



Current Performance Analysis

"State of the Union"

By: MPG

For: ABC Corp

System Analyzed: AIX720

Report Date: 1/7/2015

Time: 10:27

This document contains the 'State of the Union' for your system. It is an analysis of the current CPU, disk and memory performance.

Separate jpg files are attached which cover the What-If[®] analysis.

System Specifications - AIX720

System Specifications		DASD Specifications		LPAR 2 Properties	
Model	E4B	Total / Disk Alloc (GB)	143	Processing Units	0.40
Feature Code	8202-8350	Total LUNs	4.00	Virtual Processors	1
Serial Number	102C2CP			rPerf Rating	4.51
AIX Release	7.1.3.0, TL 02	Total / Disk Alloc Utilization	29.8	Dedicated <input type="checkbox"/> Shared <input checked="" type="checkbox"/>	
Processors	4			Capped <input type="checkbox"/> Uncapped <input checked="" type="checkbox"/>	
Total Partitions	n/a				
rPerf Rating	45.1				
Memory (MB)	4096				

CPU Daily Averages - AIX720

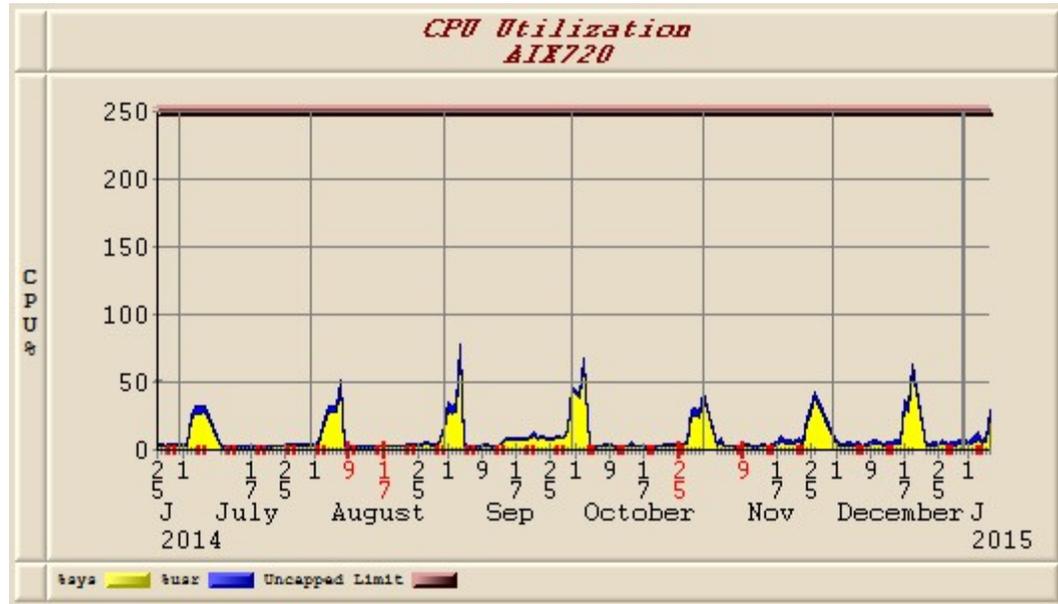
Historical Daily CPU%

6/25/2014 - 1/6/2015 (195 days)

Average %sys CPU %	9.1%
Average %usr CPU %	2.1%
Peak CPU %	78.1%

This graph gives us a view of historical daily CPU usage which if more than 90 days we can use for trending data. Below, we indicate the CPU usage for both workloads (%usr vs. %sys):

For the period measured (195 days), the average CPU% was 11.2% (%sys: 9.1%; %usr: 2.1%). During this period, the maximum CPU% was 78.1%, and it occurred on 6/25/2014.



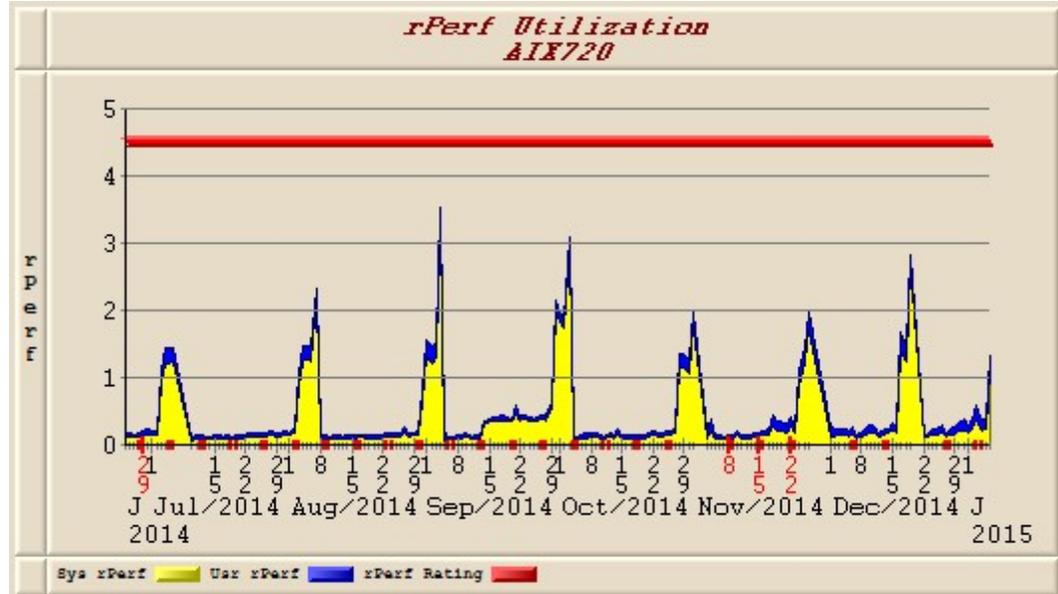
Historical Daily rPerf

11/8/2014 - 1/6/2015 (59 days)

Average %sys rPerf	0.41
Average %usr rPerf	0.10

This graph gives us a view of historical daily rPerf usage which if more than 90 days we can use for trending data. Below, we indicate the rPerf usage for both workloads (%usr vs. %sys):

For the period measured (195 days), the average rPerf was 0.51 (%sys: 0.41; %usr: 0.10). During this period, the maximum rPerf was 3.52, and it occurred on 9/4/2014.



Memory Analysis - AIX720

Historical Total Faults / Sec

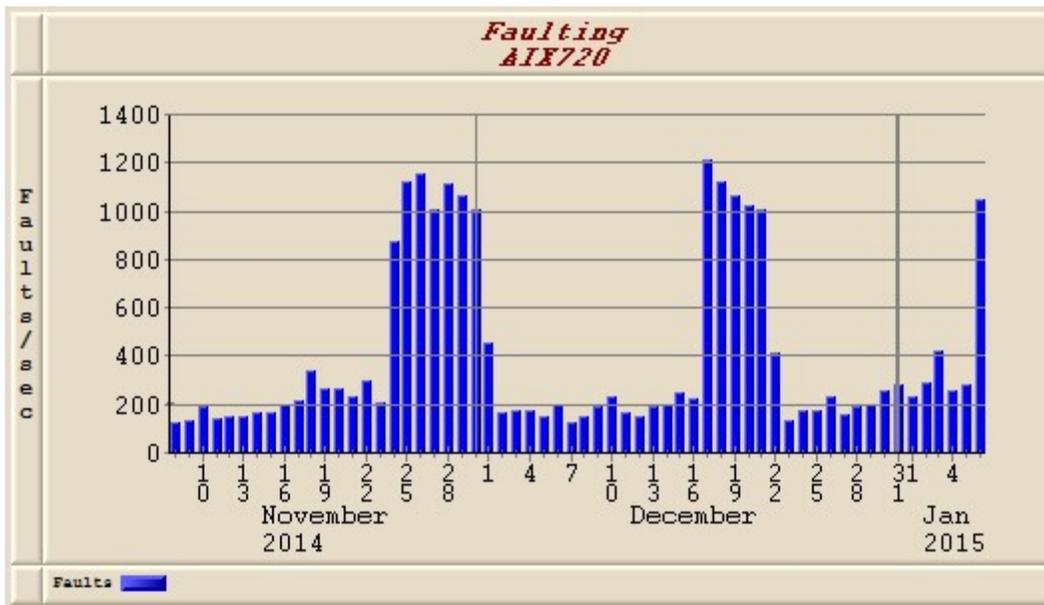
11/8/2014 - 1/6/2015 (59 days)

Average Faults / Sec 397.2

Peak Faults / Sec 1208.9

This graph gives us a view of historical daily total faulting rate:

For the period measured (59 days), the average faulting rate was 397 faults /Sec. During this period, the maximum faulting rate was 1209 faults /Sec, and it occurred on 11/08/2014.



Non File System Paging Statistics

11/8/2014 - 1/6/2015 (59 days)

Average Pages In 326.57

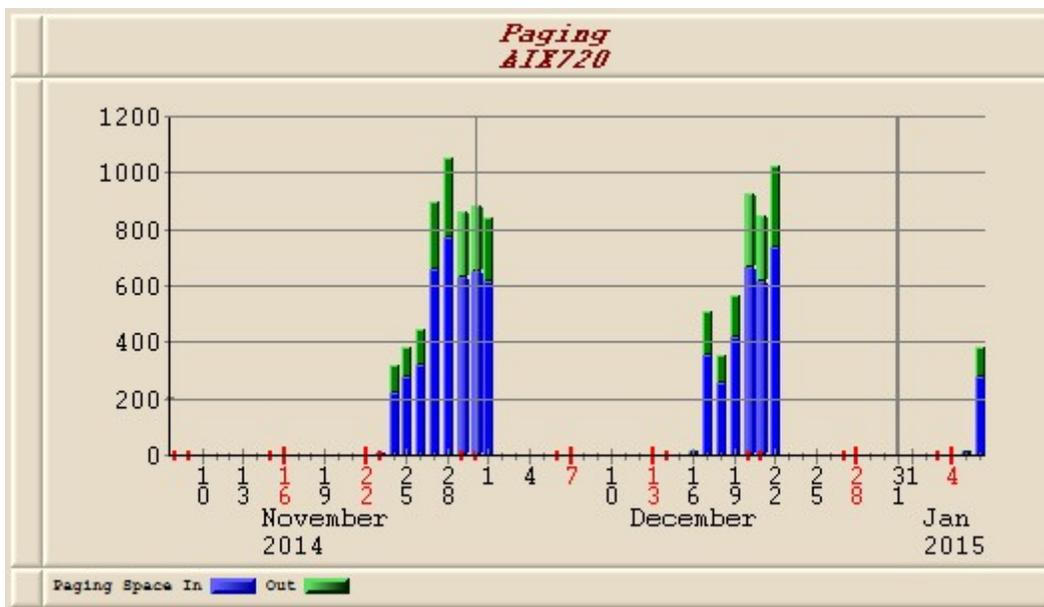
Average Pages Out 126.80

Peak Pages In 760.74

Peak Pages Out 287.50

This graph gives us a view of historical non file system paging:

For the period measured (59 days), the average paging rate was 453.37 page spaces /sec (Pages In /sec: 326.57; Pages Out /sec: 126.80). The max paging day was 11/08/2014, and the total paging rate was 1048.24 page spaces per sec.



Memory Analysis (cont) - AIX720

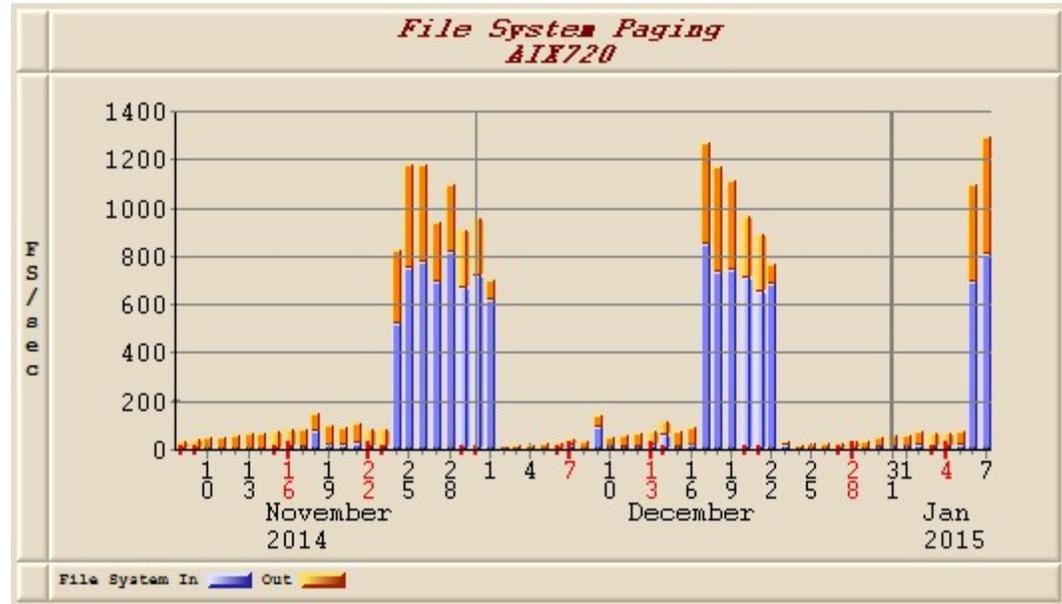
File System Paging Statistics

11/8/2014 - 1/7/2015 (60 days)

Average Pages In	209.71
Average Pages Out	126.11
Peak Pages In	482.92
Peak Pages Out	810.70

This graph gives us a view of historical file system paging:

For the period measured (60 days), the average paging rate was 335.82 page spaces /sec (Pages In /sec: 209.71; Pages Out /sec: 126.11). The max paging day was 01/07/2015, and the total file system paging rate was 1293.62 page spaces per sec.



Disk Analysis - AIX720

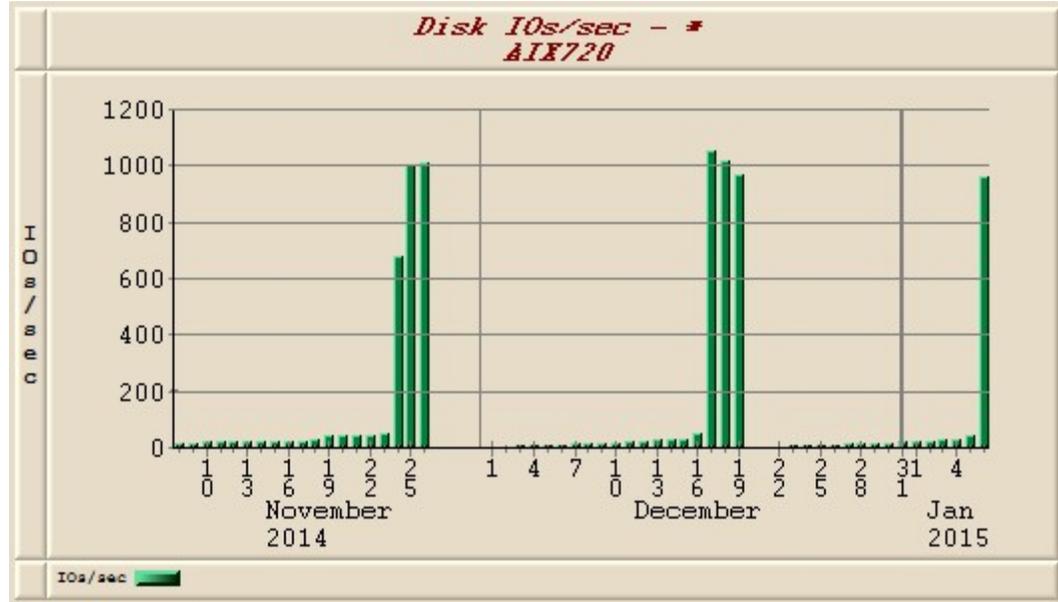
Disk IOs / Sec

11/8/2014 - 1/6/2015 (59 days)

Avg Daily Disk IOs / Sec	141.2
Peak Disk IOs / Sec	1050.3

This graph gives us a view of historical of disk operations per second:

For the period measured (59 days), the average disk operations /sec was 141. The max disk operations occurred on 12/17/2014, and the total disk ops /sec was 1,050.



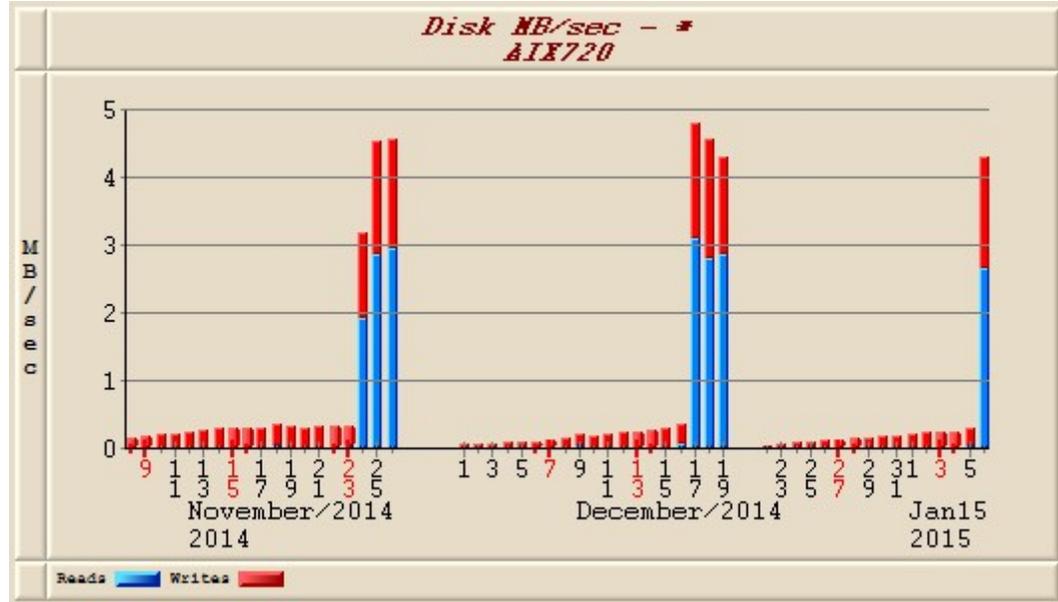
Total Disk MBs / Sec

11/8/2014 - 1/6/2015 (59 days)

Avg Disk MBs / Sec	0.91
Avg Reads / Sec	0.43
Avg Writes / Sec	0.48
Peak Disk MBs / Sec	4.80
Peak Reads / Sec	1.75
Peak Writes / Sec	3.05

This graph gives us a view of historical disk MB processed:

For the period measured (59 days), the average disk MB processed was 0.91. (Reads: 0.43; Writes: 0.48). The peak disk MB day was 12/17/2014, and the total MB processed was 4.80.



Peak Day "Baseline" Data (Used For What If ®) - AIX720

Peak Date CPU% Statistics Peak Date: 10/3/2014

Average %sys CPU%	64.71%
Average %usr CPU%	3.11 %
Maximum CPU%	134.75%
Maximum CPU% Interval Time	00:15
Max %usr CPU%	3.08%

One of the features of Power Navigator is the ability to search the historical data and select the day that used the most CPU and disk resources. The peak day selected was 10/3/2014, and for that day:

The average CPU% was 67.82%. The maximum CPU% was 134.75% (% sys: 131.67%; %usr: 3.08%), and it occurred at 00:15.



Memory Graph Explanations

CPU / rPerf:

These graphs shows the average daily CPU / rPerf utilization. The main purpose is to indicate the number of days used for the analysis and to show CPU utilization trending information. It is also used to pick a peak day for the What-If analysis

Memory Graphs (File System vs. Non File System):

Normal disk I/O uses the paging mechanism. Paging to Paging Space is moving data between real memory and your paging spaces. This is the type of paging that can affect performance negatively. Paging to File System is moving data between real memory and your file systems. A common example would be a committed write. This process is not what is normally considered Paging and does not represent a memory shortage. Its merely just that block of data that has been finished with .

Disk Graphs:

These graphs break down the IO that is being processed thru the system.

The following analysis was done
using MPG's Power Navigator ®



The Power Navigator System i code is free and very valuable because it keeps years of historical performance data in a few hundred MBs. Free access to your CPU (%usr & %sys) graphs are available for trending and planning. For a temporary key to un-lock the hundreds of other graphs and reports in Power Navigator, please contact your IBM Business Partner or contact MPG by email at support@mpginc.com or call (800) 457-6744.

Disclaimer: This capacity plan was performed using MPG's Power Navigator. The results are based on historical data, assumptions, and interpretation of the graphs. A thorough knowledge of IBM i performance and capacity planning is required. No guarantee is made as to the actual result.