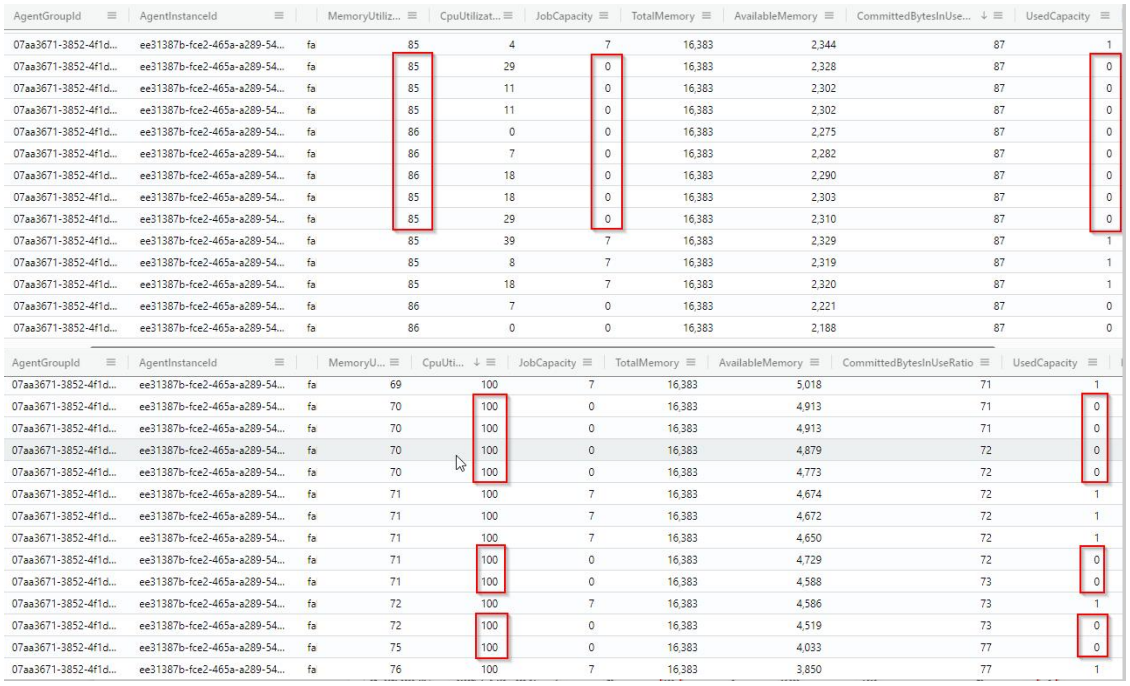
Which process uses up SHIR machine resource

Last updated by | Veena Pachauri | Mar 8, 2023 at 11:10 PM PST

Issue Symptomn

Customer reported they are seeing very high CPU/memory utilization on SHIR VM but there is no pipeline running against this SHIR. Especially when we check SHIR hearbeat, we can see the used capacity is almost zero all the time.



AgentGroupId	AgentInstanceId		MemoryUtiliz...	CpuUtilizat...	JobCapacity	TotalMemory	AvailableMemory	CommittedBytesInUse...	UsedCapacity
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	4	7	16,383	2,344	87	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	29	0	16,383	2,328	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	11	0	16,383	2,302	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	11	0	16,383	2,302	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	86	0	0	16,383	2,275	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	86	7	0	16,383	2,282	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	86	18	0	16,383	2,290	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	18	0	16,383	2,303	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	29	0	16,383	2,310	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	39	7	16,383	2,329	87	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	8	7	16,383	2,319	87	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	85	18	7	16,383	2,320	87	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	86	7	0	16,383	2,221	87	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	86	0	0	16,383	2,188	87	0

AgentGroupId	AgentInstanceId		MemoryU...	CpuUti...	JobCapacity	TotalMemory	AvailableMemory	CommittedBytesInUseRatio	UsedCapacity
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	69	100	7	16,383	5,018	71	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	70	100	0	16,383	4,913	71	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	70	100	0	16,383	4,913	71	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	70	100	0	16,383	4,879	72	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	70	100	0	16,383	4,773	72	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	71	100	7	16,383	4,674	72	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	71	100	7	16,383	4,672	72	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	71	100	7	16,383	4,650	72	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	71	100	0	16,383	4,729	72	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	71	100	0	16,383	4,588	73	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	72	100	7	16,383	4,586	73	1
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	72	100	0	16,383	4,519	73	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	75	100	0	16,383	4,033	77	0
07aa3671-3852-4f1d...	ee31387b-fce2-465a-a289-54...	fa	76	100	7	16,383	3,850	77	1

Issue Analysis

The metrics collected in heartbeat are machine wide. Multiple processes run on same SHIR VM, each could consume system resource like memory, CPU, network bandwidth etc. So it could be other process than SHIR processed which exhausted system resource.

For this kind of issues, we need to identify which process used up the system resource (memory, CPU, network etc.). Windows Performance Monitor (PerfMon) log is helpful.

Steps to collect PerfMon

1. create a folder, like 'D:\PerfMonLogs'
2. open a cmd window as administrator, and run configuration command:

   Logman create counter MS_perf_log -f bin -c "\Memory*" "\PhysicalDisk*()*" "\LogicalDisk*()*" "\Server*" "\System*" "\Process*()*" "\Processor*()*" -si 00:00:01 -max 500 -cnf 01:00:00 -o D:\PerfMonLogs\MS_perf_log.blg
3. start collection command: **Logman start MS_perf_log**
4. Please collect for about 10 to 15 min and ensure the high CPU/memory issue has reproduced.
5. stop collection command: **Logman stop MS_perf_log**
6. Please compress and upload all .blg files under D:\PerfMonLogs\ folder.

How to analyze PerfMon log

Basically this is Windows knownledge, you can cut collaboration with CSS Windows Performance team. The aim is to find out which process uses up most memory/CPU/network/Disk IO etc.

There is online material for how to learn these counters as well, take a look if interested:
https://social.technet.microsoft.com/wiki/contents/articles/12984.understanding-processor-processor-time-and-process-processor-time.aspx

Process Explorer

Process Explorer is another tool that could be leveraged to analyze machine wide performance issues.