The IT Performance Management & Capacity Planning Company

Prolink Platform Resources Audit Results

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I. Document History

Version	Date	Name	Description
1.0	30/01/06	W. Verhoeven	First Release (subject to change)

II. Stakeholders

Company	Responsible Stakeholder
Customer	Karel de Grote
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III. Contents

1. Management Summary

1.1 Introduction

At Customer the IT infrastructure supporting the core business consists of +/- 23 Microsoft servers running the WIN2K (2000 & 2003) operating system.

This environment encounters issues at an unpredictable interval causing the user community to complain about the quality of the delivered service(s).

The problem appears intermittently and is experienced by the user as being unable to use one or more applications. In order to solve this situation some servers need to be rebooted.

This audit document contains interpreted resource consumption information about the servers and has the following purpose:

- Provide a first insight of the current overall resource consumption situation. Indicate possible resource bottleneck(s) or starvation situations and provide tuning information where appropriate.

- Attempt to reveal/find a strange server behaviour that correlates with the problem encountered so that further and more detailed investigation can be undertaken in order to get to the root cause of this problem.

The resource consumption data collections for this audit are done by the TeamQuest performance management technology that provides among Operating System (OS) related metrics also data about process based workloads and applications like Active Directory, IIS etc… The finest data granularity (collection interval) configured for this project is 1 minute.

The operational data is analyzed via the TeamQuest View software.

The period covered in this document is about one week:

1) Tuesday 17 January until Wednesday 25 January 2006.

The problem occurred on Tuesday 24 January in the afternoon, see below in Table 1 -1:

Components 6 object(s)

Prog ID	Objects	Activated	Pooled	In Call	Call Time (ms)
AAAZFCRGTP. clsAPI	10	10		10	2746428

Table 1-1

This represents an increased Call Time (ms) that correlates with the problem of users unable to work properly (no login possible or waiting on a transaction result) in one or more applications.

In order to solve this situation the following has been done:

"Despite the fkweb03 & 04 reboot, the problem was still there because the problem is not on Fkweb03 -04 but above all on Fkapp01- 02. The problem ended with the general reboot (fkweb+fkapp) during the night." (Mr. X).

In order to check what has been rebooted and not we shows in Figure 1 -1 the uptime of the servers during the period 23, 24 & 25 January.

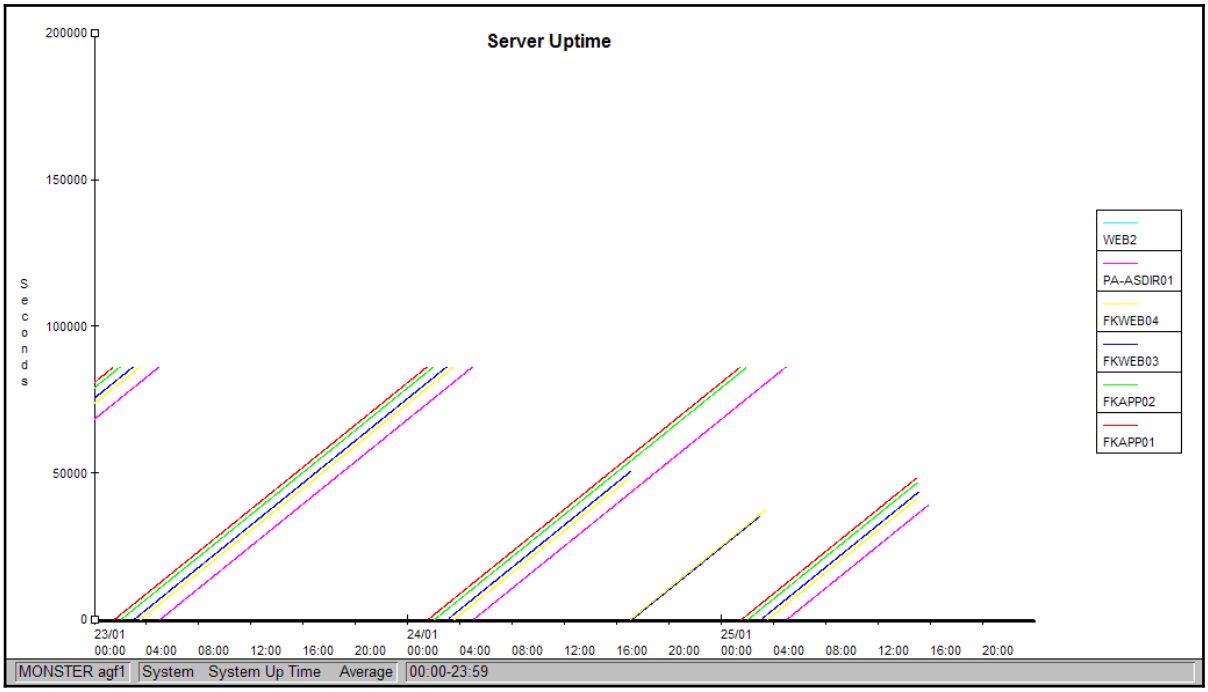


Figure 1-1

We can see that the five servers “fkapp01, fkapp02, fkweb03, fkweb04 and pa-asdir01” are rebooted during the night and that servers “fkweb03 and fkweb04” have been rebooted on 24 January around 17h.

2. Systems & Infrastructure Description

The following servers are part of the first evaluation round:

Round 1 Server List

Nr.	Server Name	OS	Function
1	fkbch01	WIN 2000 SP3	Batch
2	fkbch02	WIN 2003	Batch
3	fkapp02	WIN 2000 SP2	COM+ / App. Center
4	fkapp01	WIN 2000 SP2	COM+ / App. Center
5	fkweb03	WIN 2000 SP3	Web Server Intern
6	fkweb04	WIN 2000 SP3	Web Server Intern
7	web2	WIN 2003	Web Server Intern
8	fkque01	WIN 2000 SP2	Queue Server
9	zeus	WIN 2003 SP1	Active Directory
10	atlas	WIN 2003 SP1	Active Directory
11	atlasdrp	WIN 2003 SP1	Active Directory
12	fksna01	WIN 2000 SP3	SNA Gateway
13	fkadv01	WIN 2003 SP1	Web Server Intern
14	fkadv02	WIN 2003 SP1	Web Server Intern
15	fkadv03-fez	WIN 2003 SP1	Web Server Extern
16	fkadv04-fez	WIN 2003 SP1	Web Server Extern
17	fksql01	WIN 2000 SP3	SQL Server
18	sqlapp01	WIN 2003	SQL Server
19	zeusdmz4	WIN 2003	External Domain Controller
20	zeusdmz3	WIN 2003	External Domain Controller
21	pa-asdir01	WIN 2000 SP2	Portina Ante Server
22	isa01	WIN 2003 SP1	ISA Server
23	isa02	WIN 2003 SP1	ISA Server

Table 2-2

The current infrastructure is the following:

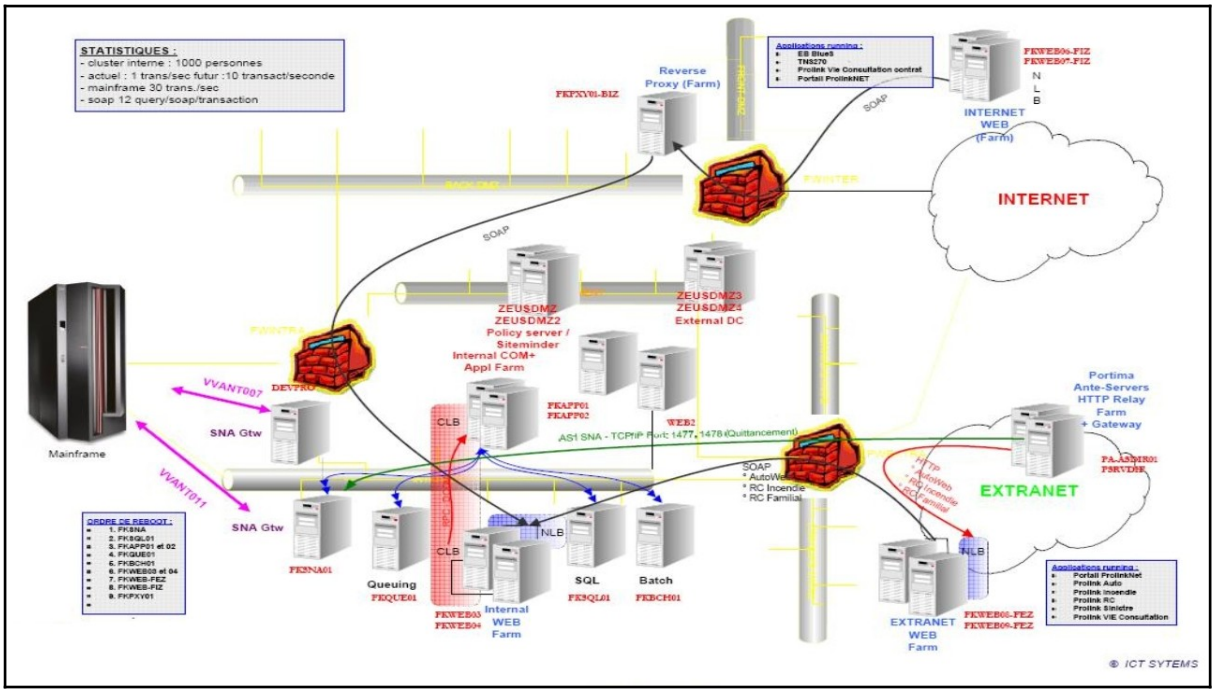


Figure 2-2

3. Recommendations & Remarks

3.1 Memory

It reveals that for most of the servers there is user sufficient user memory, ideally the server needs to keep out of the paging overhead that starts around a “free” memory drop towards 5 MBytes. The lowest free memory situations occurred for servers “fkque01, zeus, isa01 and fkbch01” but nothing dramatic yet. In fact only server “fkque01” needs real attention.

The kernel memory has a paged and non-paged pool section. Both kernel memory sections remain largely below the available sizes of 490 Mbytes for paged pool and 256 Mbytes for the non-paged pool. There where no pool & non-pool page failures measured during this period.

We can conclude that from the user & kernel memory point of view there is no direct relation with the encountered issues.

In WIN2K a page table is used to map the virtual memory addresses towards a physical one. When the free System PTE’s drop below a value of 5000, problems will start to occur. This is not the case for the server’s part of this audit.

The page file(s) will contain copies of data that has been paged-out by the virtual memory manager. Win2K does not use the mechanism of data pages reservation at load time like in UNIX. Overall the usage remains below 50% except for server “web2” that shows activity up to 90% which is quite high.

3.2 CPU

During 17 & 18 January the server “atlas, 2 CPU unit” showed a quite high consumption due to the activity of the command “cscript“ (event log parser). But this does not correlate at all with the encountered issues at Customer.

Overall the different servers have sufficient CPU resources to handle the current and increased load.

3.3 DISK

We verified the load per logical disk. Unfortunately the command “diskperf –y” has not been executed on all servers (needs a reboot afterwards) as such we are missing this kind of information for the following systems “pa-asdir01, fksna01, fkque01, web2, fkweb04, fkweb03, fkapp01, fkapp02 and fkbch01”.

Overall the disk load shows a small to medium activity with some spikes up to 100% during some minutes especially on server “zeus”. In fact there is no direct relation with the encountered issues.

3.4 Network

A quick check of the overall network packets activity sowed no high values. A detailed check of the transferred volume on server “fkapp01” revealed that it remains below 3 Mbits/Sec, far below the capabilities of the LAN devices.

3.5 Kernel Resources

Win2K implements object models to provide a way of manipulating the most basic elements/resources of the kernel. There are about 27 different objects types of which we evaluated the most important ones.

This revealed a strange behaviour on both the servers “fkapp01 & fkapp02” where the semaphore allocations increased a lot (up to 113,5% on server “fkapp01”) during the Customer application stability issue occurrence. The Semaphore class allows a specified number of threads to access a resource. Additional threads requesting the resource **block** until a thread releases the semaphore.

Also verification of the application activity on server “fkapp01” revealed an increased events activity for workload “dllhost_$PZNTX”. At the same time a correlation exists with the activity of “ASP.NET Apps v1.1.4322,,,Anonymous Requests,,,_LM_W3SVC_19_Root_lvl0_Net_Financial_BrokerAccount_” on server “fkadv02”. This activity doubled during the problem period.

This situation should be further investigated.

3.6 Conclusion

During the one week data collection period of 17 Jan. to 25 Jan. the problem appeared once. Overall there are no system resource shortages on the level of Memory, CPU, DISK & LAN that could explain the Customer application stability problem.

Within the collected/available data from TeamQuest a relationship can be found between the problem and the allocated semaphores on the servers “fkapp01 & fkapp02”. Also an increased (doubled) activity of “ASP.NET Apps v1.1.4322,,,Anonymous Requests,,, _LM_W3SVC_19_Root_lvl0_Net_ Financial_BrokerAccount_” on server “fkadv02” was found.

An increase usage of semaphores means that a lot of Inter Process/Thread communication occurs and that the shared objects need to be synchronized. Blocking of threads may occur in case the synchronization goes wrong. A blocked thread would explain the issues encountered by Customer.

Our analysis clearly identity the “dllhost_$PZNTX, and via the event log, the com+ application ID “{2C5DFFB3-472F-11CE-A030-00AA00339A98}” being part of the issues encountered. As such we recommend putting the focus on this server application(s). As a next step in narrowing down the search for the root cause we propose the following:

1. Capture the data of the period where the issue occurred a second or more time(s).

2. Verify if we have the same deriving behaviour on the servers “fkapp01 & fkapp02 & fkadv02” as during the first problem occurrence.

3. If so there are two approaches:

    a. Debug and review the server package in order to identify failure reason. This can mainly be time consuming and can force us to start a long research effort.

    b. Migrate ASAP this application to the new W2K3 environment. This gives us the possibility to take advantage of the new recycling functionality available in com+ and IIS and as such will give Customer more time to review the implemented server package.

4. Memory Subsystem

First we look at the memory subsystem since any issues with this resource has a major impact on the overall server behaviour. We look at the user, kernel and virtual memory situation.

4.1 Global User Memory Usage

Figure 4 -3 shows the available "free" memory for each server during the full period [17 Jan – 25 Jan].

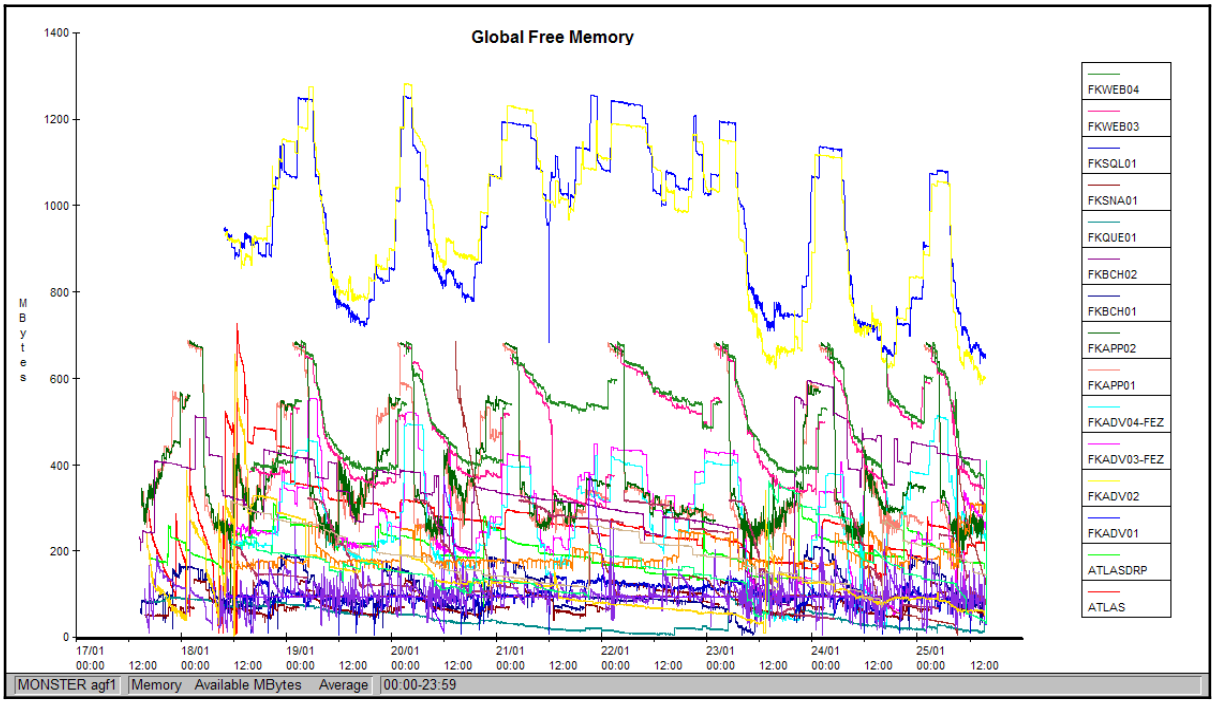


Figure 4-3

It reveals that for most of the servers there is sufficient memory, ideally the server needs to keep out of the paging overhead that starts around a "free" memory drop towards 5 MBytes.

The goal is to have about 5% of physical memory free for allocation at any time. For the servers with 1 GBytes & 512 Mbytes of memory this is respectively the 50 & 25 MBytes threshold.

The lowest free memory graph at a detailed scale shows that the servers "fkque01, zeus, isa01 and fkbch01" are sometimes near the memory paging limit, see Figure 4 -4.

In fact only server "fkque01" needs real attention.

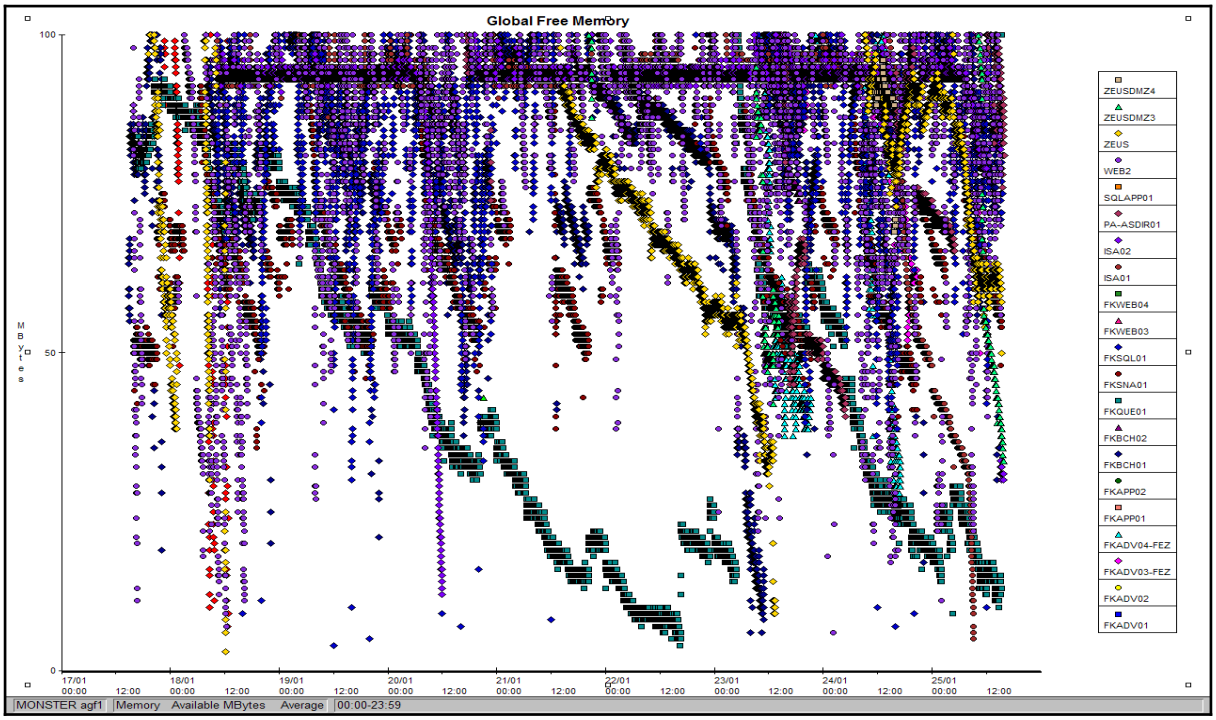


Figure 4-4

4.2 Kernel Memory Usage

This is memory consumed by the operating system also called kernel. Figure 4 -5 shows the paged pool memory size. This is memory used by kernel code that is eligible to be paged out by the virtual memory manager.

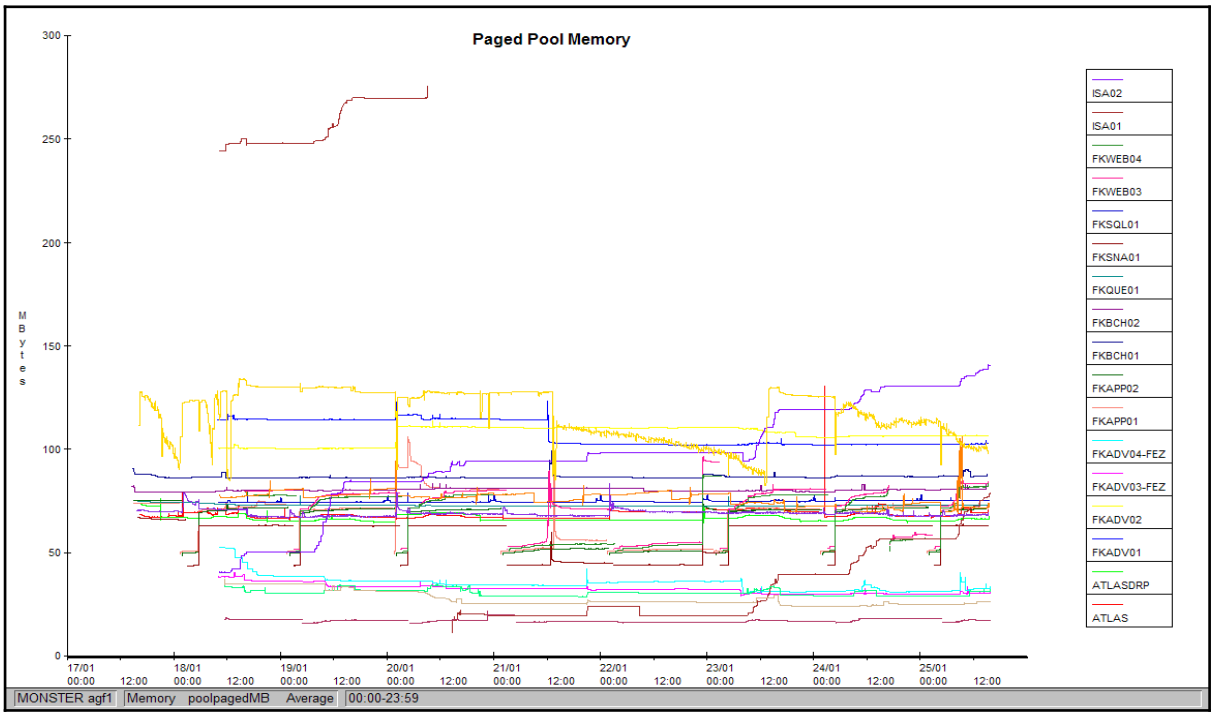


Figure 4-5

The non-paged pool memory size is given in Figure 4 -6. This is the memory that is used by kernel code rather locked so not eligible to be paged out by the virtual memory manager.

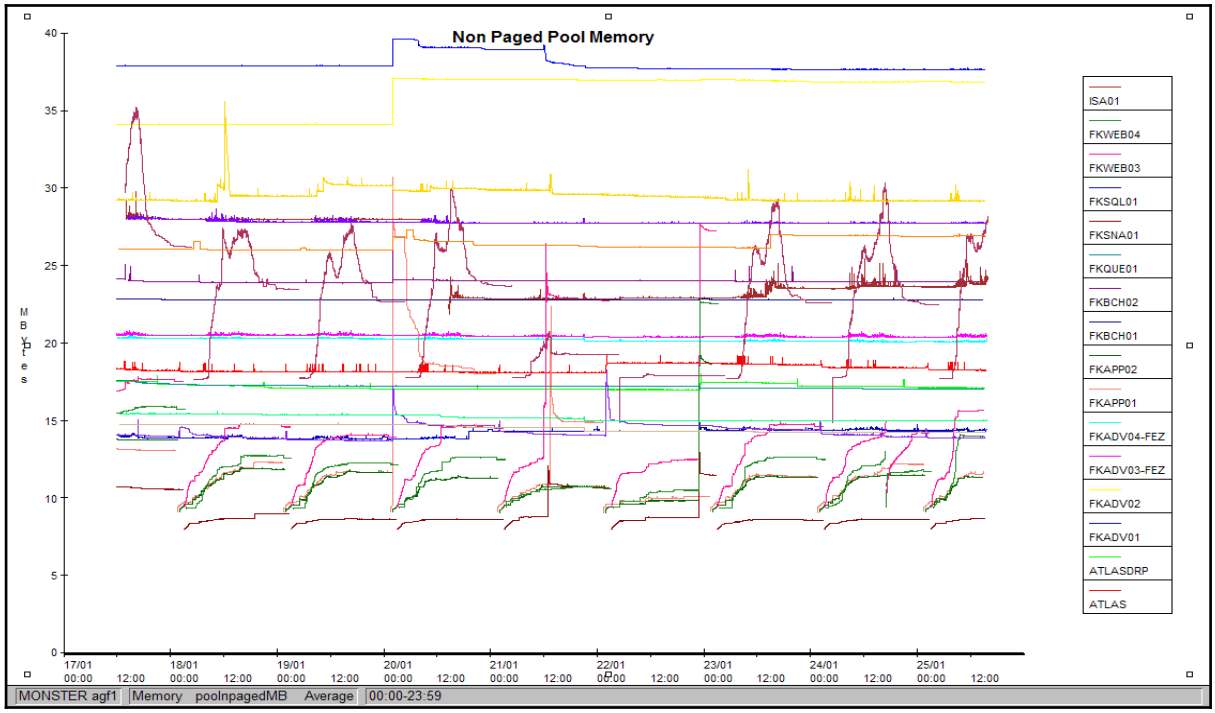


Figure 4-6

Both kernel memory types remain largely below the available sizes of 490 Mbytes for paged pool and 256 Mbytes for the non-paged pool. There where no pool & non-pool page failures measured during this period.

We can conclude that from the user & kernel memory point of view there is no direct relation with the encountered issues.

4.3 System Page Table

In WIN2K a page table is used to map the virtual memory addresses towards a physical one. In case of shortage the server will encounter performance issues.

The usage of this table for the full period is shown in the following Figure 4 -7.

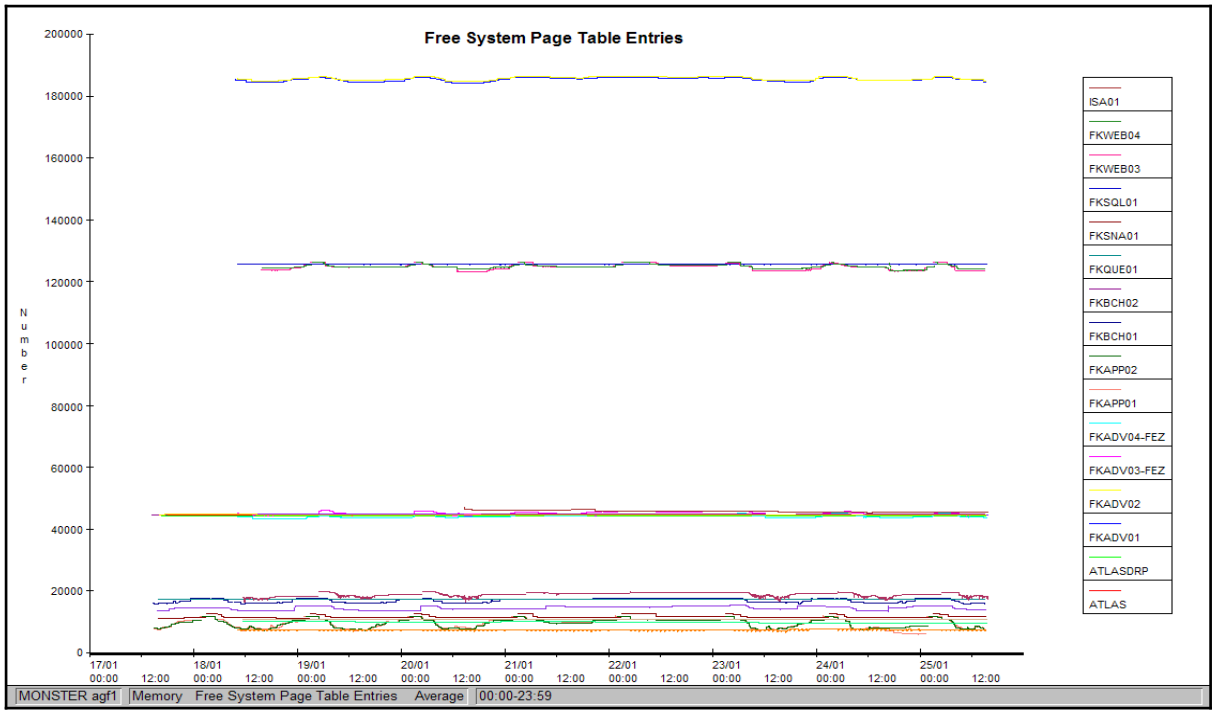


Figure 4-7

When the free System PTE's drop below a value of 5000 the problems start to occur. This is not the case for the server's part of this audit, see Figure 4 -8 for a more detailed view.

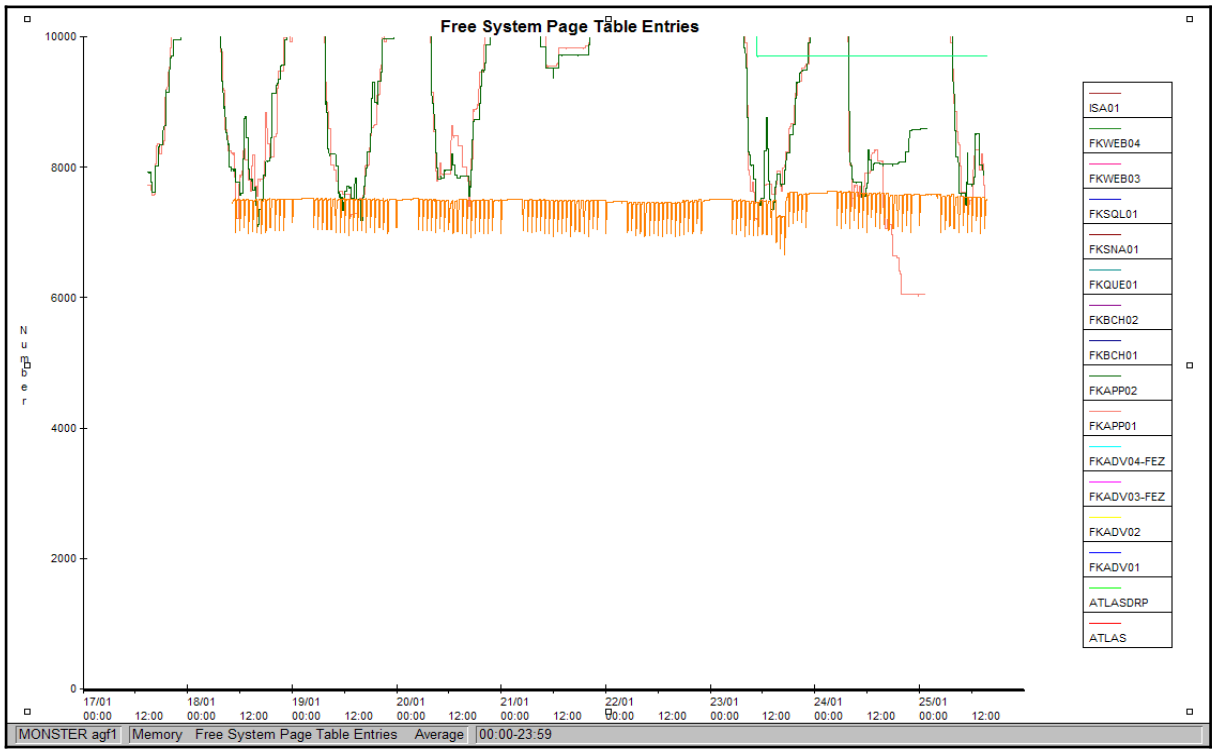


Figure 4-8

4.4 Paging File

The page file(s) will contain copies of data that has been paged-out by the virtual memory manager. Win2K does not use the mechanism of data pages reservation at load time like in UNIX. Figure 4 -9 shows the virtual memory paging file consumption.

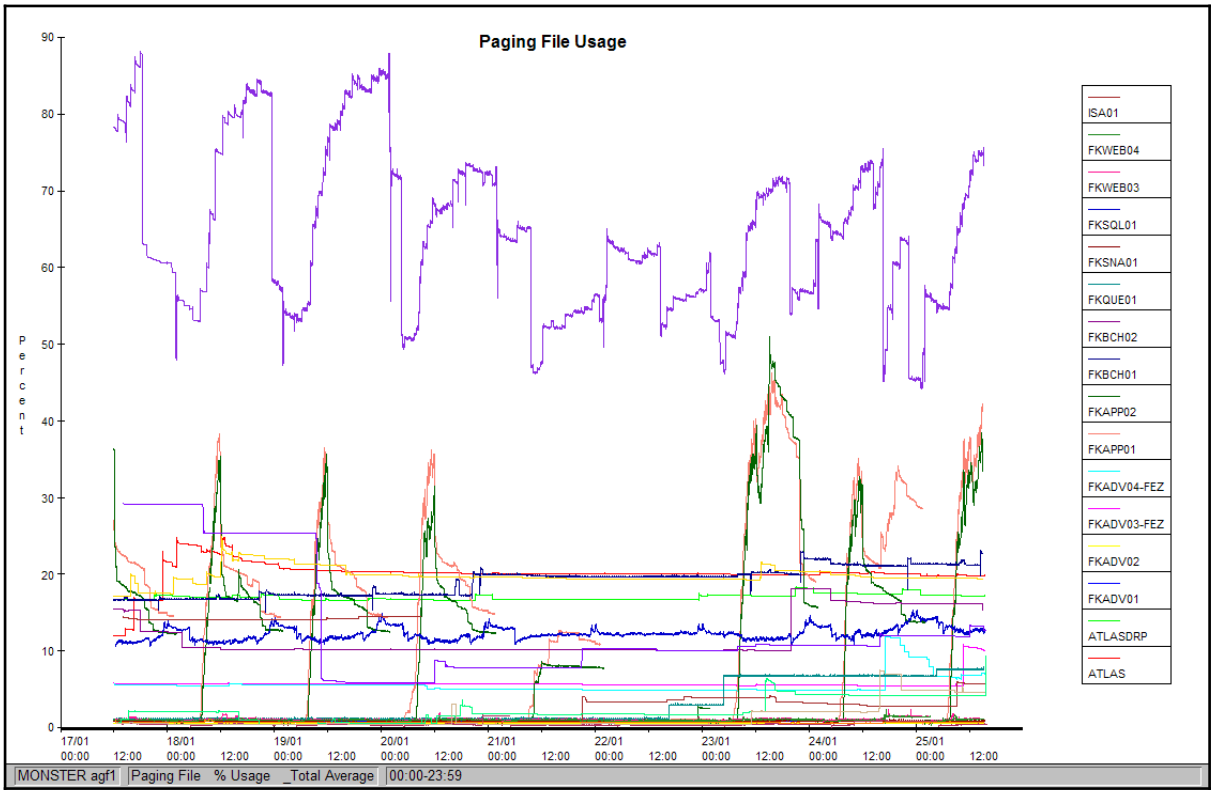


Figure 4-9

Overall the usage remains below 50% except for server “web2” that shows activity up to 90% which is quite high.

A shortage of SWAP resources could introduce issues on the memory allocation level resulting in malloc() call failures and the inability to spawn new processes or threads.

We can conclude that resource shortage on the level of available paging space has no relationship with the current issues at Customer.

5. Processor Subsystem

This section describes the overall CPU resource consumption for the different servers.

5.1 Global CPU Load

Figure 5 -10 shows the total CPU activity (normalized) over the available CPU's in the server and this for the full period [17 Jan – 25 Jan].

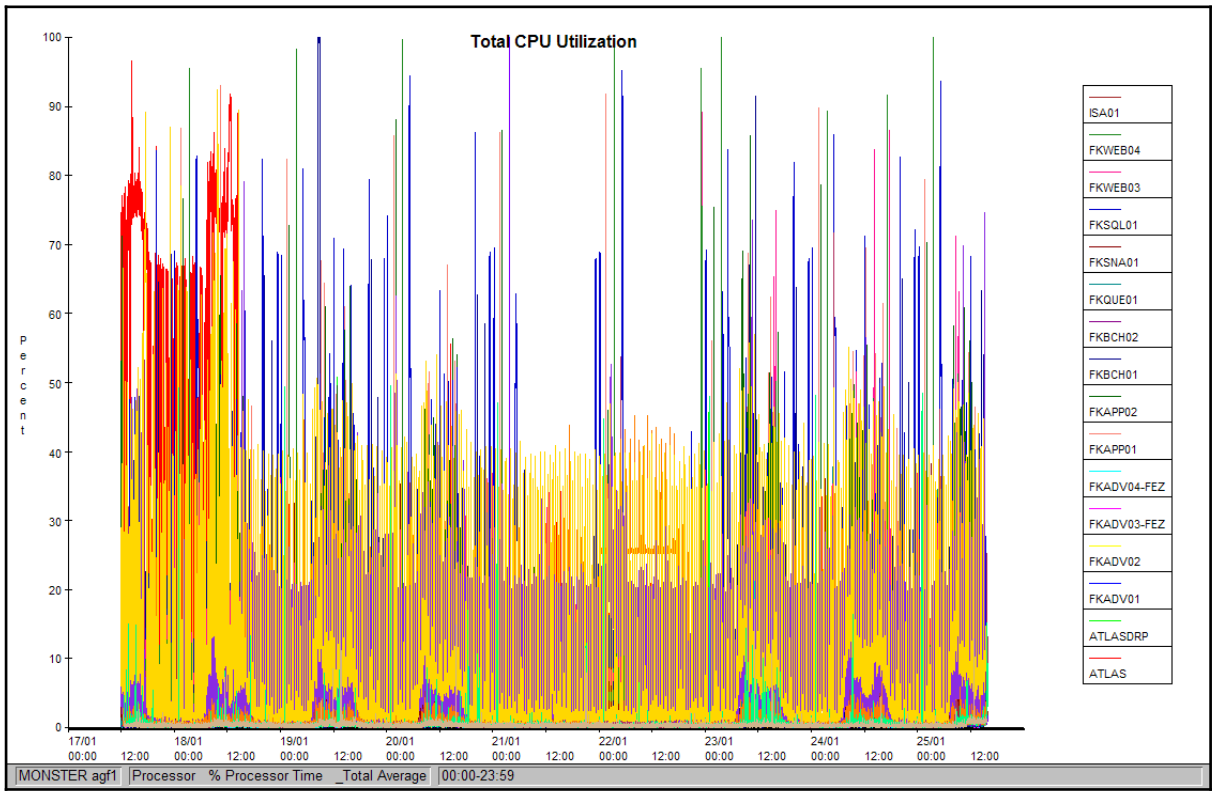


Figure 5-10

During 17 & 18 Jan. the server "atlas, 2 CPU unit, red colour" shows a quite high consumption due to the activity of the command "cscript", see below in Table 5 -3.

MONSTER agf1 NT:Process

Lock | Unlock | Filter | Combine | Set | Options | Stop

jan 18, 2006 08:40:00 - 08:41:00 — 1:48 of 48

Row	command	user	pctcpu	totcpu	privcpu	usercpu	pagefileMB	wssMB	pagefaults	handles	othread	pid	nproc
Summary	<Multi>	<Multi>	234,48	04:29,23	01:29,33	02:47,23	13074,74	15318,24	2060273	496687	22050	<Multi>	1353
1	cscript	ADM_Seclogs	44,00	00:52,88	00:06,53	00:46,31	33,38	31,70	1288960	180	6	9920	1
2	lsass	SYSTEM	14,30	00:17,19	00:02,00	00:15,19	119,44	83,14	8800	6617	364	1132	1
3	system	SYSTEM	10,58	00:12,72	00:12,72	00:00,00	0,00	0,10	414	3681	83	4	1
4	<Other>	<N/A>	2,16	00:02,60	00:00,00	00:00,00	0,00	0,00	0	0	1	<N/A>	1
5	svchost	SYSTEM	1,70	00:02,05	00:00,70	00:01,34	15,49	14,83	504	1743	54	1848	1
6	wmiprvse	SYSTEM	1,69	00:02,03	00:00,31	00:01,72	2,62	3,17	0	183	5	3416	1
7	tqw2kevent	SYSTEM	1,61	00:01,94	00:01,31	00:00,63	2,27	2,53	641	82	3	7744	1

Table 5-3

This line chart reveals that the different servers have sufficient CPU resources to handle increased load. The privileged type of CPU activity is shown below in Figure 5 -11.

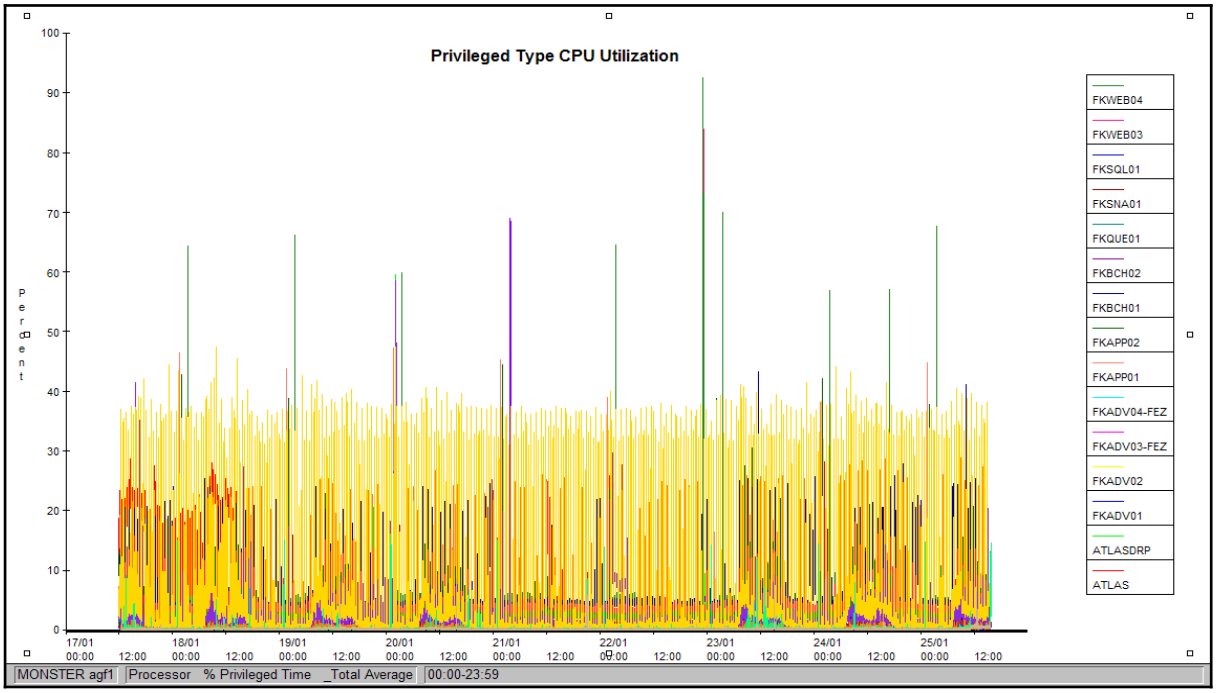


Figure 5-11

Privileged type of CPU is consumed by operating system components and hardware-manipulating drivers. High values could reveal hardware issues. A more detailed view of 24 Jan 5h-20h is shown in Figure 5 -12.

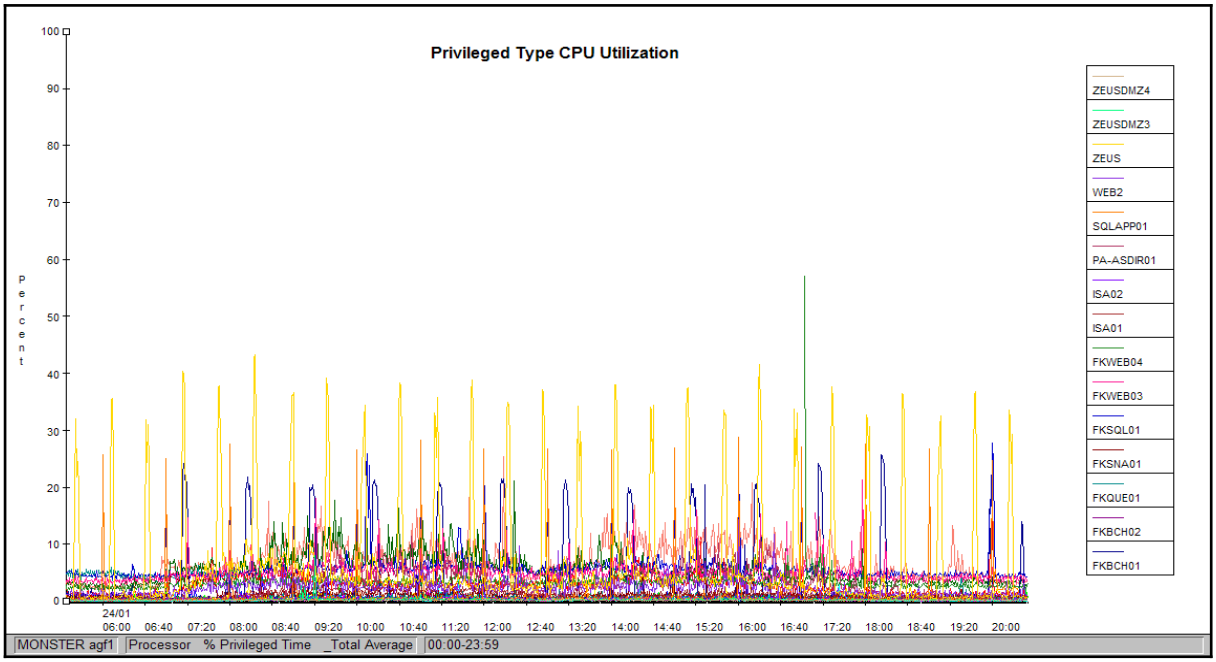


Figure 5-12

Only the servers “zeus (command=system & lsass) & fkbch01 (command=system & lsass)” show some peaks at regular intervals.

Figure 5 -13 shows that the hardware interrupt related CPU consumption is very small.

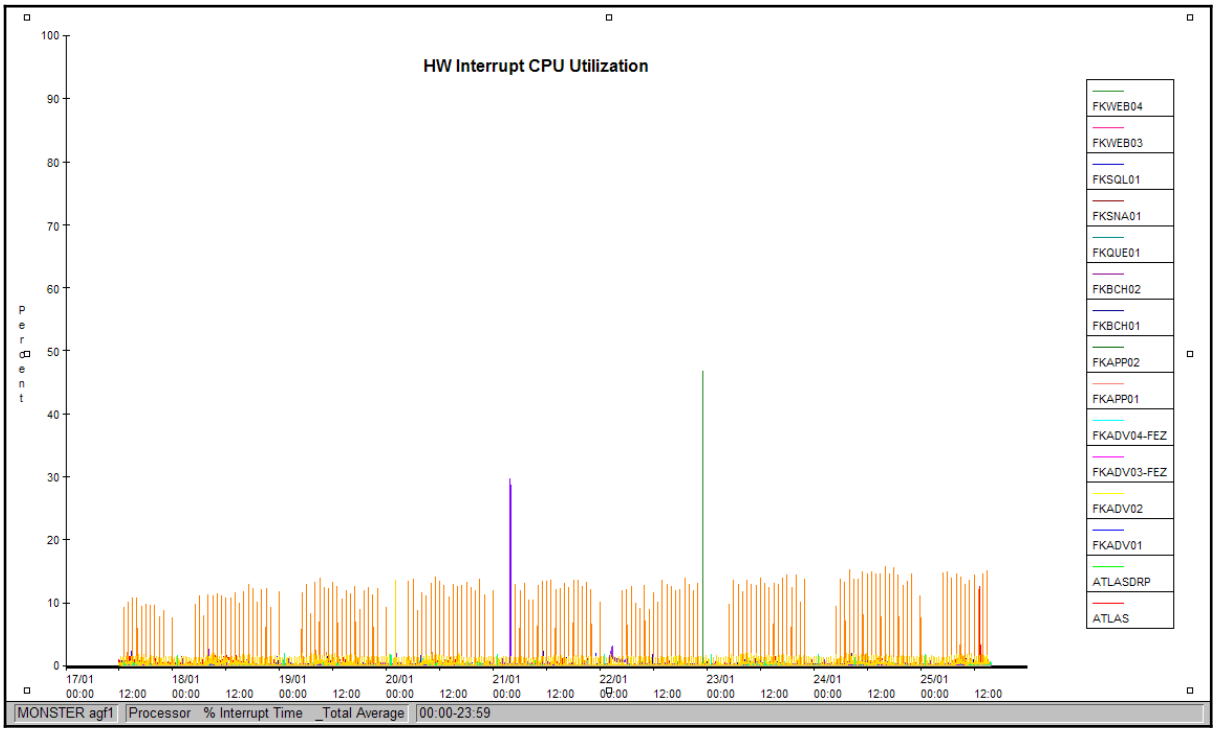


Figure 5-13

With this information the CPU resource can be excluded as root cause for the current issue at Customer.

6. Disk Subsystem

This section describes the disk I/0 subsystem activities for the two days [23 Jan – 24 Jan]. We show the load per logical disk. Unfortunately the command “diskperf –y” has not been executed on all servers (needs a reboot afterwards) as such we are missing this kind of information for the following systems “pa-asdir01, fksna01, fkque01, web2, fkweb04, fkweb03, fkapp01, fkapp02 and fkbch01”.

6.1 Logical Drive C

Figure 6 -14 shows the activity on this device.

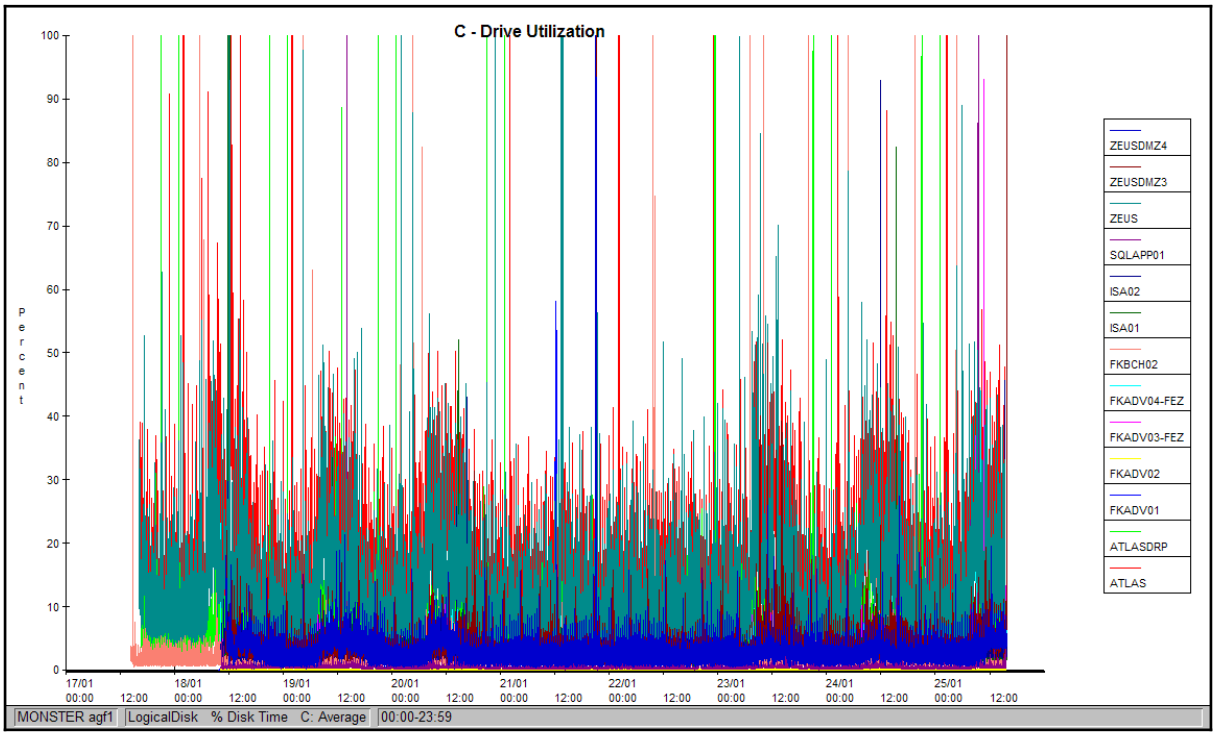


Figure 6-14

The overall load on this device is not abnormally high. Again a more detailed snapshot during the prime shift on 24 Jan. confirms this.

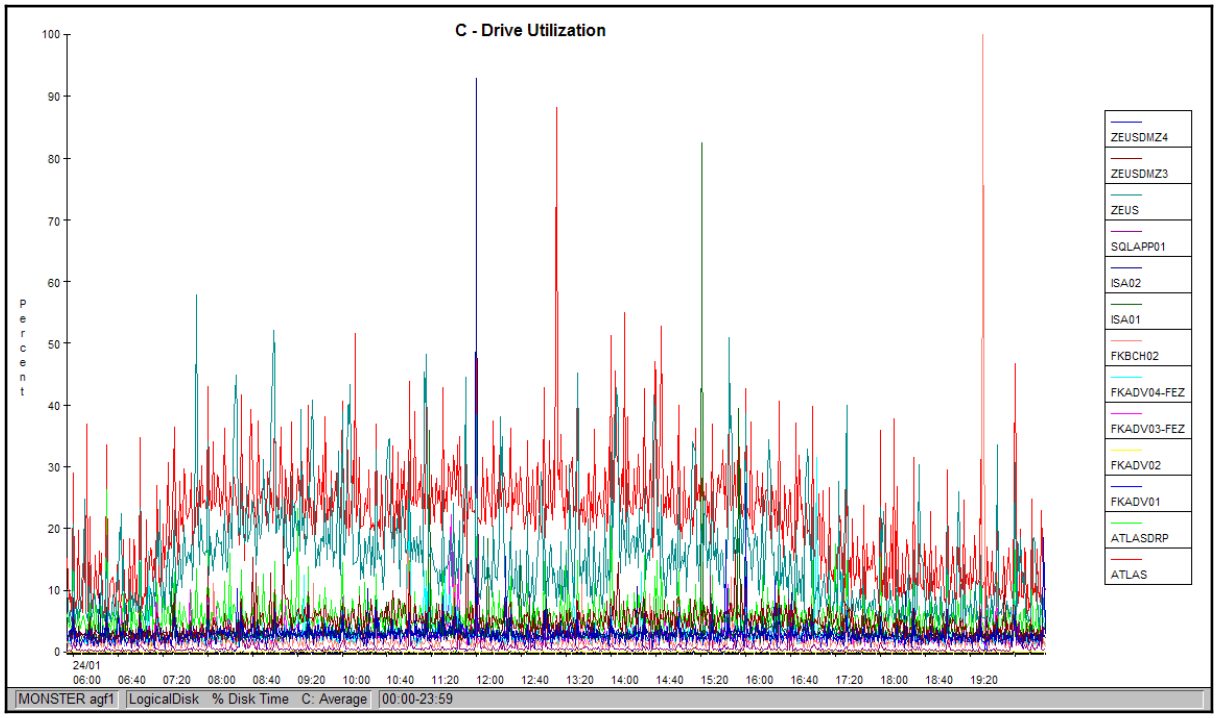


Figure 6-15

6.2 Logical Drive E

Figure 6 -16 shows the activity for the full period.

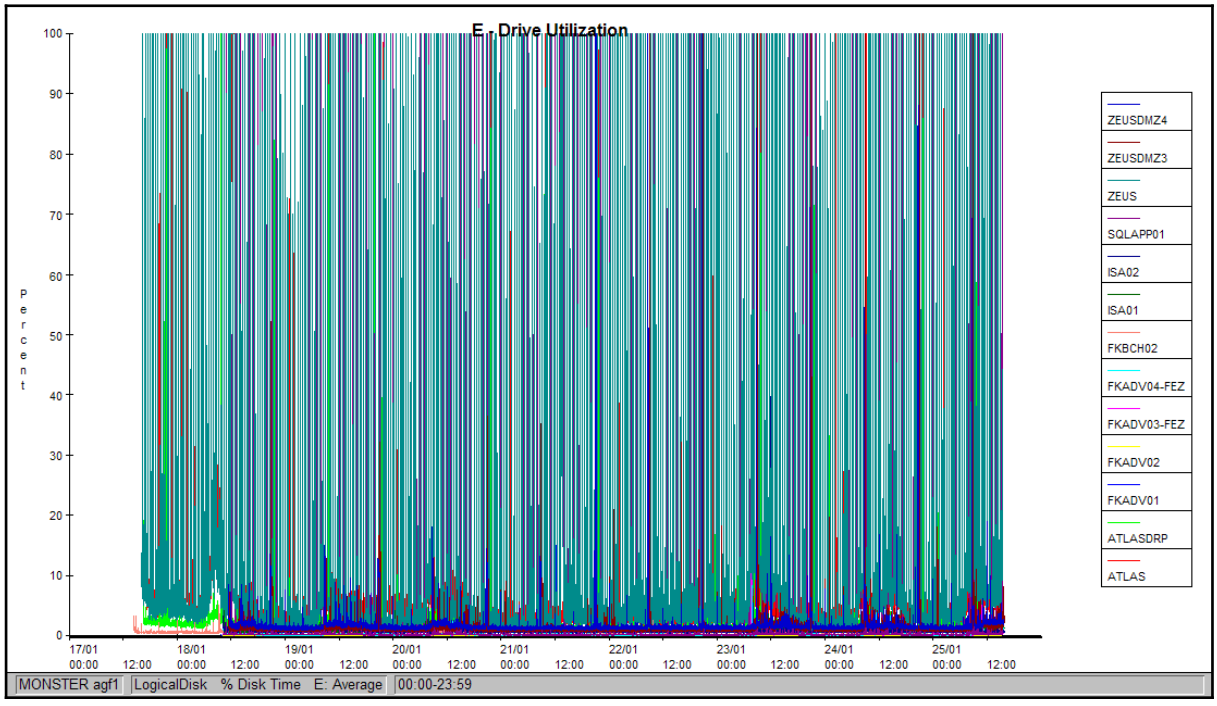


Figure 6-16

This reveals that some servers have disk I/O peaks up to 100% for small periods up to 5 minutes and this especially for server “zeus”. We show 24 Jan. prime shift in more detail in Figure 6 -17.

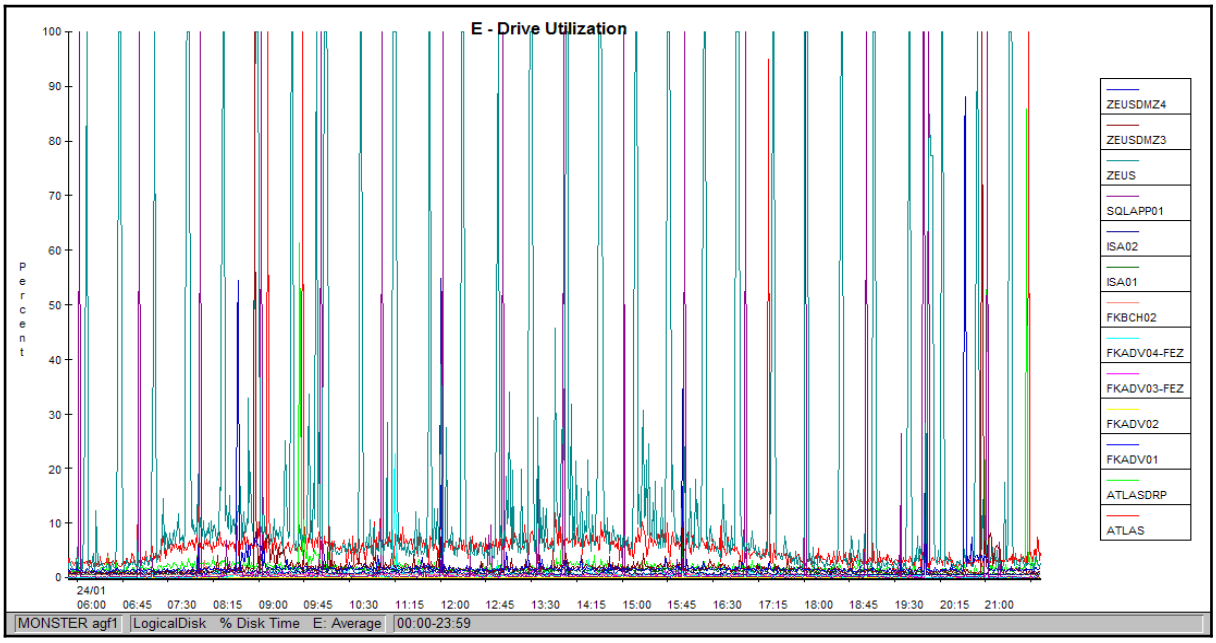


Figure 6-17

6.3 Logical Drives S & F

Figure 6 -18 shows the utilization for these devices.

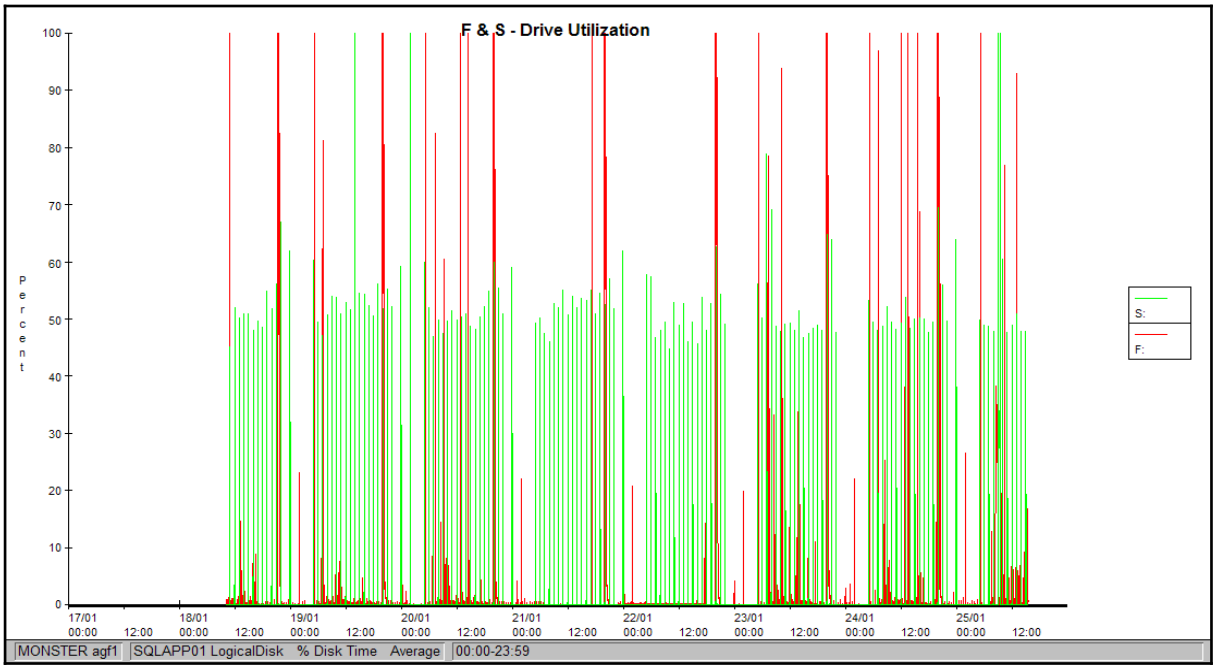


Figure 6-18

Only server “sqlapp01” has these two logical drives.

The disk subsystem does not show relevant issues to explain the current problem at Customer.

6.4 DISK I/O “fkapp01 & fkapp02”

Figure 6 -19 shows the period 23 Jan. <–> 25 Jan. for the servers “fkapp01 & fkapp02” in more detail.

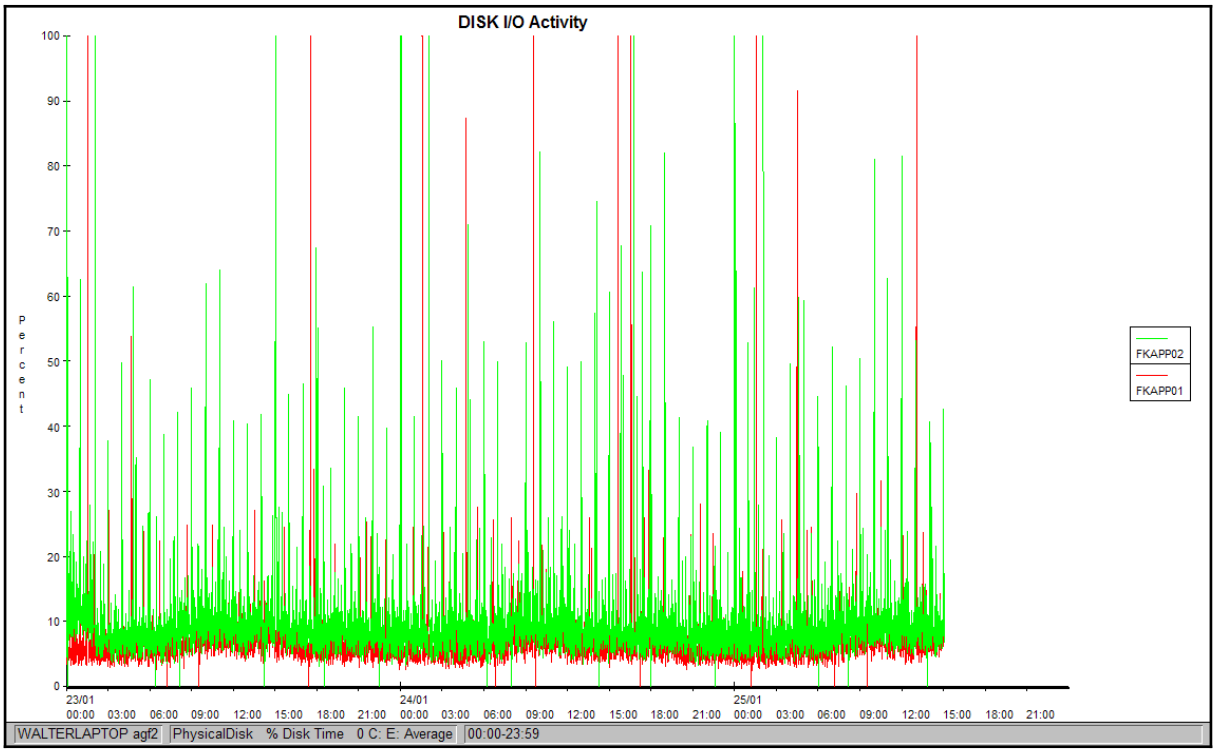


Figure 6-19

Nothing abnormal during this period.

7. Kernel Resources

Win2K implements object models to provide a way of manipulating the most basic elements/resources of the kernel. There are about 27 different objects types of which we evaluate the most important ones for each server for the full period [17 Jan – 25 Jan]:

7.1 Processes & Threads

The processes & threads represent the application & OS activity on the server.

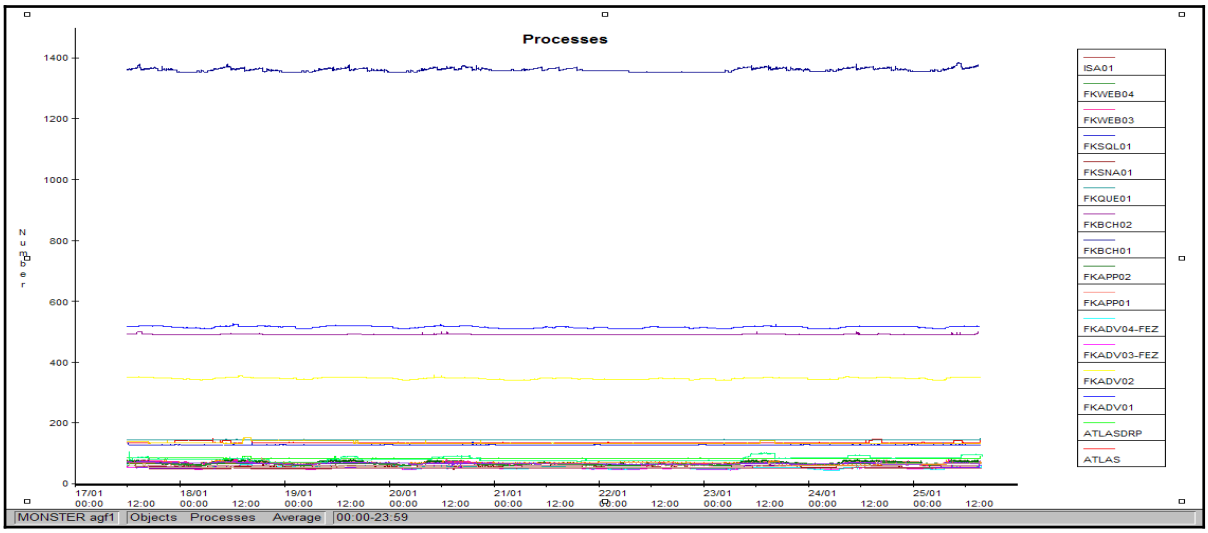


Figure 7-20

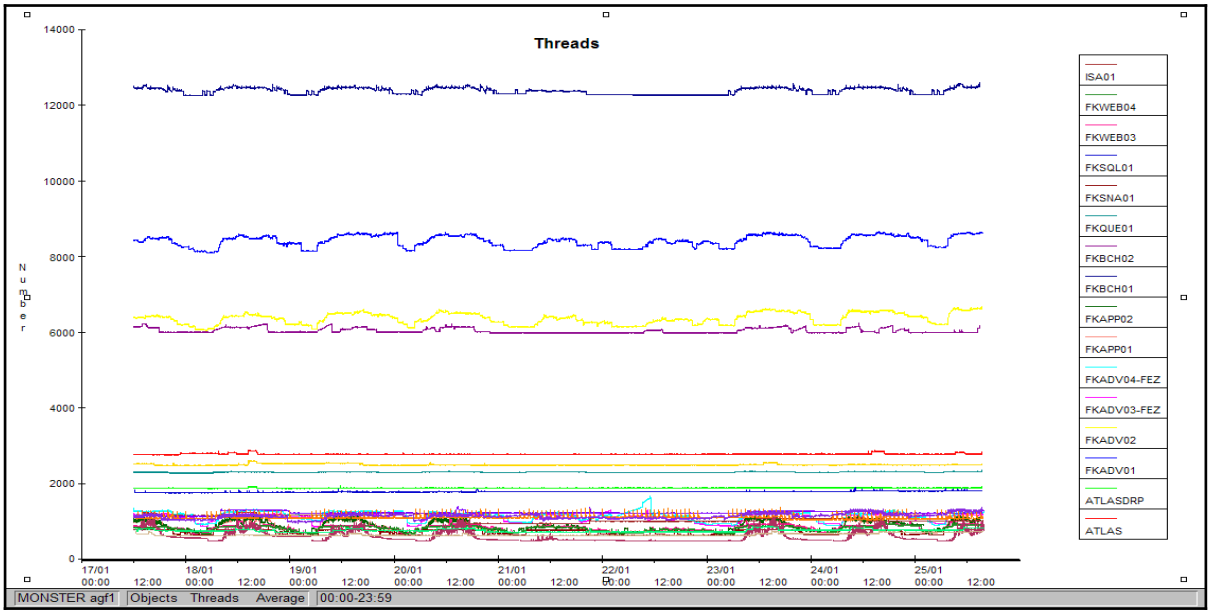


Figure 7-21

No special remarks about this activity.

7.2 Mutexes

A mutex provides exclusive access control for a resource between threads. It is a simple lock with only the thread that owns the lock being able to release the mutex.

It ensures the integrity of a shared resource that they access (most commonly shared data), by allowing only one thread to access it at a time.

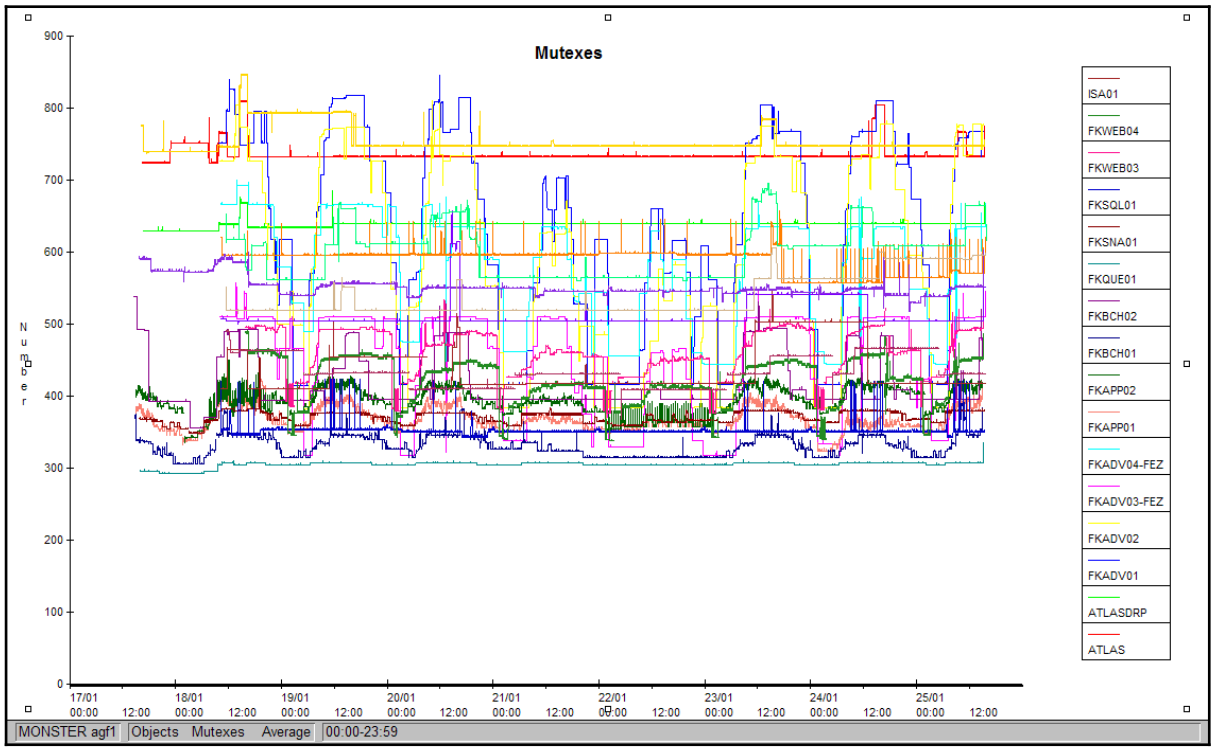


Figure 7-22

No special remarks about this resource.

7.3 Events

An event object is a synchronization object whose state can be explicitly set to signaled by use of the SetEvent function. The event object is useful in sending a signal to a thread indicating that a particular event has occurred.

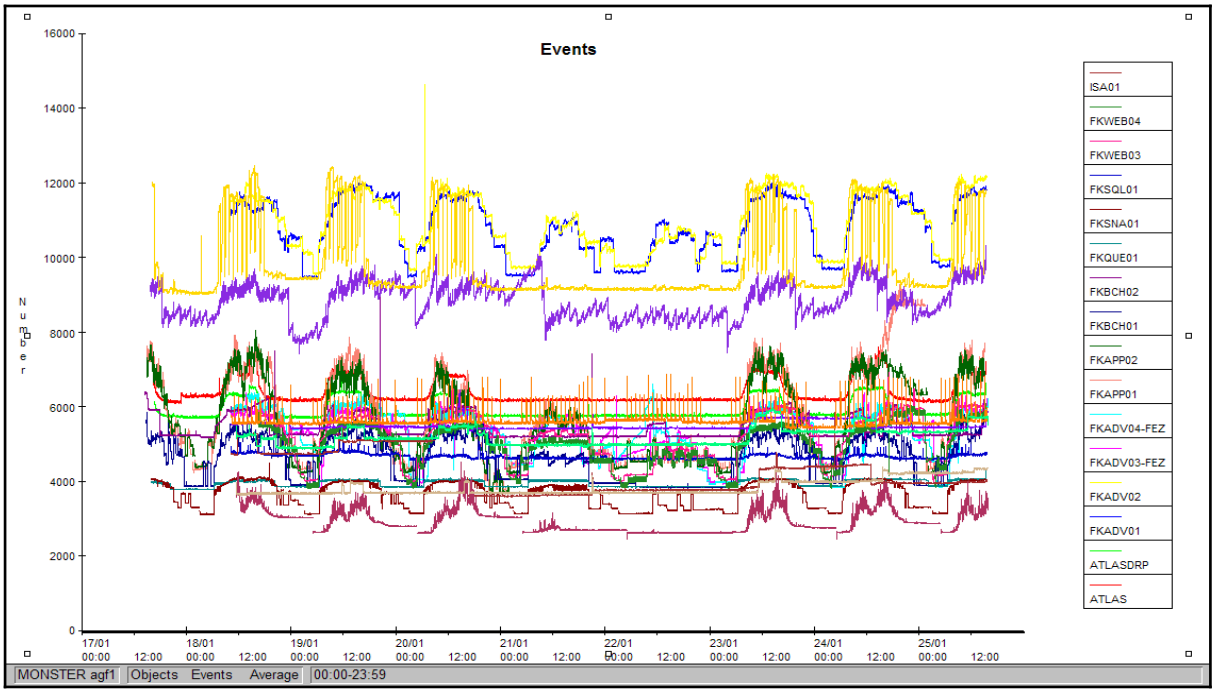


Figure 7-23

It reveals a different activity for the “fkapp01 & fkapp02” servers; see Figure 7 -24, during 24 Jan.

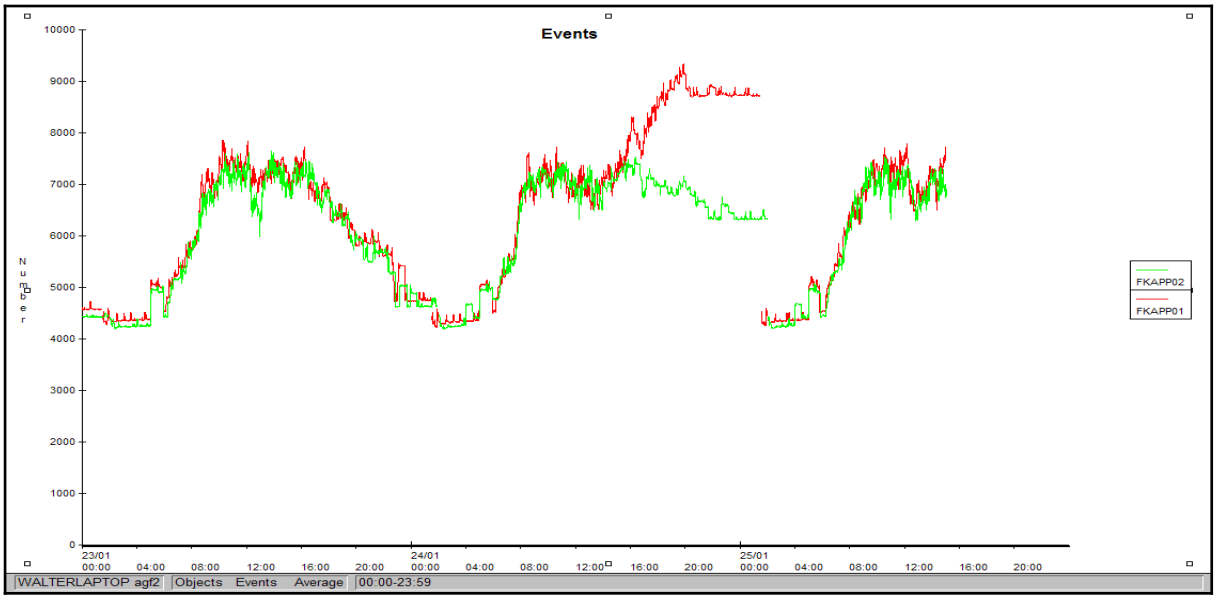


Figure 7-24

Especially sever “fkapp01” needs our attention as we will see further in this document.

7.4 Sections

Represents a block of memory that two or more processes can share. Executive uses them to load images into memory. The cache manager uses them to access data in cached file.

The memory manager does the automatic update of disk file (write) and memory (read).

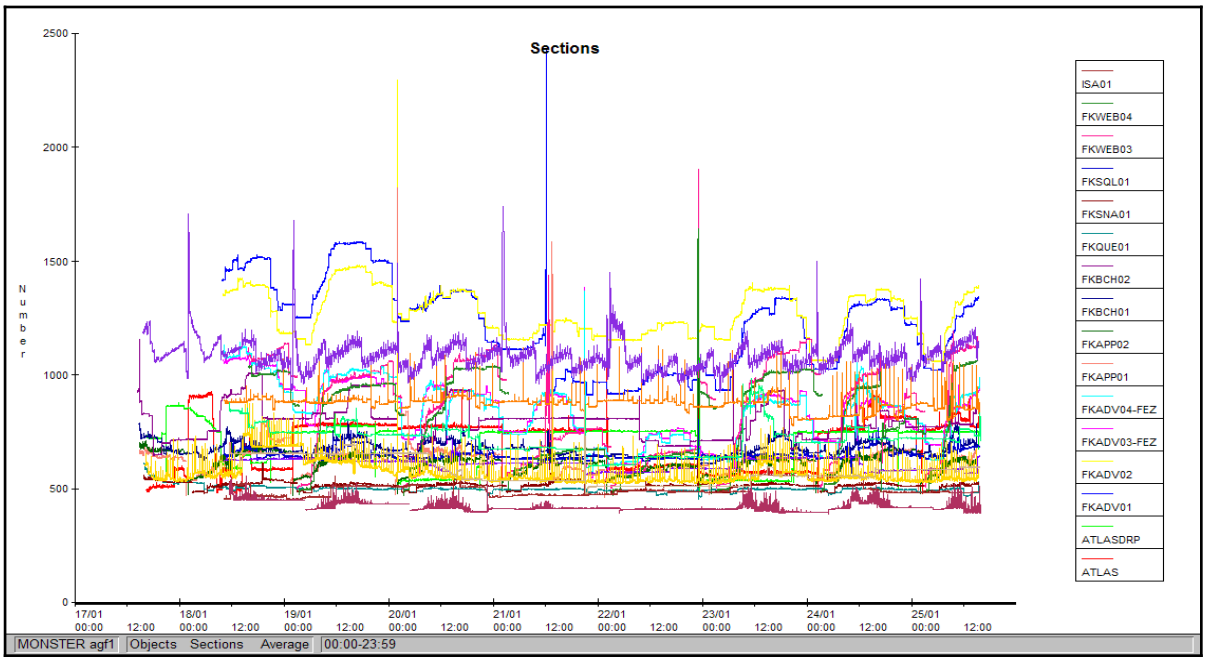


Figure 7-25

No special remarks about this resource.

7.5 Semaphores

The semaphore object is useful in controlling a shared resource that can support a limited number of users. It acts as a gate that limits the number of threads sharing the resource to a specified maximum number.

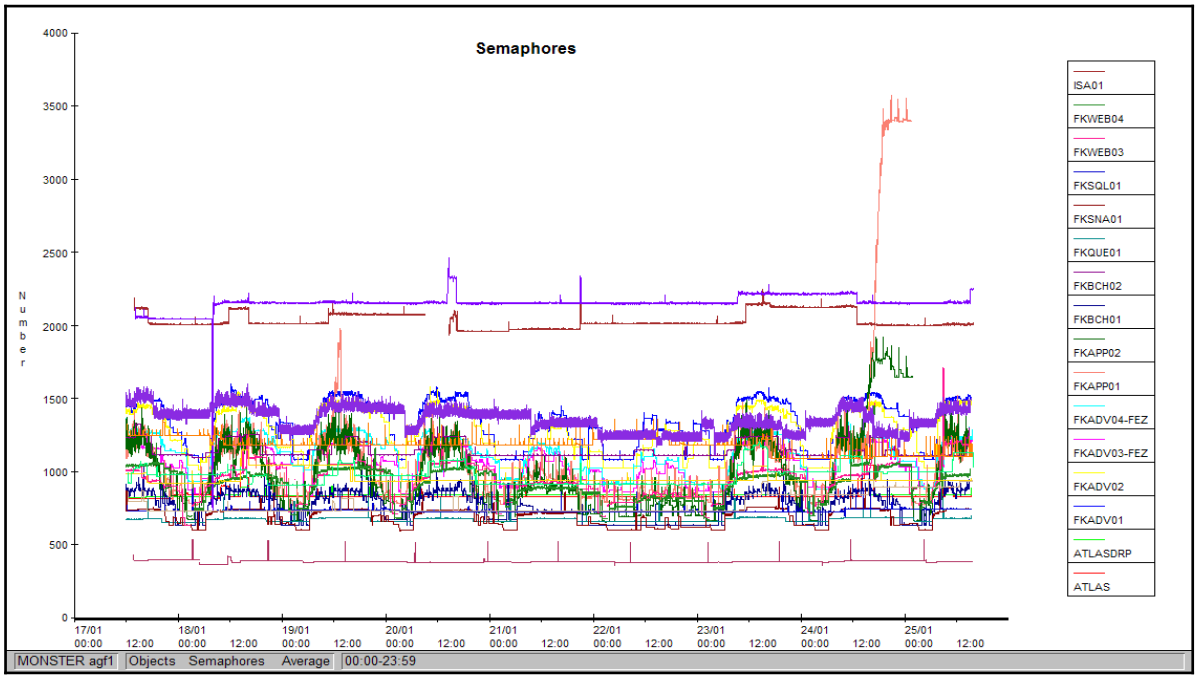


Figure 7-26

This graph reveals that on Tuesday 24 January a strange behaviour occurs on both the servers "fkapp01 & fkapp02" as shown below in Figure 7 -27 in a bit more detail.

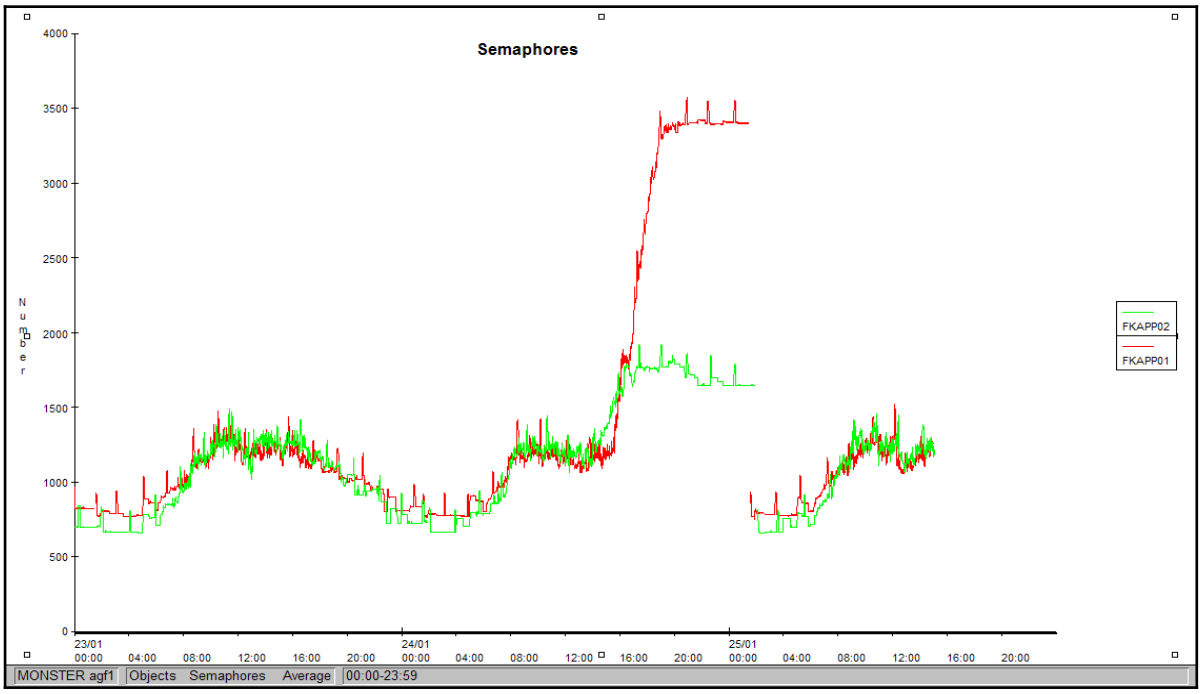


Figure 7-27

Around 16h10 in the afternoon the number of semaphore allocations start to increase significantly on both servers and especially on server "fkapp01" where an increase of 113,5% was measured. A reboot around 1h30 on Wednesday 25 January brought the value back to a normal state. This behaviour correlates with the problem occurrence & solution actions undertaken so this fact needs further investigation.

This behaviour has been correlated with all servers & metrics in the central DB and the following list was obtained.

correlated.txt - Notepad

File Edit Format View Help

```
System,Category Group,Category,Subcategory,Statistic,Workload Set,Workload,Resource,Correlation Coefficient
FKAPP01,Objects,,,Semaphores,,,,1.000
ZEUS,NBT Connection,,,Bytes Sent/sec,,,PC040338       .,  0,999
FKBCH02,.NET CLR LocksAndThreads,,,# of current logical Threads,,,_Global_,  0,995
FKBCH02,.NET CLR LocksAndThreads,,,# of total recognized threads,,,_Global_,  0,995
FKBCH02,.NET CLR LocksAndThreads,,,# of current recognized threads,,,_Global_,  0,995
FKAPP01,Workload,by Workload,,handles,agf_audit,dllhost_$PZNTX,,  0,994
SQLAPP01,Terminal Services Session,,,Pool Paged Bytes,,,RDP-Tcp 62,-0,993
ZEUS,NBT Connection,,,Bytes Total/sec,,,PC040338       .,  0,993
FKAPP01,Workload,by Workload,,privateMB,agf_audit,dllhost_$PZNTX,,  0,992
FKAPP01,Workload,by Workload,,pagefileMB,agf_audit,dllhost_$PZNTX,,  0,992
FKADV03-FEZ,.NET CLR Exceptions,,,# of Exceps Thrown,,,w3wp,  0,991
FKADV03-FEZ,.NET CLR Interop,,,# of marshalling,,,w3wp,  0,990
FKAPP01,Workload,by Workload,,wssMB,agf_audit,dllhost_$PZNTX,,  0,990
FKBCH02,.NET CLR LocksAndThreads,,,# of total recognized threads,,,w3wp#1,  0,989
SQLAPP01,Terminal Services Session,,,Output WdFrames,,,RDP-Tcp 62,-0,989
SQLAPP01,Terminal Services Session,,,Output Frames,,,RDP-Tcp 62,-0,989
FKADV03-FEZ,ASP.NET Apps v1.1.4322,,,Requests Total,,,_LM_W3SVC_18_Root_lvl3_Net_Brokerage_BrokerAccount_,  0,988
FKADV03-FEZ,ASP.NET Apps v1.1.4322,,,Requests Succeeded,,,_LM_W3SVC_18_Root_lvl3_Net_Brokerage_BrokerAccount_,  0,988
FKADV03-FEZ,.NET CLR Memory,,,# Gen 1 Collections,,,w3wp,  0,988
FKADV02,ASP.NET Apps v1.1.4322,,,Request Bytes Out Total,,,_LM_W3SVC_19_Root_lvl0_Net_Financial_BrokerAccount_,  0,986
FKADV02,ASP.NET Apps v1.1.4322,,,Anonymous Requests,,,_LM_W3SVC_19_Root_lvl0_Net_Financial_BrokerAccount_,  0,986
```

Table 7-4

We will further investigate this list in the following sections.

7.5.1 Correlation – Kernel Memory

A cross-check if issues occurred on the level of kernel memory was negative, see Figure 7 -28 below.

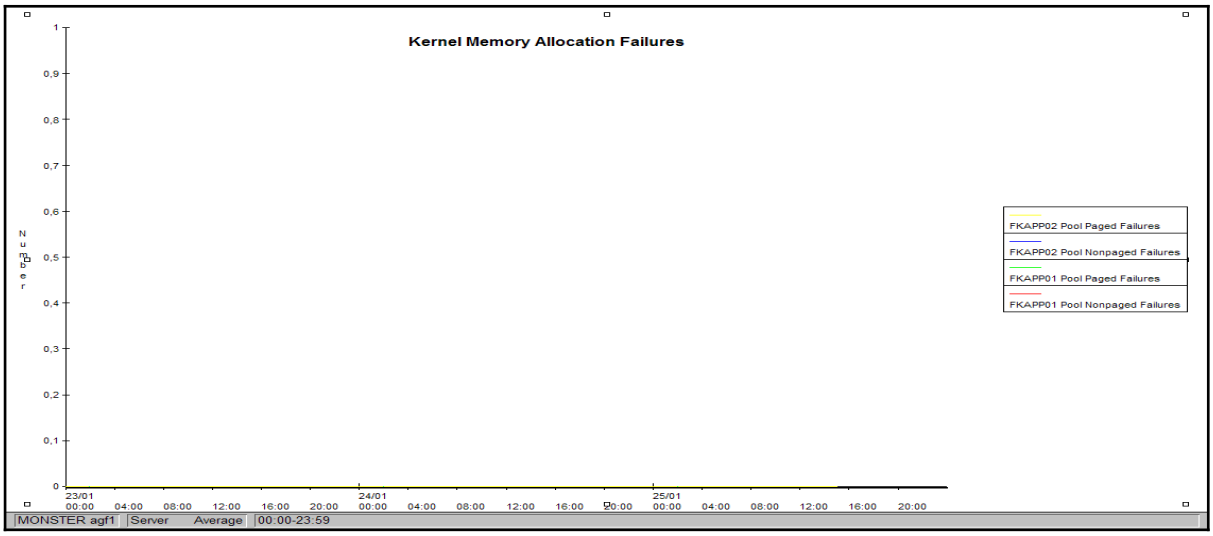


Figure 7-28

The server has sufficient kernel memory left to handle increased load as we already know from the memory section of this document.

7.5.2 Correlation – CPU Workload Activity

This shows the CPU consumption for the different applications/workloads. It reveals that there is no relationship at all with the semaphore increase.

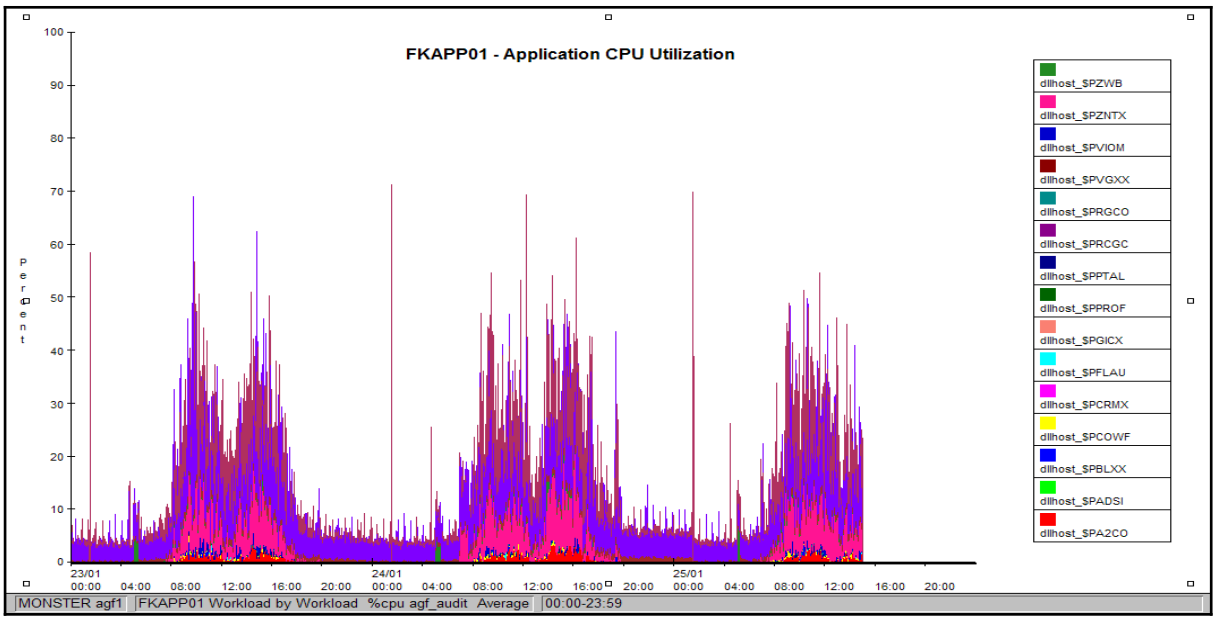


Figure 7-29

7.5.3 Correlation – Event Workload Activity

Verification of the application activity on server “fkapp01” revealed an increased events activity for workload named “dllhost_$PZNTX” as shown in Figure 7 -30.

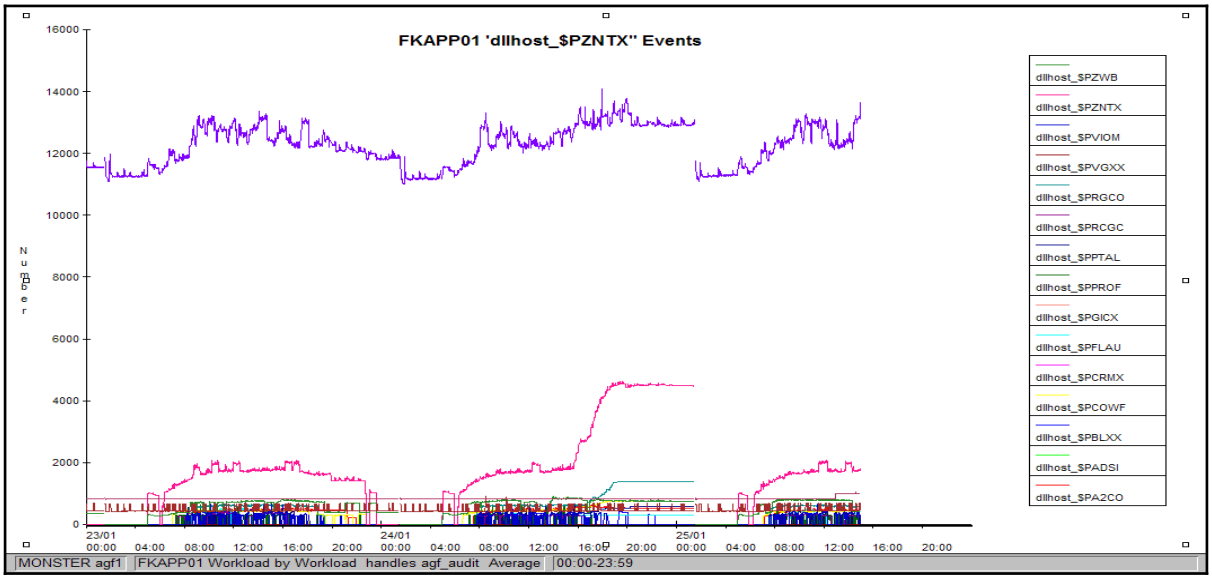


Figure 7-30

7.5.4 Correlation – Memory Workload Activity

At the same time the memory needs of this workload “dllhost_$PZNTX” also increases, see Figure 7 - 31.

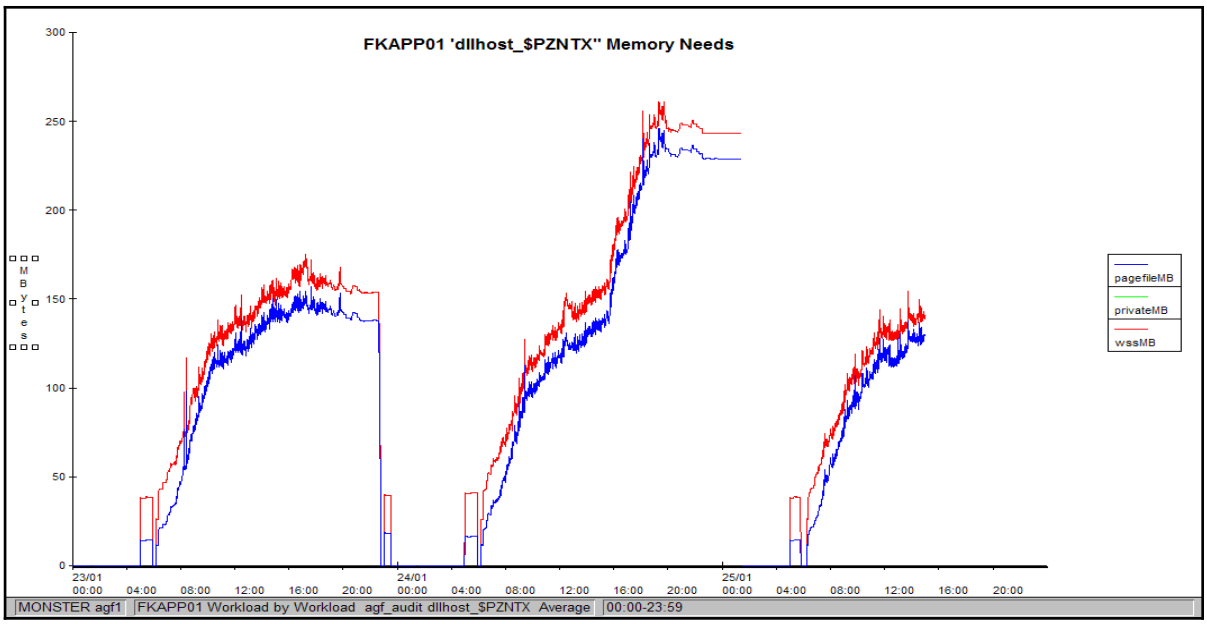


Figure 7-31

7.5.5 Correlation – FKADV02 ASP.NET Apps v1.1.4322 Anonymous Requests

The correlation engine revealed that the on server “fkadv02” the activity of “ASP.NET Apps v1.1.4322,,,Anonymous Requests,,,_LM_W3SVC_19_Root_lvl0_Net_Financial_BrokerAccount_” has a possible relationship with the semaphore increase on server “fkapp01” as shown in Figure 7 -32.

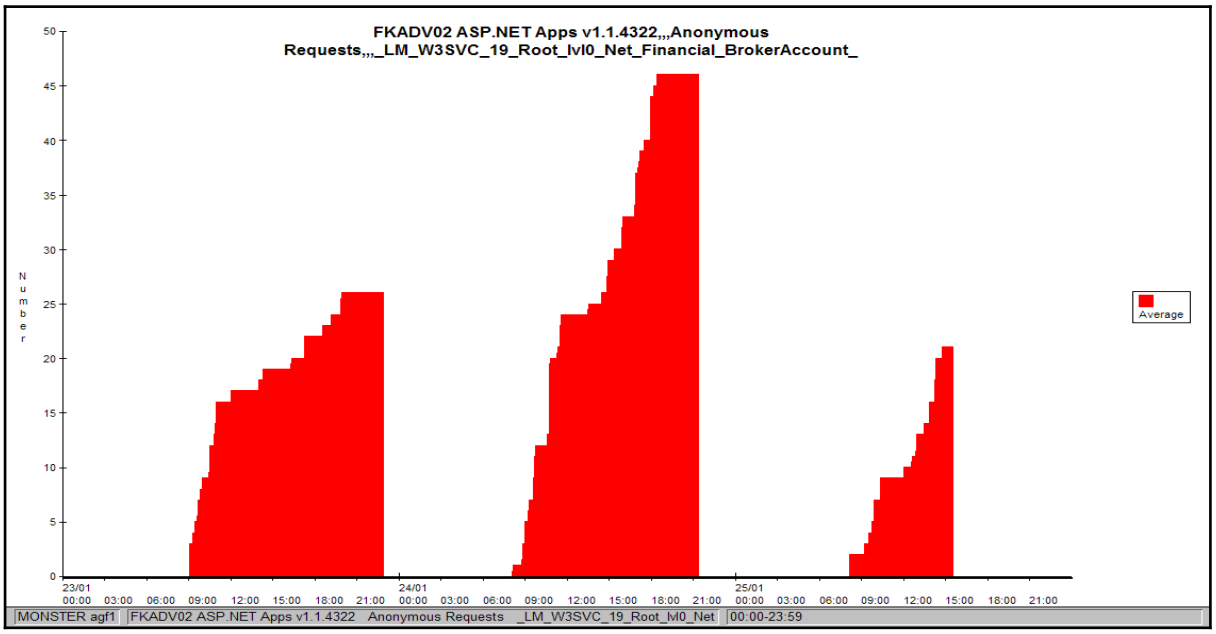


Figure 7-32

Seems that these requests on server “fkadv02” triggers the semaphore activity on the server “fkapp01 & fkapp02”.

7.5.6 Correlation – FKADV02 ASP.NET Apps v1.1.4322 Request Bytes Out

The correlation engine revealed that on server “fkadv02” the activity of “ASP.NET Apps v1.1.4322,,,Request Bytes Out Total,,,_LM_W3SVC_19_Root_lvl0_Net_Financial_BrokerAccount_” has a possible relationship with the semaphore increase on server “fkapp01” as shown in Figure 7 -33.

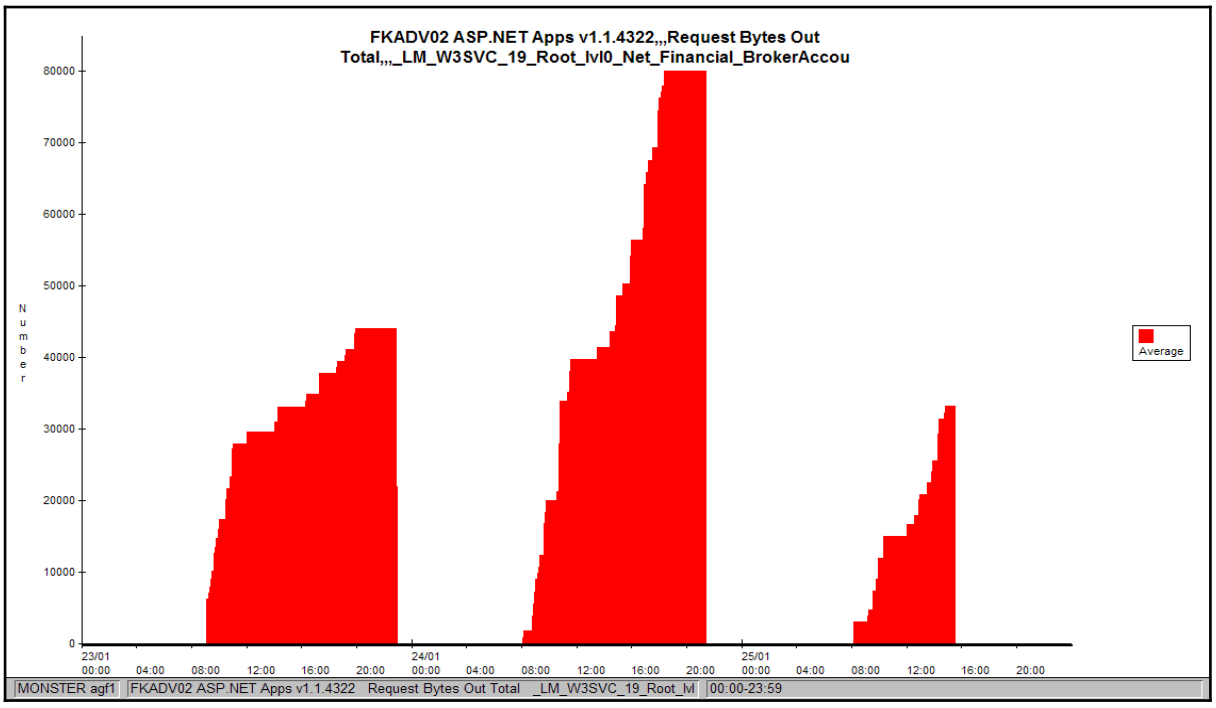


Figure 7-33

7.5.7 Correlation – FKAPP01 Event Log

Verification of the event log of server “fkapp01” revealed the following interesting errors, see Figure 7 -34.

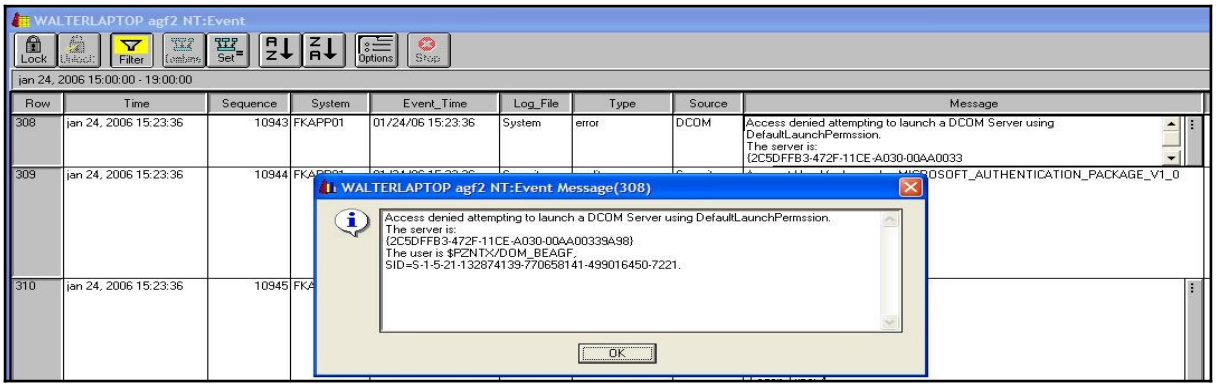
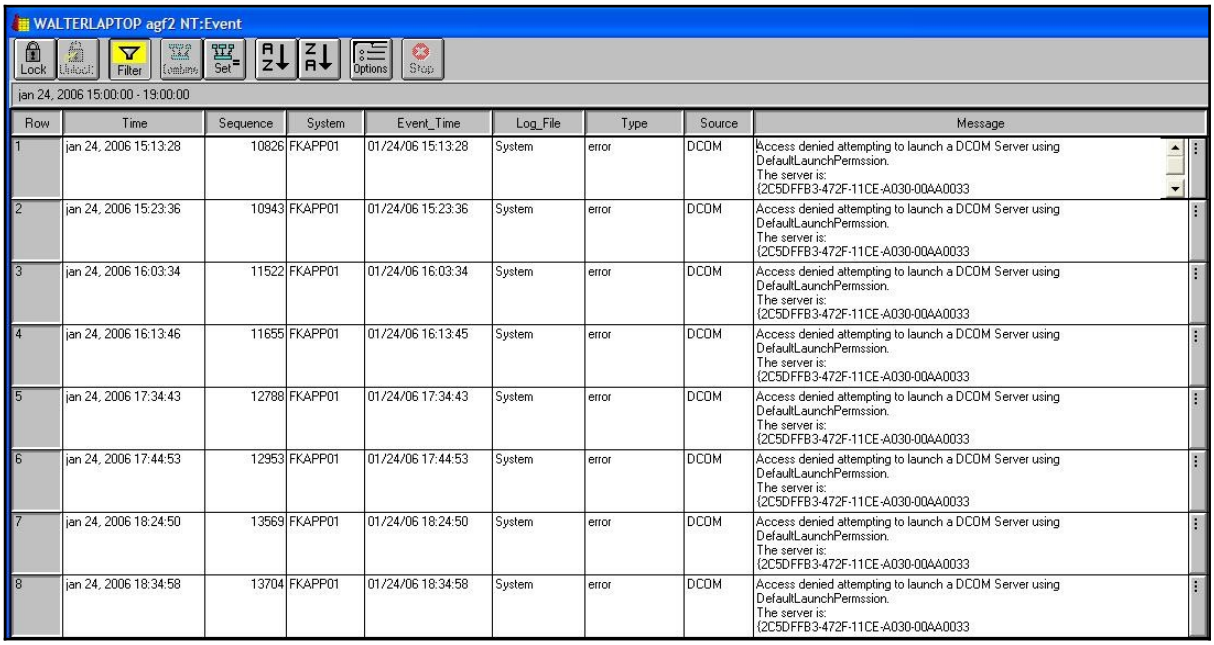


Figure 7-34

The com+ application ID “{2C5DFFB3-472F-11CE-A030-00AA00339A98}” encounters issues around the period where the stability problems appear on 24 January. In fact this issue occurred several times that afternoon.



Row	Time	Sequence	System	Event_Time	Log_File	Type	Source	Message
1	jan 24, 2006 15:13:28	10826	FKAPP01	01/24/06 15:13:28	System	error	DCOM	Access denied attempting to launch a DCOM Server using DefaultLaunchPermssion. The server is: {2C5DFFB3-472F-11CE-A030-00AA0033
2	jan 24, 2006 15:23:36	10943	FKAPP01	01/24/06 15:23:36	System	error	DCOM	Access denied attempting to launch a DCOM Server using DefaultLaunchPermssion. The server is: {2C5DFFB3-472F-11CE-A030-00AA0033
3	jan 24, 2006 16:03:34	11522	FKAPP01	01/24/06 16:03:34	System	error	DCOM	Access denied attempting to launch a DCOM Server using DefaultLaunchPermssion. The server is: {2C5DFFB3-472F-11CE-A030-00AA0033
4	jan 24, 2006 16:13:46	11655	FKAPP01	01/24/06 16:13:45	System	error	DCOM	Access denied attempting to launch a DCOM Server using DefaultLaunchPermssion. The server is: {2C5DFFB3-472F-11CE-A030-00AA0033
5	jan 24, 2006 17:34:43	12788	FKAPP01	01/24/06 17:34:43	System	error	DCOM	Access denied attempting to launch a DCOM Server using DefaultLaunchPermssion. The server is: {2C5DFFB3-472F-11CE-A030-00AA0033
6	jan 24, 2006 17:44:53	12953	FKAPP01	01/24/06 17:44:53	System	error	DCOM	Access denied attempting to launch a DCOM Server using DefaultLaunchPermssion. The server is: {2C5DFFB3-472F-11CE-A030-00AA0033
7	jan 24, 2006 18:24:50	13569	FKAPP01	01/24/06 18:24:50	System	error	DCOM	Access denied attempting to launch a DCOM Server using DefaultLaunchPermssion. The server is: {2C5DFFB3-472F-11CE-A030-00AA0033
8	jan 24, 2006 18:34:58	13704	FKAPP01	01/24/06 18:34:58	System	error	DCOM	Access denied attempting to launch a DCOM Server using DefaultLaunchPermssion. The server is: {2C5DFFB3-472F-11CE-A030-00AA0033

Figure 7-35

This should clearly be further investigated._

8. Network Resource

The correlation engine did not reveal any link with the network activity. As a quick check we look at the overall activity in packets/sec for all network cards for each server, see Figure 8 -36.

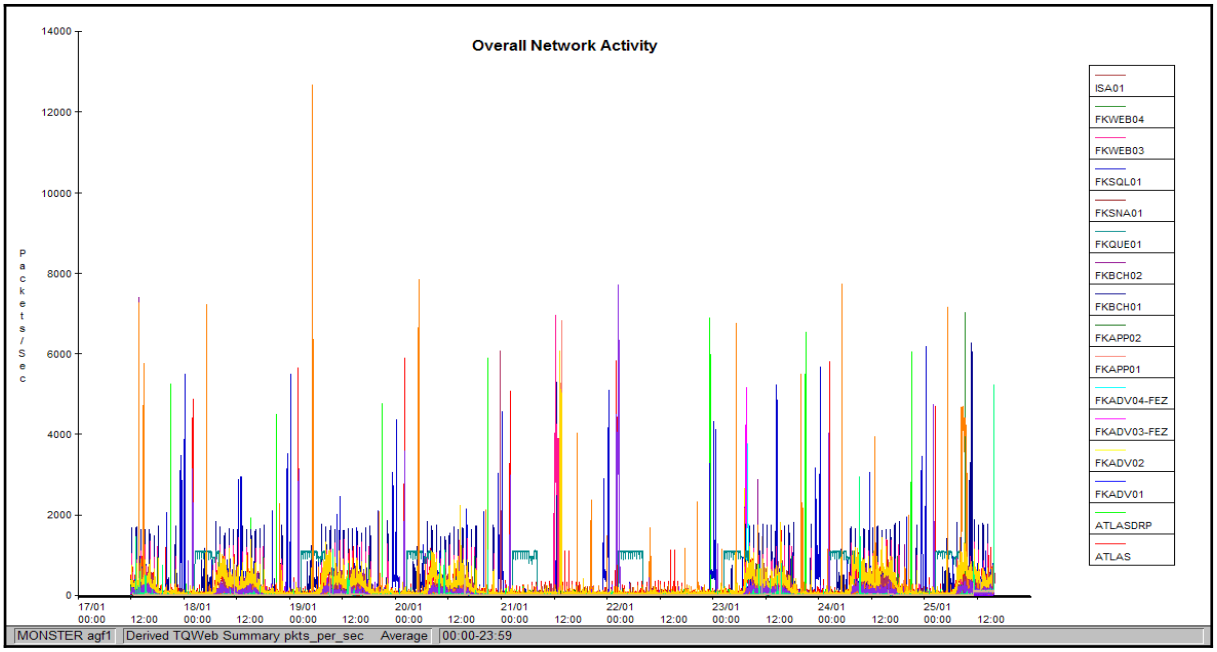


Figure 8-36

This represents a quite low activity. A more detailed graph for 24 Jan. prime shift period is shown below.

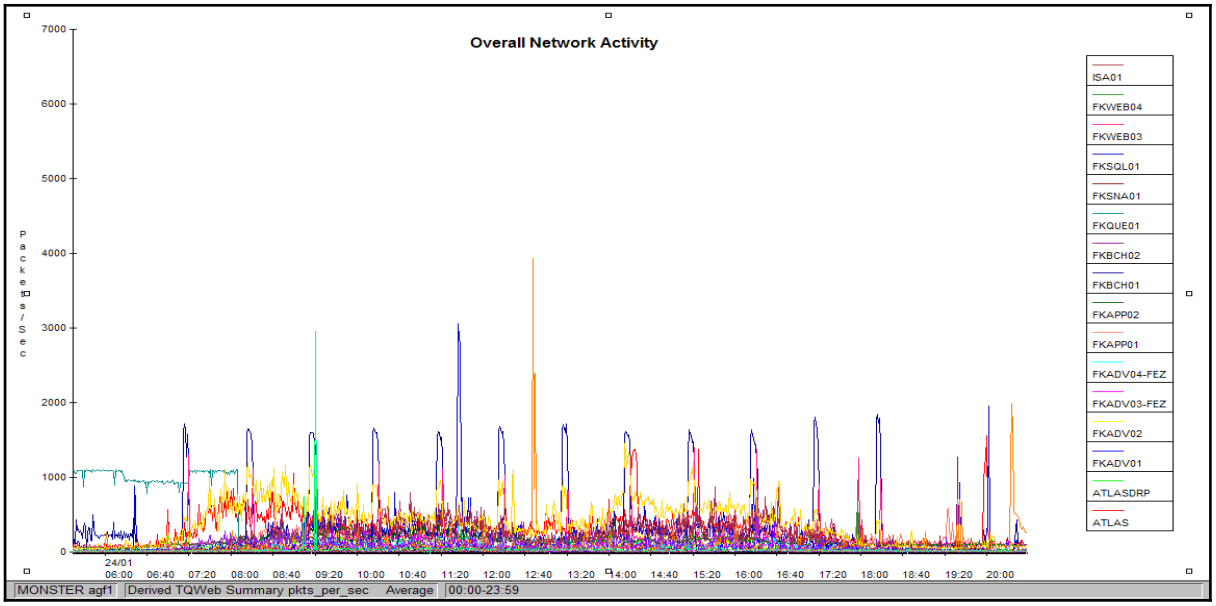


Figure 8-37

This reveals that the network resource is not the first point where we need to debug in order to get to

the root cause of this problem. Figure 8 -38 shows the network activity (Bytes/Sec) for each network card on server “FKADV02”.

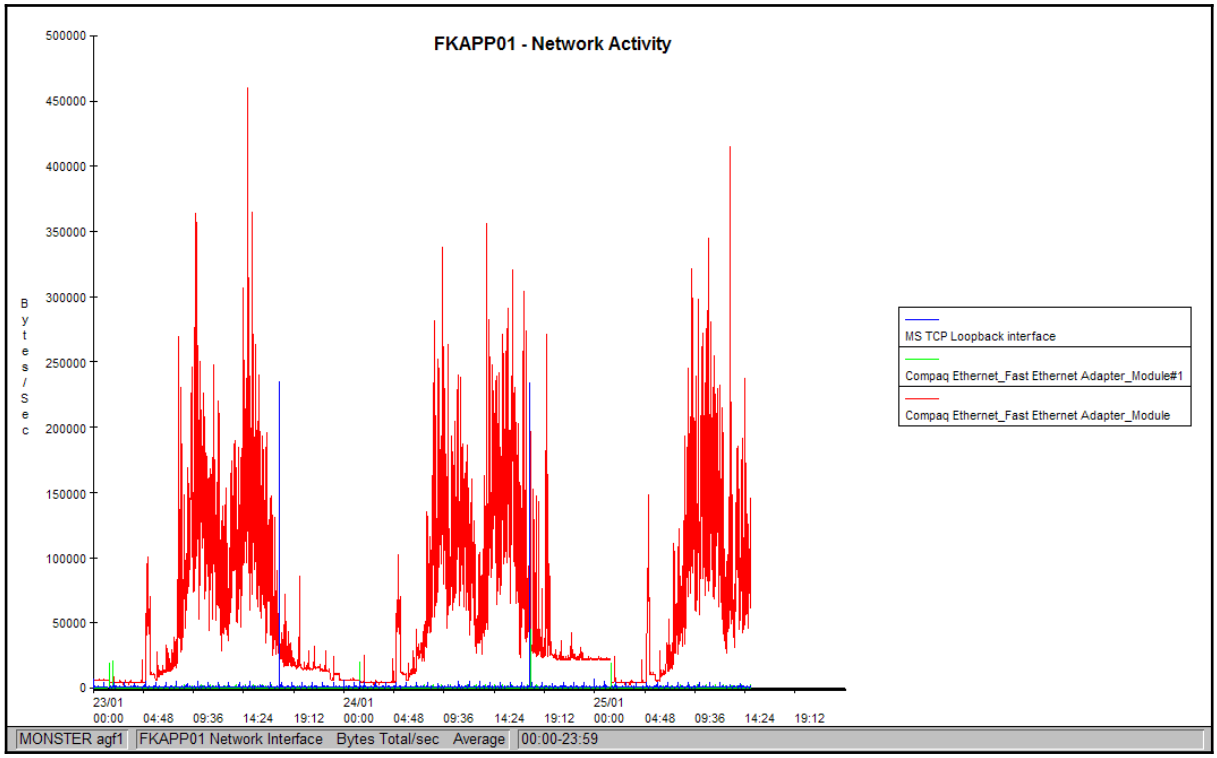


Figure 8-38

The amount of data transferred (300000 Bytes/Sec -> 292,96 KBytes/Sec -> 0.286 MBytes/Sec or 2.288 Mbits/Sec) is largely below the available bandwidth offered by the 100MBit LAN cards.

- End -