->BMC PATROL->PATROL Central
- b. The Application should initiate and you will see the following panel (If you see



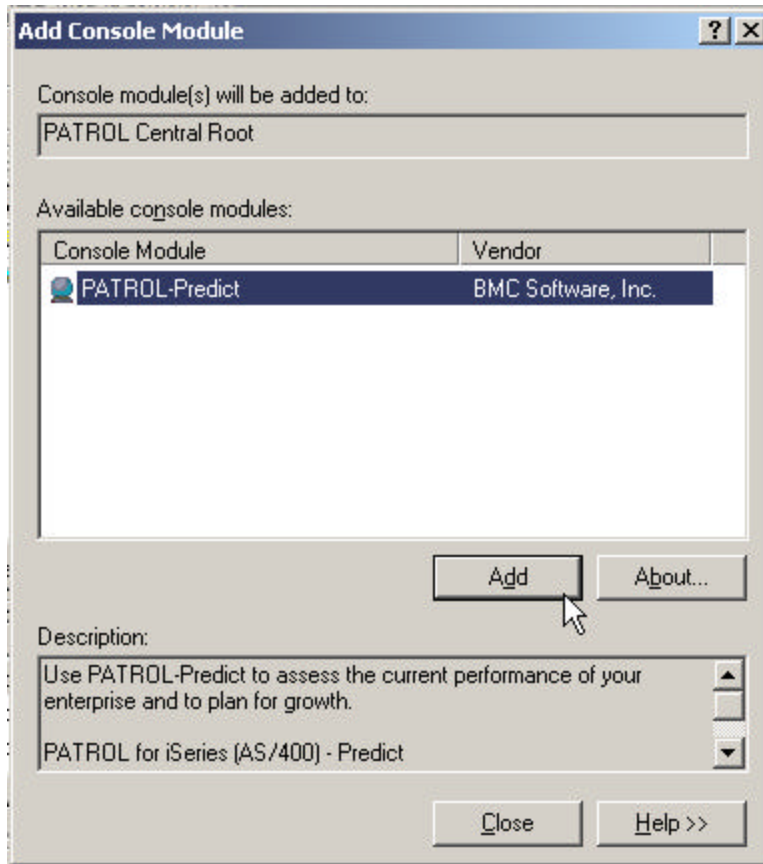
a “tip of the day” pop-up window, close it!).

1.2 Add the Predict Console Module

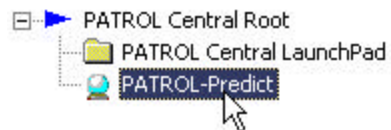


- a. PATROL Central from the menu bar at the top and select Add Console Module from the drop down menu:

- b. A dialog should appear with one available Console Module (PATROL –Predict).
- c. Highlight the Console Module and click ADD.
- d. This should add the Predict Console Module to the Application.



- e. Close the “Add Console Module” Dialog.
- f. Double Click on the PATROL-Predict icon to open the PATROL Predict Workbench on the right-side on the Console



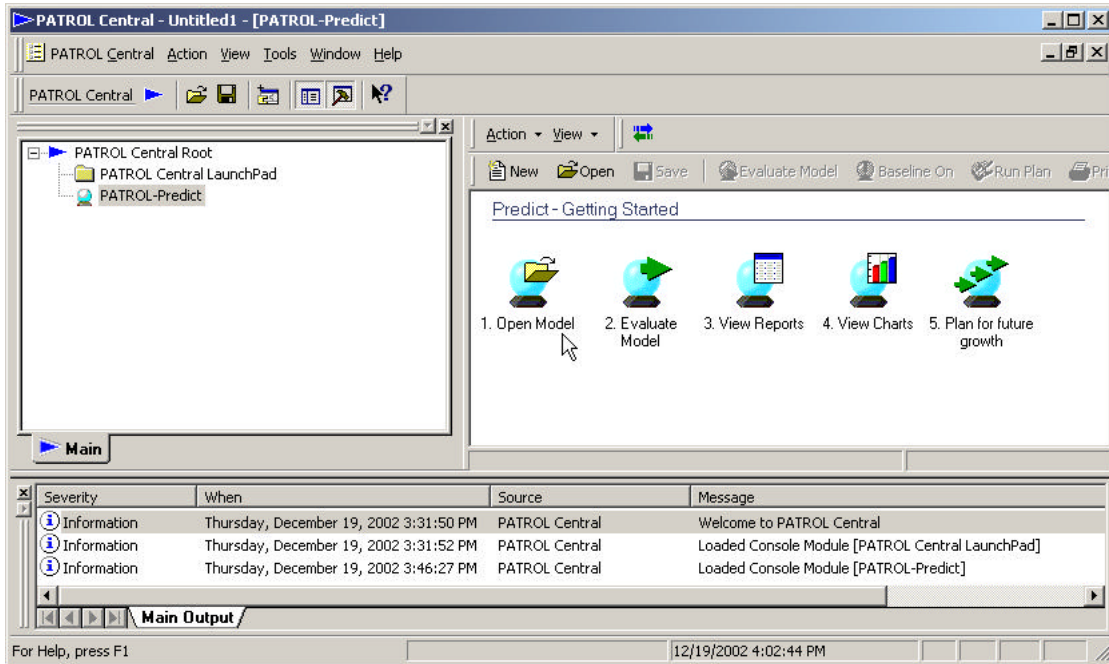
Predict - Getting Started



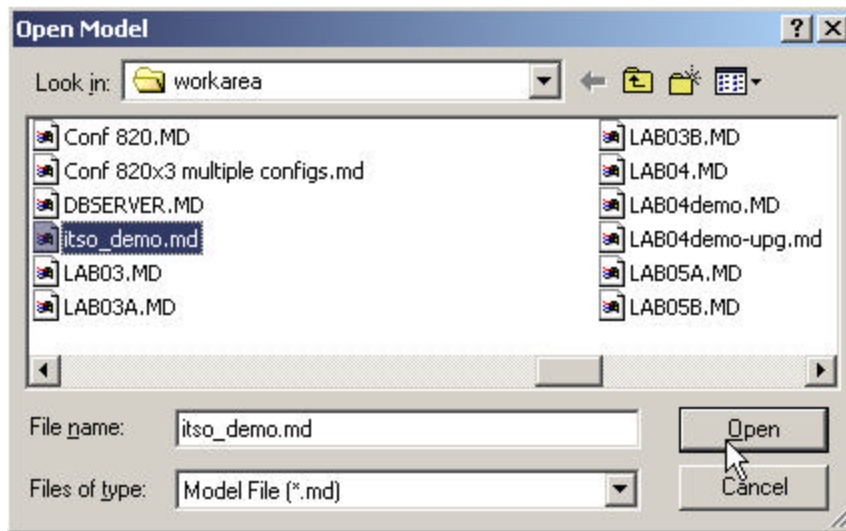
- g. Maximize the workbench so that the “Getting Panel” fills the right-hand pane.

1.3 Open a Model

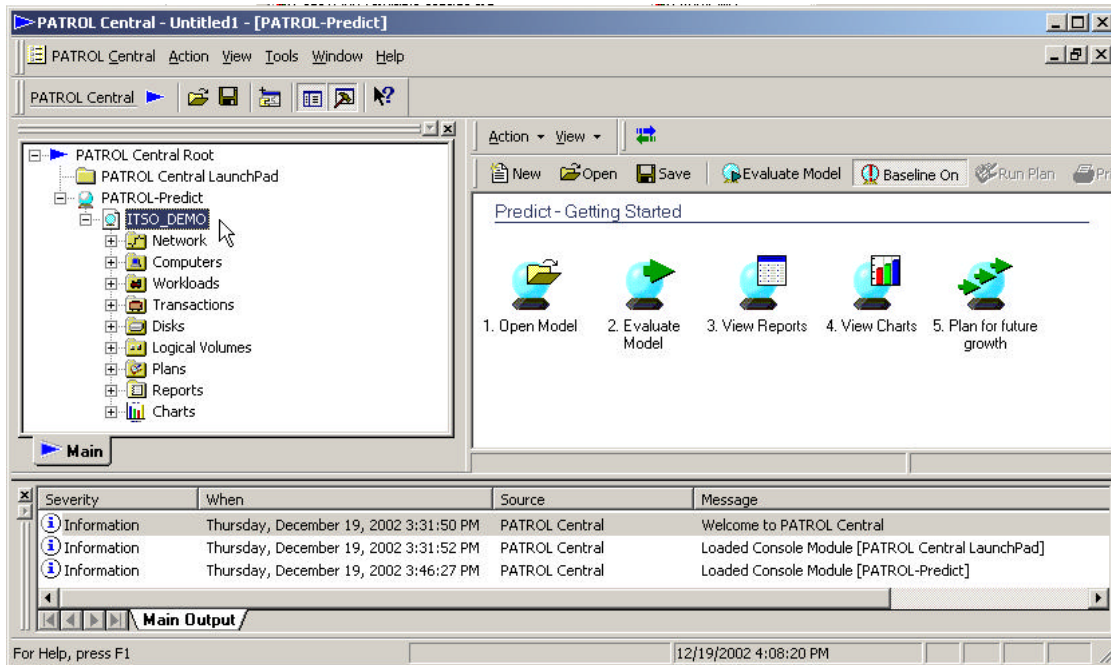
- a. The Patrol for iSeries - Predict Workbench will be your interface into the all the Predictive analysis you will perform on the iSeries model.



- b. Click on the "Open Model" icon and select **itso-demo.md** from the "Open Model" dialog and select the Open button:



c. The “ITSO-DEMO” model will be displayed in the navigation pane on the



left-side:

- d. Select the “Evaluate” Icon to create the Predict Reports and Charts.
- e. Select the ‘Baseline’ Icon to confirm the validity of Predict model for further review and “What if...?” Predictive analysis.

You are now ready to review the Model “ITSO-DEMO” and perform a predictive capacity plan.

Service time per I/O :.....
Wait time per I/O :.....

g. Review additional Reports of your choice.

h. Open the “**Charts**” container:

i. Double click on the “CPU Response Time by Workload” chart and review the chart.

j. Right-click on the chart-area and select each of the following options in the drop-down menu and examine the resulting displays:

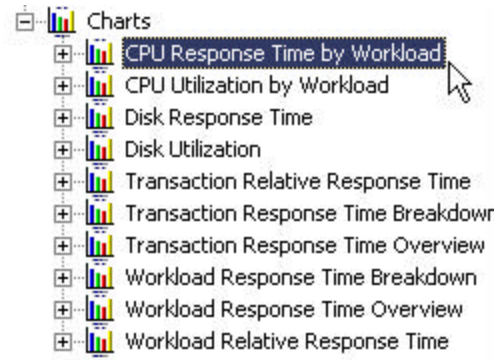
Bar Chart

Stacking Bar Chart

Pie Chart

Also select the “3D Chart” option for each type of graph.

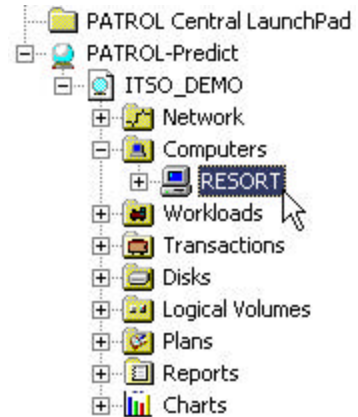
k. Review additional Charts of your choice from the selection available.



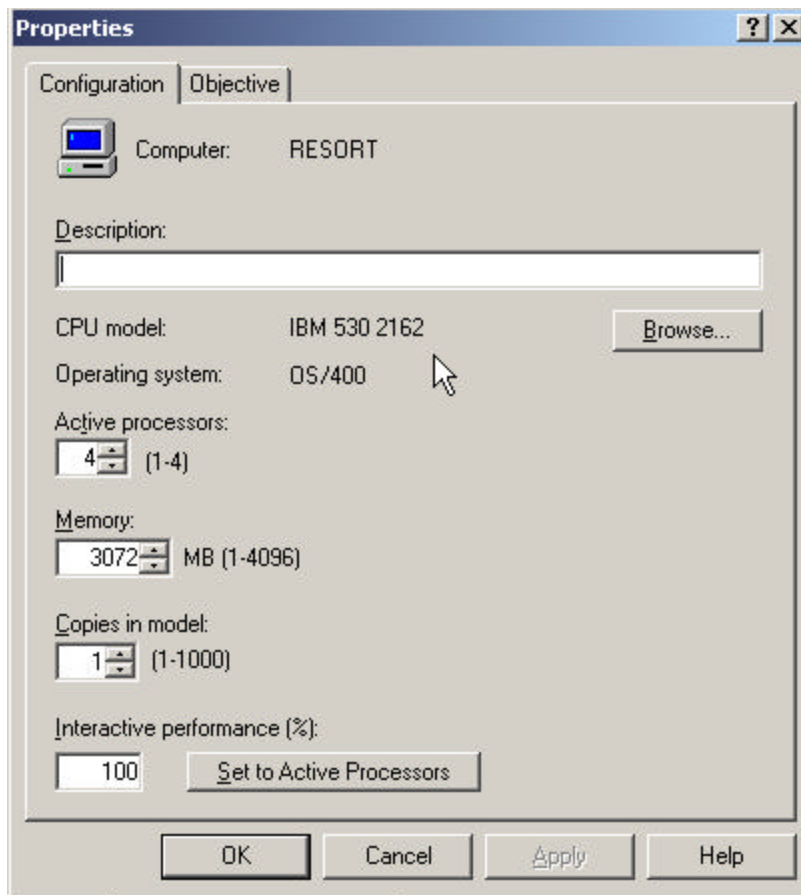
Lab 03: Work with Processor (Computers)

In this section you will navigate the console functions to review the Computer Processor currently configured in the model, and investigate the effect on CPU Utilization and Response times that would result by upgrading the Processor.

- a. Open the “Computers” container, and double click on the icon representing the “RESORT” computer:



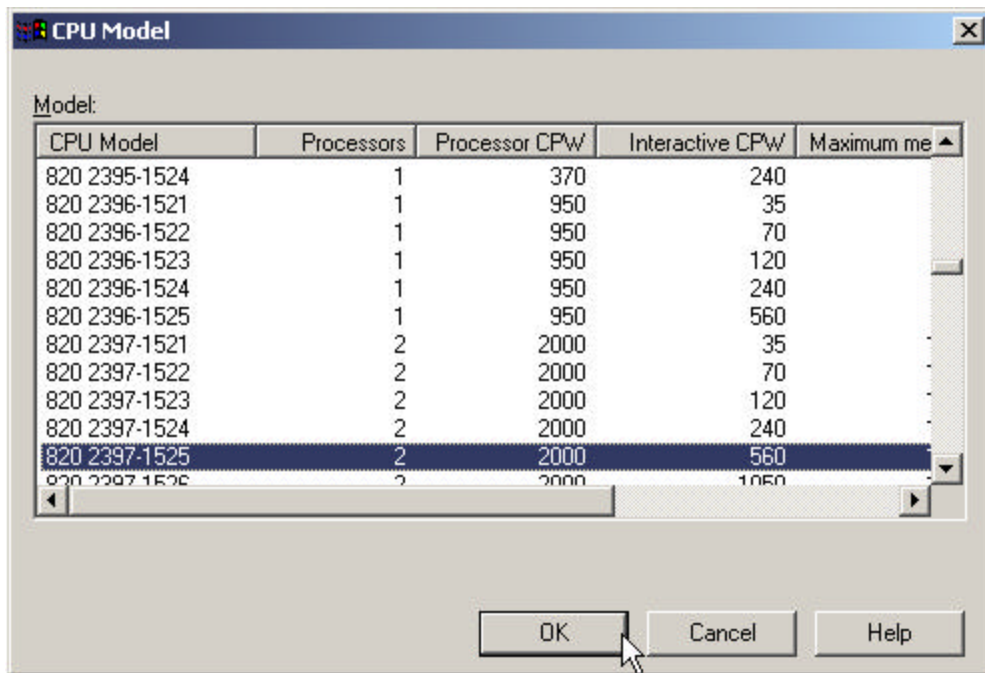
- b. This will open the Computer Properties dialog.



- c. Use the Computer properties dialog to note the following information about the iSeries processor associated with the RESORT model:

iSeries Model and Feature :.....
 Number of processors :.....
 Installed Memory :.....
 Total & Interactive CPW :.....
 (hint" click on the "Browse... Button!)
 CPU Utilization by High Pty Work :.....
 Memory Faulting Rate per sec :.....

- d. Click on the "Browse" button to display the "CPU Models" dialog which will



allow you to select a "new" CPU model.

- e. Select the iSeries 820 2397-1525 and note the following:
 Number of Processors :.....
 Total CPW :.....
 Interactive CPW :.....
- f. Select the OK button to upgrade the CPU in your model. When you return to the Properties display note that the CPU has now changed to reflect your choice. Press OK to continue.
- g. Select the "Objectives" tab, and specify a guideline of 70% and a threshold of 75% for high priority workload. Press the OK button to continue.

Lab 04: Work with Disk Configuration

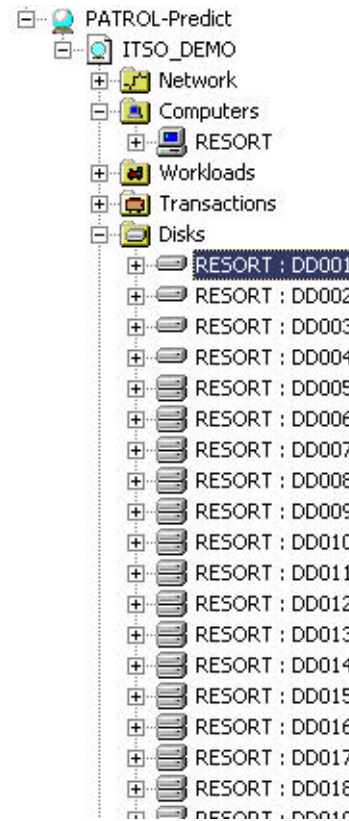
During this exercise, you will review the properties of the Disk configuration associated with the model.

- a. Open the “Disks” container, this will show you all the disk drives in the model:
How many disk drives are in the configuration? :.....

Note: There are two different icons used to represent the disk drives. You will identify the difference as you progress through the lab!

- b. Double click on the first disk DD001 to view the various tabs in the properties dialog of this disk drive and complete the following table:

	DD001	DD005
Icon Appearance		
IOP/IOA		
Disk Model		
Capacity		
Module EDISK time		
RAID EDISK time		
Current Util %		
Util Guideline %		
Util Threshold %		
RAID/non-RAID ?		

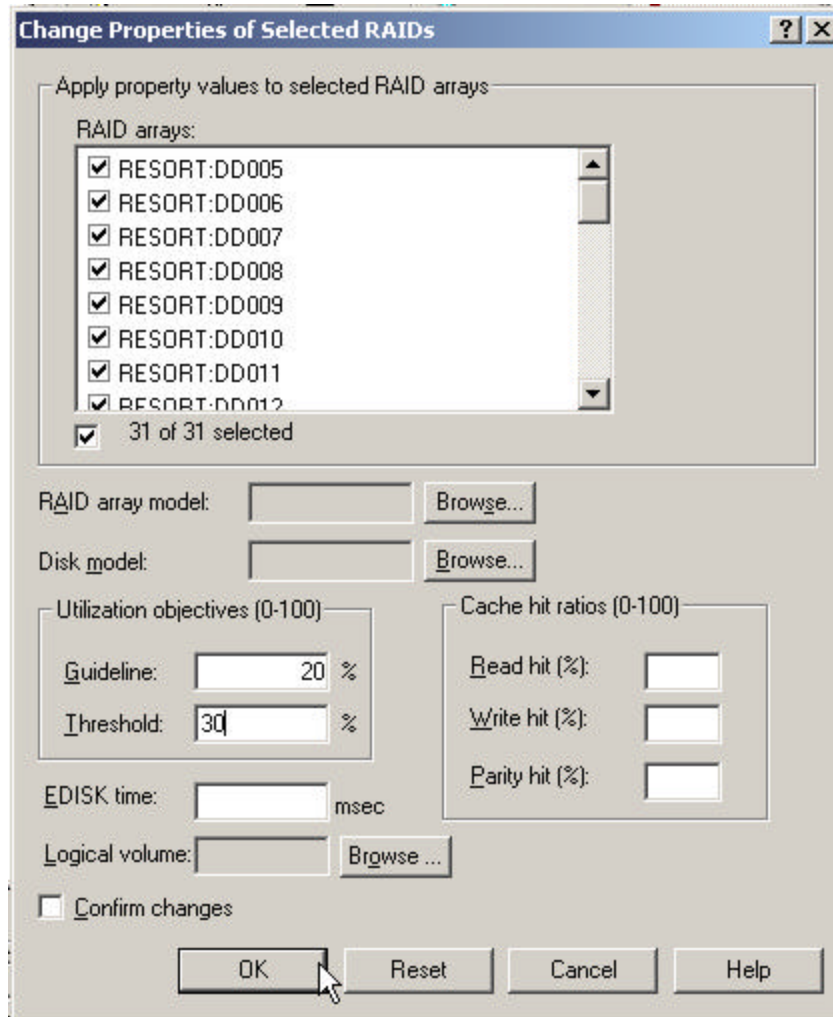


- c. Double click on the disk DD005 to view the various tabs in the properties dialog of this drive and complete the above table:

- d. To specify a Disk Utilization Guideline and Threshold value for all the RAID disk drives, right click on the Disk container and select “Group Properties on RAID...” On the drop down menu .



e. On the “Change Properties of Selected RAIDs”. Select all the disk drives and



specify a Guideline of 20% and a Threshold of 30%.

f. Press OK to apply the changes and continue.

Lab 05: Simulate Upgrade

During this exercise, you will simulate effect of the upgrade to the iSeries model 820 you made in step “e” of Lab 03.

- a. Select the “Evaluate” icon on the right pane.
- b. After the Evaluation is complete, open the “**Reports**” container.
- c. Open the Computer Reports container and then double click on the Computer Summary Report:

- d. Review the Computer Summary Report and note the following:

CPU Model	:	.....
CPU Utilization - Total	:	.....
- Interactive	:	.....
- Non-Interactive	:	.....
Transactions/hr - Total	:	.....
- Interactive	:	.....
- Non-Interactive	:	.....
Disk I/O per sec	:	.....
Faults per sec	:	.....

- e. Review the Computer Stat(istic)s by Workload Report and note number of transactions per hour and response times for each of the workloads in the model:

Workload	Trans/hour	Response time (secs)
.....		
.....		
.....		
.....		
.....		
.....		
.....		
Total

- f. Open the Logical Volume Reports container and then double click on the Computer Summary Report :

- g. Review the Logical Volume Summary Report and note:

Total I/O per sec	:	.....
Response time per I/O	:	.....
Service time per I/O	:	.....
Wait time per I/O	:	.....

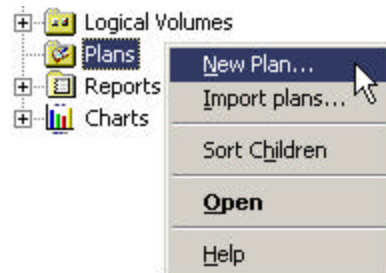
Compare the above results with those you recorded in Lab02.

LAB 06: Working with Scenario Plans

During this exercise, you will utilize the growth planner feature of PATROL for iSeries – Predict. You will be able to simulate the impact of workload growth on your computer configuration. You will create the growth scenario, evaluate the plan and review the resource utilization over the growth periods.

The iSeries system used in this simulation is an 820 2397-1525 (total CPW=2000 and Interactive CPW=560) which you specified in Lab-03.

- a. Right click on the Plan container and select “New Plan ...” From the drop down menu.



- b. Press “Next” at the New Plan Welcome Wizard.

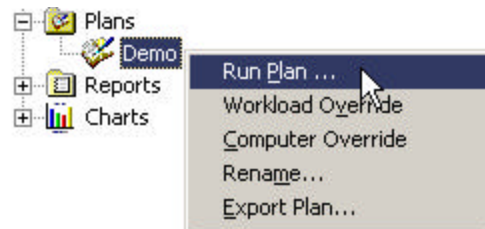
- c. Select the following radio buttons on the **Growth Options** dialog:
Grow by Call count
Growth Units Percentage Growth
Counting base over Previous Period
And select the “Next” button.

- d. On the **Growth Rates** dialog enter the following information:

Plan (name) Demo
Plan Description 10% per period
Select the “New Periods” button and specify”
- Number of Periods = 10
- Period Name prefix = Months
- Period growth rate = 10%
- Select the OK button on the “New Periods” dialog.

- e. The Growth Rates dialog will now show that you require 10 periods of growth at 10% per period, with each period having prefix of “Months”. Complete the growth plan by selecting the “Finish” button. (Note” you will see an informational message indicating that you may create further overrides. Select “OK”.)

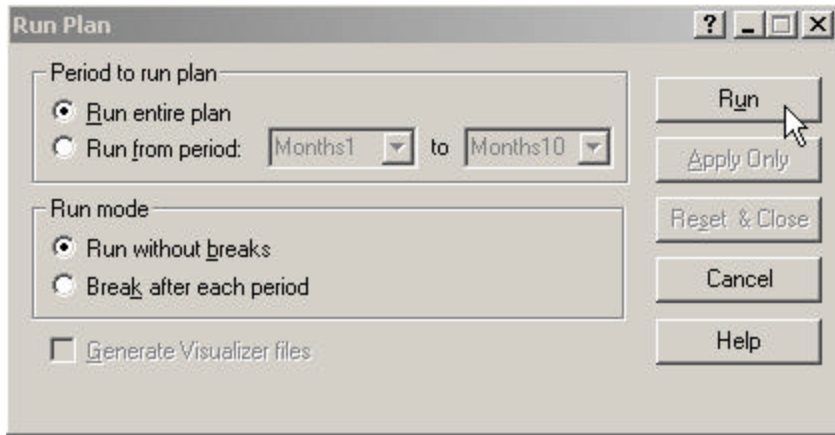
- f. The Plan container now includes the “DEMO” plan. Double click on the DEMO plan to review the plan details.



- g. Right click on the DEMO plan and select Run Plan from the drop down

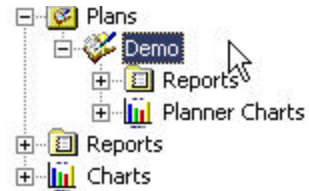
menu.

- h. When the Run Plan dialog appears, accept the default settings of the radio buttons and select the “Run” button to simulate your growth plan.



- i. Once the growth plan is processed you will see the completion dialog. **DO NOT** Close this dialog **NOR** select the “STOP & RESET” button. Merely minimize it!

- j. Open the DEMO plan container, and you will see two additional containers titled “Reports” and “Planner Charts” within the **Plans > Demo** branch. These contain the output from the growth plan. (**Note:** the Evaluation Reports and Charts containers appear below these reports)



- k. Check for any warning messages in the message pane at the bottom or any flags (red or yellow) indicating any guideline or threshold exceptions. Review the appropriate Properties dialog to understand more about the exceptions

.....

You are now ready to review the results of your growth plan and strategy (LAB-07).

LAB 07: Working with Charts & Reports

In this exercise, you will review the HTML reports and assorted charts that are generated by PATROL for iSeries – Predict. You will manipulate the color, look, and feel of the charts.

Reports

a. Open the “Reports” container, within the **Plans>Demo** branch of the “tree” and note the many reports generated by Predict.

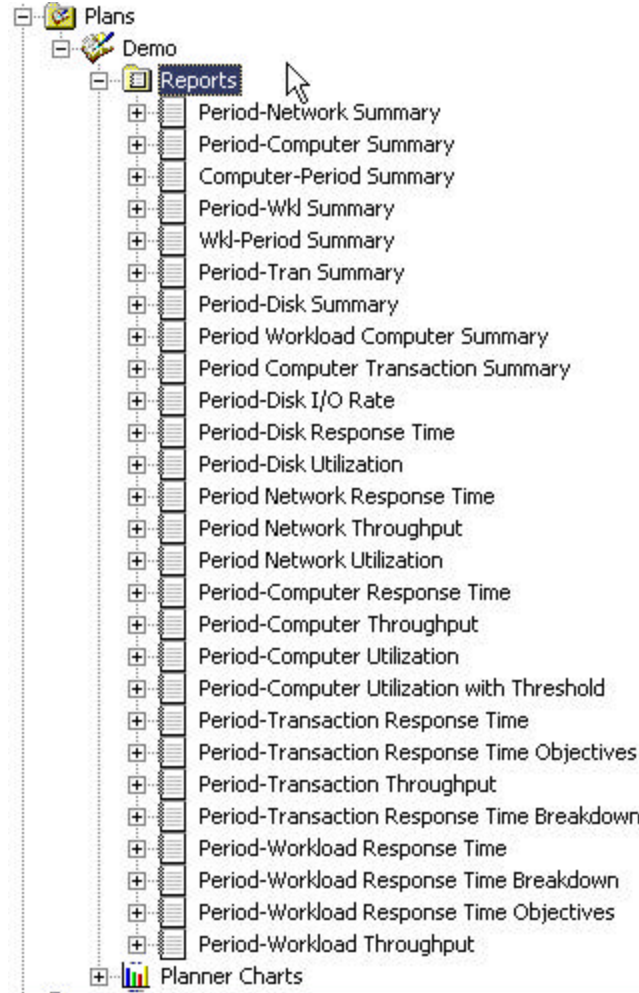
b. Open each of the .html reports generated by Predict and review the contents of the report.

c. Open the “Computer-Period” Summary Report. Note the following:

- Increase in Total CPU Utilization
- Increase in Interactive CPU Utilization
- Increase in non-interactive CPU Utilization

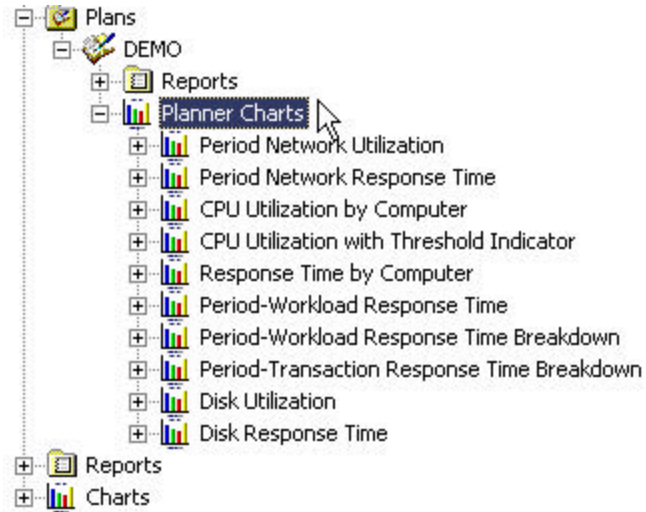
d. Open the “Period-Computer” Summary Report:
 Note the different presentation of the Period information in this report.....

e. Open the “Period-Disk” Summary Report:
 Review the disk utilization for each drive for each period and Note the period in which some of the disks exceed the guideline value of 40%:.....



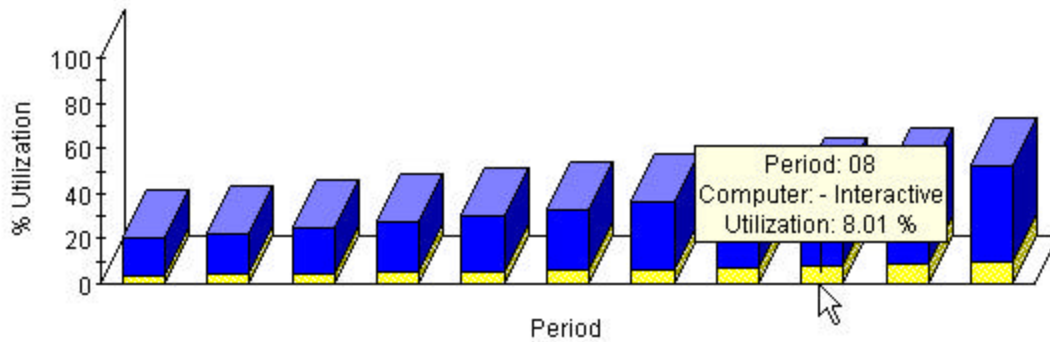
Planner Charts

a. Open the “Planner Charts” container, within the **Plans>Demo** branch of the “tree” and note the many charts generated by Predict.



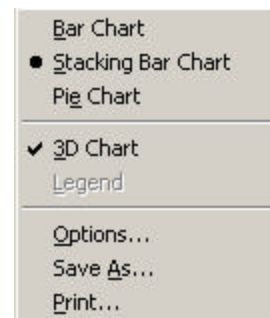
b. Double click on the “CPU Utilization by Computer”. Review the CPU Utilization by interactive and non-Interactive workload over the 10 periods of

CPU Utilization by Computer



growth.

c. Right click on the graph and note the graphing option available to you. With the 3D capability, you can right click on the graph and rotate the graph on three planes.

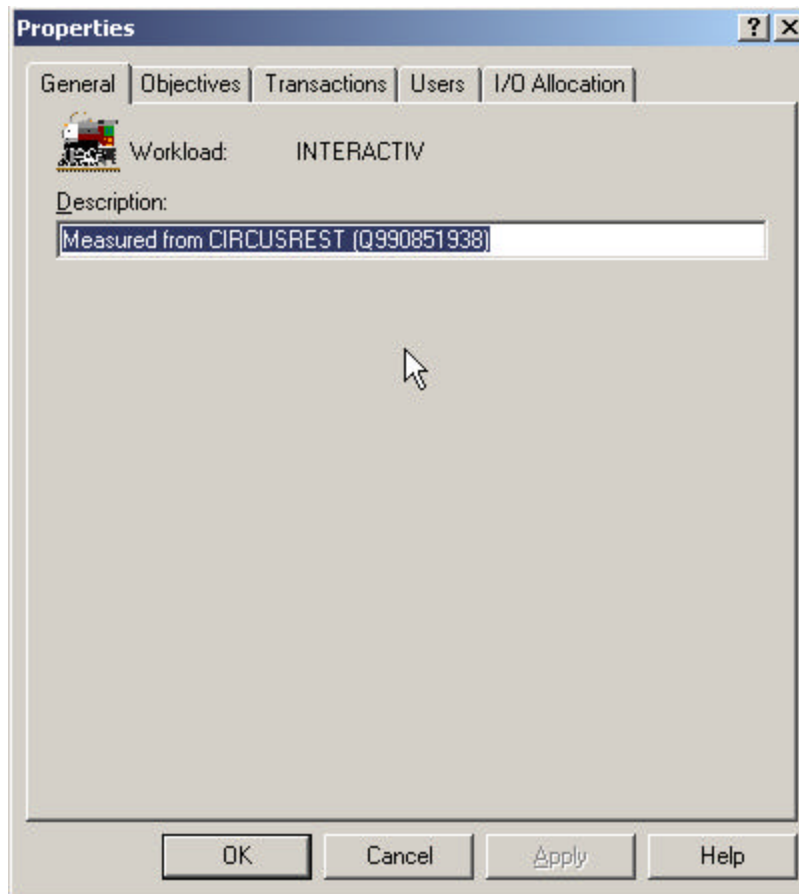


d. Examine the other charts produced by Predict.

LAB 08: Working with Workloads

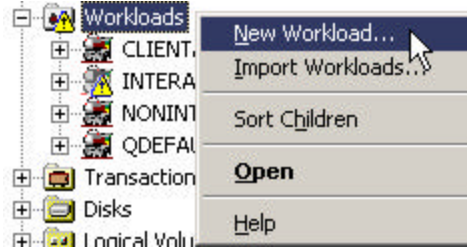
In this exercise, you will investigate the workload objects in the model and create a new workload, manipulate a workload, and save a workload for later use.

- a. Close the “Plan Evaluation” window (which you minimized in the previous lab).
- b. Open the “Workload” container, this will show you all the workloads in the Predict Model. Note the names of the workloads:
.....
.....
- c. Double click on the INTERACTIV workload to display the Properties dialog:
- d. Select the “Objectives “ tab and note the current response time:.....



- e. Specify a Guideline of 0.10 seconds and a Threshold of 0.15 seconds and select OK. (Note that this will immediately show a yellow marker indicating that the guideline has been exceeded.)

- f. Right click on the Workloads container to see the drop down menu with the option to create a “New Workload...”



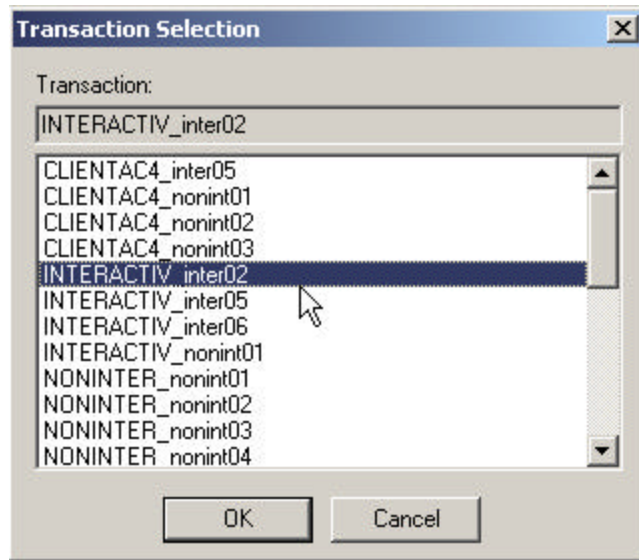
- g. Press “Next” on the welcome wizard, specify the name of the new workload as “NEW” and enter a description. Then select “Next”.

- h. On the “Computers in Workload” dialog, enter “10” in the “Number of Terminals” column and select “Next”.

- i. On the “Transactions in Workload” dialog, the “...” in the transaction column allows you to select from the available transactions and the “add” icon allows you to

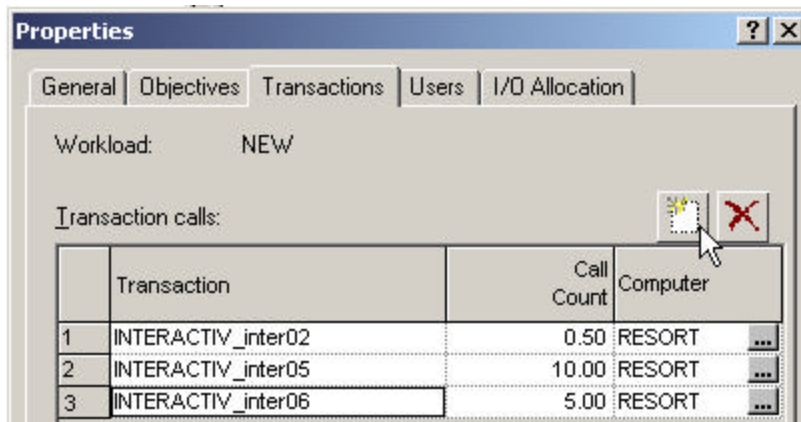


add transaction entries:

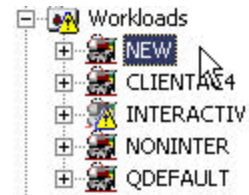


- j. Using the facilities indicated in “h” above, include the following transactions

specifications for the NEW workload and select "Next":



- k. Select "Next" on the I/O Allocation by LV dialog.
- l. Specify a Guideline value of 1.0 secs and Threshold value of 1.2 seconds for the response time for this workload. Complete the workload specification by selecting "Finish" on the dialog.
- m. Note that this adds a "NEW" workload in the Workloads container.



Repeat the steps in LAB-06 and LAB-07 to determine the impact of this increased workload on your iSeries model 820.