

AppManager Testing Demo

Desktop Testing - MT19

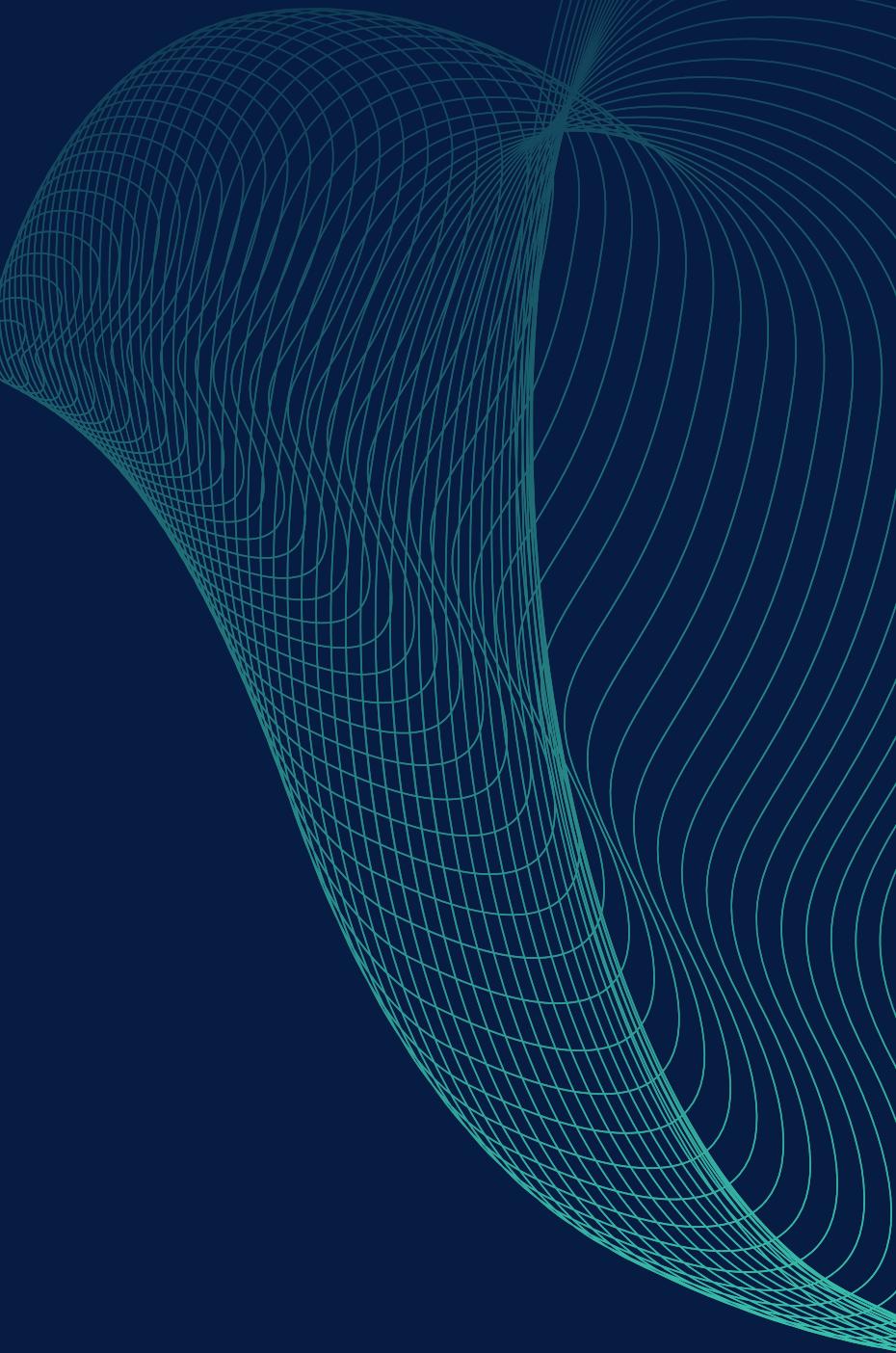
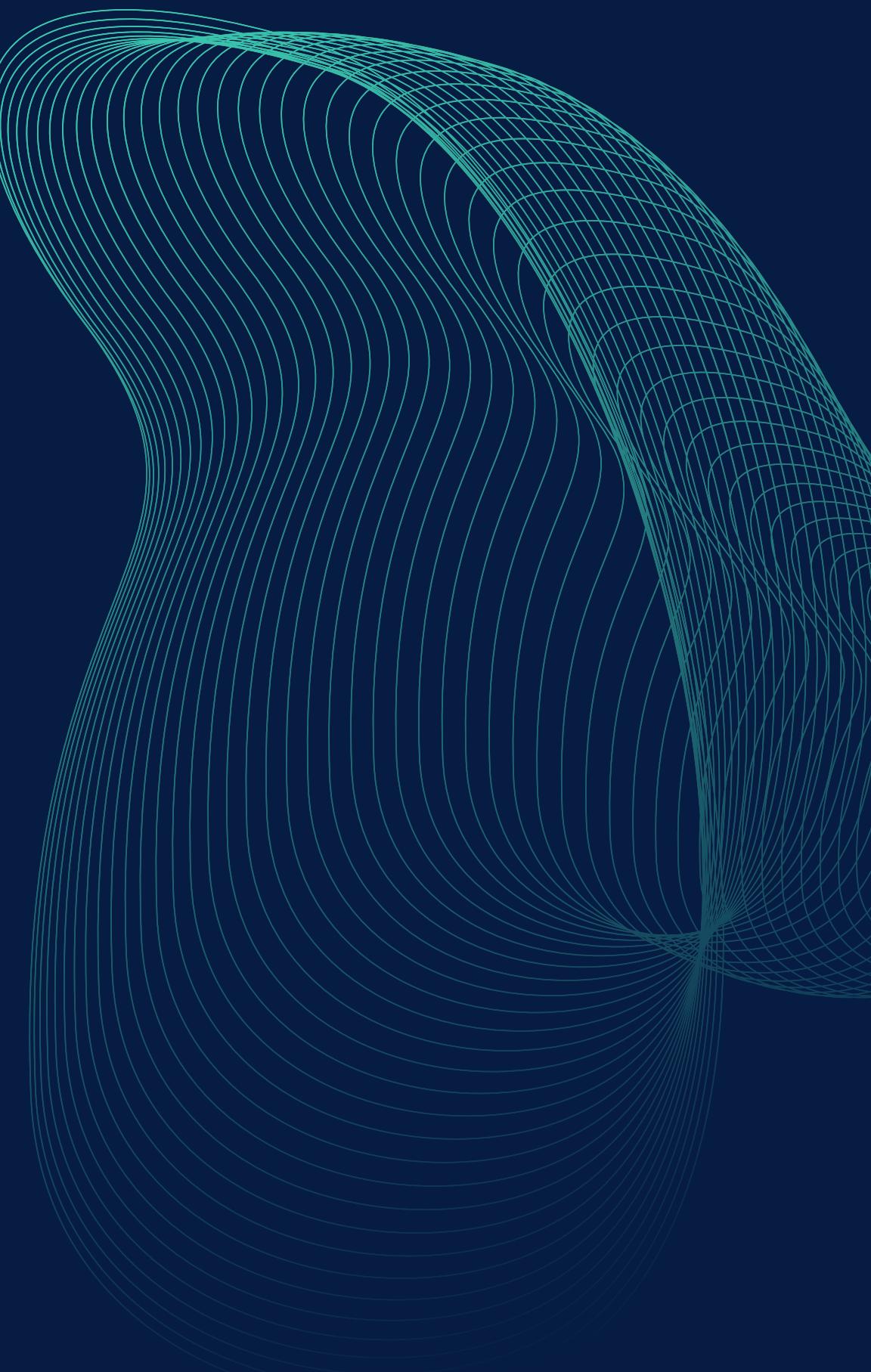
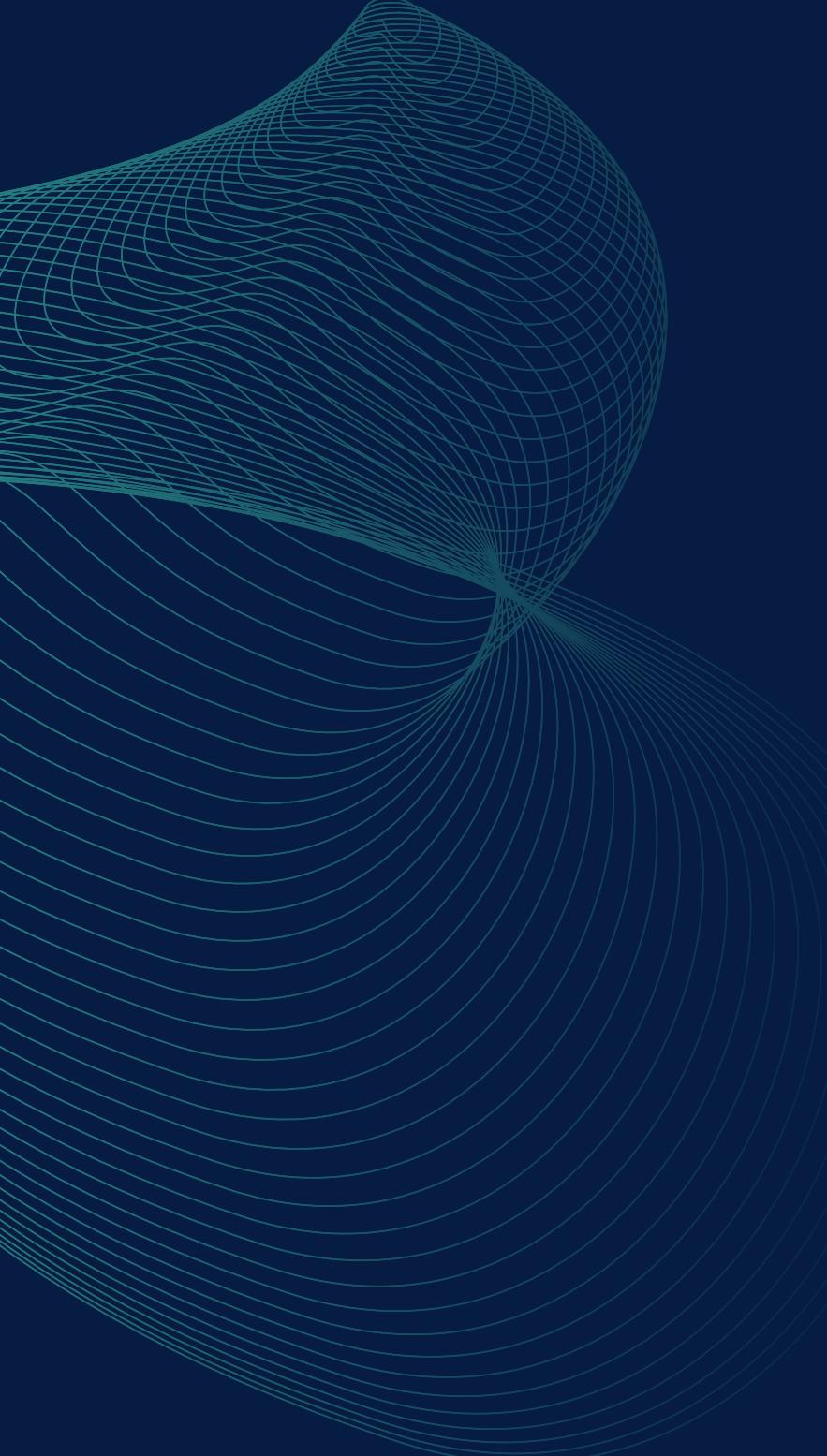


Table of Contents

- **Introduction**
- **Architecture**
- **Planning**
- **General Attributes**
- **Knowledge Scripts**
- **Reports**
- **Conclusions**





Introduction

What is AppManager?

Comprehensive solution for
**managing, diagnosing,
analyzing performance,
availability, and server health**
for a broad spectrum of
environments, applications, and
server hardware.

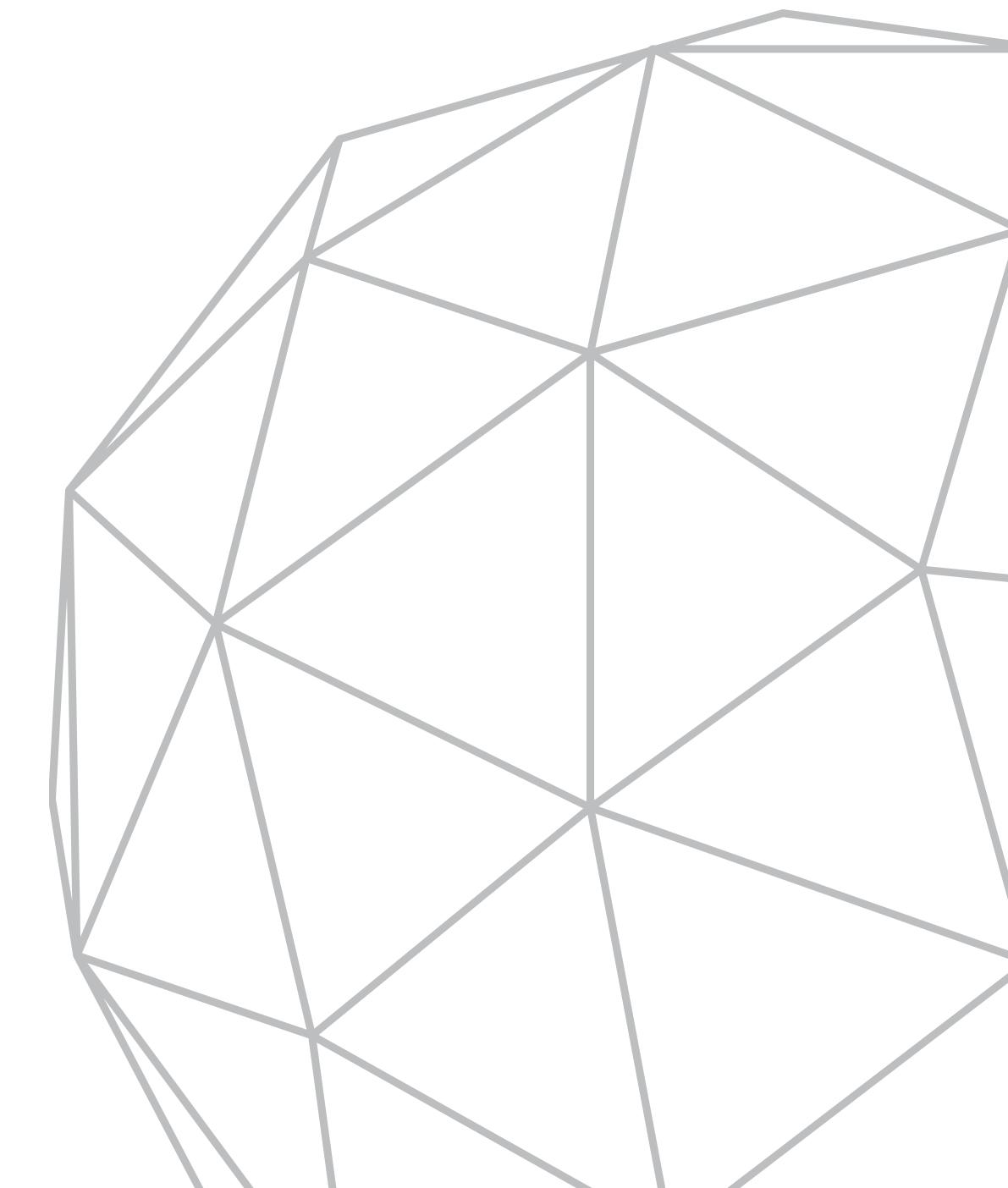
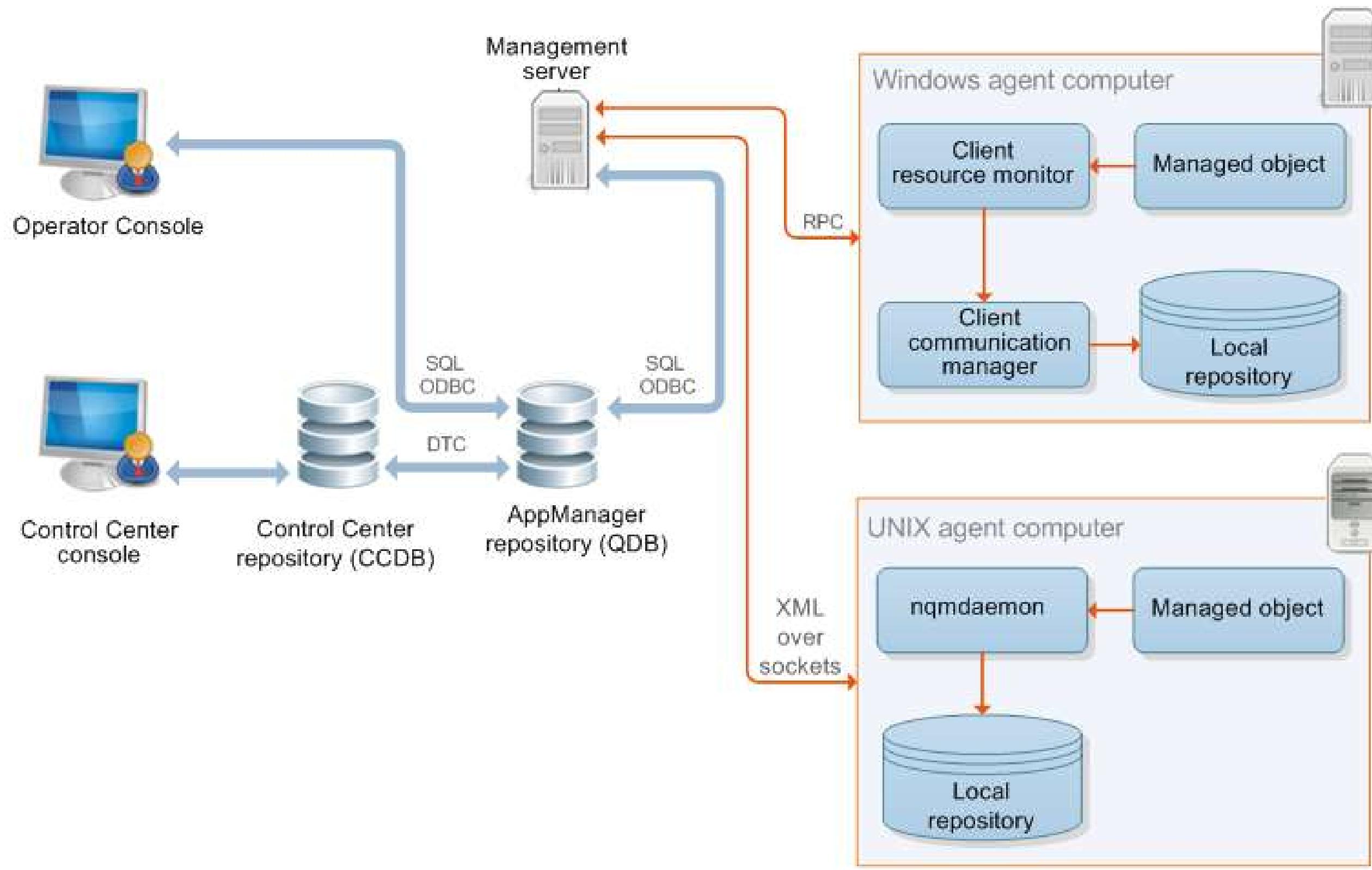


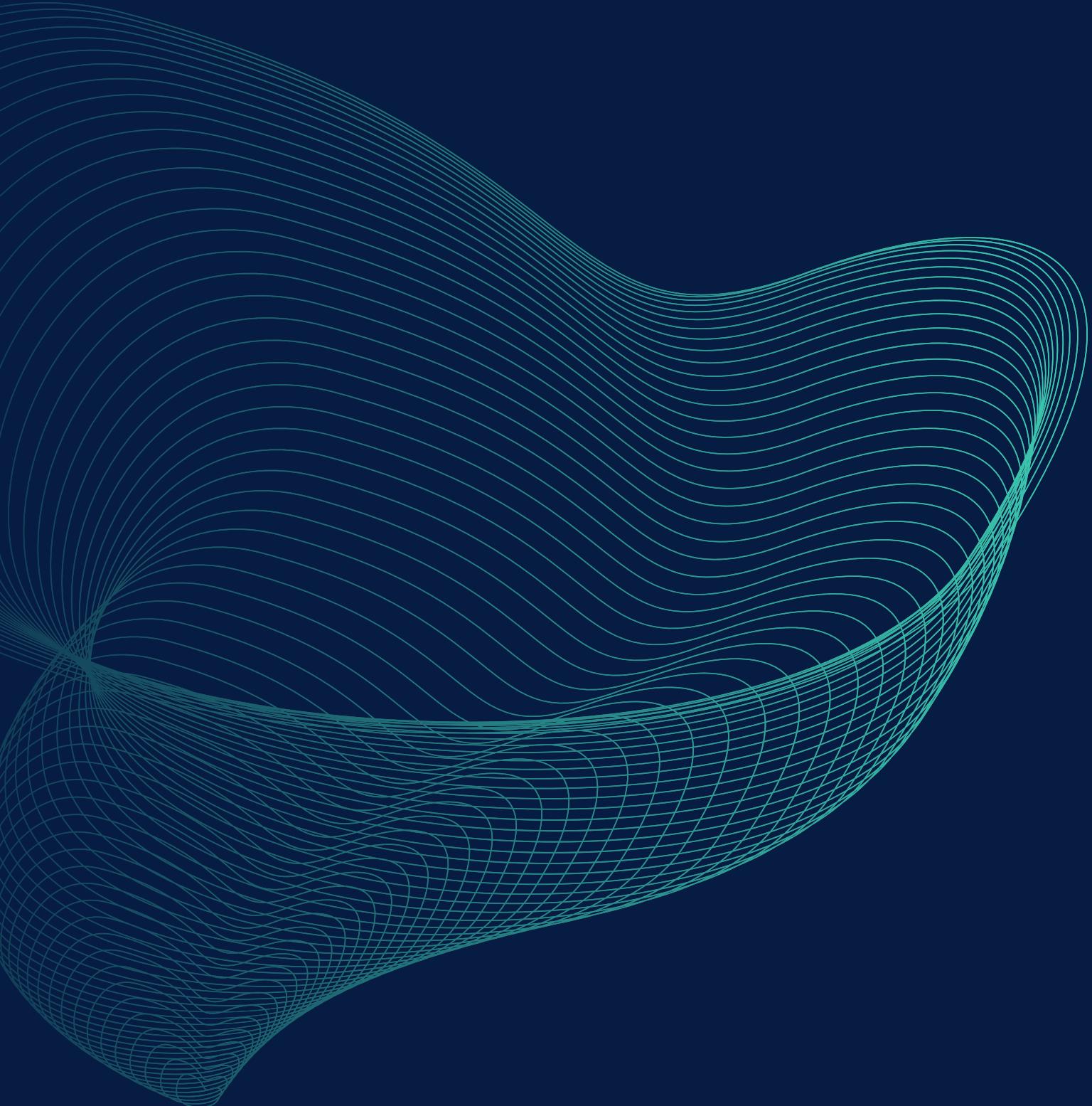
Knowledge Scripts

ConfigRemoteServiceDown	NetworkBusy	ServiceHung
ConfigServiceDown	PagingHigh	ServiceRemove
CpuByProcess	PhysicalDiskStats	SharedFiles
CpuLoaded	PortHealth	SystemUpTime
CpuResource	PrinterHealth	TopCpuProcs
DiskSpace	PrinterQueue	TopMemoryProcs
DNSConnectivity	ProcessDown	TrustRelationship
FailedLogon	Processes	UnixRemoteProcessDown
FileChanged	ProcessUp	
FilesCompare	RegistryChange	
FileSizeSum	RemoteServiceDown	
FilesOpen	RemoteServiceDownLR	
FindFiles	RunAwayProcesses	
FolderFileCount	ServerBusy	
FolderPath	ServerBytes	
IntervalCounter	ServerError	
LogicalDiskStats	ServerTimeout	
MemByProcess	ServiceChange	
MemUtil	ServiceDown	
NetSession	ServiceDownLR	

ACTION \ AD \ AMADMIN \ AMHEALTH \ ASYNC \ DIAG \ DISCOVERY \ GENERAL \ NT \ NTADMIN \ P

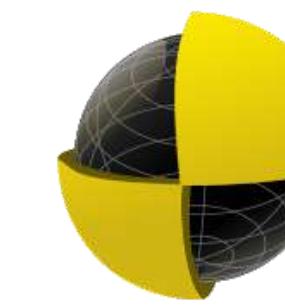
APPMANAGER ARCHITECTURE





Planning

Tools



TestLink

Teams - Task Board

To do	In Progress	To Review	Done
<p>+ Agregar tarea</p>	<p>+ Agregar tarea</p> <p>As a Tester, I write test cases in TestLink for the NT_FilesCompare KS, so I can group them by test techniques</p> <p>17/03 AB</p> <p>5 Sprint1 Test Cases</p> <p>As a Tester, I write test cases in TestLink for KS_NT_FilesOpen, and group them by techniques</p> <p>15/03</p> <p>5 Sprint1 Test Cases</p> <p>As a Tester, I write test cases in TestLink for NT_KS_FindFiles, so I can group them by techniques</p> <p>15/03 LM</p>	<p>+ Agregar tarea</p>  <p>3 Sprint1 HTSM</p> <p>As a Tester, I want to perform an exploratory test to the NT_FilesCompare KS, so I can understand its functionality</p> <p>Exploratory tours NT_FilesCompare KS.pdf</p> <p>0 1</p> <p>13/03 AB</p> <p>KS_NT_FileChanged (53)</p> <ul style="list-style-type: none">Function Testing (9)Acceptance Testing (9)Scenario Testing (10)Combinatory Testing (4)Domain Testing (18)Risk Testing (2)	<p>+ Agregar tarea</p>  <p>3 Sprint1 HTSM</p> <p>As a Tester, I want to elaborate a Domain table for the NT_FilesCompare KS, so I can find boundary values</p> <p>DomainTable_NT_FilesCompare.xlsx</p> <p>0 1</p> <p>13/03 AB</p> 

TestLink

The screenshot displays two browser windows for the TestLink 1.9.20 [DEV] application.

Left Window: A search interface for filtering test cases. It includes dropdowns for Platforms, Status, Importance, and Execution type, and buttons for Apply, Reset Filters, Expand tree, and Collapse tree. A main tree view shows a project structure under SP.Lt.MT.DK.01 (694), including Group 1 - Los KSeros (384), Group 2 - No hay AppManager que dure cien años (189), Group 3 (103), and Bugs (18). Each group and bug item has a detailed description below it.

Right Window: A context menu for a selected test case. The title bar shows Diana.Urrutia [TD_QA_Role]. The menu includes sections for Test Suite, Keyword, Priority, Execution type, Assigned to, Bugs on Exec. Context (with a list containing BUGX,BUGY,BUGZ), Result, and on. Buttons for Apply, Reset Filters, Advanced Filters, and Expand tree/Collapse tree are also present. The main area shows the context: Exec. Context: Test Plan Sprint1 - Build KS NT_FileChanged. The Test Plan Sprint1 section lists Build KS NT_FileChanged.

Environments



 Windows Server

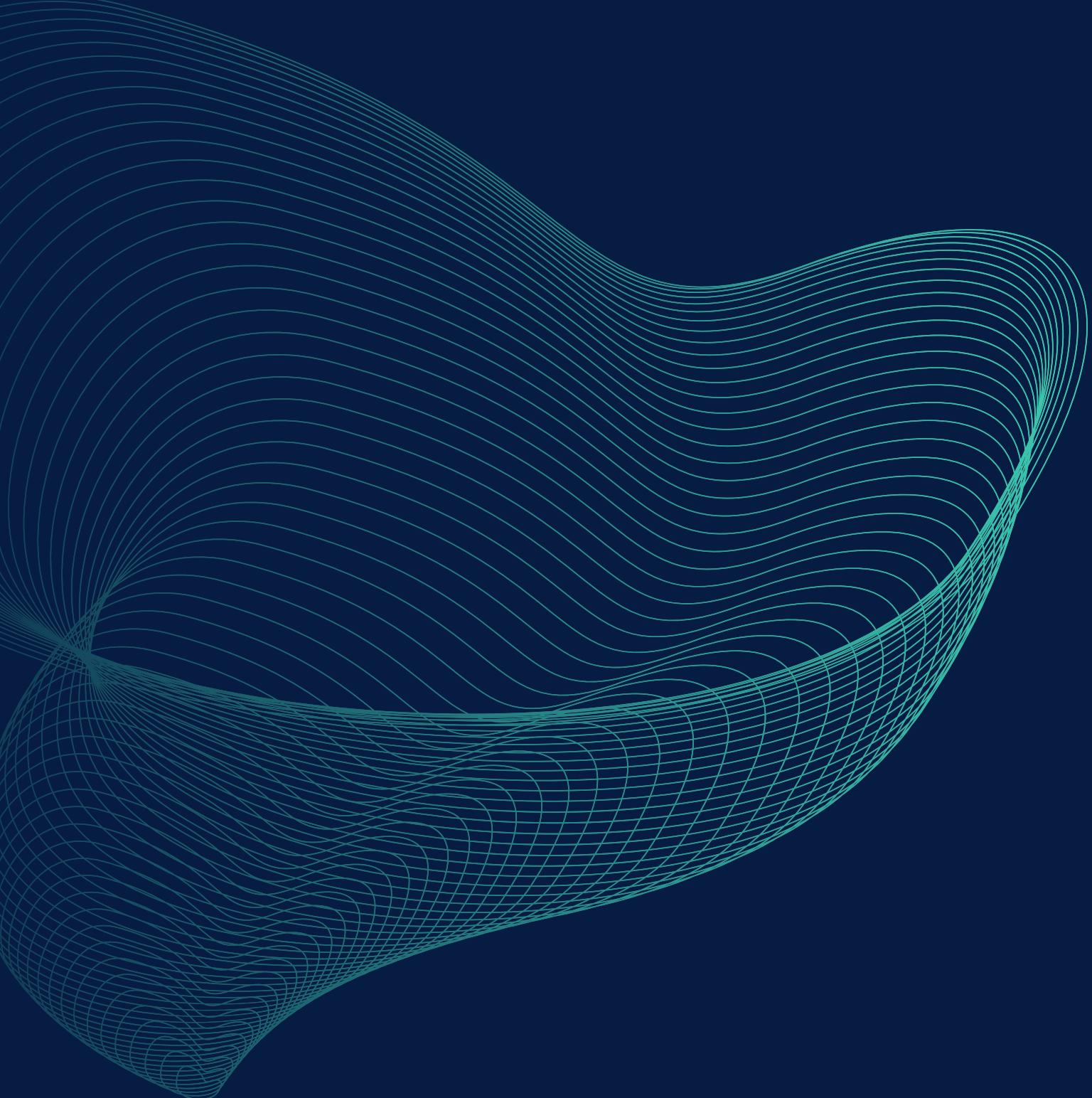
Versions

SQL Server



Windows Server





General Attributes

Quality Criteria

- Capability
- Reliability
- Usability
- Charisma



Test Techniques



Acceptance

Combinatory

Domain

Function

Risk

Scenario

Stress

Elements

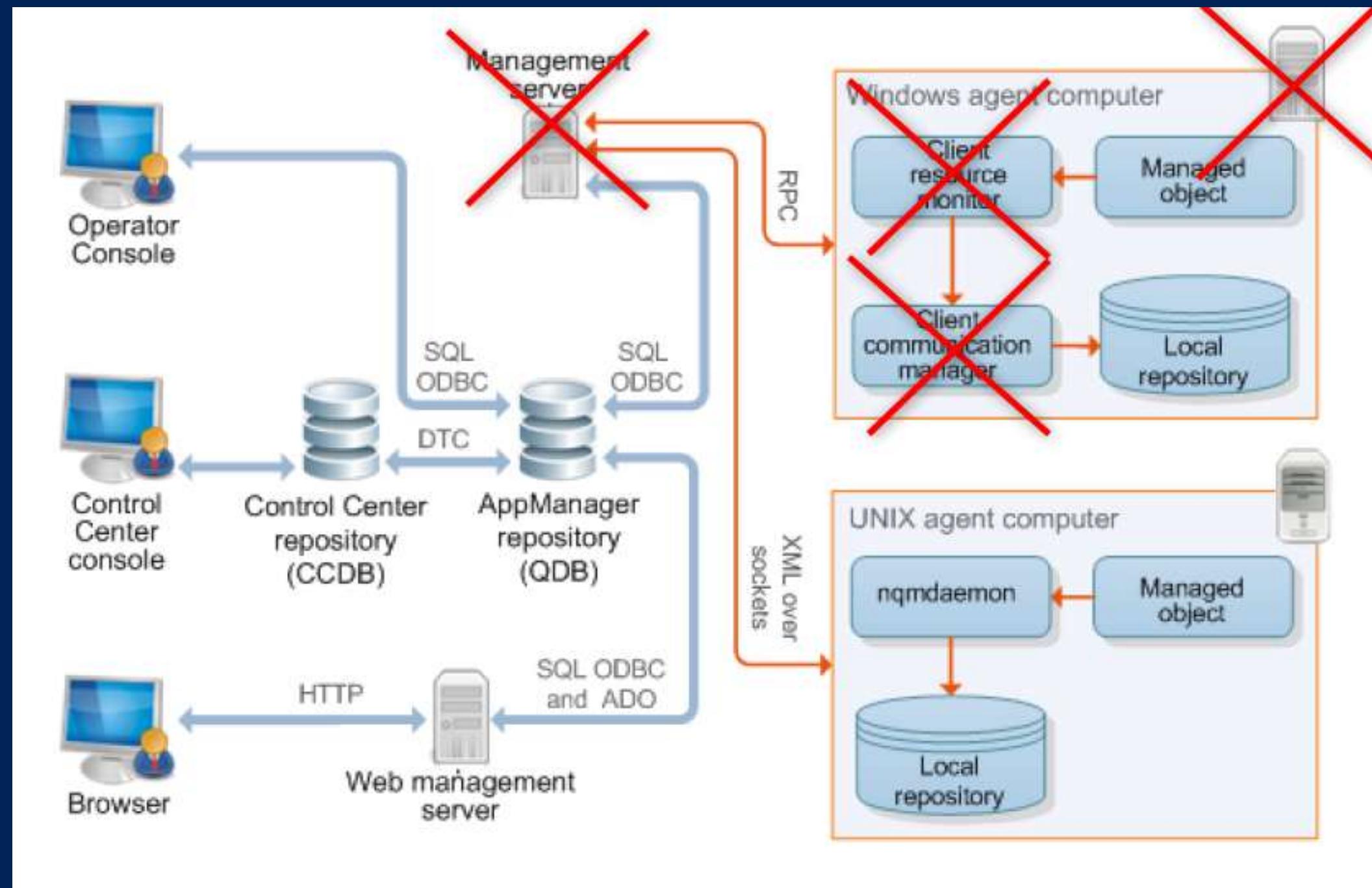


NT_FindFiles
NT_FilesOpen
NT_FileChanged
NT_FileCompare
NT_FolderFileCount
NT_NetworkBusy
NT_SharedFiles
NT_LogicalDiskStats
NT_MemByProcess
NT_CpuByProcess

TABS:

- Schedule
- Values
- Actions
- Advanced

Scenarios



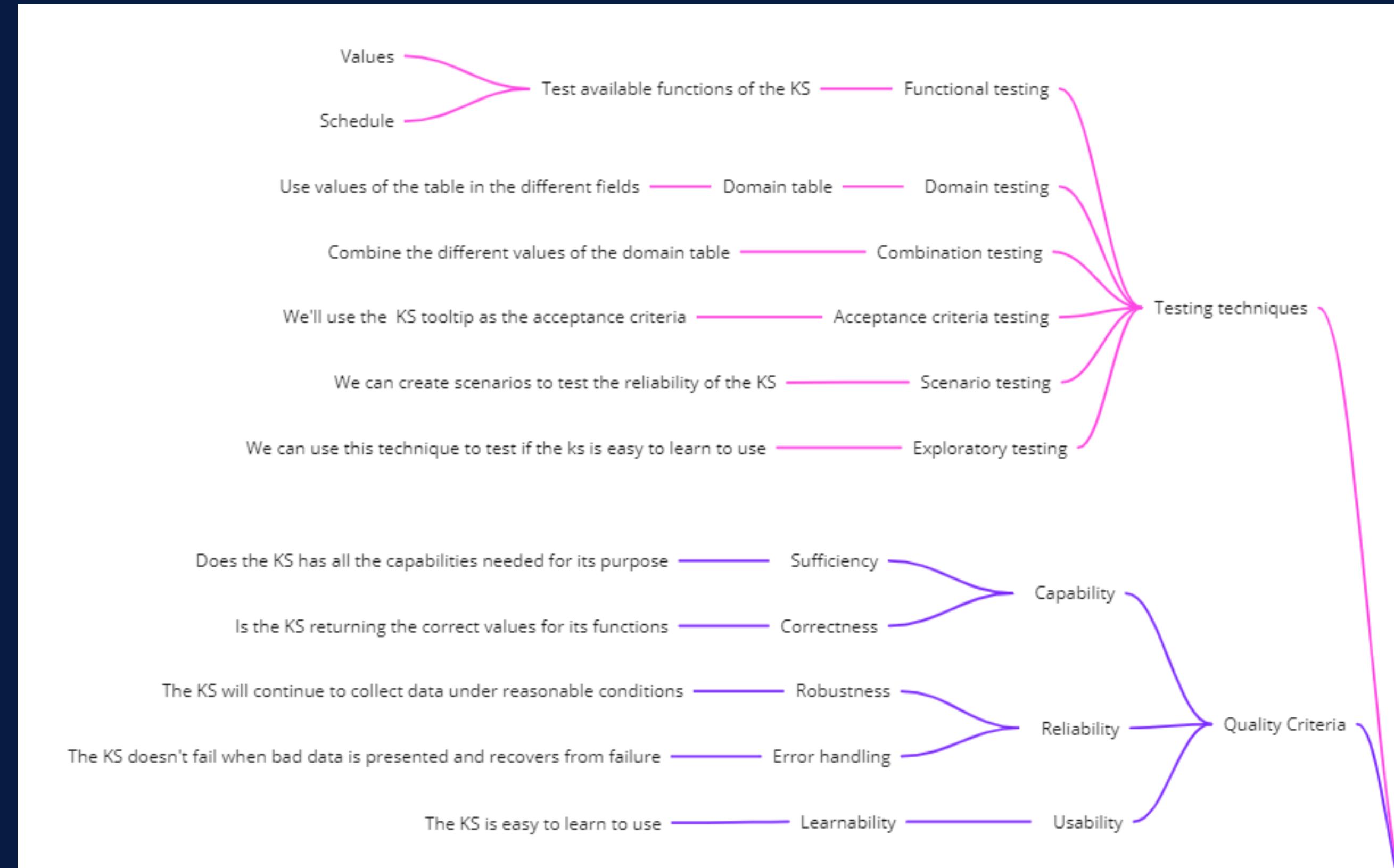
KS_NT_SharedFiles

Use this Knowledge Script to monitor and list shared files that are open. This script raises an event if the number of open shared files exceeds the threshold you specify. Run this script on the server that hosts the shared files.

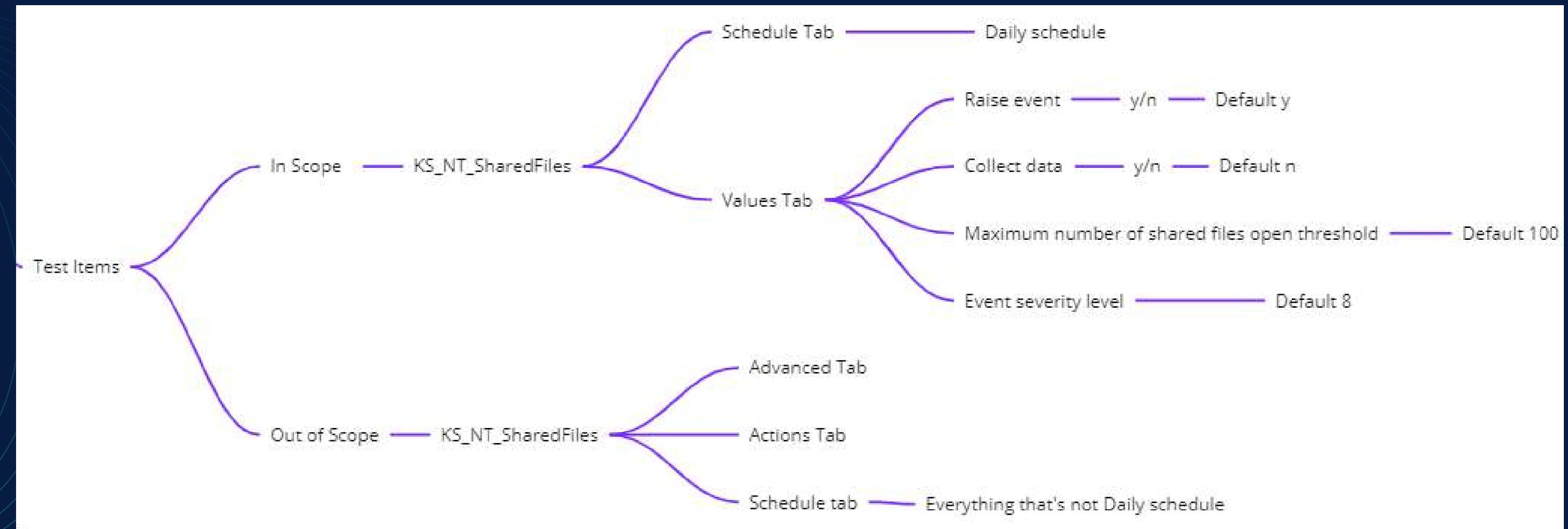
Testing mission

Evaluate if the above claims are true, this will act as our acceptance criteria. We will adopt a testing strategy to do this in the most expedient way possible while trying to adhere to an attainable degree of thoroughness.

KS_NT_SharedFiles



KS_NT_SharedFiles



KS_NT_SharedFiles

Tab	Name	Valid Case	Invalid Case	Boundaries	Default
Values	Raise event?	y/n	a, B, -, 1 (field only accepts one character).		y
	Collect data?	y/n	a, B, -, 1 (field only accepts one character).		n
	Maximum number of shared files open threshold	0 to 999999	a, B, -, 1000000, -1	0 and 999999	100
	Event severity level	1 to 40	a, B, -, 0, 41	1 and 40	8
Schedule	Run Once	Now, Start Date	Start date: invalid dates, checking the PM checkbox when it's past 12	00:00 and 12:00	No settings.
	Daily Schedule	Now, no end date, start date, end date, frequency (once or every x time)	Start/end date: invalid dates, checking the PM checkbox when it's past 12.	00:00 and 12:00	Now, no start date, no end date. Once for the selected period.

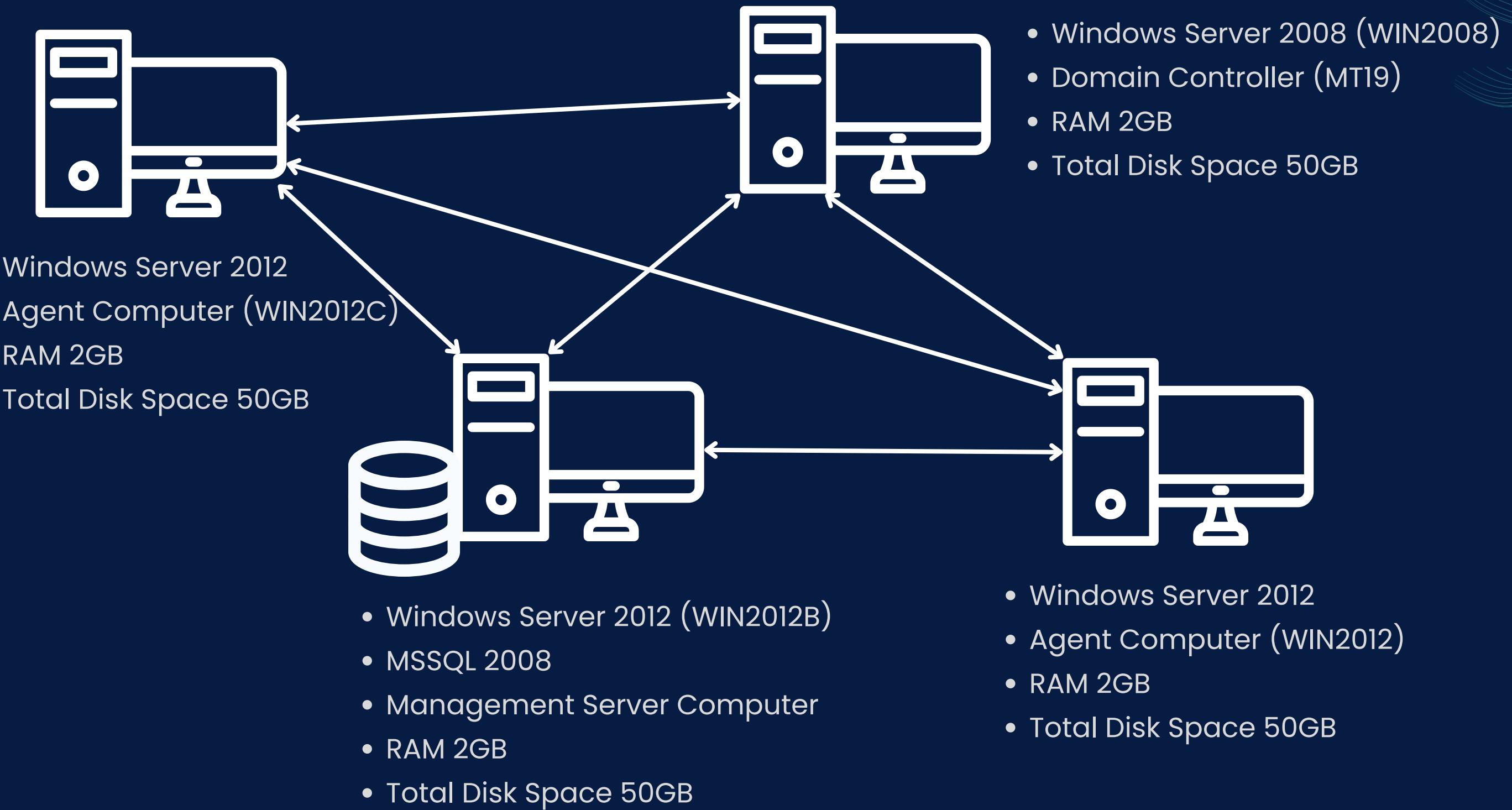


Pairwise Independent Combinatorial Testing (PICT)



	A	B	C	D
1	Event	Data	Threshold	Severity
2	n	y	1000	1
3	y	n	0	40
4	y	y	0	8
5	n	n	1000	40
6	y	n	0	1
7	n	n	100	8
8	y	y	100	40
9	y	y	1000	8
10	n	y	0	1
11	n	y	100	1
12				

Environment Distribution



Validators

- Computer management
- PowerShell (Get-SMBOpenFile)

The screenshot displays two windows side-by-side. The top window is 'Computer Management' with the title bar 'Computer Management'. It shows a navigation tree on the left with 'Computer Management (Local)' expanded, revealing 'System Tools', 'Shared Folders' (with 'Shares', 'Sessions', and 'Open Files' selected), 'Storage', and 'Services and Applications'. To the right is a table titled 'Open File' with columns: Open File, Accessed By, Type, # Locks, and Open Mode. Two entries are listed: 'C:\Shared\' Accessed by 'Administrator' (Windows) with 0 locks and 'Read' mode, and another 'C:\Shared\' entry with the same details. The bottom window is 'Administrator: Windows PowerShell' with the title bar 'Administrator: Windows PowerShell'. It shows the command 'get-smbopenfile' being run, resulting in a table output:

FileId	SessionId	Path	ShareRelativePath	ClientComputerName	ClientUserName
240518169929	240518168577	C:\Shared\		192.168.0.19	WIN2012\Administ...

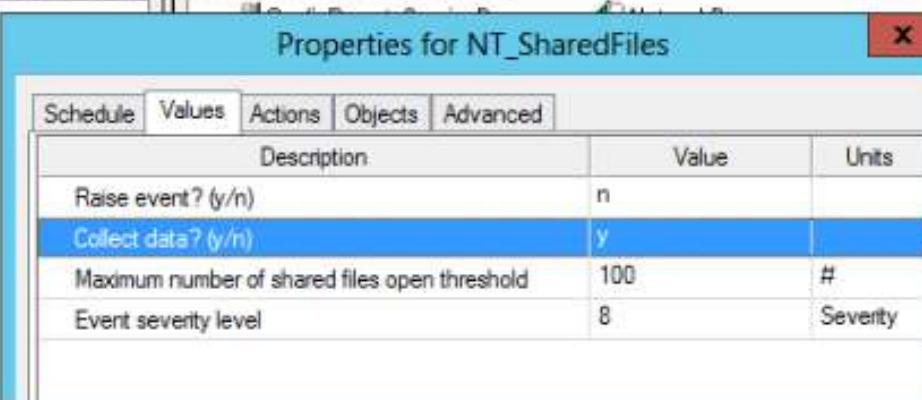
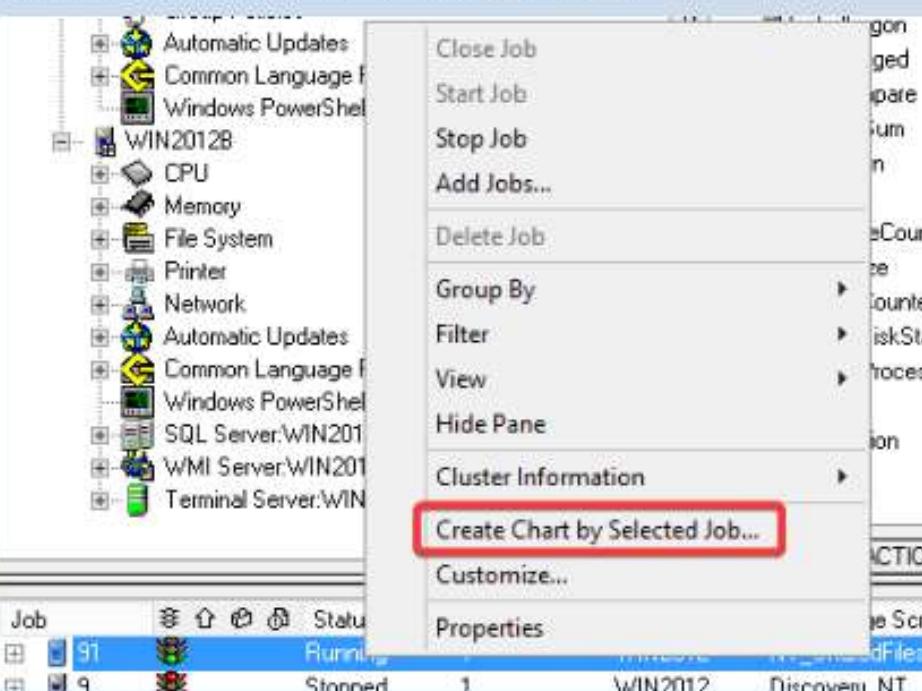
Scenarios

- KS counts files created after it started running
- KS can monitor multiple systems simultaneously
- KS continues to monitor after being disconnected from agent
- KS counts hidden files, or hidden files that have been toggled as hidden after the KS started running.
- KS can count open shared files in a computer where the user running it doesn't have access to see shared files.

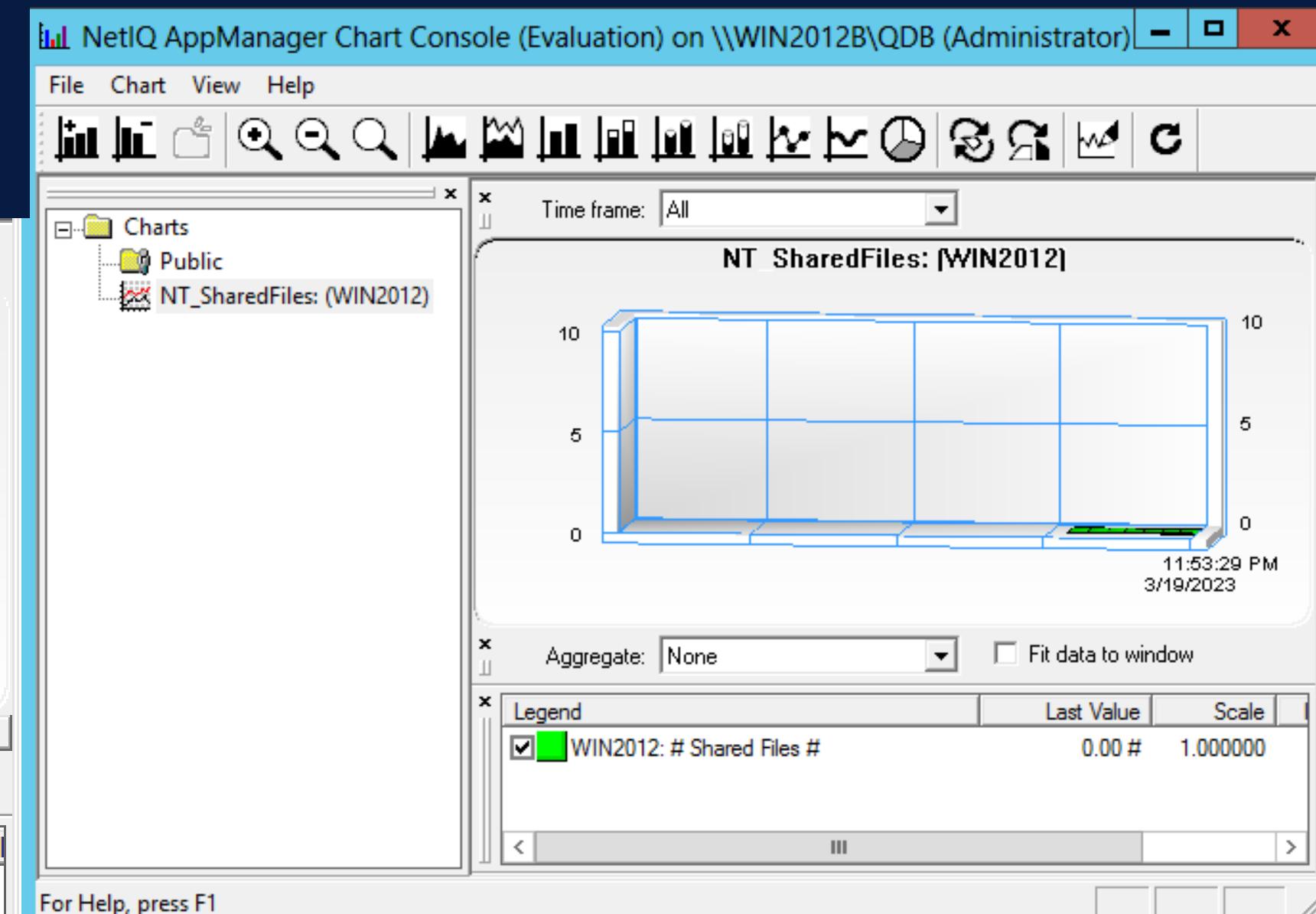
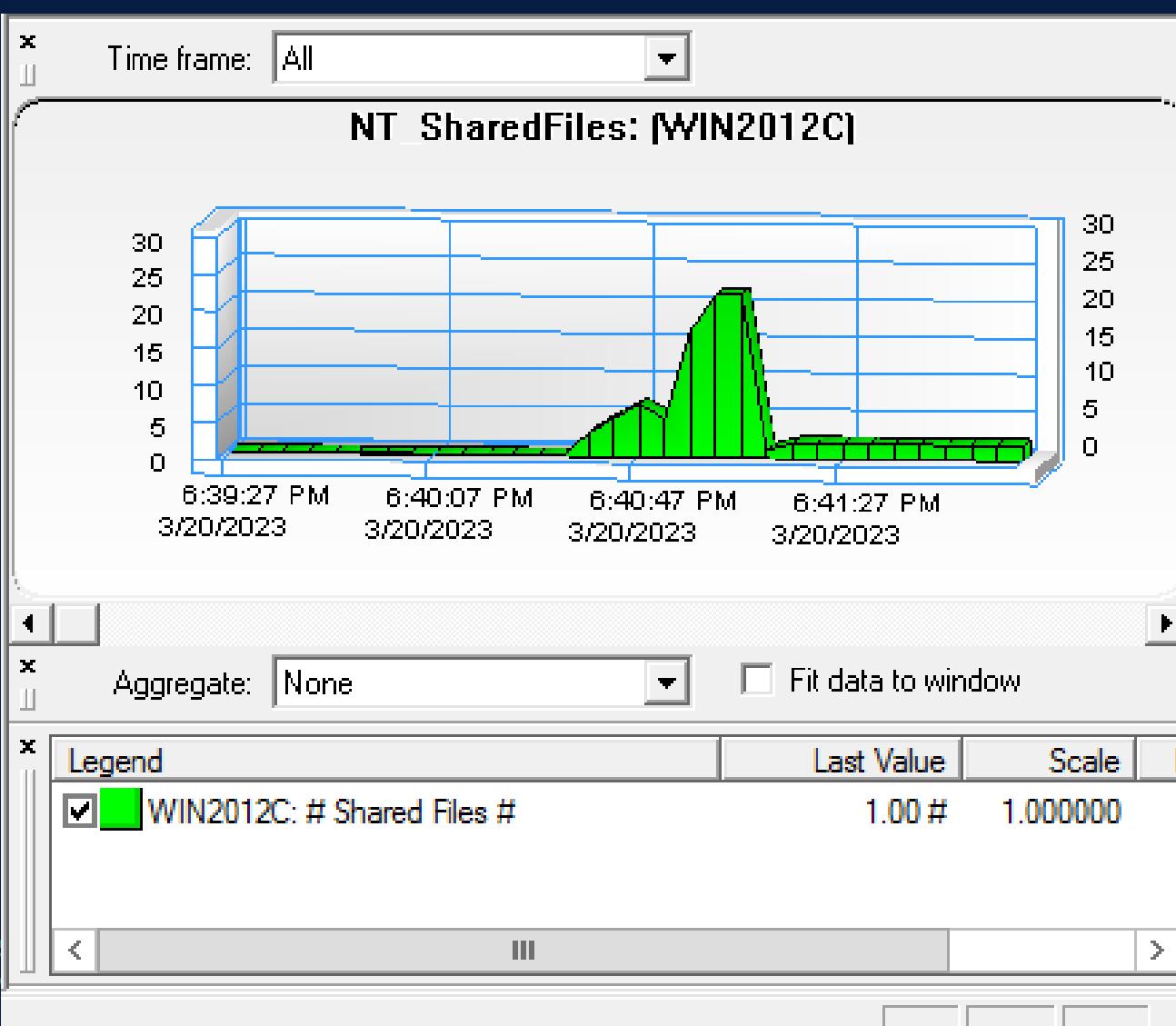
Bugs

- Mt01-926 : KS SharedFiles > No warning is given when data collection is not working when set to do so in agent in computer where the agent isn't set to communicate with the control center. (**Medium**)
- Mt01-712 : KS SharedFiles > Values > Threshold can be set to "-", which is understood by the program as "0". (**Low**)
- Mt01-927 : KS > Schedule > Time accepts hours past 11 and PM checkbox simultaneously (**Low**)

Bug (continued)

Step actions	Expected Results	Execution
1 Look for the NT tab, drag the KS to computer B con the left, set the schedule to run in regular intervals, now every 5 seconds		Manual  
2 Go to the Values tab and set "collect data" to y		Manual  
		
3 In computer A, open the folder shared by computer B, open 3 files in it, and wait for a bit.		Manual  
4 Right click the job and click ""Create chart by selected job"		Manual  
		
5 Click next, next and finish. A chart will be displayed	The chart should display peaks where the files were remotely accessed, however no such peaks are noticed.	Manual  

Bug (continued)

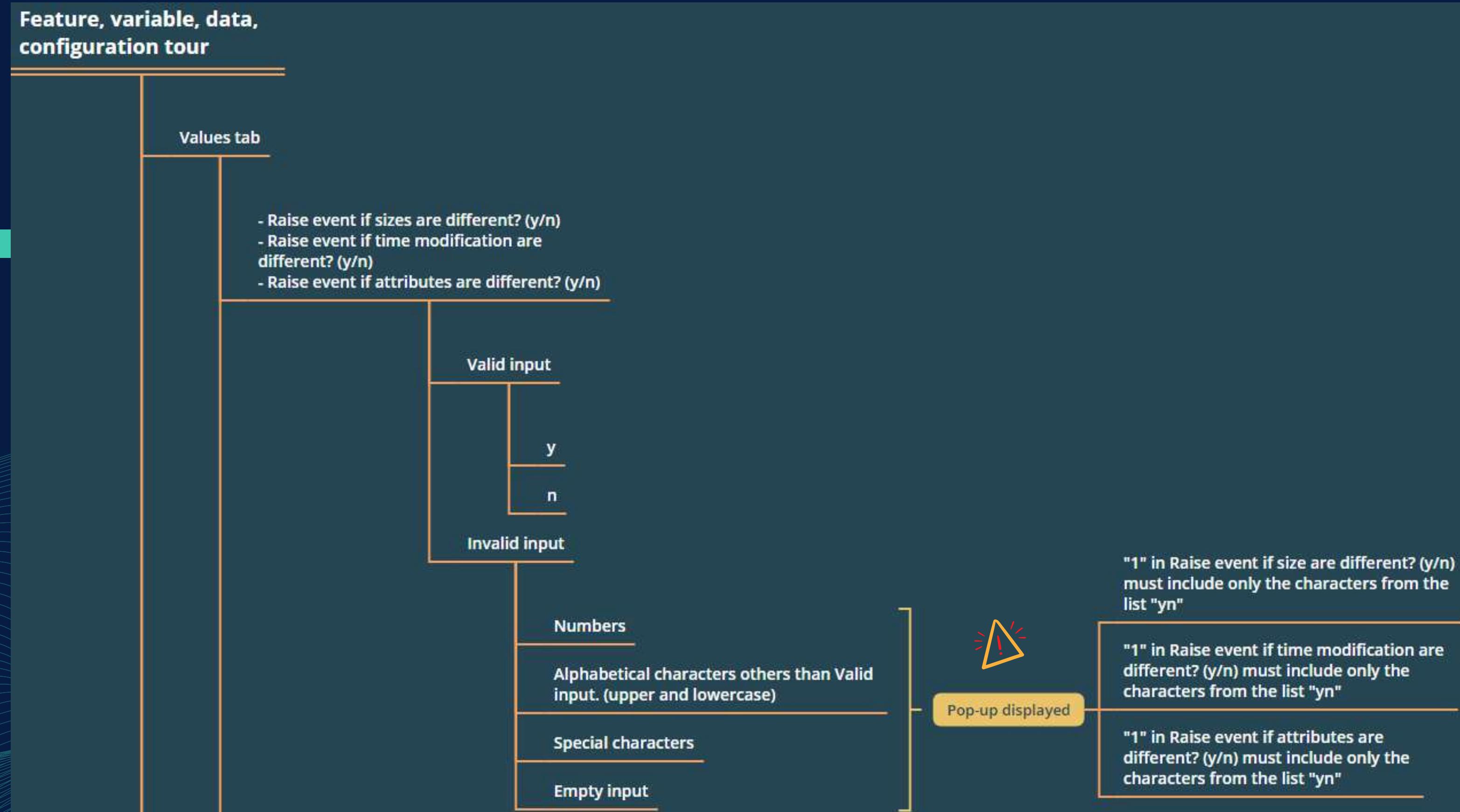


NT_FilesCompare

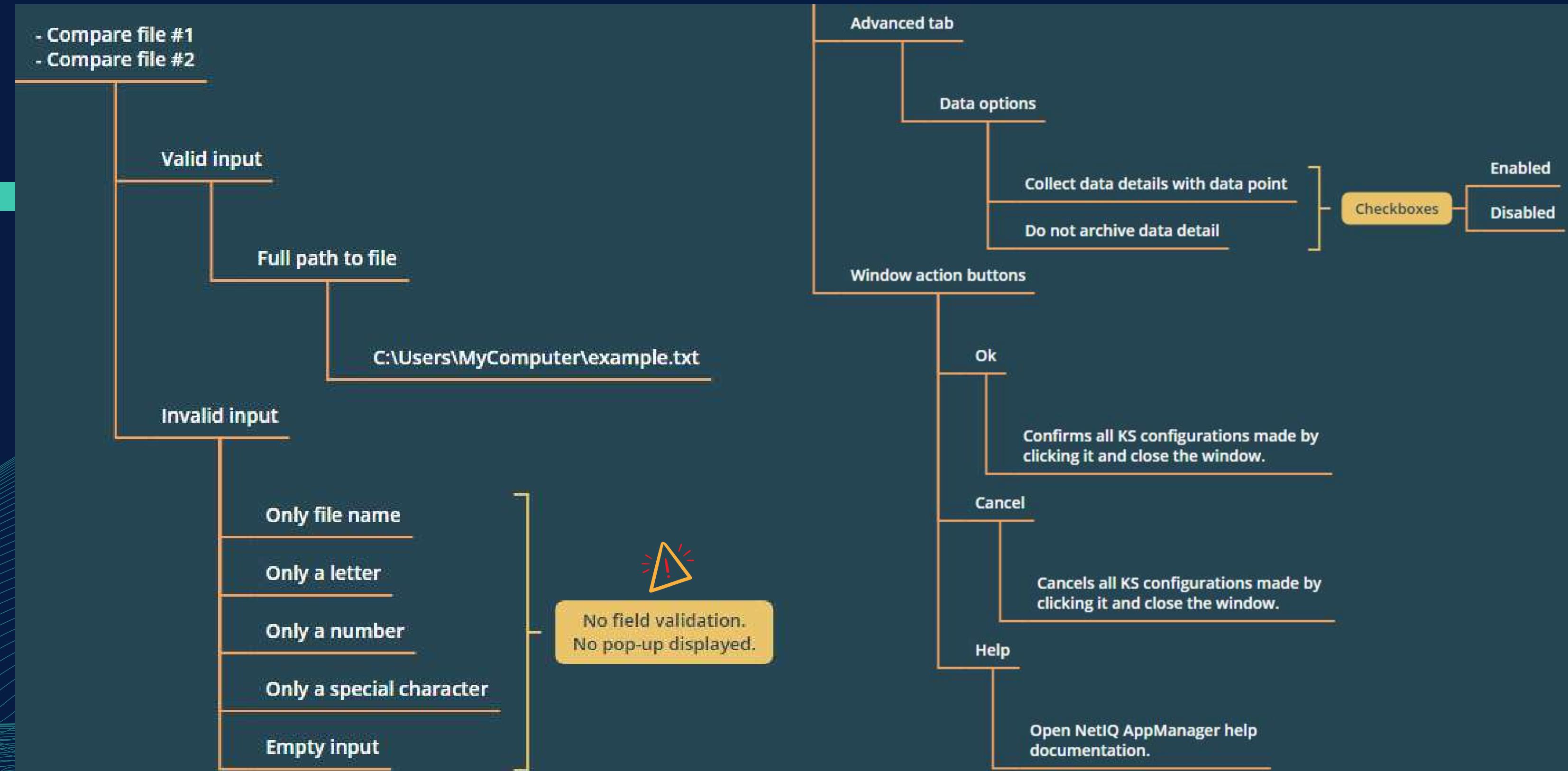
Compares the size, time stamp and attributes of two files. Raises an event if differences are found.

Properties for NT_FilesCompare		
Schedule	Values	Actions
Description	Value	Units
Raise event if sizes are different? (y/n)	y	
Raise event if modification times are different? (y/n)	y	
Raise event if attributes are different? (y/n)	y	
Compare file #1		
Compare file #2		
Event severity level for size difference	5	Severity
Event severity level for time difference	5	Severity
Event severity level for attribute difference	5	Severity

Exploratory tours



Exploratory tours

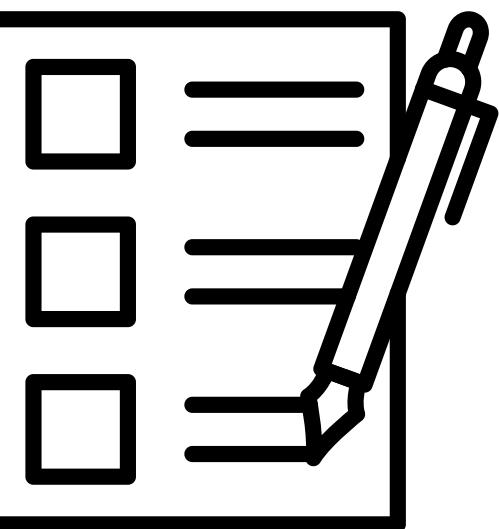


Project environment

Testing mission

Create a test strategy for NT_FilesCompare KS to verify that it meets with the acceptance criteria and its functionality works as it should.

Identify and define the most useful approaches and test techniques to get results that help to analyze its behavior in specific scenarios, as well as those where it fails.



Project environment

Environment distribution



Domain

amfilescompare.org

VM1 – WS 2019 Main

- Windows Server 2019
- SQL Server 2012
- AppManager 8.0
- Operator Console, Control Console
- Management Server, QDB



Child domain

ws2019agent.amfilescompare.org

VM2 – WS 2019 Agent

- Windows Server 2019
- Agent

Project environment

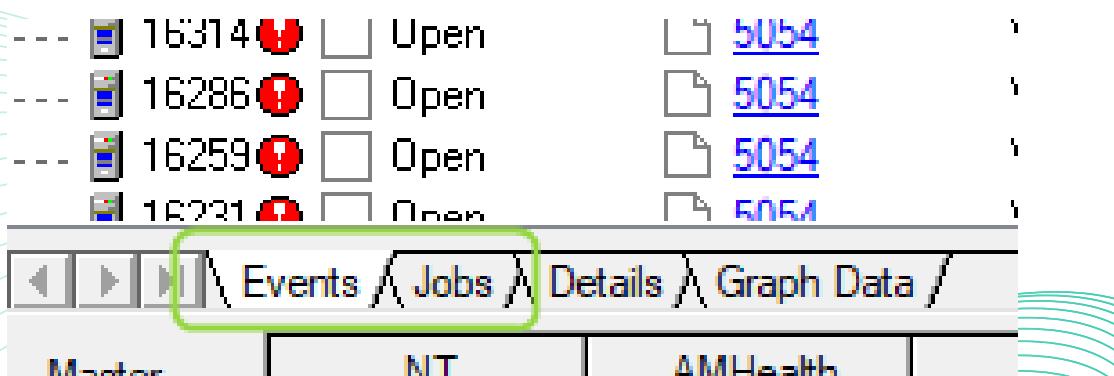
Properties for NT_FilesCompare

Schedule Values Actions Advanced

Description	Value	Units
Raise event if sizes are different? (y/n)	y	
Raise event if modification times are different? (y/n)	y	
Raise event if attributes are different? (y/n)	y	
Compare file #1	C:\Users\Administrator\Documents\	
Compare file #2	C:\Users\Administrator\Documents\	
Event severity level for size difference	5	Severity
Event severity level for time difference	5	Severity
Event severity level for attribute difference	5	Severity

Data options
(These options apply when "Collect data?" is set to "y" in Values tab)

Collect data details with data point
 Do not archive data detail.



Scope

Values tab

- Raise event.
 - Size difference
 - Modification time difference
 - Attribute diffence
- Compared files
 - #1 and #2
- Event severity
 - Size difference
 - Time difference
 - Attribute diffence

Advanced tab

- Data options
 - Collect data details with data point.
 - Do not archive data detail.

Operator Console

- Events and Jobs tab

Out of Scope

Schedule tab

Actions tab

- Event options
- Data options
 - Collect data every...
 - Start collecting data

- Details and Graphic Data tab

Quality criteria

- Capability
 - Sufficiency
 - Correctness
- Usability
 - Learnability
 - Operability
 - Accessibility
- Reliability
 - Error handling
 - Data integrity
- Charisma
 - Necessity
 - Image

Test techniques

- Function testing
- Scenario testing
- Domain testing
- Risk testing
- Acceptance testing
- Scenario testing

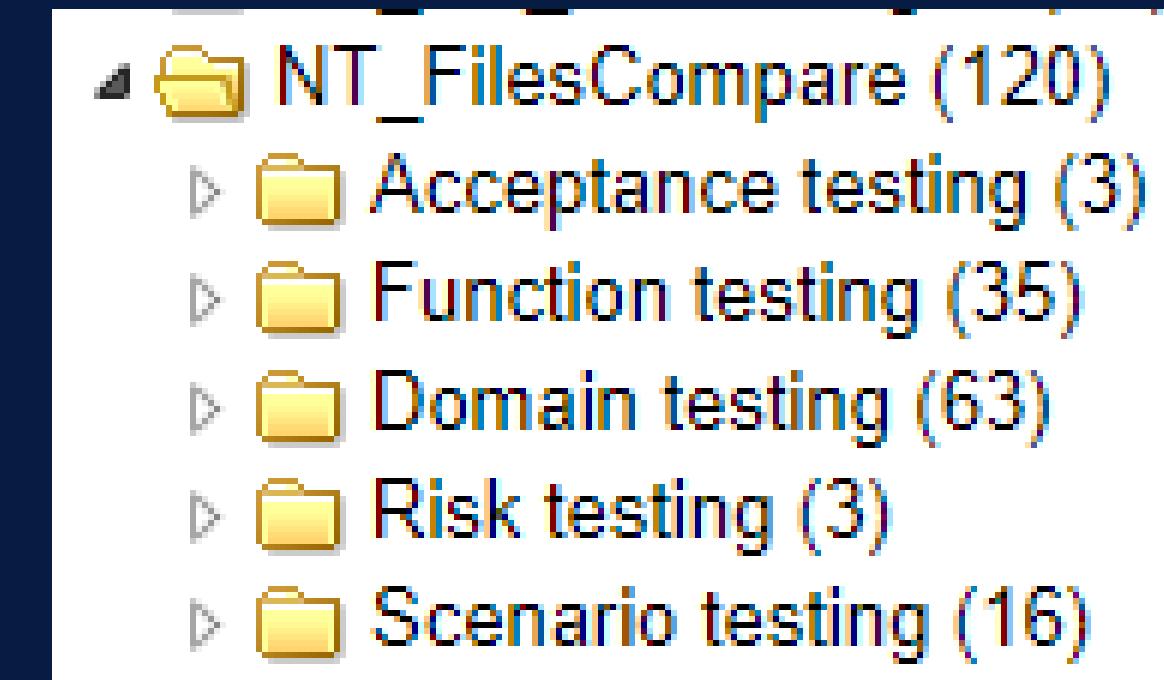
Domain table

Tab	Variable	Values to be taken		
		Valid class Equivalence class	Invalid class Equivalence class	Boundaries and special cases
Values	Raise event if size, time modification and attributes are different.	"y","n"		
			Upper and lowercase letters others than valid class.	Y N A a
			Numbers	1
			Special characters	"@ _"
			Empty input	
Values	Compare files #1 and #2	File path e.g: C:\Users\MyComputer\example.txt		
			Only a single word	"example"
			Only a letter	a
			Only a number	1
			Only a special character	"@ _"
			Empty input	
Values	Event severity level for size, time and attributes differences	1 - 40		1 40
			<1	0
			>40	41
			Alphabetic characters	a A
			Special characters	"@ _"
			Empty input	

Scenarios

- An empty file can be monitored.
- A file with different sizes in MBs can be compared
- A file with different sizes in GBs can be compared
- A file with a recent modification time can be compared
- A file with a very old modification time can be compared
- Same file cannot be compared
- Two same kind of files can be compared
- Different kind of files can be compared
- A file name that contains special characters can be compared
- Changes in the file size can be compared when it is being monitored
- The data collected keep secure when MS service unexpectedly closes having a running job

Test Case Suit



Validation Tools

- SQL Server 2012 – QDB
- Directory Opus 12
- Command Prompt
- File Explorer
- Attribute changer 11

Object Explorer

SQLQuery1.sql - WI...Administrator (81)*

```
select *  
from [dbo].[EventDetail]  
where EventID = 11249
```

	Type	ObjName	Comment	AgentMsgshort
1	NULL	NULL		File length: Z:\WS_2019x64ENG.iso = 1357121536 bytes;

File Explorer

Attributes Changer 11

test Properties

Name	Size	Type	Modified	Attr
dasds	empty	File Folder	Yesterday	-a--e--
SQL Server...		File Folder	3/9/2023	-a--e--
Visual Stu...		File Folder	3/6/2023	-a--e--
test.txt	63.9 KB	Text Document	Yesterday	-a-----
test2.txt	38.2 KB	Text Document	Yesterday	-a-----

Name	Size	Type	Modified	Attr
2023-02-26_...	147 KB	PNG image	2/26/2023	-a-----
Notepad++...	3.62 MB	Windows Installer Package	12/8/2022	-a-----
practicepict...	10.3 KB	XLSX File	2/8/2023	-a-----
test.txt	63.9 KB	Text Document	Yesterday	-a-----
test2.txt	38.2 KB	Text Document	Yesterday	-a-----

C:\Windows\system32\cmd.exe

```
Microsoft Windows [Version 10.0.19045.2728]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\andre>fsutil file createnew prueba.txt 2147483648  
File C:\Users\andre\prueba.txt is created  
  
C:\Users\andre>fsutil file createnew 2kkk.txt 2000000000  
File C:\Users\andre\2kkk.txt is created  
  
C:\Users\andre>
```

test Properties

General Security Details Previous Versions

test

Type of file: Text Document (.txt)

Opens with: Notepad Change...

Location: E:\

Size: 63.9 KB (65,524 bytes)

Size on disk: 64.0 KB (65,536 bytes)

Created: Today, March 19, 2023, 4 hours ago

Modified: Today, March 19, 2023, 12 hours ago

Accessed: Today, March 19, 2023, 4 hours ago

Attributes: Read-only Hidden Advanced...

OK Cancel Apply

Mt01-973 : NT_FilesCompare > Events: The size of a 100GB file when is compared is displayed as 0 bytes Severity: High

Operator console

The diagram illustrates the flow of file comparison events from the Operator console to various file explorers and a command prompt. The Operator console shows several events related to file modification times. A specific event (Event Properties: 14016) is highlighted, showing a comparison between a large ISO file (1357121536 bytes) and a 100gb.txt file (0 bytes). This event is also shown in a separate event properties window. The file explorer properties windows show the creation of a 100gb.txt file (107374182400 bytes) and a test.txt file (0 bytes). The command prompt window shows the creation of the 100gb.txt file using the fsutil command.

Event Properties: 14016

Event Message Comments

File length: C:\WS_2019x64ENG.iso = 1357121536 bytes; Z:\100gb.txt = 0 bytes.

C:\Users\andre>fsutil file createnew 100gb.txt 107374182400
File C:\Users\andre\100gb.txt is created

NT_FilesCompare 3/22/2023 5:01:18 AM 3 5 File modification times are different
NT_FilesCompare 3/22/2023 5:01:18 AM 1 5 File modification times are different
NT_FilesCompare 3/22/2023 4:56:18 AM 1 5 File modification times are different
NT_FilesCompare 3/22/2023 4:51:18 AM 1 5 File modification times are different

Event Properties: 19692

Event Message Comments

File length: C:\WS_2019x64ENG.iso = 1357121536 bytes; Z:\100gb.txt = 0 bytes.

Directory Opus 12

CMD - fsutil file createnew

100gb

Type of file: Text Document (.txt)
Opens with: Notepad
Location: C:\Users\andre
Size: 100 GB (107,374,182,400 bytes)
Size on disk: 100 GB (107,374,182,400 bytes)

test

Type of file: Text Document (.txt)
Opens with: Notepad
Location: E:\
Size: 0 bytes
Size on disk: 0 bytes

File explorer properties

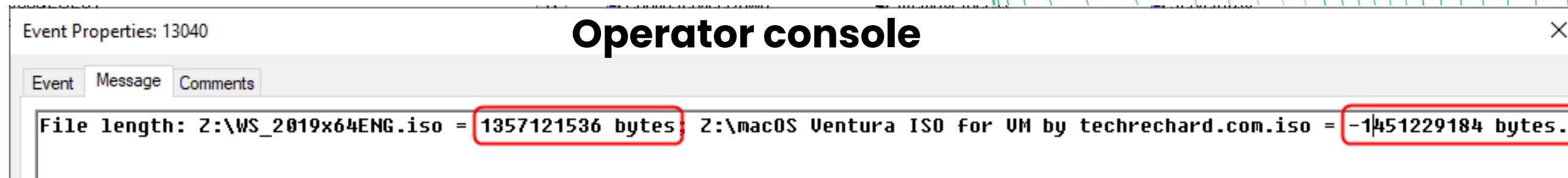
Actual result

A 100gb file is displayed as an empty file (0 bytes) in the event message when is being compared, is not being recognized the whole size.

Expected result

The event message should displays the whole size, in this case 107374182400 bytes for a 100gb file.

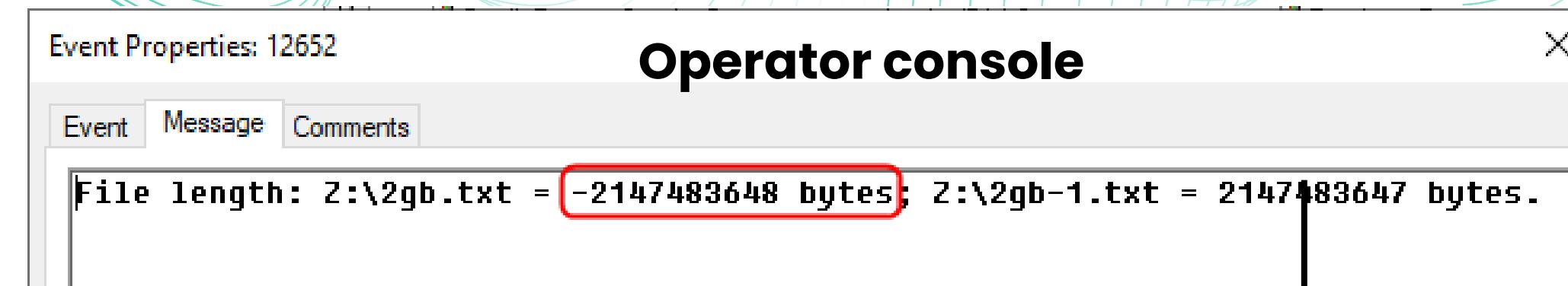
Mt01-942 NT_FilesCompare > Events: The real size is not displayed for files with equal or bigger size than 2GB.



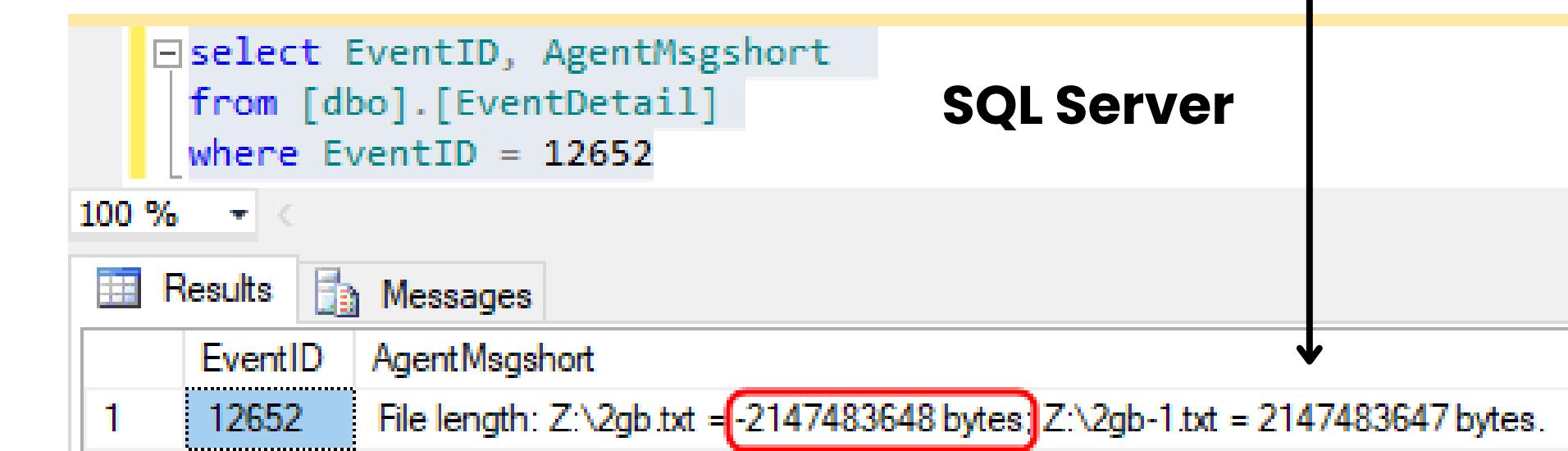
Severity: Medium



Isolation



Actual result	Expected result
The size displayed for files equal or bigger than 2GB is wrong because could get a negative number or a random number that is even close to the real.	The size displayed should be the real one and should not be a boundary in the file size at least not a small one.



Mt01-942 NT_FilesCompare > Events: The real size is not displayed for files with size equal or bigger than 2GB.

Severity: Medium

File	Real size	Size displayed
2022-10-28 081707.mp4	2.57 GB (2,767,716,400 bytes)	-1,527,250,896 bytes
SW_DVD9_SQL_Svr_Standard_Edtn_2012_English_MLF_X17-97001.iso	4.19 GB (4,509,648,896 bytes)	214,681,600 bytes
WS_2019x64ENG.iso	5.26 GB (5,652,088,832 bytes)	1,357,121,536 bytes
ubuntu-22.10-desktop-amd64.iso	3.79 GB (4,071,903,232 bytes)	-223,064,064 bytes
macOS Ventura ISO for VM by techrechard.com.iso	14.6 GB (15,728,640,000 bytes)	-1,451,229,184 bytes

File Explorer

1	WS_2019x64ENG
Type of file:	Disc Image File (.iso)
Opens with:	Windows Explorer
Location:	Z:\
Size:	5.26 GB (5,652,088,832 bytes)
Size on disk:	5.26 GB (5,652,090,880 bytes)

2	macOS Ventura ISO for VM by techrechard.com
Type of file:	Disc Image File (.iso)
Opens with:	Windows Explorer
Location:	Z:\
Size:	14.6 GB (15,728,640,000 bytes)
Size on disk:	14.6 GB (15,728,640,000 bytes)

Directory Opus 12

5	WS_2019x64ENG.iso	5.26 GB Disc Image File
6	2gb.txt	2 GB Text Document

CMD - fsutil file createnew

```
C:\Users\andre>fsutil file createnew prueba.txt 2147483648
File C:\Users\andre\prueba.txt is created
```



```
C:\Users\andre>fsutil file createnew 2gb-1.txt 2147483647
File C:\Users\andre\2gb-1.txt is created
```

Mt01-974 : NT_FilesCompare >Events: Cannot know what are the attribute differences because are shown as numbers

Severity: Medium

SQL Server

SQLQuery1.sql - WI...Administrator (89)*

```
select EventID, AgentMsgshort
from [dbo].[EventDetail]
Where EventID = 18842
```

100 %

Results Messages

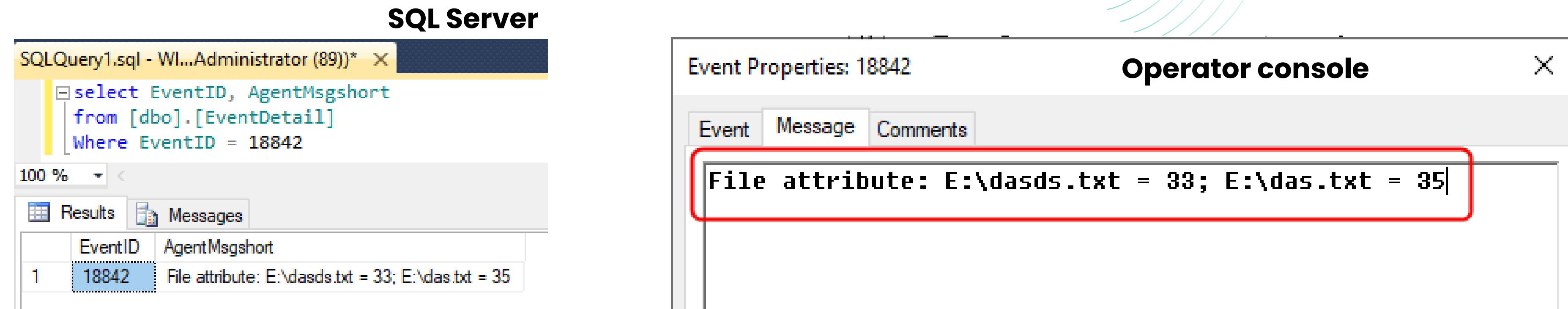
EventID	AgentMsgshort
18842	File attribute: E:\dasds.txt = 33; E:\das.txt = 35

Operator console

Event Properties: 18842

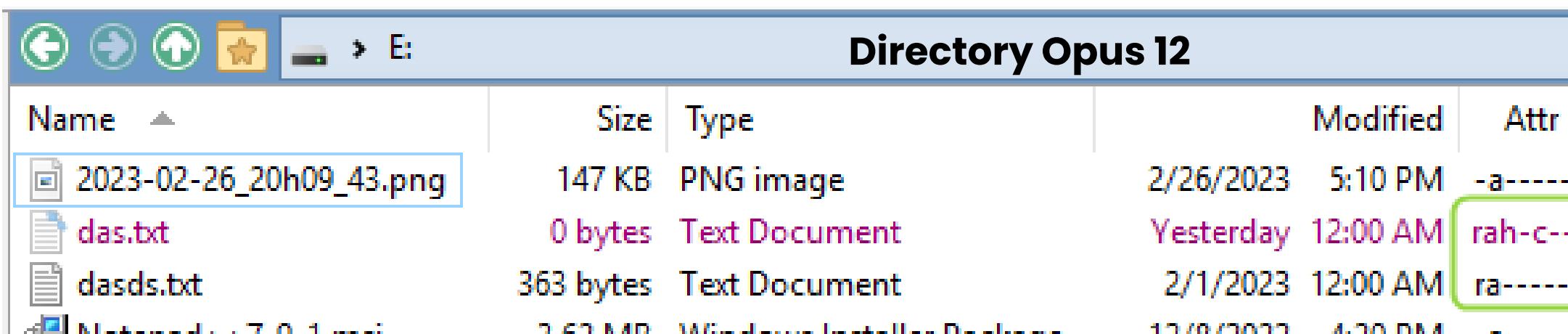
Event Message Comments

File attribute: E:\dasds.txt = 33; E:\das.txt = 35



Directory Opus 12

Name	Size	Type	Modified	Attr
2023-02-26_20h09_43.png	147 KB	PNG image	2/26/2023 5:10 PM	-a-----
das.txt	0 bytes	Text Document	Yesterday 12:00 AM	rah-c--
dasds.txt	363 bytes	Text Document	2/1/2023 12:00 AM	ra-----



Actual result

Attributes displayed in the event message are numbers and is not possible to identify what are this numbers related to and what are the differences.

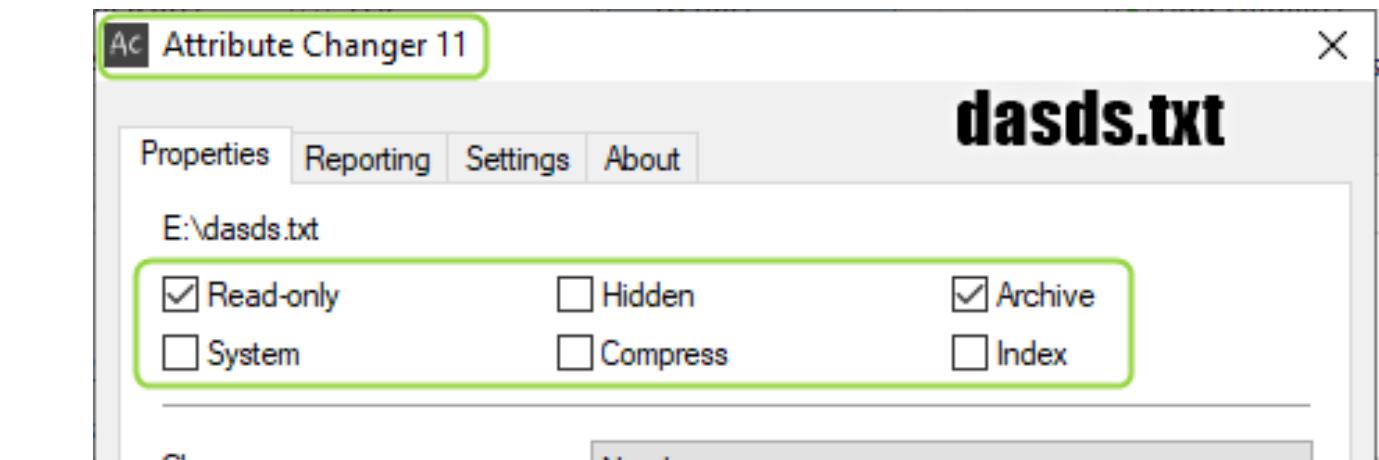
Expected result

Attributes should be displayed with its own letter to be able to identify what are the differences between attributes of two files.

Attribute Changer 11

dasds.txt

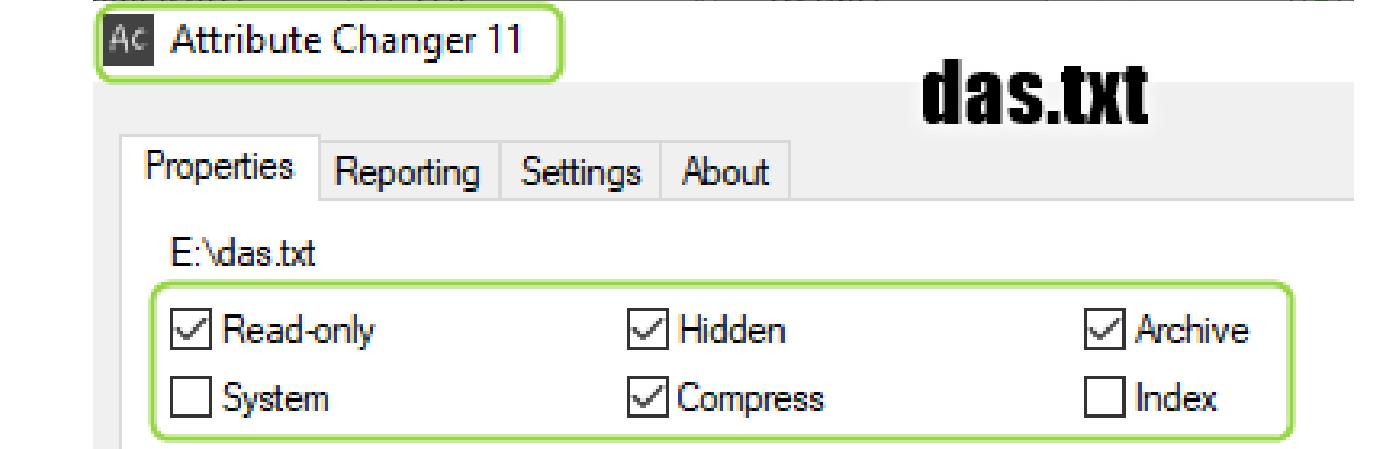
Read-only	Hidden	Archive
System	Compress	Index



Attribute Changer 11

das.txt

Read-only	Hidden	Archive
System	Compress	Index



Mt01-924 NT_FilesCompare > Events: "File not found" message only displays 1st path error when both are wrong. Severity: Low

Actual result

When both file paths are invalid raises an event "File not found" but is not included a message of the 2nd path that is also invalid. Only the 1st field is validated and included as the only invalid in the message. To enable a validation of 2nd field the 1st one must be a valid one.

Expected result

The "File not found" event message should include all paths that are invalid, in this case both should be included because they are invalid.

Properties for NT_FilesCompare		
Schedule	Values	Actions
	Description	Value
	Raise event if sizes are different? (y/n)	y
	Raise event if modification times are different? (y/n)	y
	Raise event if attributes are different? (y/n)	y
	Compare file #1	C:\Windows\ODBC
	Compare file #2	C:\Windows\system
	Event severity level for size difference	5
	Event severity level for time difference	5
	Event severity level for attribute difference	5

Event Properties: 5731		
Event	Message	Comments
	Q1P3KSJT1 Compare file #1 C:\Windows\ODBC does Not exist	
Only file#1 message is displayed		

Event Properties: 5738		
Event	Message	Comments
	WIN-SPQ1P3KSJT1 Compare file #2 C:\Windows\system does Not exist	
If path file#1 is valid Then invalid path file#2 is displayed		

Mt01-557 ENH > NT_FileCompare: Path fields should have a file browser or validation of full path to the file. Severity: Medium

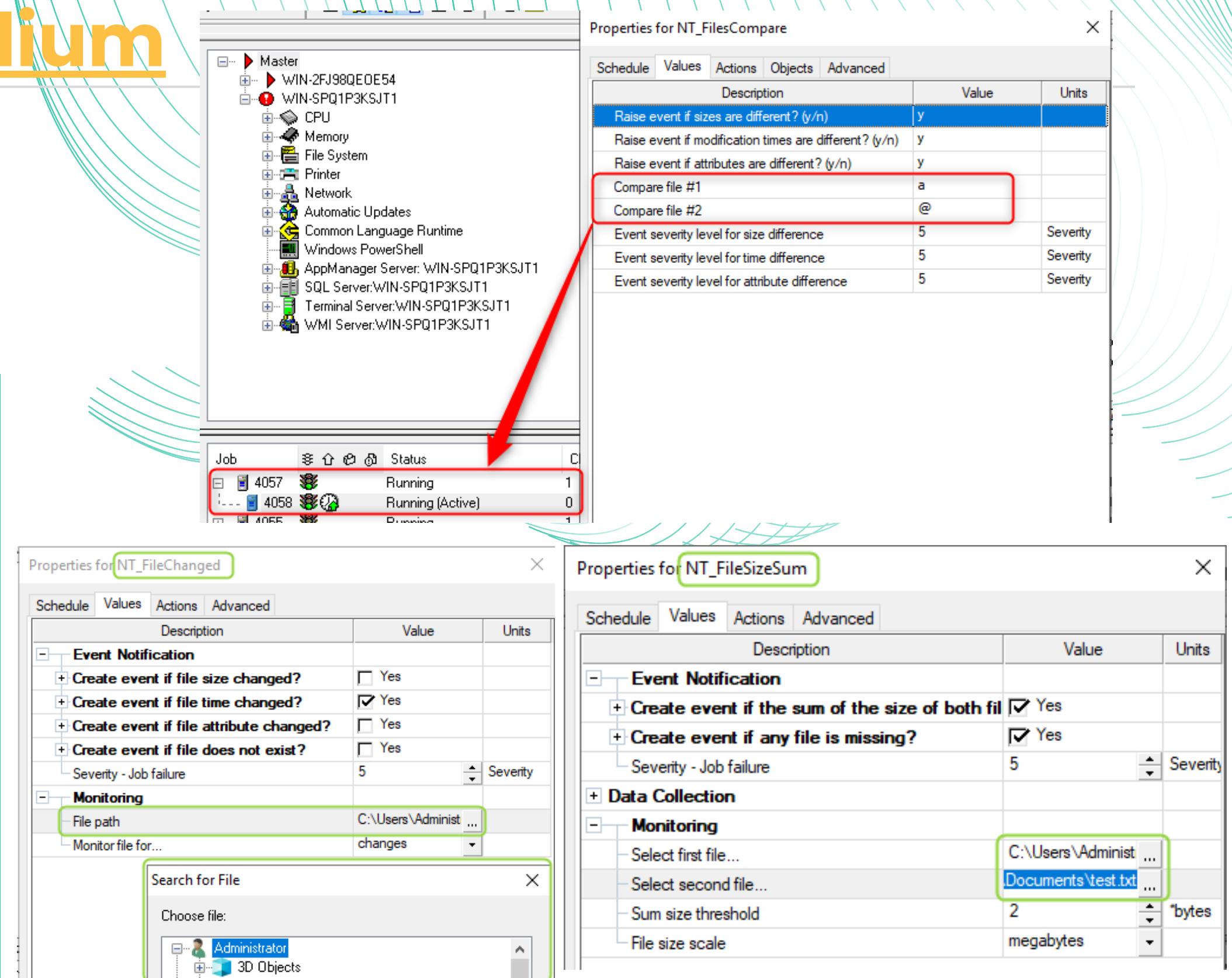
Actual result

The path fields accept all kind of characters since the minimal quantity. Only validates when is empty, if it is filled with a single character is accepted and the job starts.

There is not a useful functionality in these two fields to improve its usability as others KSSs do.

Expected result

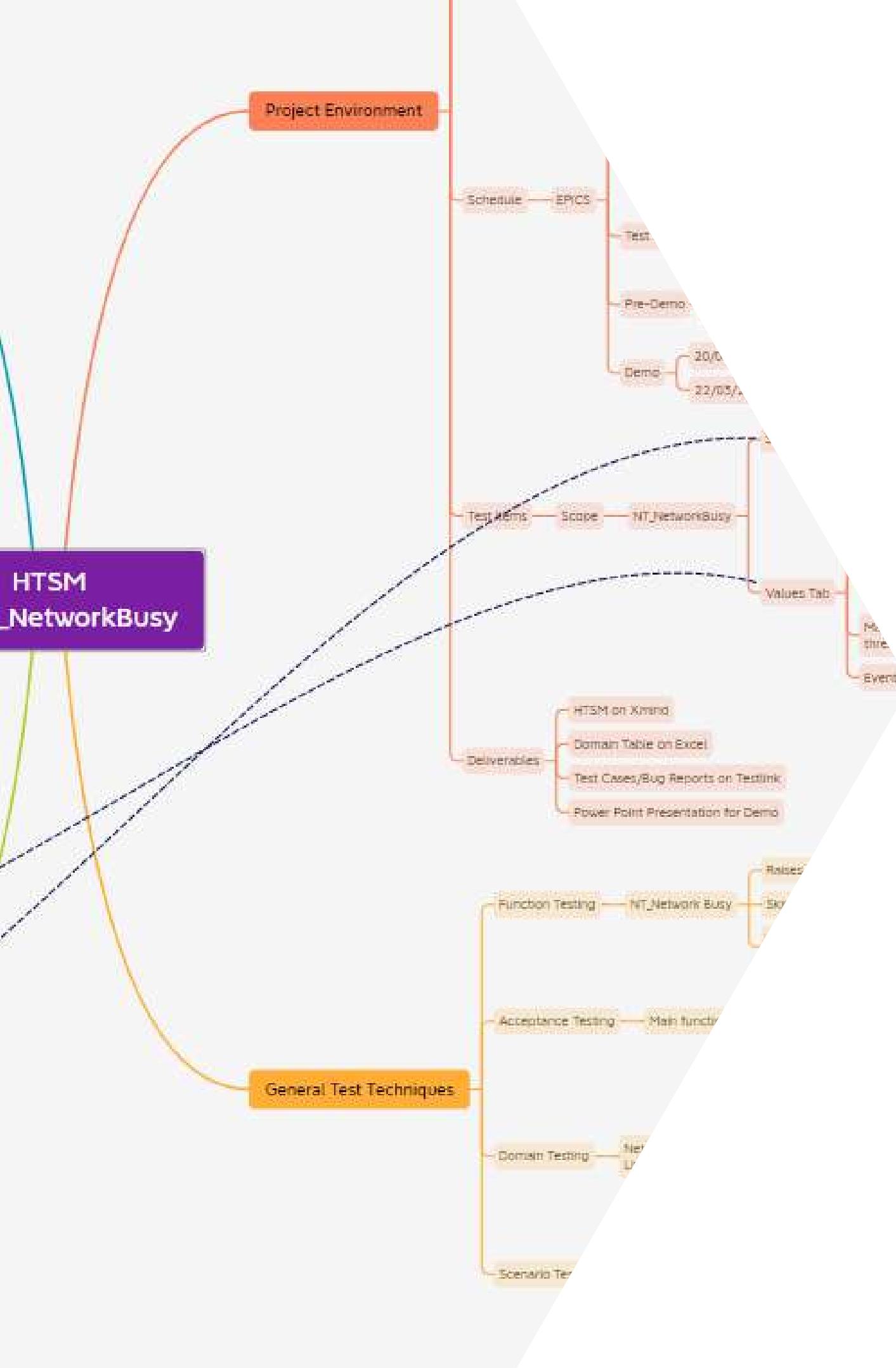
The path fields should have a file browser button to help the user to select the correct one. These fields should have at least a storage unit validation of the path or it should rejects when there is only one character and displays a pop-up giving advices to add the valid one.



KS NT_NetworkBusy

Monitors traffic on network interface cards.
Loopback is skipped. Raises an event if
bandwidth utilization exceeds the threshold





Environment

- Windows Server 2008 R2

Test techniques

- Function
- Acceptance
- Domain
- Scenario

Quality Criteria

- Capability
- Usability
- Compatibility
- Reliability

Tabs		Valid Case	Invalid Case	Boundaries	Best Representative	Default
Values	Raise event?	"y" or "n"			y	y
	Collect data?	"y" or "n"	Numbers, Special Characters, or Letters different than "y" and "n"		y	n
	Maximum percentage network utilization network	0 to 100	Letters, Numbers > 100	0 and 100	35	35
	Event severity level	1 to 40	Letters, Numbers > 40	1 and 40	5	5
Schedule	Run Once	Now, Start date	Start date: Invalid dates, Hours > 60, Minutes > 60, Seconds > 60		Now	Now
	Regular Intervals	Every 2, 5 and 10 minutes	0, Numbers > 100, Letters or Special Characters	1 and 100	Every 2 Minutes	Every 30 Minutes

Domain Table

Scope

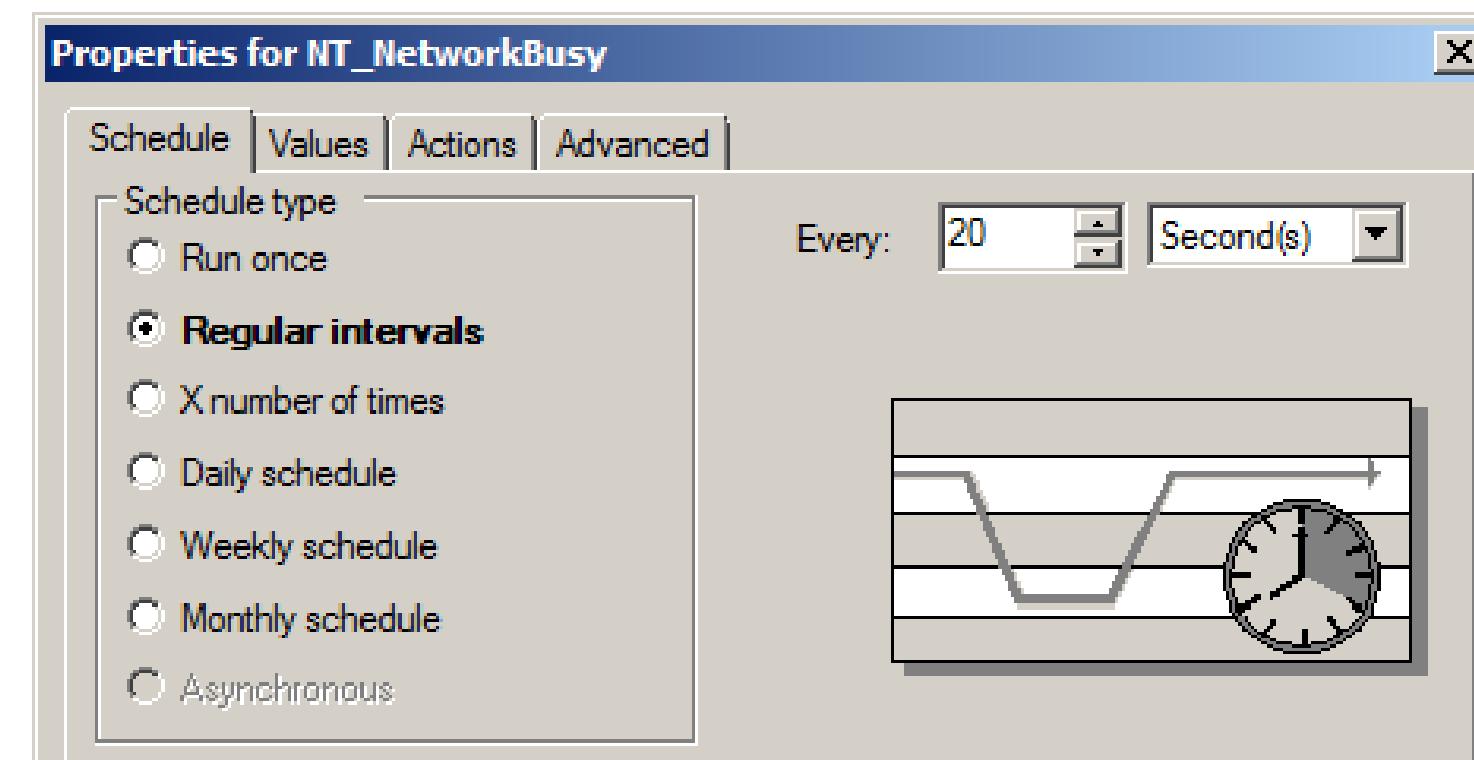
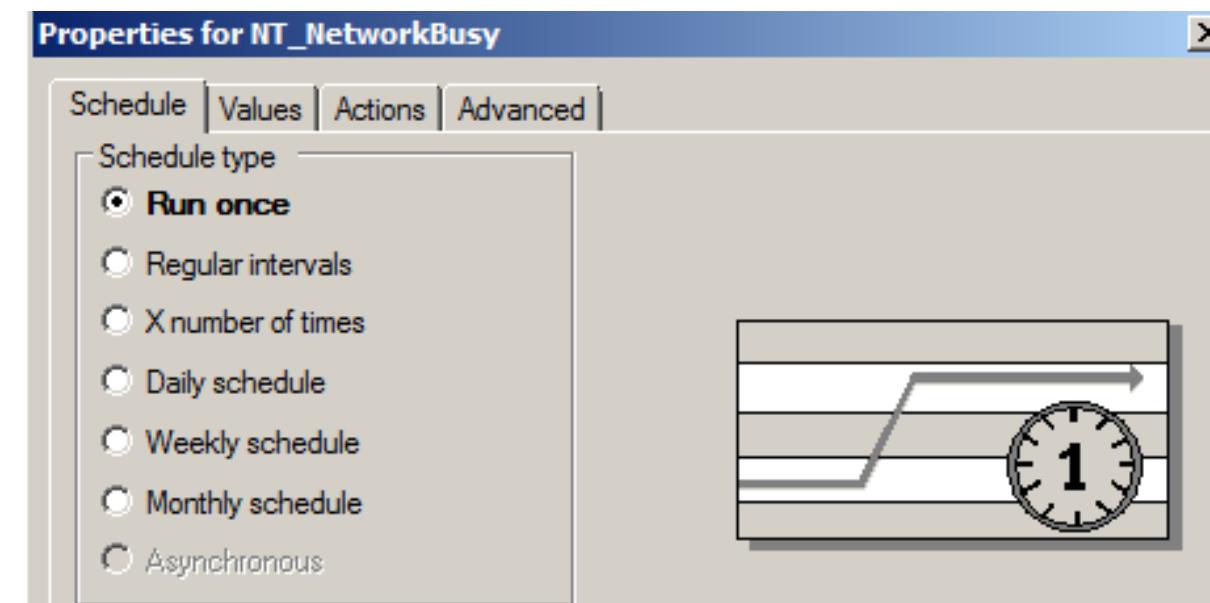
Value Tab:

- Raise event
- Collect data
 - Yes/No
- Network utilization threshold
 - 0%, 1%, 3%, 5%, 10%
 - Note: The default 35% couldn't be reached
- Severity Level
 - 5, 15, 30, 39

Schedule Tab

- Run once
- Regular intervals
 - 10, 20, 30 Seconds
 - 1, 5 Minutes

Properties for NT_NetworkBusy		
Schedule	Values	Actions
Description	Value	Units
Raise event? (y/n)	y	
Collect data? (y/n)	y	
Maximum percentage network utilization threshold	5	%
Event severity level	5	Severity



Test Techniques

Function Test

Mt01-111 : The KS doesn't show information of the network bandwidth if the Collect Data option is disabled - Version1 🤖 ⓘ

Summary

When the user is configuring the KS NT_NetworkBusy Job to raise an event, if the option of Collect Data is marked with an "n", the event shouldn't show any information about the percentage reached of the network interface used

Scenario Test

Mt01-153 : The KS doesn't raise an event if the network card is disabled - Version1 🤖 ⓘ

Summary

The KS shouldn't be able to raise an event if all the network cards are disabled, and there is no network bandwidth usage

Acceptance Test

Mt01-127 : The KS raises an event when the network interface's bandwidth utilization exceeds the threshold - Version1 🤖 ⓘ

Summary

After setting up the KS NT_NetworkBusy, an event will raise if the threshold set has been exceeded

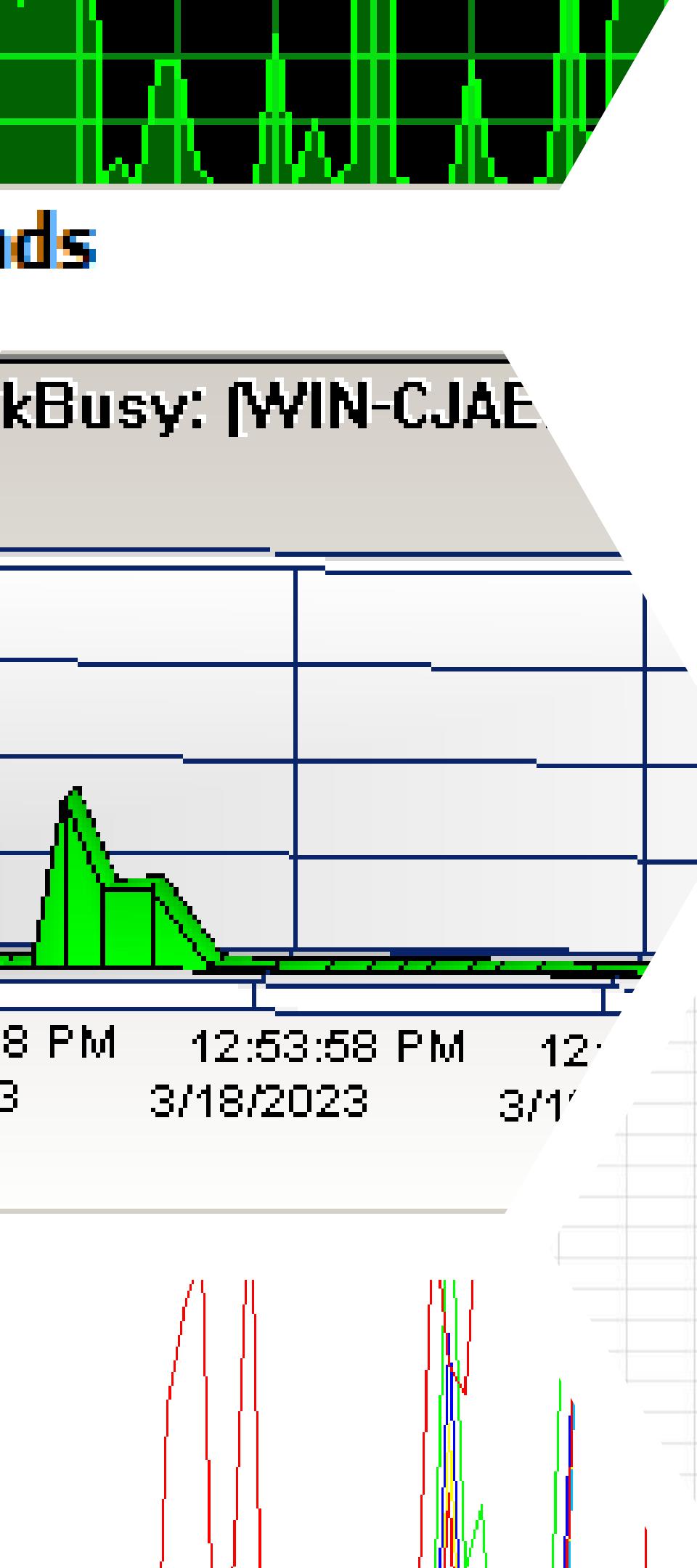
Domain Test

Mt01-133 : The KS doesn't accept special characters on the "Maximum percentage network usage" field - Version1 🤖 ⓘ

Summary

When the user is setting the threshold for the maximum percentage usage of the network bandwidth, the field should not accept any special characters

- ▶  [KS NT_NetworkBusy \(45\)](#)
 - ▷  [Function Tests \(17\)](#)
 - ▷  [Domain Tests \(23\)](#)
 - ▷  [Scenario Tests \(3\)](#)
 - ▷  [Acceptance Tests \(2\)](#)



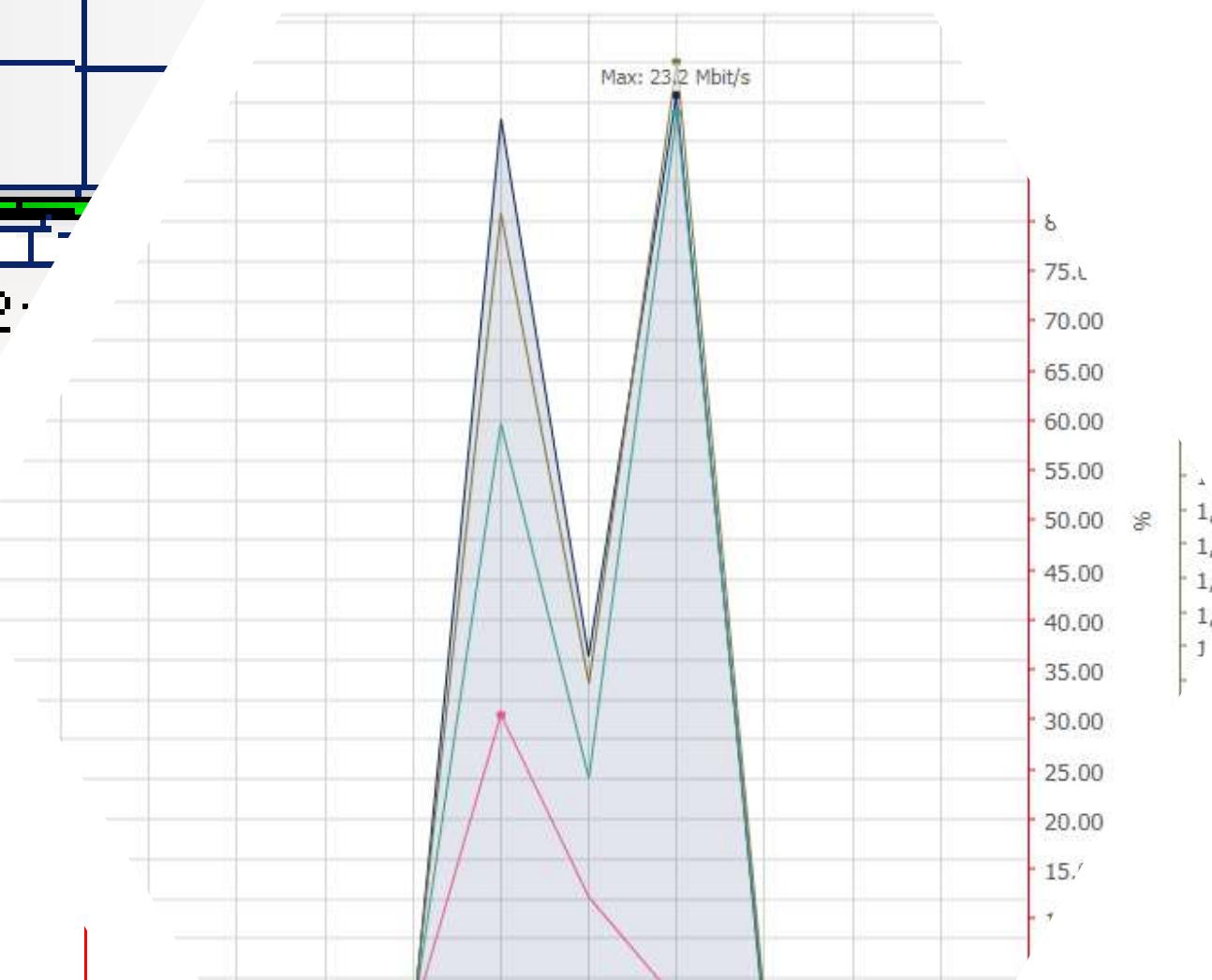
PAESSLER PRTG NETWORK MONITOR



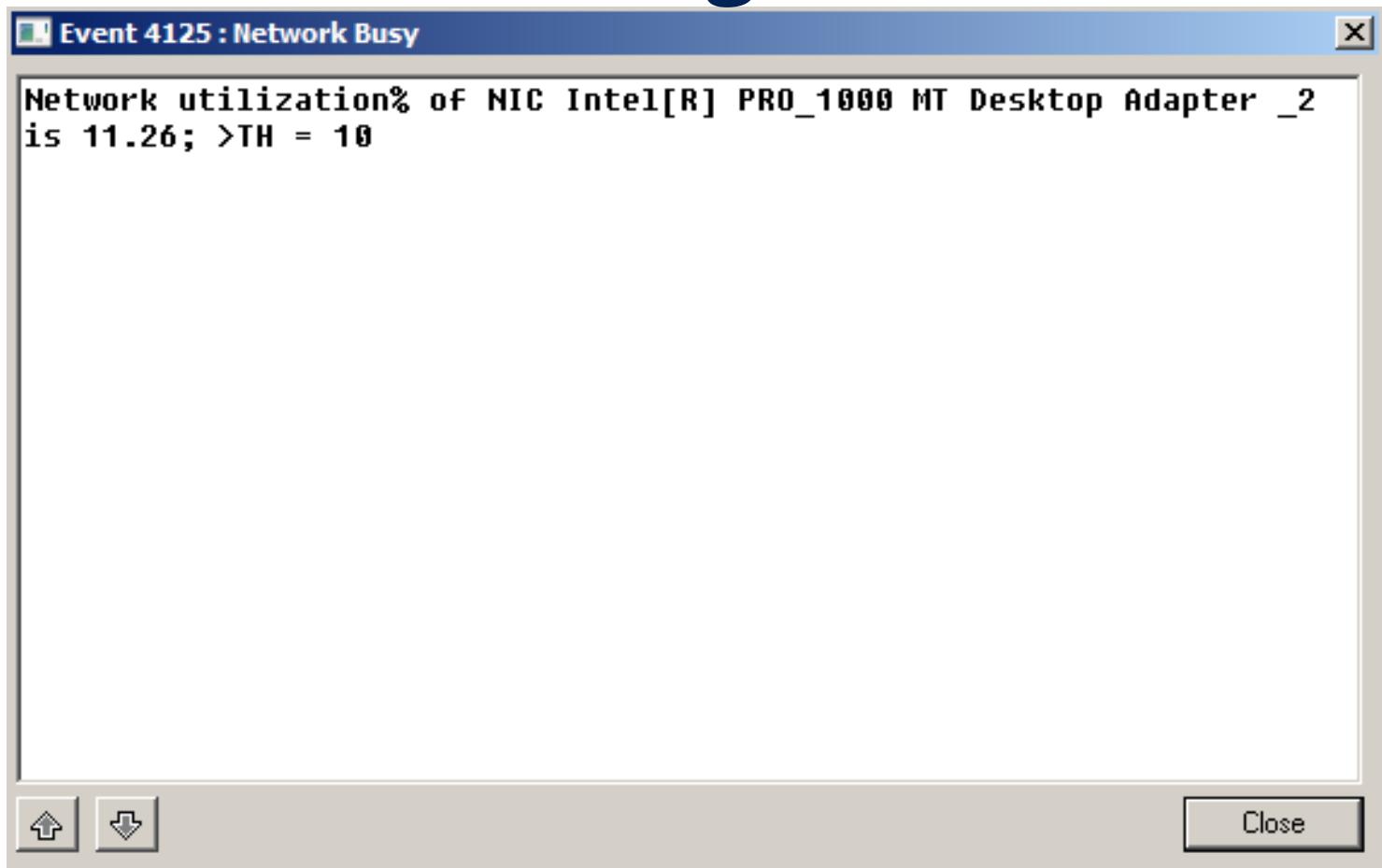
Test Executions and Validations

Tools

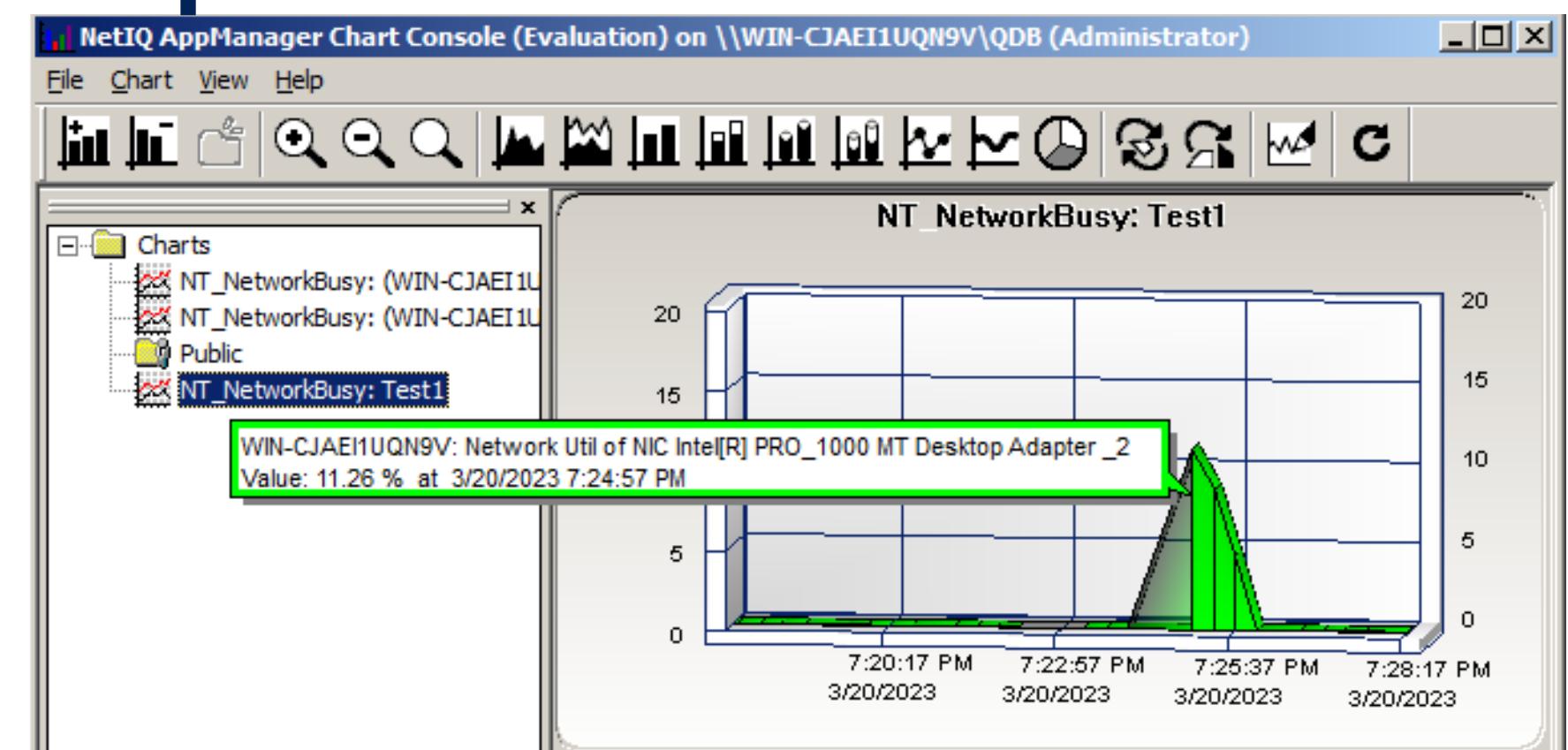
- Task Manager
- Resource Monitor
- Graph Data
- PRTG Network Monitor



Detailed Message of the Event



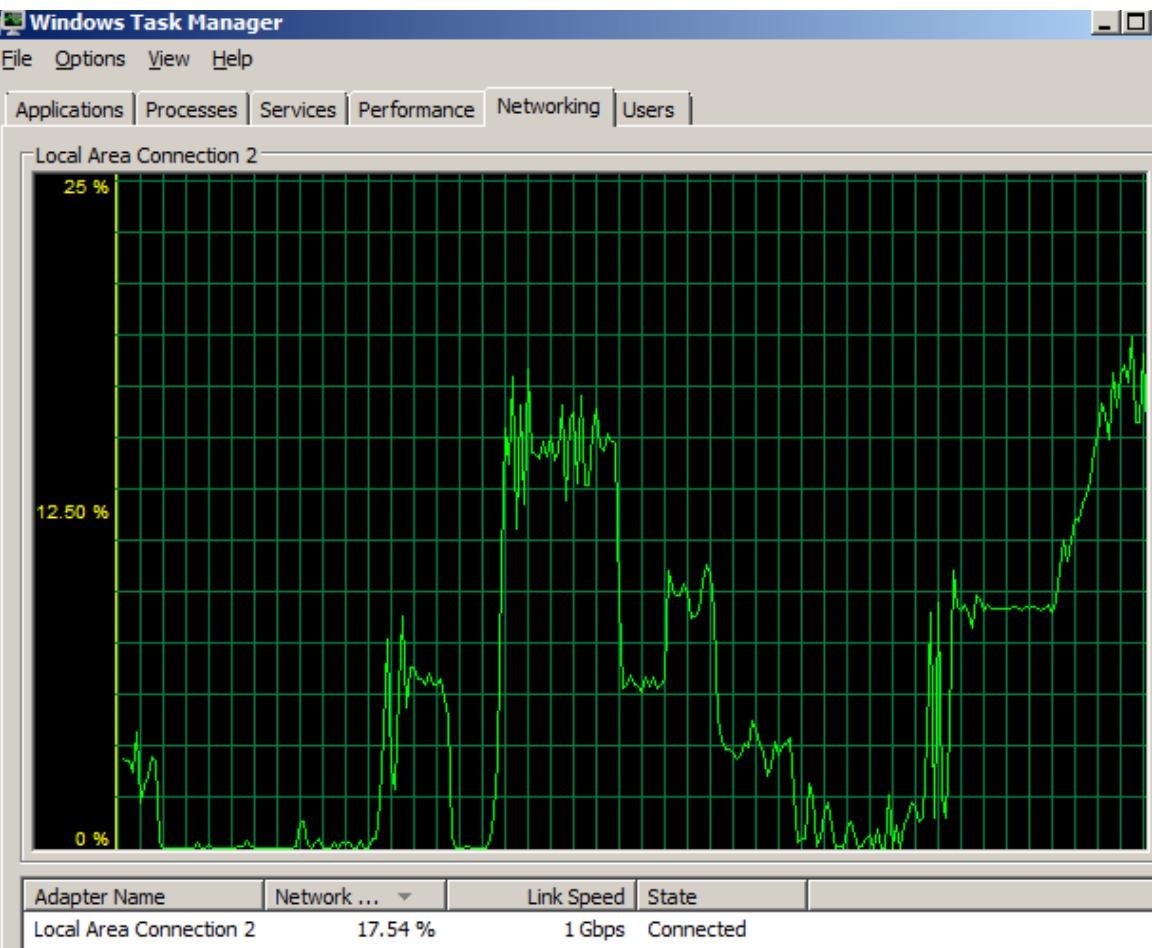
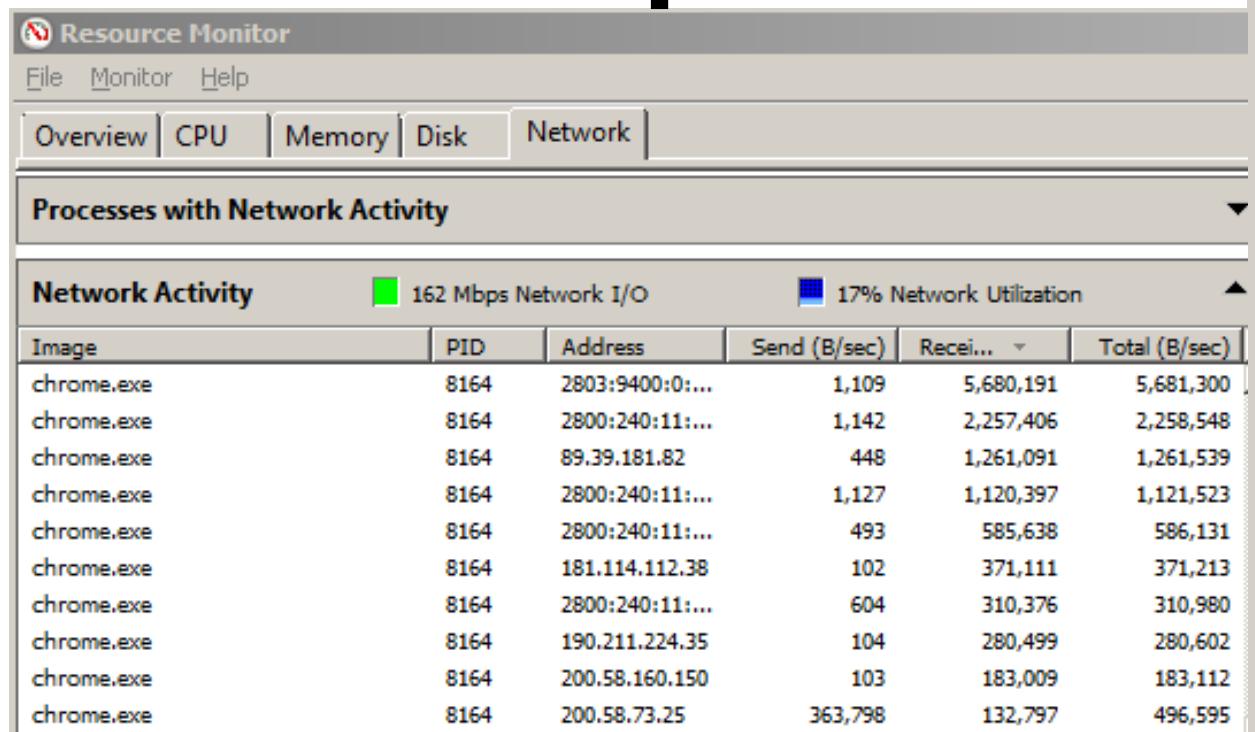
Graphic made from the data collected



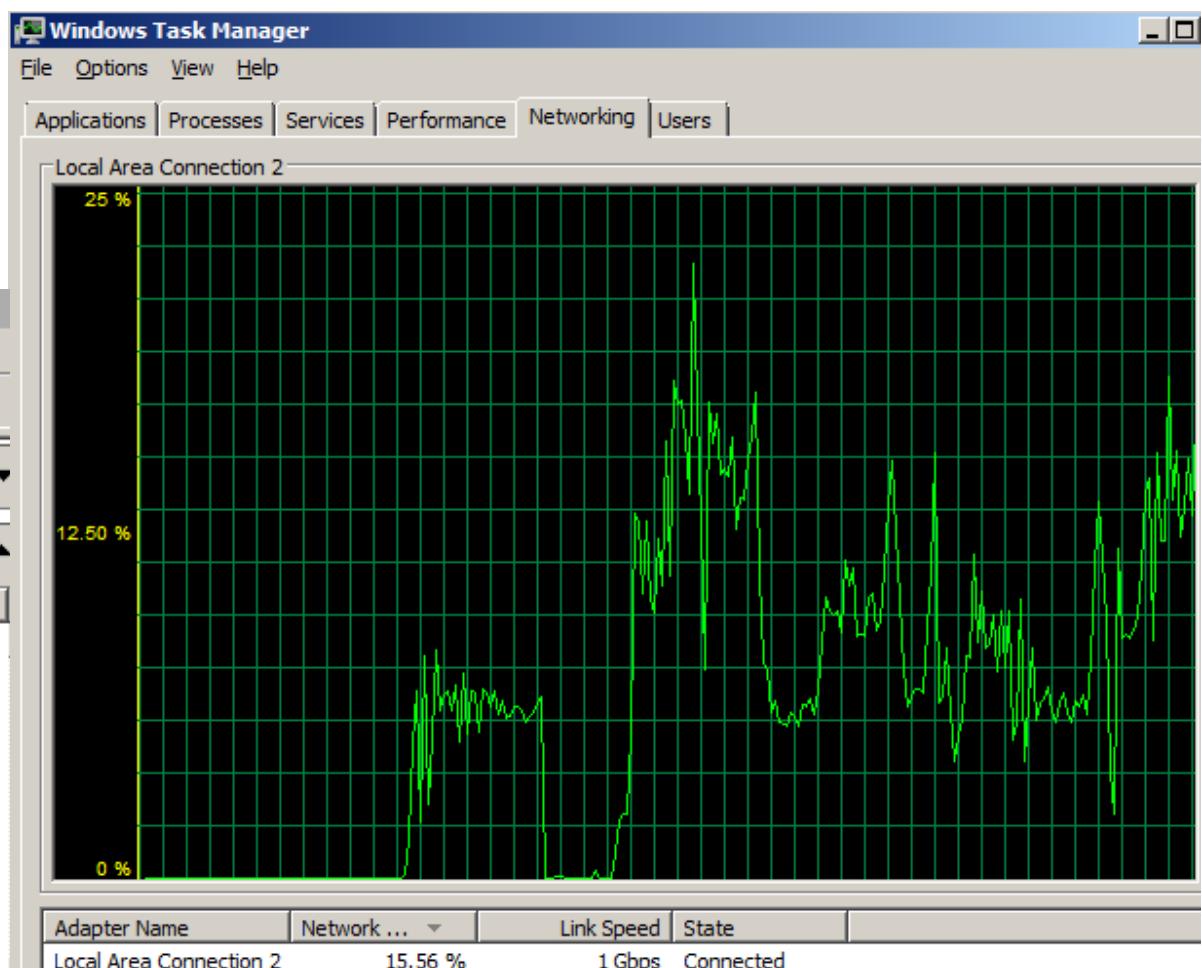
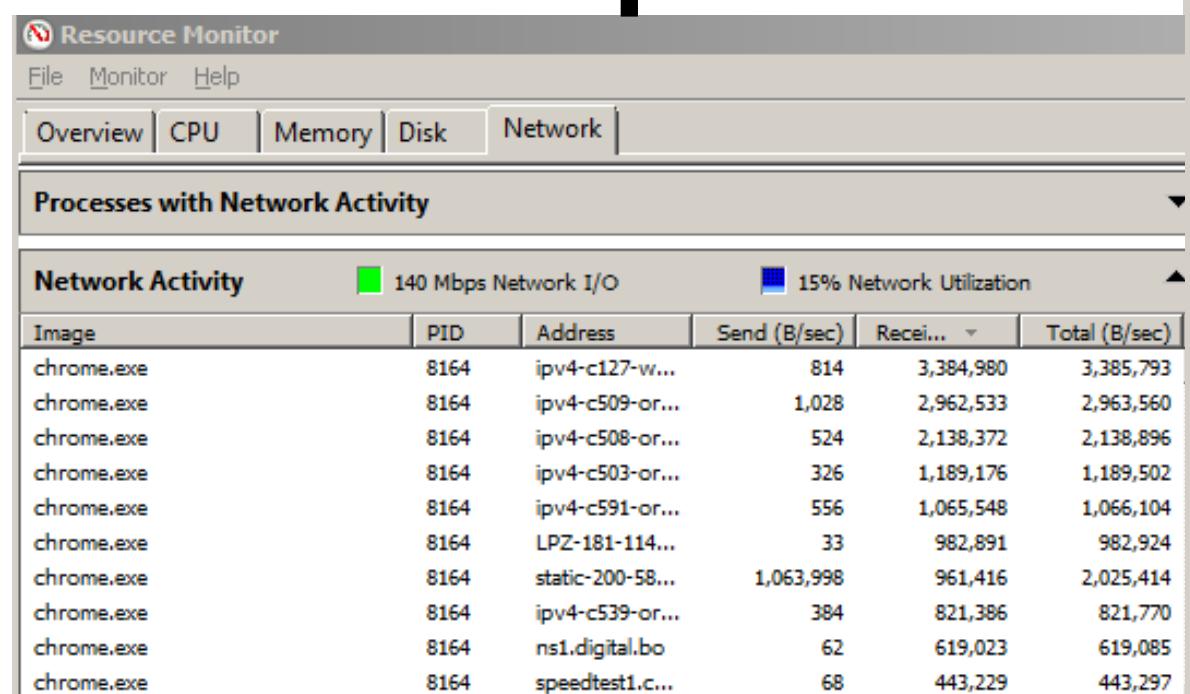
Event and Graph Data related

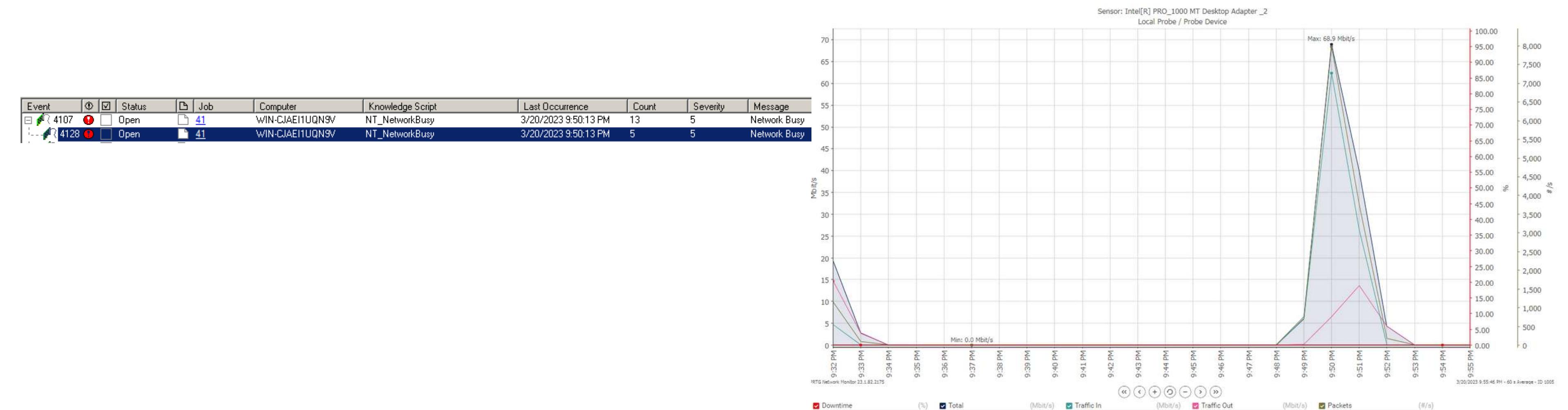
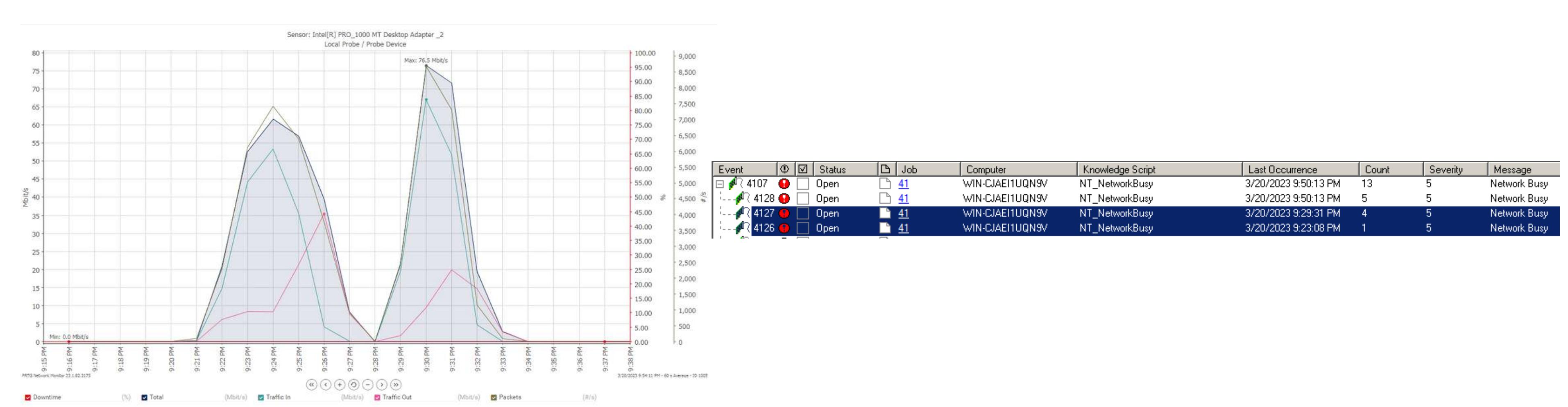
Event	Status	Job	Computer	Knowledge Script	Last Occurrence	Count	Severity	Message
4107	Open	41	WIN-CJAEI1UQN9V	NT_NetworkBusy	3/20/2023 7:24:57 PM	3	5	Network Busy
4125	Open	41	WIN-CJAEI1UQN9V	NT_NetworkBusy	3/20/2023 7:24:57 PM	1	5	Network Busy
Data Source								
7	41	NT_NetworkBusy	WIN-CJAEI1UQN9V	8	220			Network Util of NIC Intel[R] PRO_1000 MT Desktop Adapter _2 %
6	39	NT_NetworkBusy	WIN-CJAEI1UQN9V	8	16			Network Util of NIC Intel[R] PRO_1000 MT Desktop Adapter _2 %
5	37	NT_NetworkBusy	WIN-CJAEI1UQN9V	8	12			Network Util of NIC Intel[R] PRO_1000 MT Desktop Adapter _2 %
4	31	NT_NetworkBusy	WIN-CJAEI1UQN9V	8	167			Network Util of NIC Intel[R] PRO_1000 MT Desktop Adapter _2 %
3	33	NT_NetworkBusy	WIN-CJAEI1UQN9V	8	112			Network Util of NIC Intel[R] PRO_1000 MT Desktop Adapter _2 %
2	29	NT_NetworkBusy	WIN-CJAEI1UQN9V	8	1			Network Util of NIC Intel[R] PRO_1000 MT Desktop Adapter _2 %
1	23	NT_NetworkBusy	WIN-CJAEI1UQN9V	8	37			Network Util of NIC Intel[R] PRO_1000 MT Desktop Adapter _2 %

Example 1



Example 2





Scenarios

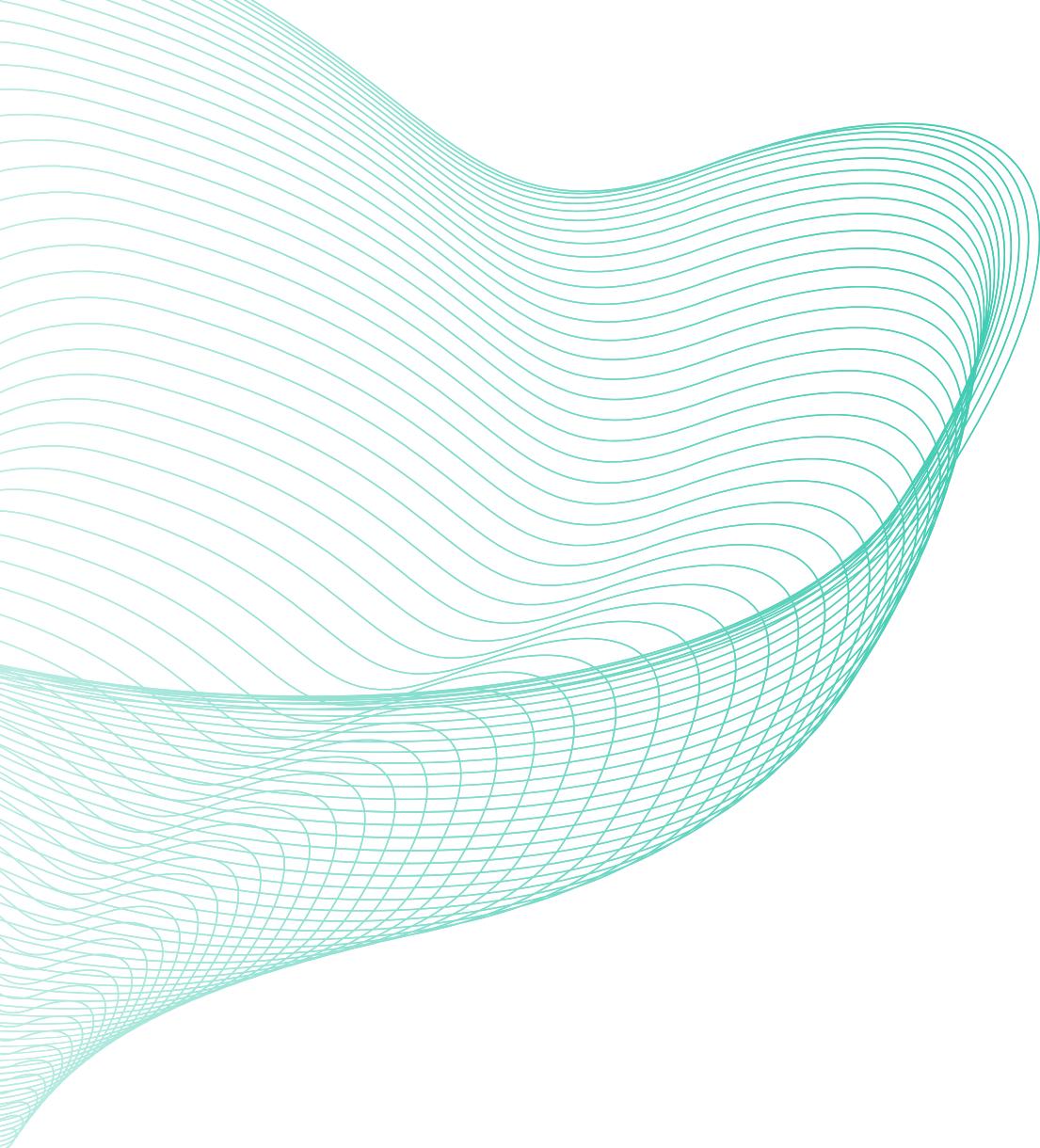
- The KS raises events when the Linkspeed is set in 10Mbps with Full Duplex
- The KS raises events when the Linkspeed is set in 10Mbps with Half Duplex
- The KS doesn't raise events when the network cards are disabled

Bugs

Mt01-928 : NT_NetworkBusy >
The threshold field accepts
being filled with an space

Mt01-931 : KS NT_NetworkBusy >
The severity field allows as an input
value 2 numbers separated by a
dash

NT_FileChanged



Acceptance Criteria

Compares the size, timestamp, and attributes of a specified file from one interval to the next. Raises an event if the file has (or has not) been modified.

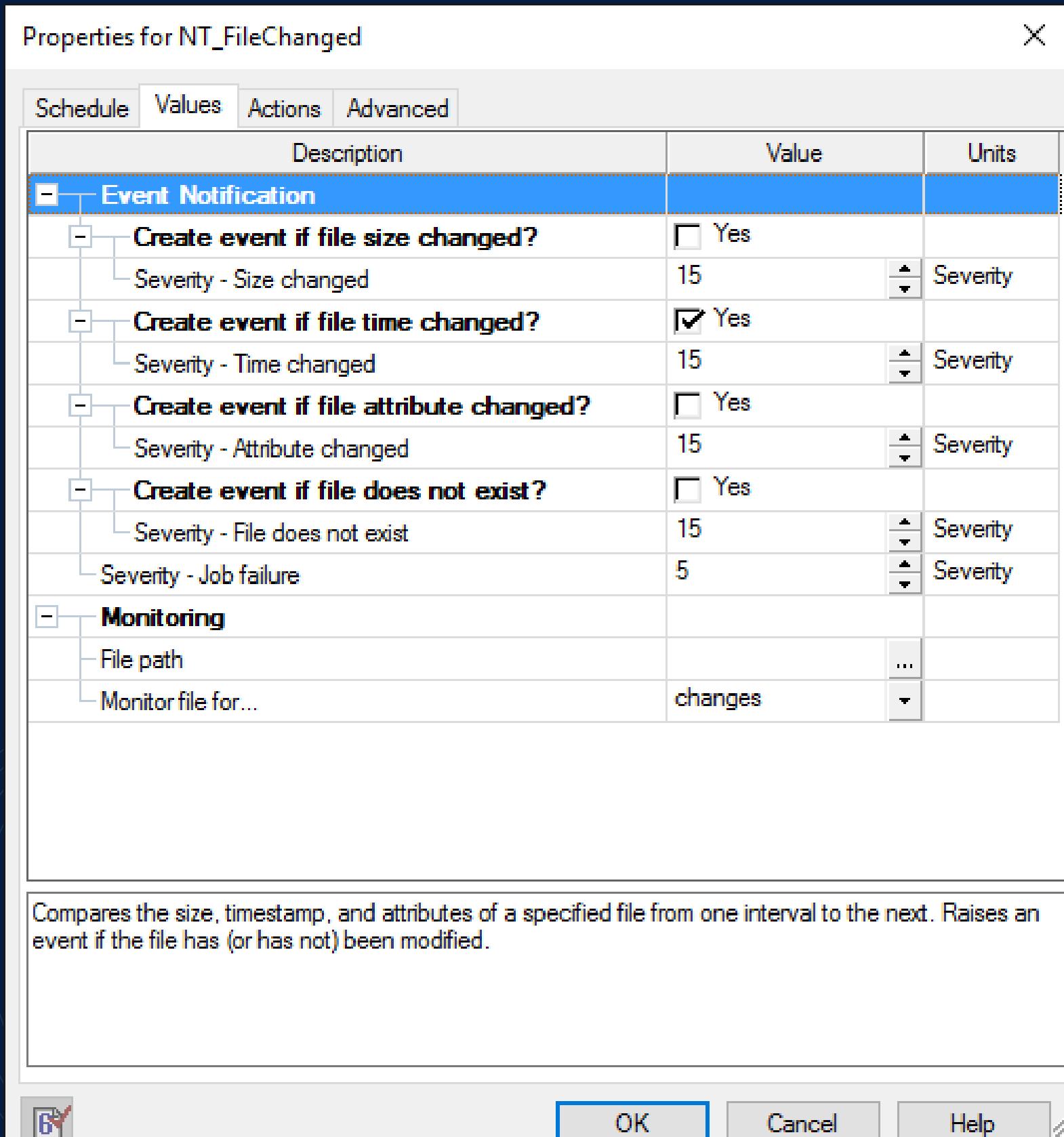
Because this script checks the file properties rather than the file content, you can use this script with almost any file type.

Mission

Test the functionality of the KS NT_FileChanged and its response to the collapsing options

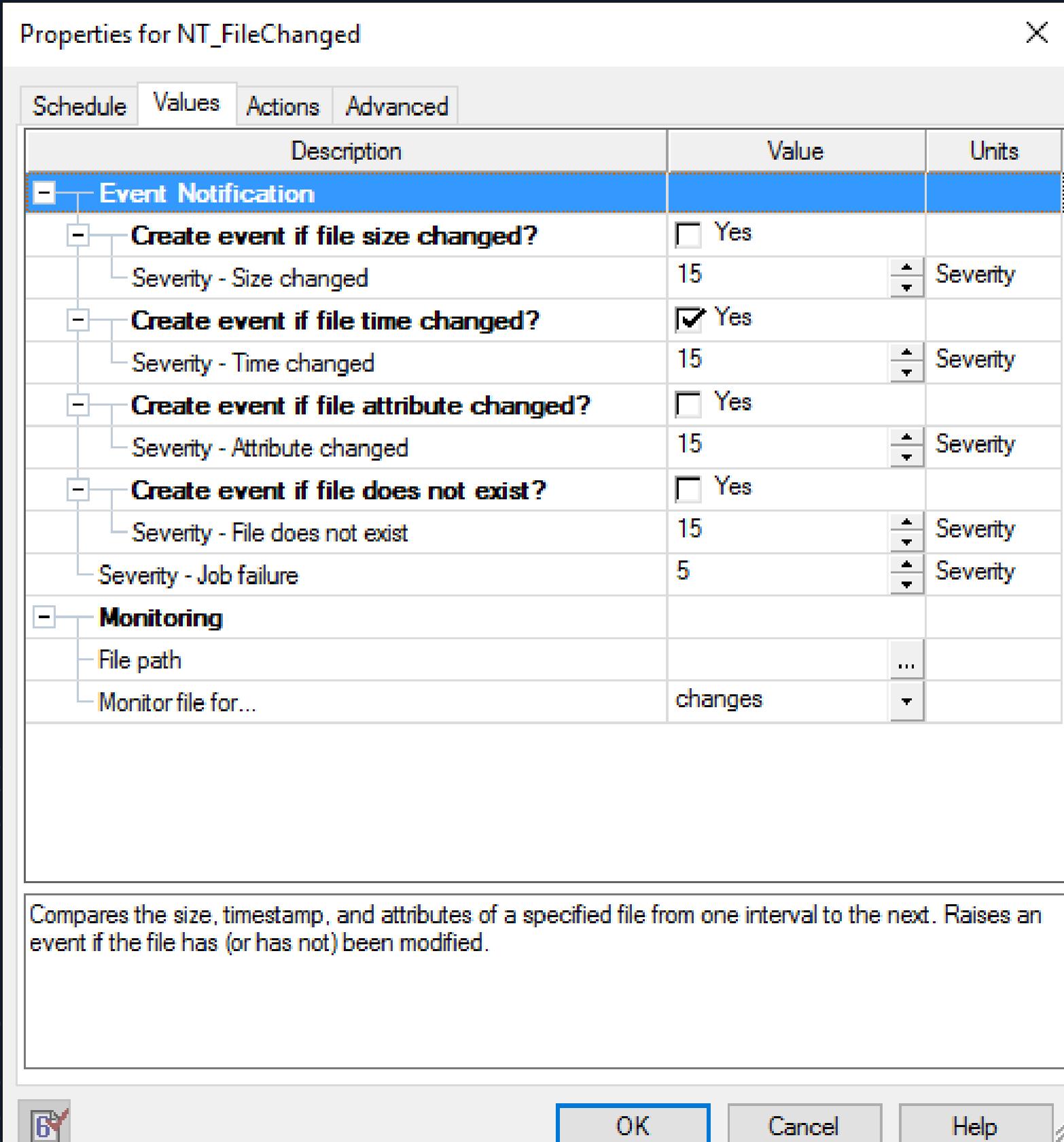
NT_FileChanged

Scope



- Values tab:
 - Event Notification values
 - Monitoring values
- Files to monitor:
 - System files (.sys)
 - Text files (.txt)
 - Wordpad files (.rtf)
 - Paint files (.png)
- Advanced tab:
 - "Collapse duplicate events into a single event" options
- Operator Console:
 - Events tab
 - Jobs tab

NT_FileChanged



Test Techniques

- Function Testing:
 - Verify that each function does what it is supposed to do
- Acceptance Testing:
 - According to the acceptance criteria
- Scenario Testing
- Combinatory Testing:
 - Different combinations between values tab and collapsing options
- Domain Testing
- Risk Testing:
 - Problems that could appear

NT_FileChanged

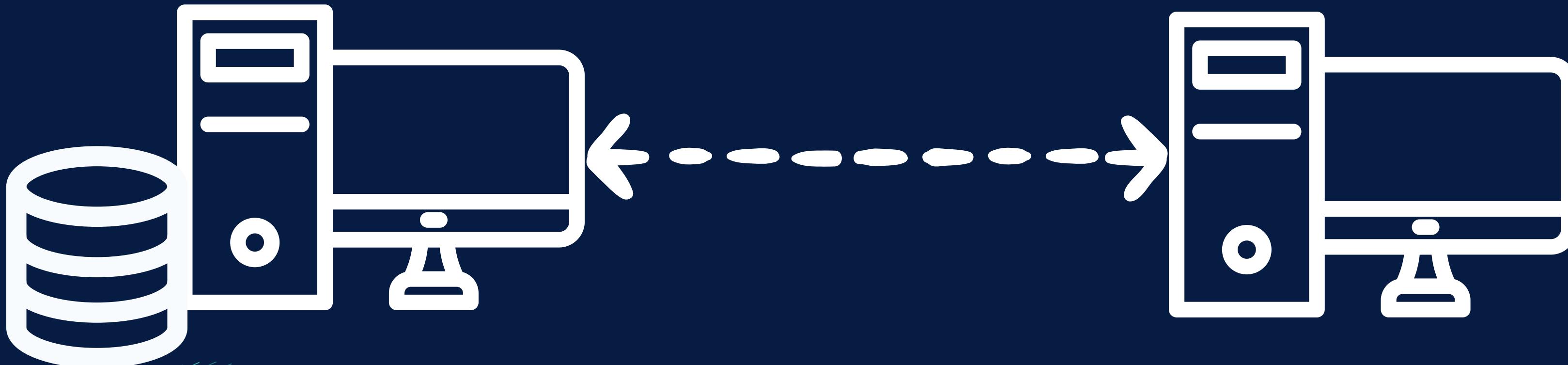
Properties for NT_FileChanged

Schedule	Values	Actions	Advanced																																										
<table border="1"> <thead> <tr> <th>Description</th> <th>Value</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Event Notification</td> <td></td> <td></td> </tr> <tr> <td> Create event if file size changed?</td> <td><input type="checkbox"/> Yes</td> <td></td> </tr> <tr> <td> Severity - Size changed</td> <td>15</td> <td>Severity</td> </tr> <tr> <td> Create event if file time changed?</td> <td><input checked="" type="checkbox"/> Yes</td> <td></td> </tr> <tr> <td> Severity - Time changed</td> <td>15</td> <td>Severity</td> </tr> <tr> <td> Create event if file attribute changed?</td> <td><input type="checkbox"/> Yes</td> <td></td> </tr> <tr> <td> Severity - Attribute changed</td> <td>15</td> <td>Severity</td> </tr> <tr> <td> Create event if file does not exist?</td> <td><input type="checkbox"/> Yes</td> <td></td> </tr> <tr> <td> Severity - File does not exist</td> <td>15</td> <td>Severity</td> </tr> <tr> <td> Severity - Job failure</td> <td>5</td> <td>Severity</td> </tr> <tr> <td>Monitoring</td> <td></td> <td></td> </tr> <tr> <td> File path</td> <td></td> <td></td> </tr> <tr> <td> Monitor file for...</td> <td>changes</td> <td></td> </tr> </tbody> </table>				Description	Value	Units	Event Notification			Create event if file size changed?	<input type="checkbox"/> Yes		Severity - Size changed	15	Severity	Create event if file time changed?	<input checked="" type="checkbox"/> Yes		Severity - Time changed	15	Severity	Create event if file attribute changed?	<input type="checkbox"/> Yes		Severity - Attribute changed	15	Severity	Create event if file does not exist?	<input type="checkbox"/> Yes		Severity - File does not exist	15	Severity	Severity - Job failure	5	Severity	Monitoring			File path			Monitor file for...	changes	
Description	Value	Units																																											
Event Notification																																													
Create event if file size changed?	<input type="checkbox"/> Yes																																												
Severity - Size changed	15	Severity																																											
Create event if file time changed?	<input checked="" type="checkbox"/> Yes																																												
Severity - Time changed	15	Severity																																											
Create event if file attribute changed?	<input type="checkbox"/> Yes																																												
Severity - Attribute changed	15	Severity																																											
Create event if file does not exist?	<input type="checkbox"/> Yes																																												
Severity - File does not exist	15	Severity																																											
Severity - Job failure	5	Severity																																											
Monitoring																																													
File path																																													
Monitor file for...	changes																																												
<p>Properties for NT_FileChanged</p> <table border="1"> <thead> <tr> <th>Schedule</th> <th>Values</th> <th>Actions</th> <th>Advanced</th> </tr> </thead> <tbody> <tr> <td colspan="4"> <p>Event options</p> <p>(These options apply when "Event?" is set to "y" in Values tab)</p> <p><input checked="" type="checkbox"/> Collapse duplicate events into a single event</p> <p>Time interval for event collapsing: <input type="text" value="20"/> minutes</p> <p>Time interval measured from:</p> <p><input type="radio"/> Initial occurrence <input checked="" type="radio"/> Most recent occurrence</p> </td> </tr> </tbody> </table>				Schedule	Values	Actions	Advanced	<p>Event options</p> <p>(These options apply when "Event?" is set to "y" in Values tab)</p> <p><input checked="" type="checkbox"/> Collapse duplicate events into a single event</p> <p>Time interval for event collapsing: <input type="text" value="20"/> minutes</p> <p>Time interval measured from:</p> <p><input type="radio"/> Initial occurrence <input checked="" type="radio"/> Most recent occurrence</p>																																					
Schedule	Values	Actions	Advanced																																										
<p>Event options</p> <p>(These options apply when "Event?" is set to "y" in Values tab)</p> <p><input checked="" type="checkbox"/> Collapse duplicate events into a single event</p> <p>Time interval for event collapsing: <input type="text" value="20"/> minutes</p> <p>Time interval measured from:</p> <p><input type="radio"/> Initial occurrence <input checked="" type="radio"/> Most recent occurrence</p>																																													

Domain Table

Tab	Variable	Valid Case Equivalence Class	Invalid Case Equivalence Class	Boundaries & Special Cases
Values	Severity Pickers (Size Changed, Time Changed, Attribute Changed, File does not exist, Job failure)	From 1 to 40	< 1 > 40	0 1 40 41
			Negative numbers Letters Special characters Spaces (Blanks)	-1 A,B,C,... *&%\$#,. No value
Advanced	File Path	Full path, for example: C:\Temp\myfile.txt	Single words Single letters Single numbers Single special characters Spaces (Blanks)	"myfile" A,B,C,... 1,2,3,... *&%\$#,. No value
	"Time interval for event collapsing" picker	From 10 to 32767 minutes	< 10 > 32767	9 10 32767 32768 -1 A,B,C,... *&%\$#,. No value

NT_FileChanged - Environment Distribution

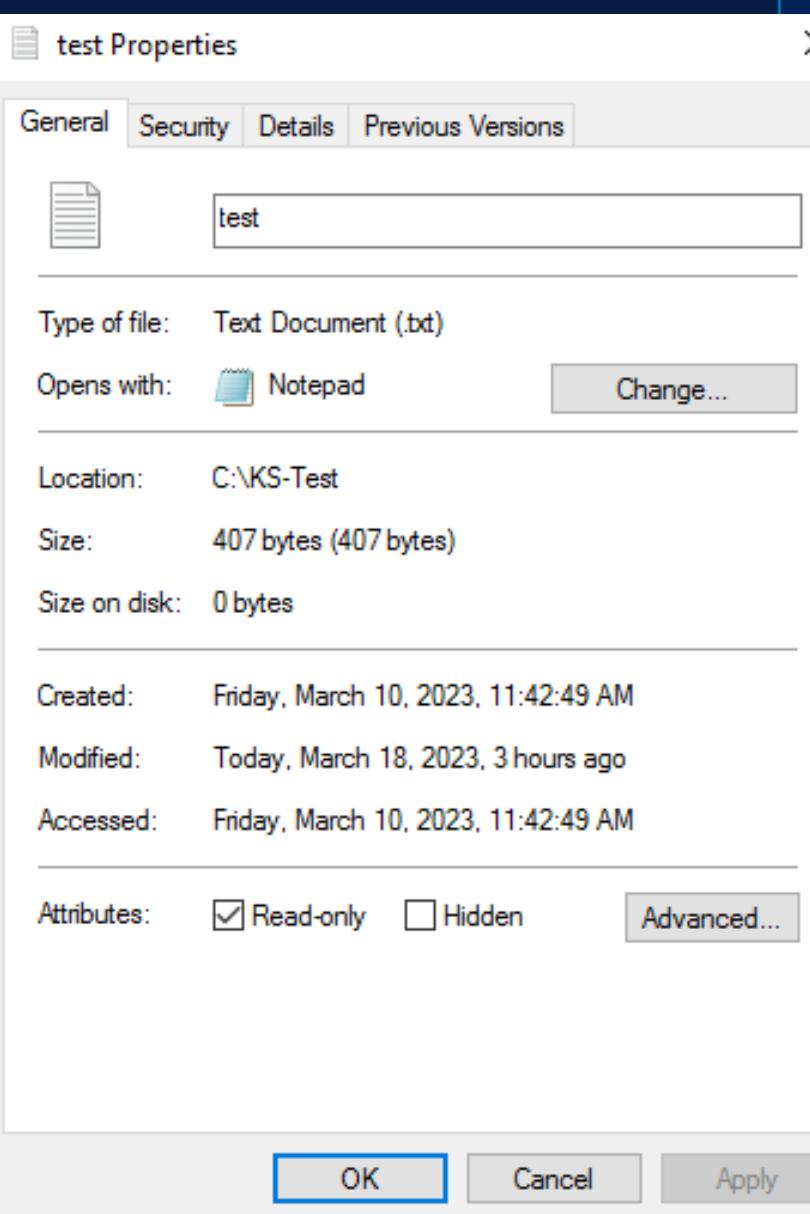
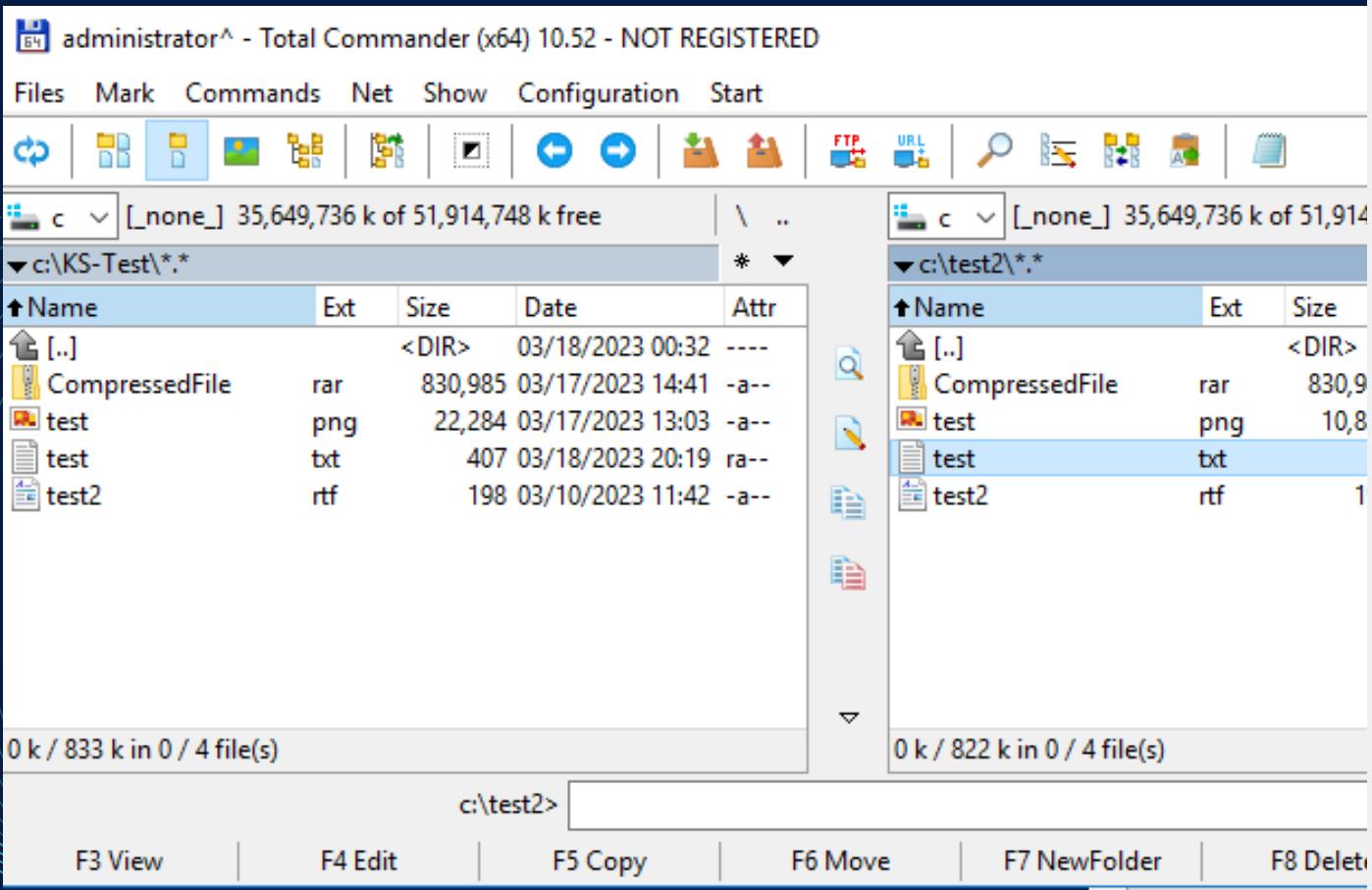


- Windows Server 2016
- Management Server Computer (ws2016)
- RAM 2GB
- Total Disk Space 49,51GB

- Windows Server 2016
- Agent Computer (Agent2016)
- RAM 2GB
- Total Disk Space 49,51GB

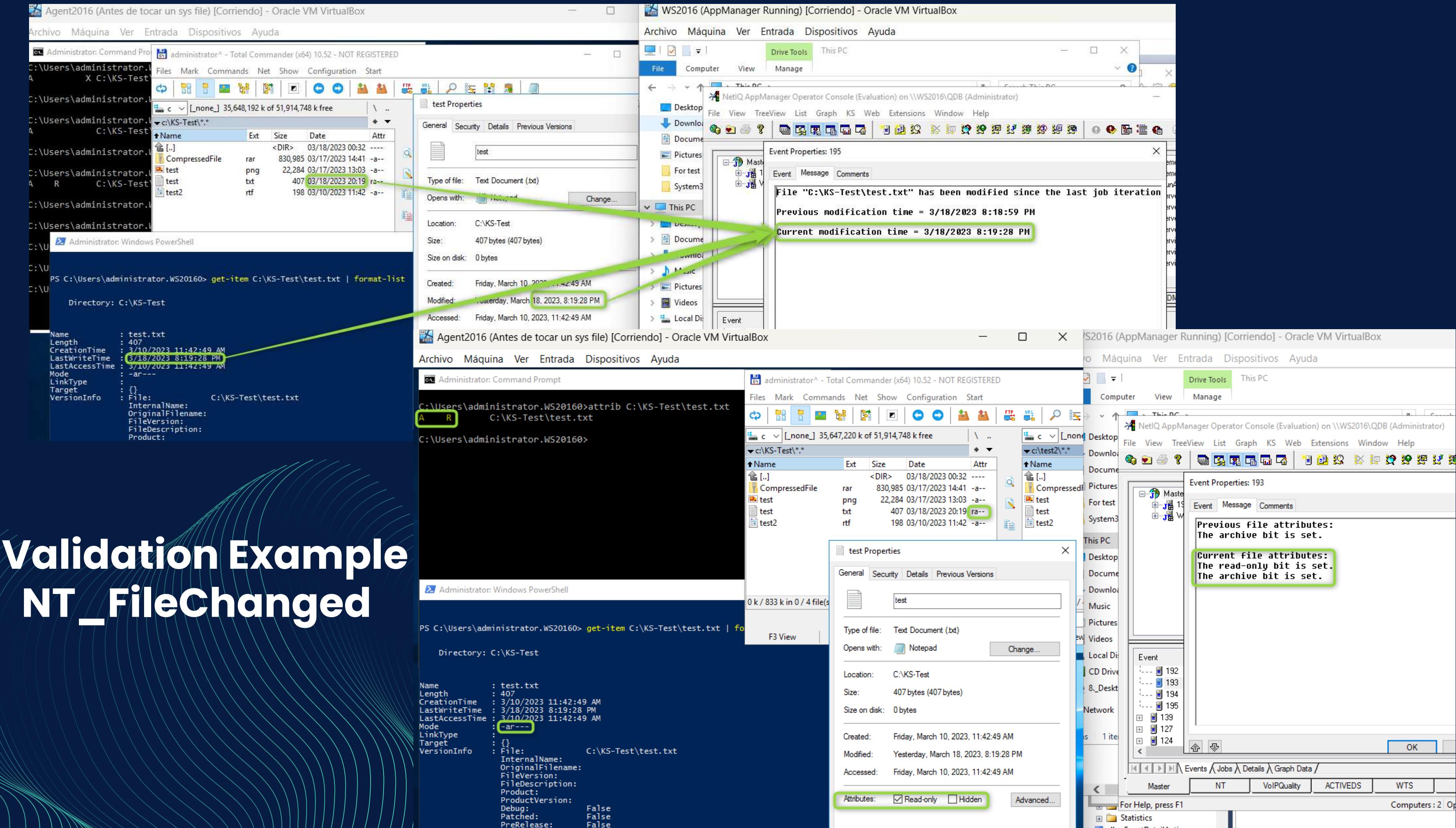
NT_FileChanged Validations

- Total Commander
- PowerShell (get-item)
- cmd (attrib)
- File Properties



A Windows PowerShell window titled 'Administrator: Windows PowerShell' is running. The command 'get-item C:\KS-Test\test.txt | format-list' is executed, displaying detailed file information. The output includes fields like Name, Length, CreationTime, LastWriteTime, LastAccessTime, Mode, LinkType, Target, VersionInfo, File, InternalName, OriginalFilename, FileVersion, FileDescription, Product, ProductVersion, Debug, Patched, PreRelease, PrivateBuild, SpecialBuild, and Language. The file 'test.txt' is shown to have a length of 255 bytes, created on 3/10/2023 at 11:42:49 AM, and last written on 3/18/2023 at 6:25:12 PM.

An Administrator Command Prompt window is open, showing a series of 'attrib' commands being run on the file 'C:\KS-Test\test.txt'. The commands include:
A X C:\KS-Test\test.txt
C:\Users\administrator.WS20160>attrib C:\KS-Test\test.txt -X
C:\Users\administrator.WS20160>attrib C:\KS-Test\test.txt
A C:\KS-Test\test.txt
C:\Users\administrator.WS20160>attrib C:\KS-Test\test.txt +R
C:\Users\administrator.WS20160>attrib C:\KS-Test\test.txt
A R C:\KS-Test\test.txt
C:\Users\administrator.WS20160>attrib C:\KS-Test\test.txt -R
C:\Users\administrator.WS20160>attrib C:\KS-Test\test.txt +R
C:\Users\administrator.WS20160>attrib C:\KS-Test\test.txt -R
C:\Users\administrator.WS20160>attrib C:\KS-Test\test.txt +R
C:\Users\administrator.WS20160>



Scenarios

- Monitored file substituted/replaced
- Containing folder attribute changed
- MS machine turned off
- Monitoring shared files on a remote agent
- Monitoring a folder
- Monitoring compressed files
- User permissions as attributes

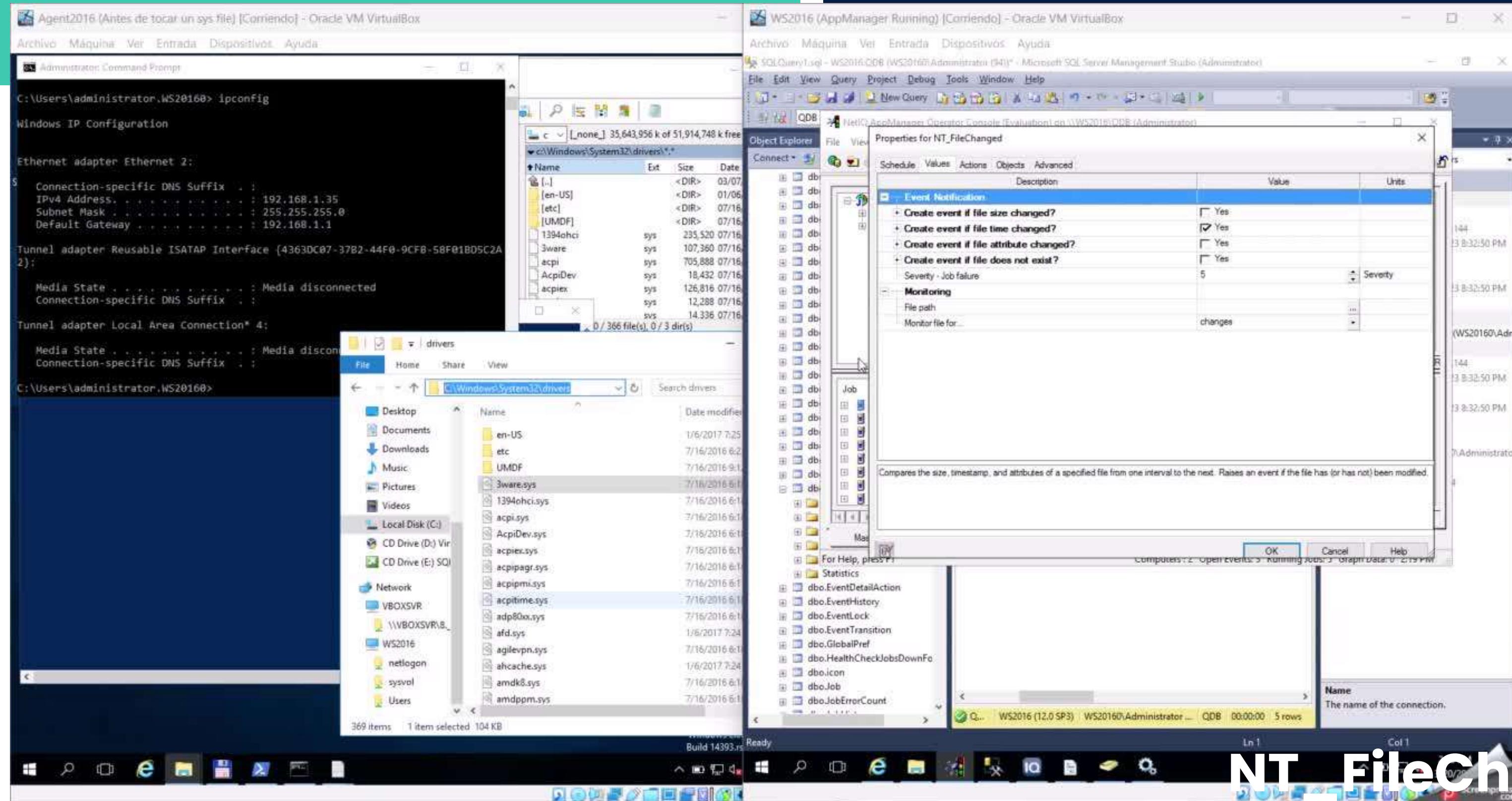
NT_FileChanged

Bugs



- Not able to monitor a system file
(High) - Acceptance
- Not able to monitor shared files with a network path on a remote agent
(Medium) - Scenario
- Does not recognize "I" and "X" file attributes
(Medium) - Acceptance
- File path of the remote Agent can't be selected in the "Search for File" window
(Medium) - Domain

- **Actual Result:** The system file is not recognized by the KS and the event "File specified does not exist" is raised
- **Expected Result:** No event should be raised since the KS should be able to monitor system files



The KS is not able to monitor system files (High) - Acceptance

NT_FileChanged

KSNT_FilesOpen

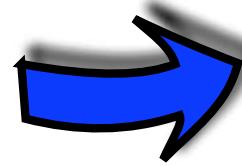


Monitor the number of files currently open through a shared network drive or by a user who logged onto the computer remotely

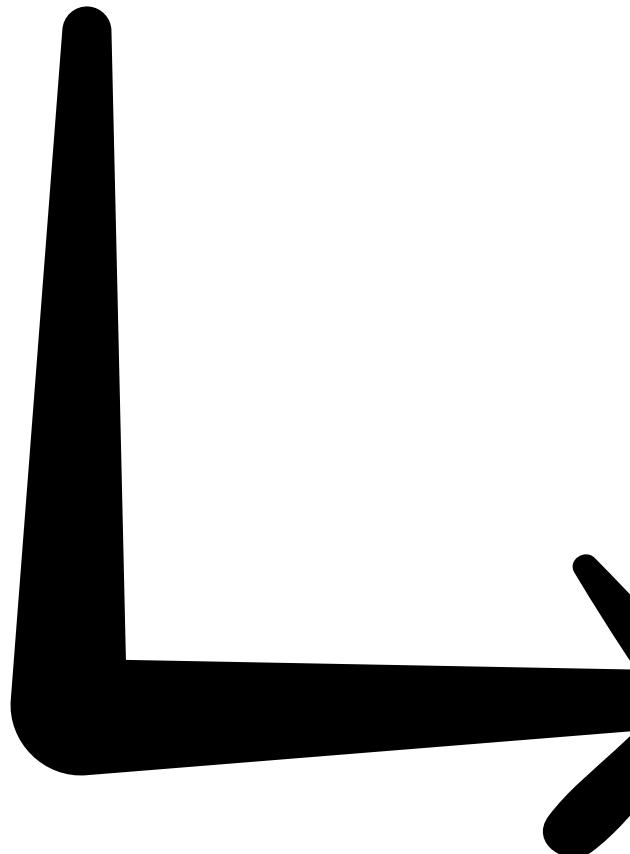
Raises an event if the number of open files exceeds the threshold

This script does not raise an event if a file is opened by a user who interactively logged onto the computer.

HTSM



Project Mission: Validate that the KS NT_FILESOPEN monitors and raise events according to the acceptance criteria. If there are any bugs, they should be reported.



Project Environment
Product Elements
Quality Criteria
Test Techniques





Test Techniques

- Exploratory Testing — Explore all the functionality and aspects of the KS, and what is required for its execution.
- Function Testing — Check that their inputs match the expected output
- Domain Testing — Domain table — check whether the KS accepts inputs within the acceptable range and delivers required output.
- Acceptance Testing — Make sure the software is polished to an acceptable criteria.
- Scenario Testing — Test end to end scenarios
- Combinatory Testing
- Stress testing
 - Ensuring that software doesn't crash under crunch situations
 - Measuring software on its robustness and error handling capabilities under load conditions



Variable	Valid case equivalence class	Invalid case equivalence class	Boundaries & special cases
Raise event And Collect data	y & n	Any letter different to y/n	Y Y = Capital letter N = Capital letter n Blank space Numbers Special Characters
Maximum number of FO Threshold	0 to 99999	<0 >99999	-1 0 99999 100000 Blank space Special Characters Letters
Event severity/Event severity unexpected KS error	1 to 40	<1 >40	0 1 40 41 Blank space Special Characters Letters
Job Iterations number fields	1 to 32767	<1 >32767	0 1 32767 32768 Blank space Special Characters Letters

Domain

- ▶  KS_NT_FilesOpen (93)
 - ▶  Combinatory Testing (12) 
 - ▶  Acceptance Testing (10)
 - ▶  Function Testing (12)
- ▶  Domain Testing (51)
 -  Mt01-324:FO>Values>Raise event> with the value "y" a job c
 -  Mt01-325:FO>Values>Raise event> with the value "n" a job c
 -  Mt01-326:FO>Values>Raise event> with any letter different t
 -  Mt01-327:FO>Values>Raise event> with the value "Y" in cap
 -  Mt01-328:FO>Values>Raise event> with the value "N" in cap
 -  Mt01-329:FO>Values>Raise event> with a blank space a job
 -  Mt01-330:FO>Values>Raise event> with any special charact
 -  Mt01-331:FO>Values>Raise event> with a numeric value a jk
 -  Mt01-332:FO>Values>Collect data> with the value "y" a job c
 -  Mt01-333:FO>Values>Collect data> with the value "n" a job c
 -  Mt01-334:FO>Values>Collect data> with any letter different t
 -  Mt01-335:FO>Values>Collect data> with the value "Y" in cap
 -  Mt01-336:FO>Values>Collect data> with the value "N" in cap
 -  Mt01-337:FO>Values>Collect data> with a blank space a job
 -  Mt01-338:FO>Values>Collect data> with any special charact
 -  Mt01-339:FO>Values>Collect data> with a numeric value a jk
 -  Mt01-340:FO>Values>Maximum number of FO threshold> W
 -  Mt01-341:FO>Values>Maximum number of FO threshold> w
 -  Mt01-342:FO>Values>Maximum number of FO threshold> w



microsoft/pict

Pairwise Independent Combinatorial Tool

Validation tools

The image displays four windows illustrating validation tools:

- SQL Server Management Studio:** A query window titled "SQLQuery1.sql - WSR2-DT.QDB (WSR2-DT\Cecy (65))" containing four T-SQL statements to check for open files. The results show one row with EventID 5597.
- Computer Management:** A "Computer Management (Local)" window showing the "Shared Folders" node expanded, with "Shares" and "Sessions" listed under it.
- Administrator: Windows PowerShell:** Three "net files" commands run in sequence, each listing file paths, user names, and lock counts. The output shows multiple entries for "C:\shareWSR2\" and "C:\shareWSR2\pictures\pets".
- Event Viewer:** A "Windows Event Log" window with a red arrow pointing to a message from the "SharedAgent" application. The message reads: "NT # of files open is 2; >TH = 1". Another red arrow points to the "User name" column in the PowerShell "net files" output, which lists "CecyAgent" multiple times.

Validation tool

Stress Testing

```
script2.bat
1  @echo off
2  Y:
3  for /l %%x in (1, 1, 300) do ( echo %%x
4  for %%f in (*.txt) do START %%f
5  timeout /t 60
6  )
7  exit
```

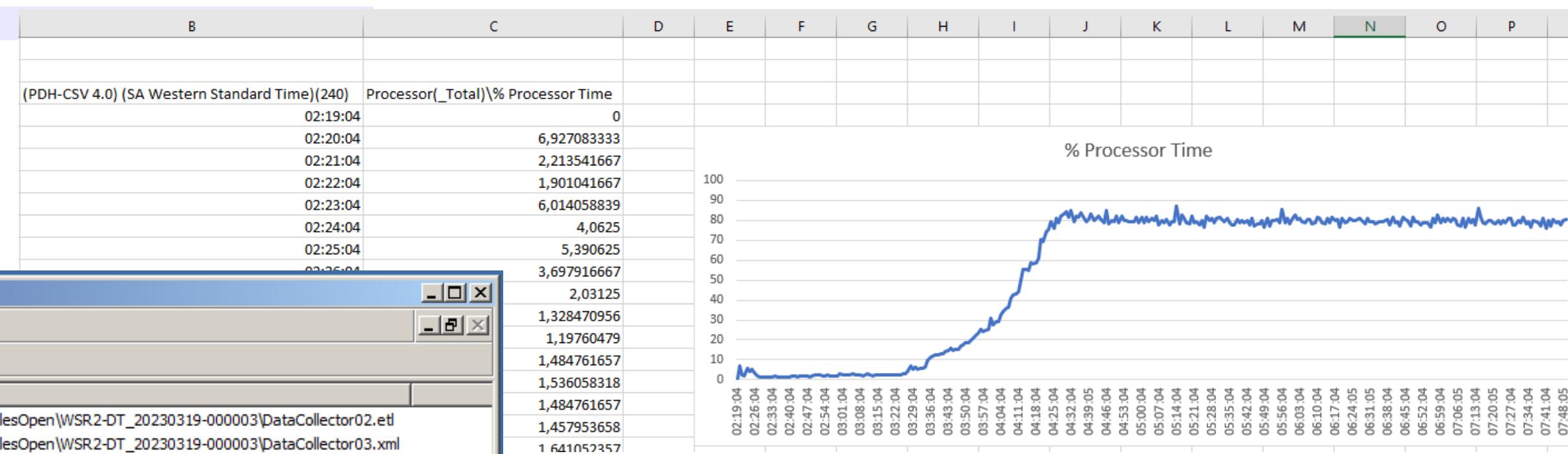
```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2009 Microsoft Corporation. All rights reserved.

PS C:\Windows\system32> net files
ID      Path          User name # Locks
302    C:\shareWSR2\   CecyAgent  0
The command completed successfully.

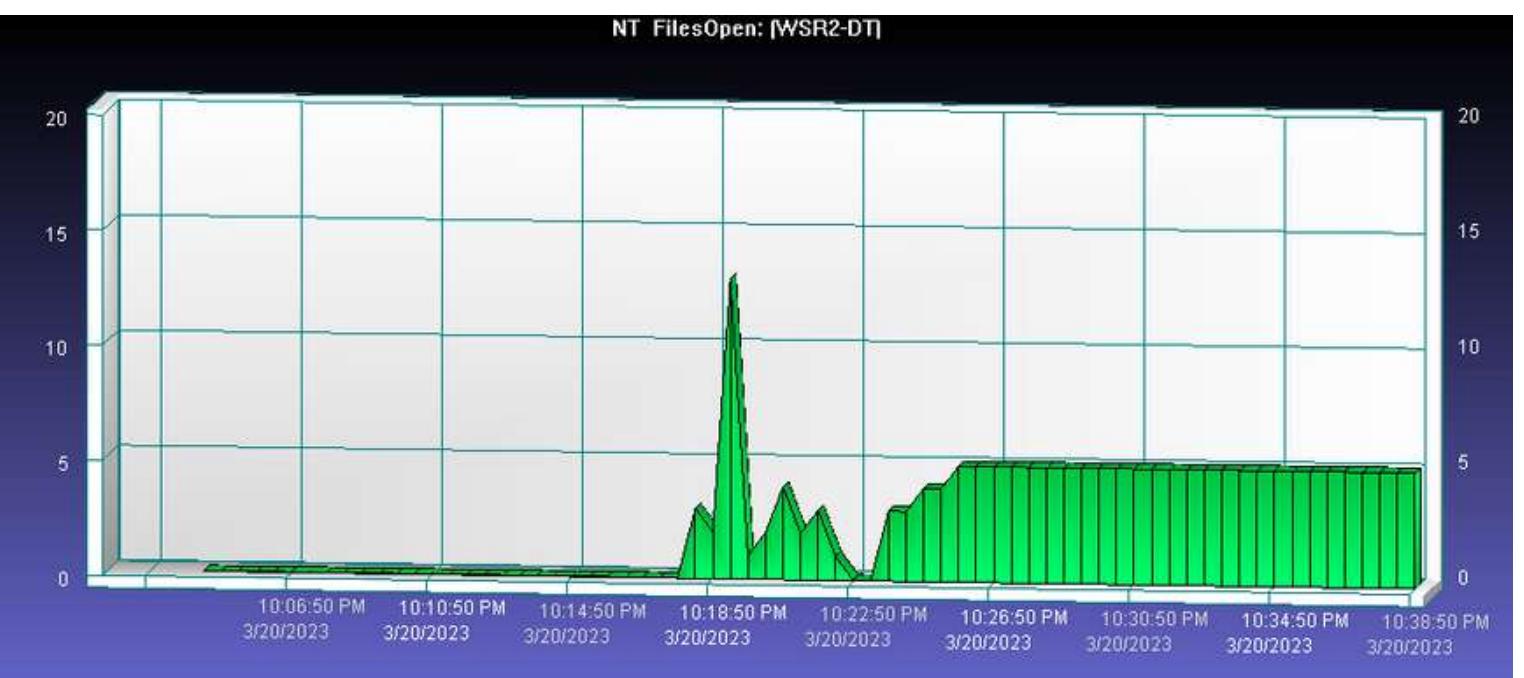
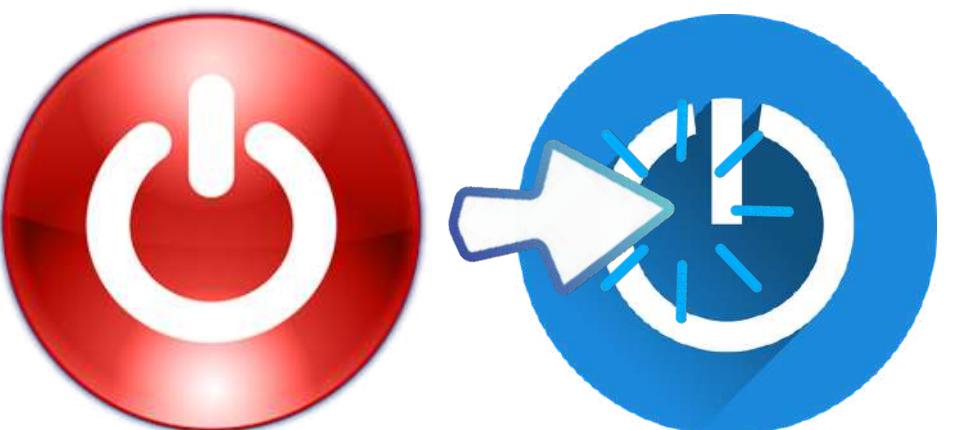
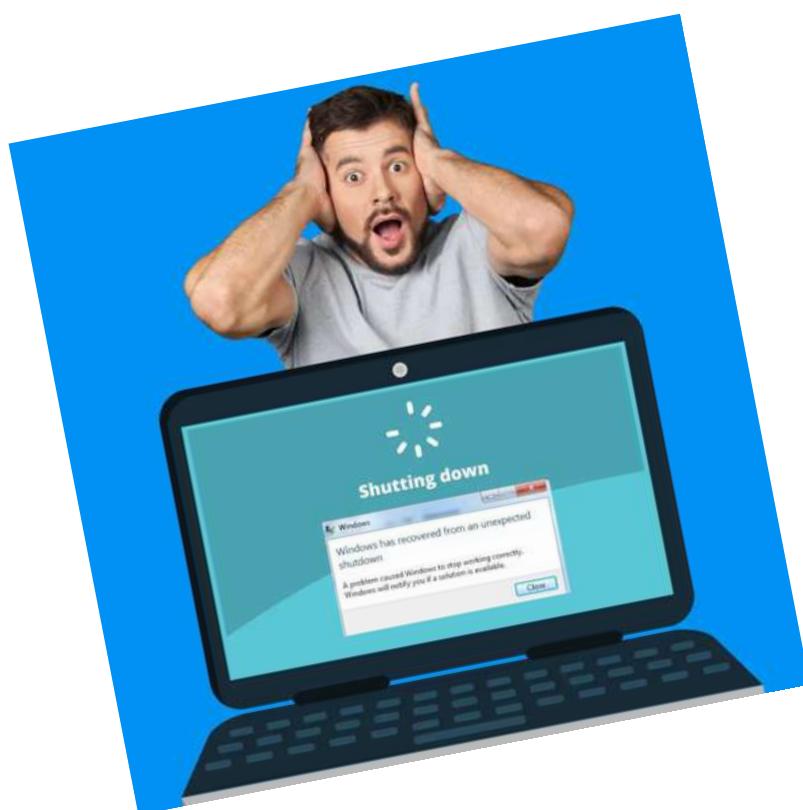
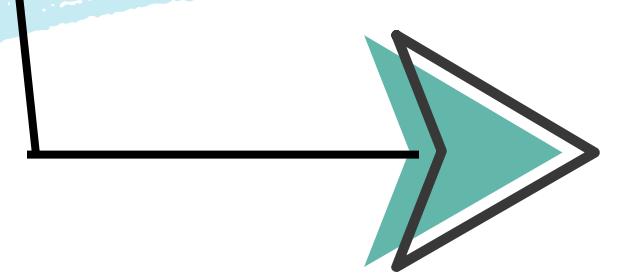
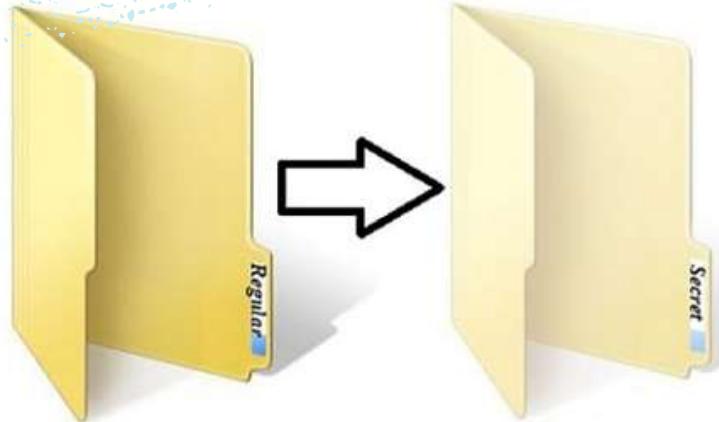
PS C:\Windows\system32> net files
ID      Path          User name # Locks
302    C:\shareWSR2\   CecyAgent  0
305    C:\shareWSR2\   CecyAgent  0
307    C:\shareWSR2\pictures CecyAgent  0
309    C:\shareWSR2\pictures\pets CecyAgent  0
322    C:\shareWSR2\pictures\pets CecyAgent  0
The command completed successfully.

PS C:\Windows\system32> net files
ID      Path          User name # Locks
302    C:\shareWSR2\   CecyAgent  0
305    C:\shareWSR2\   CecyAgent  0
307    C:\shareWSR2\pictures CecyAgent  0
309    C:\shareWSR2\pictures\pets CecyAgent  0
322    C:\shareWSR2\pictures\pets CecyAgent  0
The command completed successfully.

PS C:\Windows\system32> net files
ID      Path          User name # Locks
305    C:\shareWSR2\   CecyAgent  0
307    C:\shareWSR2\pictures CecyAgent  0
322    C:\shareWSR2\pictures\pets CecyAgent  0
388    C:\shareWSR2\pictures\pets CecyAgent  0
447    C:\shareWSR2\pictures\people CecyAgent  0
494    C:\shareWSR2\pictures\world CecyAgent  0
511    C:\shareWSR2\pictures\world CecyAgent  0
The command completed successfully.
```



Scenarios



- FO> The KS raises event if threshold is exceeded even if user opens files from hidden shared folder
- FO> Events are raised even if the monitoring computer shuts down unexpectedly
- FO> When the monitored computer is turned off and on again, the job is restarted.
- FO> The KS still monitoring even if a new shared folder is added when the job was already running.
- FO> The KS can be executed in an agent that is powered off and the job will be in Pending state
- FO> When "collect data" value= n the KS doesn't collect even if "collect data every" option is selected
- FO> The KS raises event if threshold is exceeded even if user opens hidden files from shared folder
- FO> GraphData>A chart with the collected data is created when "collect data" = y

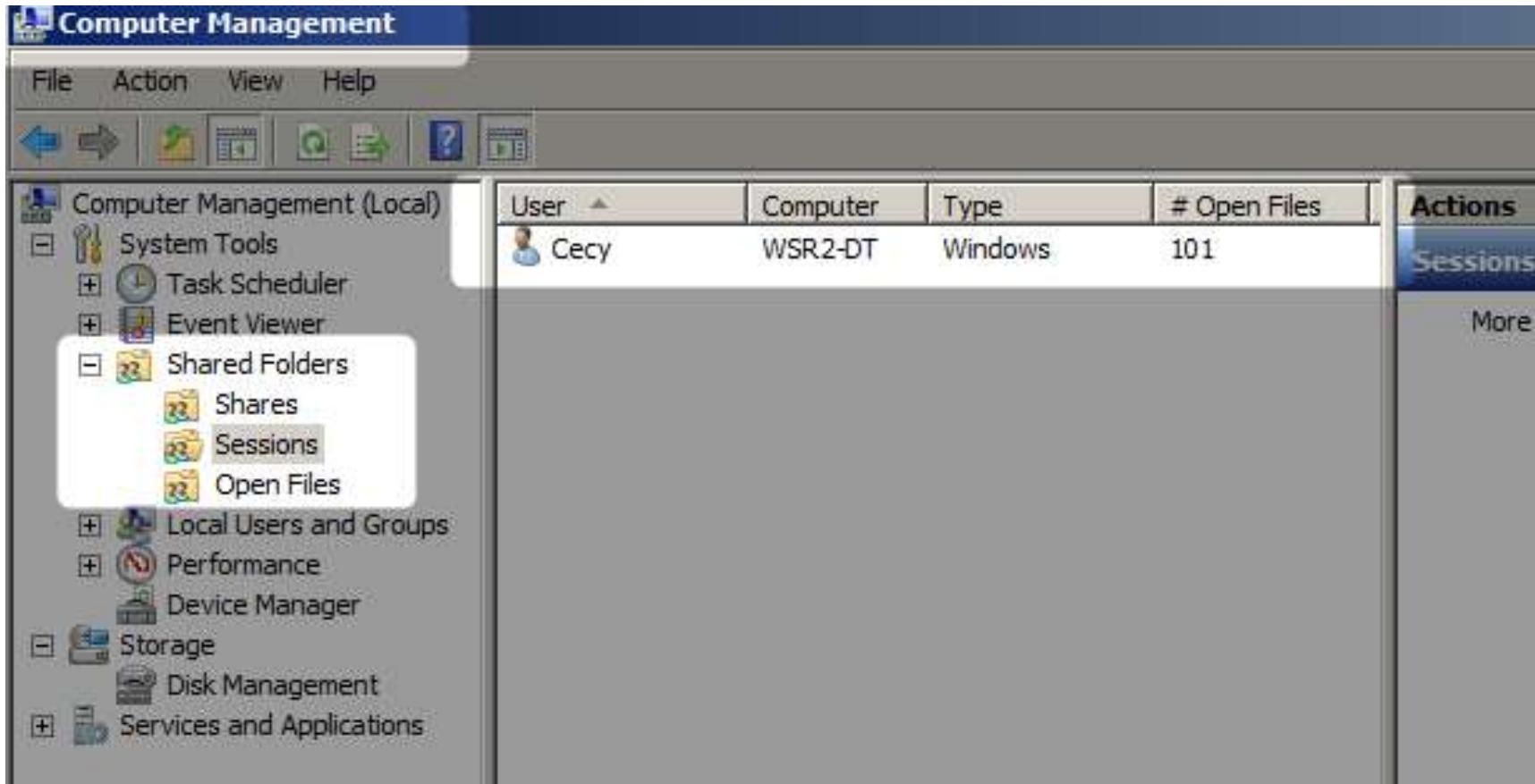
Documentation NT FO

AppManager for Microsoft Windows

You are here: NT Knowledge Scripts > FilesOpen

FilesOpen

Use this Knowledge Script to monitor the number of files currently open through a shared network drive or by a user who logged onto the computer remotely, for example, by using the net use command. This script does *not* raise an event if a file is opened by a user who interactively logged onto the computer.



The screenshot shows the Windows Computer Management console. The left navigation pane is expanded, showing 'Computer Management (Local)' and its sub-nodes: System Tools, Task Scheduler, Event Viewer, Shared Folders (which is expanded to show Shares, Sessions, and Open Files), Local Users and Groups, Performance, Device Manager, Storage, Disk Management, and Services and Applications. The right pane displays a table titled 'Sessions' with one row for 'Cecy' (User), 'WSR2-DT' (Computer), 'Windows' (Type), and '101' (# Open Files). The 'Actions' column has a 'Sessions' button.

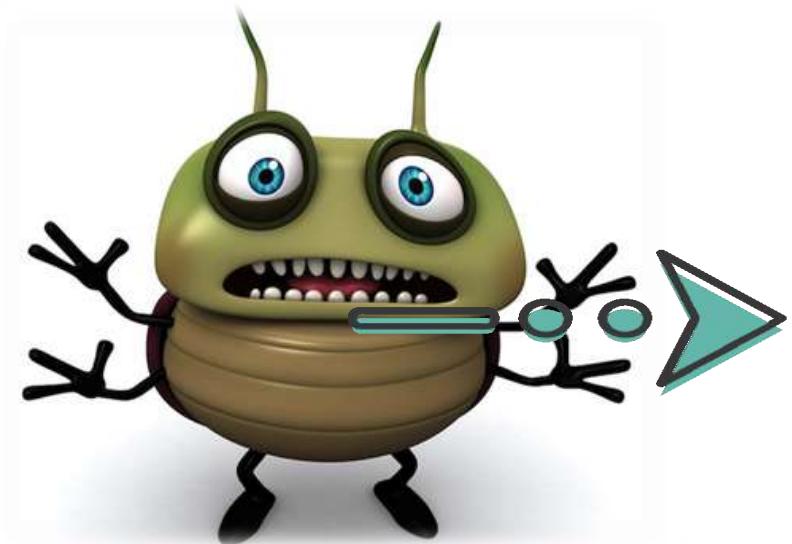
Net File documentation:

Examples

Display all the open shared files on a server and the lock-id
NET FILE

<https://ss64.com/nt/net-session.html>

Bug



NT_FilesOpen> KS monitoring is inconsistent, resulting in events that are invalid or missed

Settings:

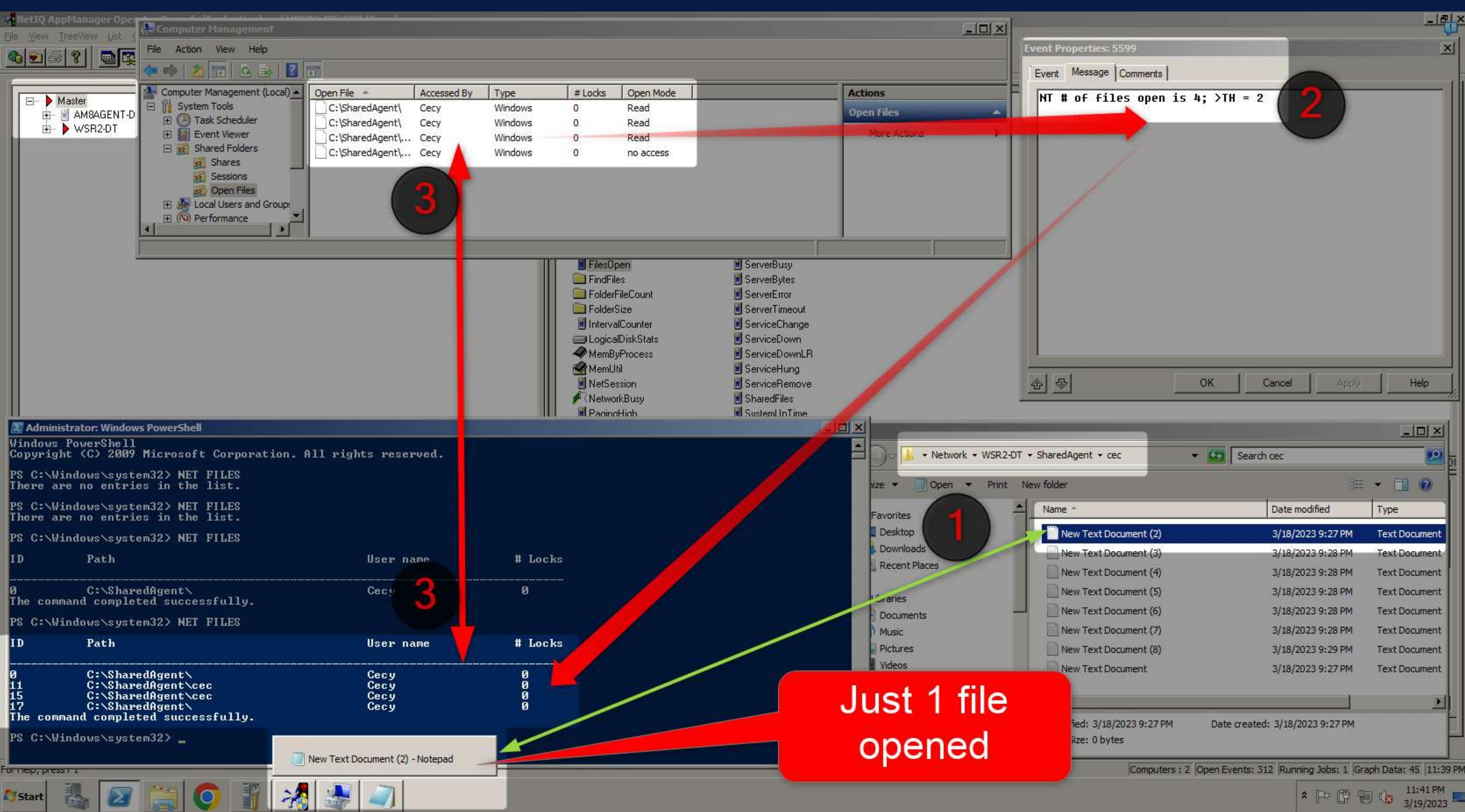
Schedule	Values	Actions	Advanced
Description	Value	Units	
Raise event? (y/n)	y		
Collect data? (y/n)	y		
Maximum number of files open threshold	2	#files	
Event severity level for open files	5	Severity	
Event severity level for an unexpected Knowledge Script	35	Severity	



Event	Status	Job	Computer	Knowledge Script
5598	Open	8074	WSR2-DT	NT_FilesOpen
5611	Open	8074	WSR2-DT	NT_FilesOpen
5610	Open	8074	WSR2-DT	NT_FilesOpen
5609	Open	8074	WSR2-DT	NT_FilesOpen

The screenshot shows the Windows Computer Management interface. In the center, a table lists open files across four shared folders (C:\SharedAgent\, C:\SharedAgent\..., C:\SharedAgent\..., C:\SharedAgent\...). The table columns are Open File, Accessed By, Type, # Locks, and Open Mode. A red arrow points from the 'Open Mode' column to the 'no access' entry in the fourth row. Below this, a separate window titled 'Event Properties: 5610' displays the message: 'NT # of files open is 4; >TH = 2'. Another red arrow points from the 'Message' tab to this text.

Actual Result: An event is raised every 1 minute even if the user has opened only 1 file from the shared folder.



Conclusion

(VM1) Network resources of the same computer			
Threshold	Scenario	1 Folder	1 subfolder
1	1 .txt	2	3
2	1 .txt + 1 .jpg	3	4
3	2 .txt	3	4
4	2 txt + 2 jpg	5	6
5	3 txt	4	5
6	3 txt + 3 jpg	7	8

(VM2) From a remote computer			
Threshold	Scenario	1 Folder	1 subfolder
2	1 .txt	2	3
2	1 .txt + 1 .jpg	3	3
2	2 .txt	3	3
3	2 txt + 2 jpg	2	2
2	3 txt	2	3
4	3 txt + 3 jpg	2	3
5	6 .jpg		3

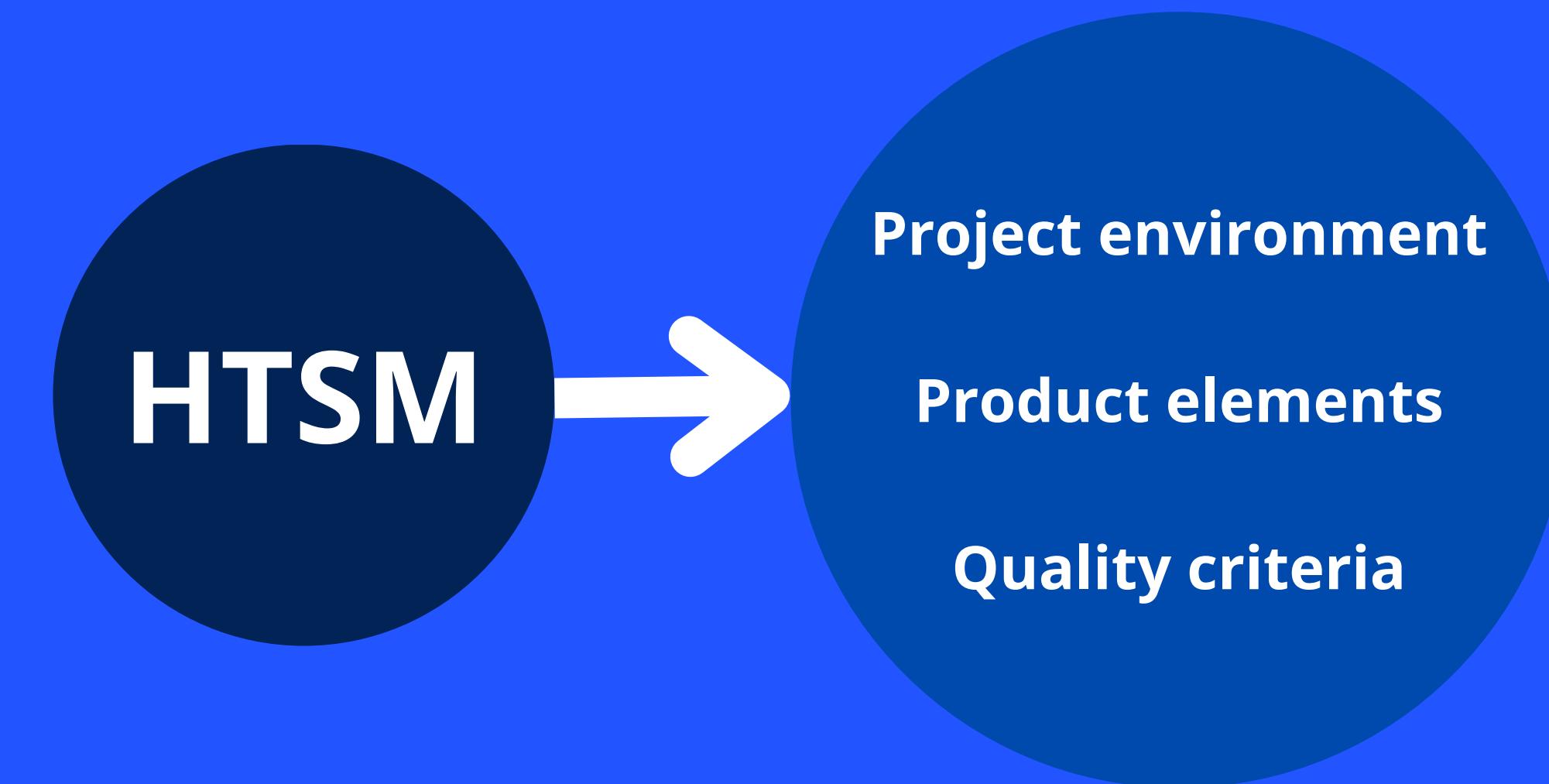
NT_MemByProcess

Use this Knowledge Script to monitor process memory usage. This script monitors individual memory use for each specified process, and the total memory use for all specified processes.



Mission

Test if the ks collects the memory usage per process, by the sum of all processes and compare the results obtained to validate that the data is correct.



- scope**
- **Values**
 - **Action**

● Exploratory test

identify the main features of the ks, understand how the ks works.

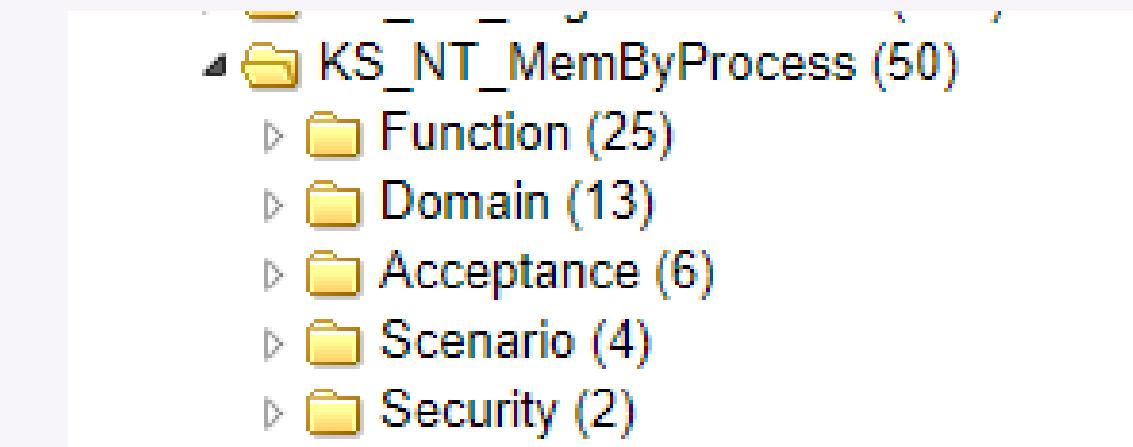
- Collect data
- Severity

● Domain testing

- Inputs:
 - Severity
 - Processes
 - Thresholds

● Function testing

Documentation -> acceptance criteria



Description	Value	Units
Event Notification		
Create event for each process that exceeds the threshold?	<input checked="" type="checkbox"/> Yes	0, -1
Severity - Individual process memory high	40	
Create event if the sum of all processes exceeds the threshold?	<input checked="" type="checkbox"/> Yes	1 - 40
Severity - Total process memory high	4	
Severity - Job failure	1	41
Data Collection		
Collect data for each process?	<input checked="" type="checkbox"/> Yes	
Collect data for all processes?	<input checked="" type="checkbox"/> Yes	
Monitoring		
Processes (comma separated, without spaces)	-1	
Maximum threshold for memory for each process	0 - 2,147,483,648	bytes
Maximum threshold for memory for all processes	100	bytes
Memory scale	2,147,483,649	gigabytes



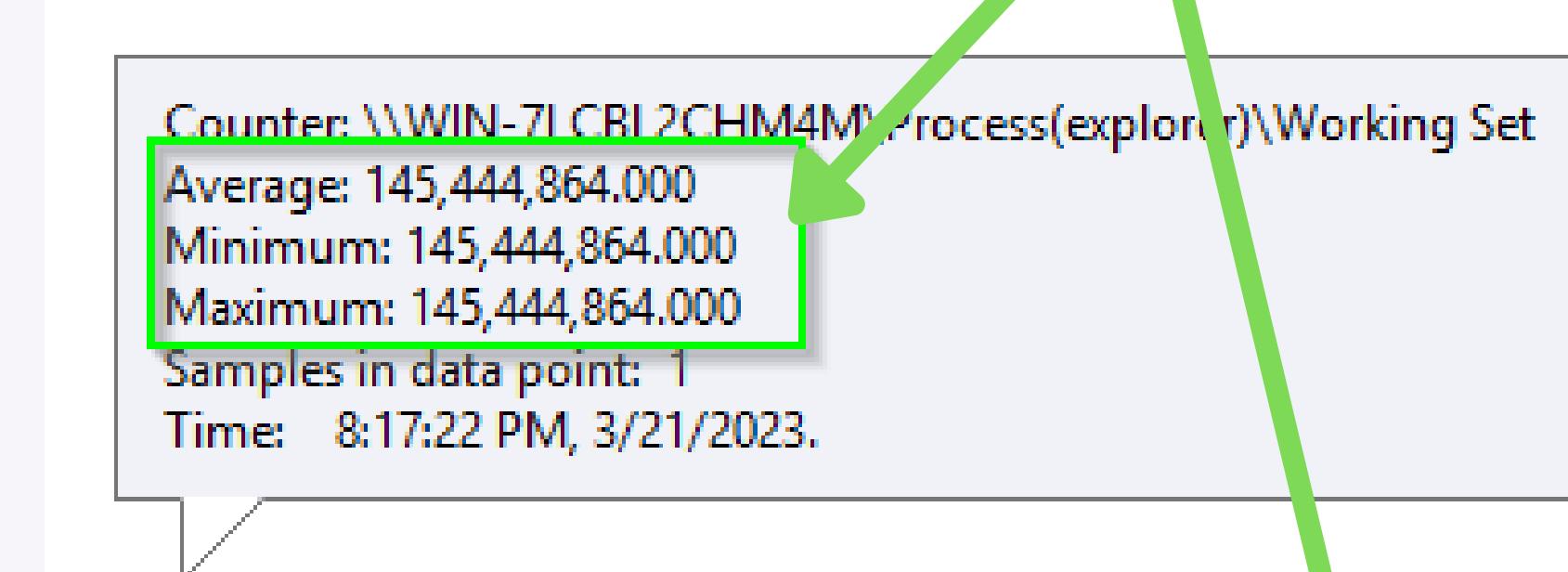


Validation tools

Memory Utilization: Specific Processes			
Process Name	Process ID (PID)	Is Process Running?	Memory Utilization (B)
EXPLORER	2572	Yes	145,444,864.00

Performance

- monitor
- •
- •
- •
- SQL



Counter: Working set

Table: EventDetail

:bold;'' DataType = 'RawData'>Yes</C2><C3 style='font-weight:bold;' DataType = 'RawData'>145,444,864.00</C3></R><C0 ST...

Service Status Report

Service Name	Start Type	Status
Portable Device Enumerator Service	Manual	Stopped

Portable Device Enumerator Service Enforces gr... Running Manual / Trip... Local Syst...

Power Manages p... Run Start

Print Spooler This service ... Run Stop

Printer Extensions and Notifications This service ... Pause

PROPERTIES FOR INT.

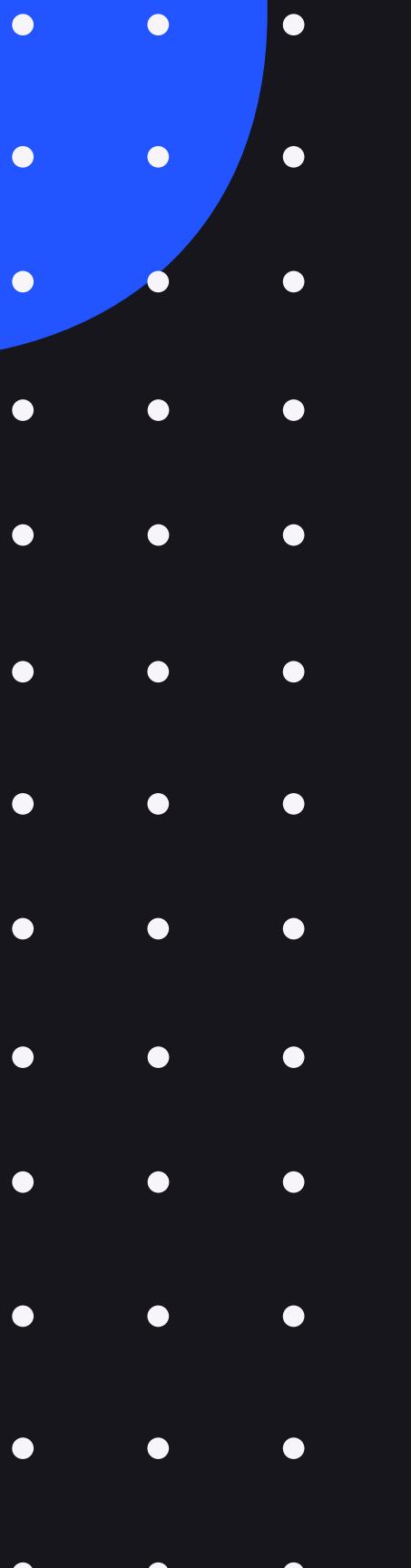
Schedule Values Actions Advanced

Action	Location	Type	Schedule
Action_StopServices	MC	New Event	Always

139 Open 74

140 Open 74

Bugs



- **NT_MemByProcess > First process name with spaces doesn't allow to the ks collect data**

If in the field of processes to be monitored there is a space in the first process, no data is collected for any other process.

- **The KS raises an unhandled error event when the special character " " is used**

```
/*<1>*/ '#### Begin KP-Version Section  
/*<2>*/ Const AppManID = "7.6.276.0"  
/*<3>*/ Const KSVerID = "1.0"  
/*<4>*/ '#### End KP-Version Section  
/*<5>*/  
/*<6>*/  
/*<7>*/ '#### Begin Type Section  
/*<8>*/ Const NT_MemoryFolder = "Memory"  
/*<9>*/ '#### End Type Section  
/*<10>*/  
/*<11>*/ '#### Begin KPU Section  
/*<12>*/ Sub KS_INIT ()  
/*<13>*/ End Sub  
/*<14>*/
```

NT_LogicalDiskStats

Use this Knowledge Script to monitor logical disk I/O and busy statistics gathered from performance counter values in Performance Monitor: Disk transfers, reads and writes per second, Disk operation time in milliseconds and Disk queue length



ENVIRONMENT



Windows Server 2008 R2

RAM: 3GB

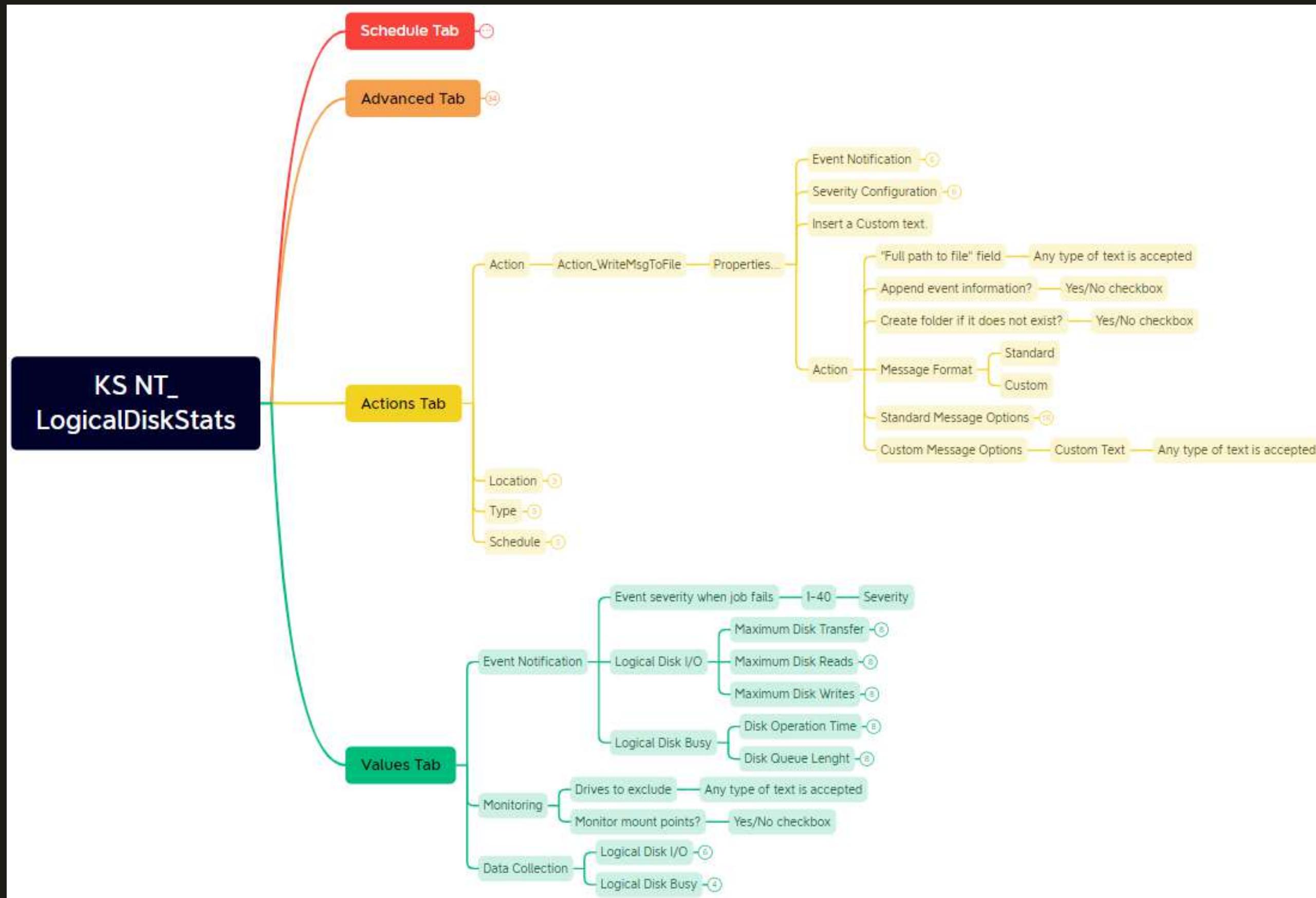
Storage: 60GB

AppManager Components

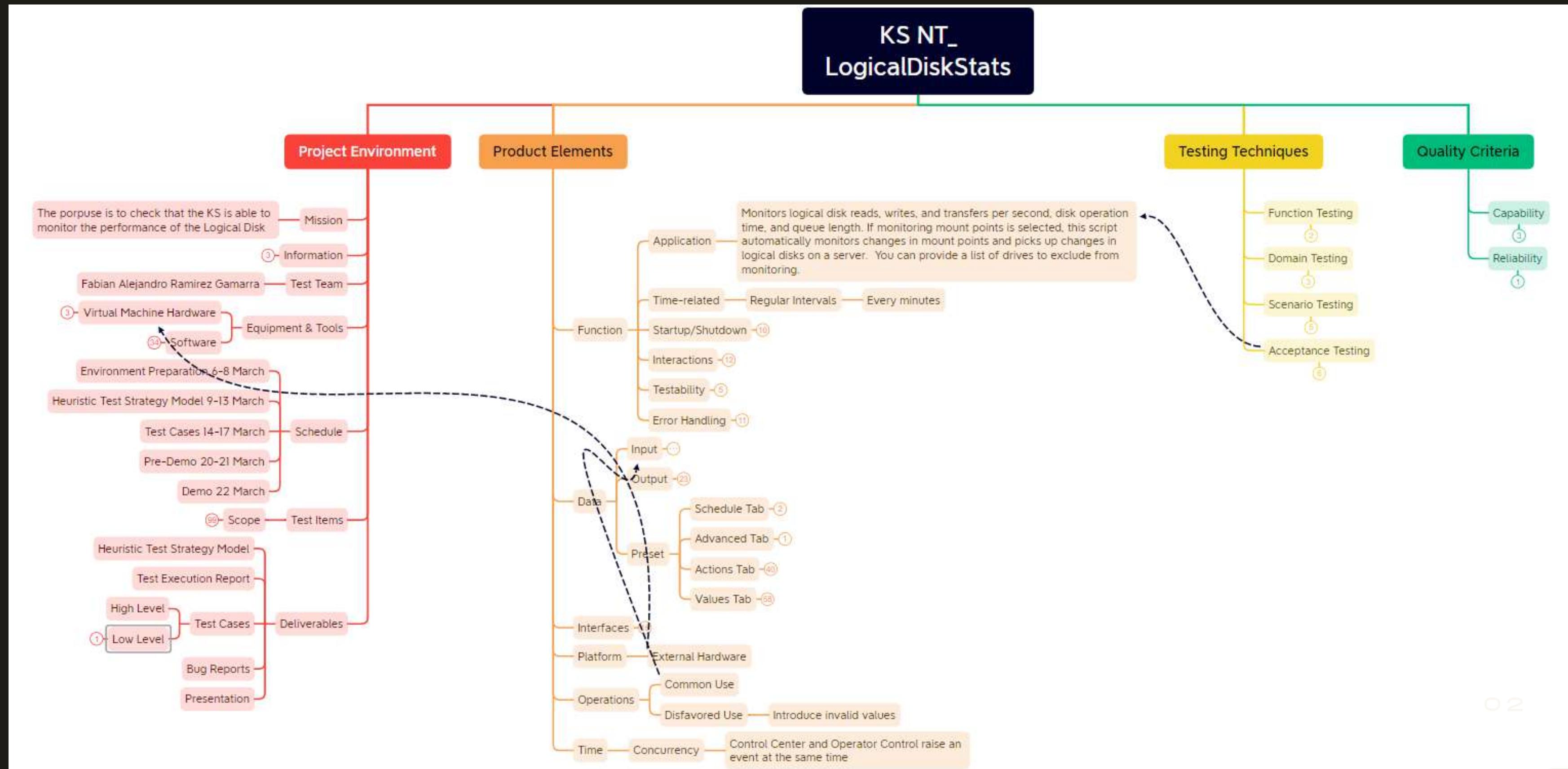
CrystalDiskMark

HOW TO TEST THE KS?

EXPLORATORY



HEURISTIC TEST STRATEGY MODEL



DOMAIN TABLE AND SCOPE

Variable	Valid case equivalence class	Invalid case equivalence class	Boundaries and Special cases	Best representative
Threshold - Maximum disk queue length	0 to 9999		8	1
		< 0	-1	
		>9999	10000	
		Letters or special characters	a,*,!,&,-	
		Empty		
Drives to exclude	Letter of the disk		C, D:	C:
	Numbers		1,2,3,4	
	Special characters		*\:-	
		Special characters	!,&,-	
	Empty			

Properties for NT_LogicalDiskStats

Schedule	Values	Actions	Objects	Advanced
Description				
Event Notification <ul style="list-style-type: none"> Event severity when job fails: 15 Logical Disk I/O <ul style="list-style-type: none"> + Raise event if disk transfers exceed threshold? <input checked="" type="checkbox"/> Yes + Raise event if disk reads exceed threshold? <input checked="" type="checkbox"/> Yes + Raise event if disk writes exceed threshold? <input checked="" type="checkbox"/> Yes Logical Disk Busy <ul style="list-style-type: none"> + Raise event if disk operation time exceeds threshold? <input checked="" type="checkbox"/> Yes + Raise event if disk queue length exceeds threshold? <input checked="" type="checkbox"/> Yes Monitoring <ul style="list-style-type: none"> Drives to exclude Monitor mount points? <input checked="" type="checkbox"/> Yes Data Collection <ul style="list-style-type: none"> Logical Disk I/O <ul style="list-style-type: none"> Collect data for disk transfers per second? <input checked="" type="checkbox"/> Yes Collect data for disk reads per second? <input checked="" type="checkbox"/> Yes Collect data for disk writes per second? <input checked="" type="checkbox"/> Yes Logical Disk Busy <ul style="list-style-type: none"> Collect data for disk operation time? <input checked="" type="checkbox"/> Yes Collect data for disk queue length? <input checked="" type="checkbox"/> Yes 				

Properties for NT_LogicalDiskStats

Action	Location	Type	Schedule
Action_WriteMsgToFile	MS	New Event	Always

Properties for Action_WriteMsgToFile

Values	Description	Value
Event Notification		
Severity Configuration		
Action		
Full path to file	c:\temp\new\NetiQACT_Dump4.txt	
Append event information?	<input checked="" type="checkbox"/> Yes	
Create folder if it does not exist?	<input checked="" type="checkbox"/> Yes	
Message format	Standard	
Standard Message Options		
Custom Message Options		

TEST TECHNIQUES AND WRITE TEST CASES

Mt01-763 : Collect data of the disk writes/s - Version1 🕵️ ⓘ

Summary
Verify that the KS collects the date related to the disk writes per second and validate the data gathered with the performance monitor.

Preconditions

1. Have AppManager installed.
2. Have a valid account logged in on the Operator Console.
3. Have the NT tab component active.
4. Have the LogicalDiskStats job already included in the jobs list at the List pane with its default properties and the collect data for disk writes per second? checkbox activated.
5. Have the Current Writes/sec counter ready to collect data on the performance monitor.

#	Step actions	Expected Results	Execution
1	Start the job on AppManager and the collection of data on the performance monitor at the same time.		Manual ✘ ⓘ
2	Wait until you have a good amount of data, like 30 samples.		Manual ✘ ⓘ
3	Stop both, the job on AppManager and the recollection of data on the performance monitor		Manual ✘ ⓘ
4	On AppManager, go to collector of data at the Graph Data Tab and right click on it > Select "Create Chart". Write a name for the chart and click on "Finish". On the performance monitor. Look for the .csv file created with all the data collected and open it on excel.		Manual ✘ ⓘ
5	Compare both of the chart with the values on Excel or create chart on Excel to compare the data.	Both the data collected by AppManager and the Performance Monitor should have the same values.	Manual ✘ ⓘ

KS_NT_LogicalDiskStats (114)

- Function Testing (35)
- Domain Testing (58)
- Scenario Testing (9)
- Acceptance Testing (12)

04

EVENT / COLLECT DATA VALIDATION

MT19WS2K8 NT_LogicalDiskStats 3/20/2023 11:39:55 PM
 MT19WS2K8 NT_LogicalDiskStats 3/20/2023 11:39:55 PM
 MT19WS2K8 NT_LogicalDiskStats 3/21/2023 12:00:14 AM
 MT19WS2K8 NT_LogicalDiskStats 3/21/2023 12:00:14 AM
 MT19WS2K8 NT_LogicalDiskStats 3/21/2023 12:00:15 AM

Event Properties: 1107

Event	Message	Comments
		The operation time for logical disk C: is 119.54 msec, w...

Data Viewer

Time	MT19WS2K8: LdiskTime (C:) msec
3/21/2023 12:01:13 AM	0.47
3/21/2023 12:00:20 AM	119.54
3/20/2023 11:57:37 PM	652.00
3/20/2023 11:56:11 PM	0.39

SELECT TOP 1000 [DataID], [Value], [AgentTime], [AgentHour], [AgentDate], [AgentMonth], [AgentYear] FROM [QDB].[dbo].[vData] where DataID = 235 order by AgentTime DESC

Results

DataID	Value	AgentTime	Age
2	119.543753564358	2023-03-21 00:00:20.000	2023-03-21 00:00:20.000
3	119.54	2023-03-21 00:00:20.000	2023-03-21 00:00:20.000

Data Viewer

Time	MT19WS2K8: LdiskTime (C:) msec
3/21/2023 12:00:20 AM	119.54

DATA COLLECTOR / PERFORMANCE MONITOR COUNTER

(PDH-CSV 4.0) (SA Western S (E:)\Avg. Disk sec/Transfer		Time	MT19WS2K8: LdiskTime (E:) msec
03/20/2023 00:54:14.283	0.032993443	3/20/2023 12:54:50 AM	404.50
03/20/2023 00:54:16.881	0.034929586	3/20/2023 12:54:19 AM	34.83
03/20/2023 00:54:19.476	0.048464583	3/20/2023 12:53:44 AM	32.05
03/20/2023 00:54:20.550	0.056666666		

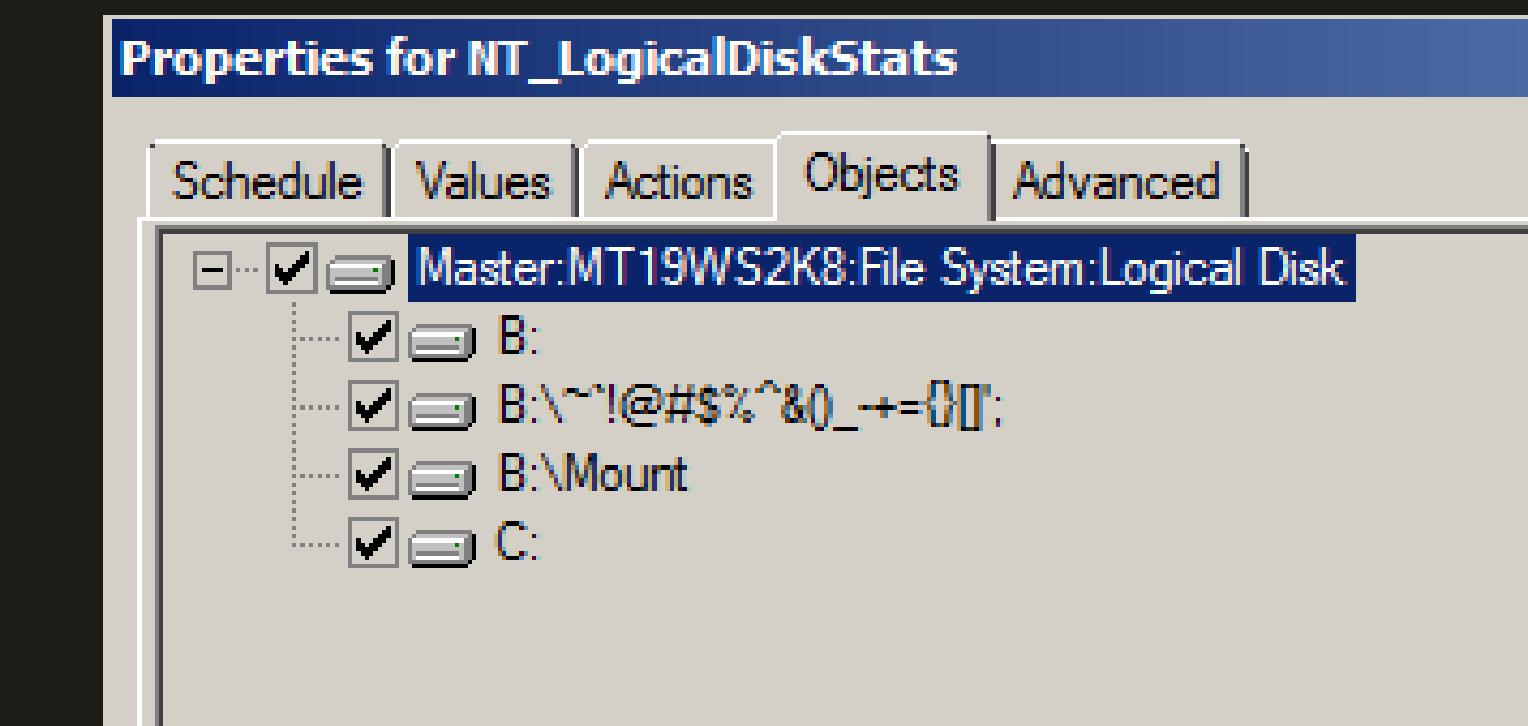
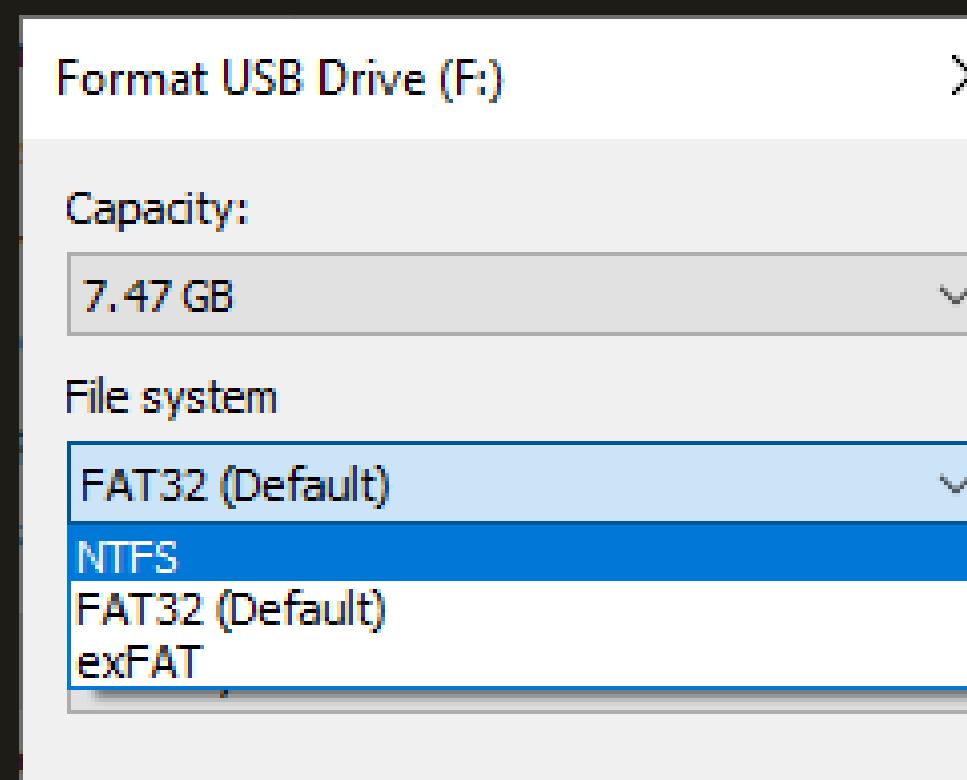
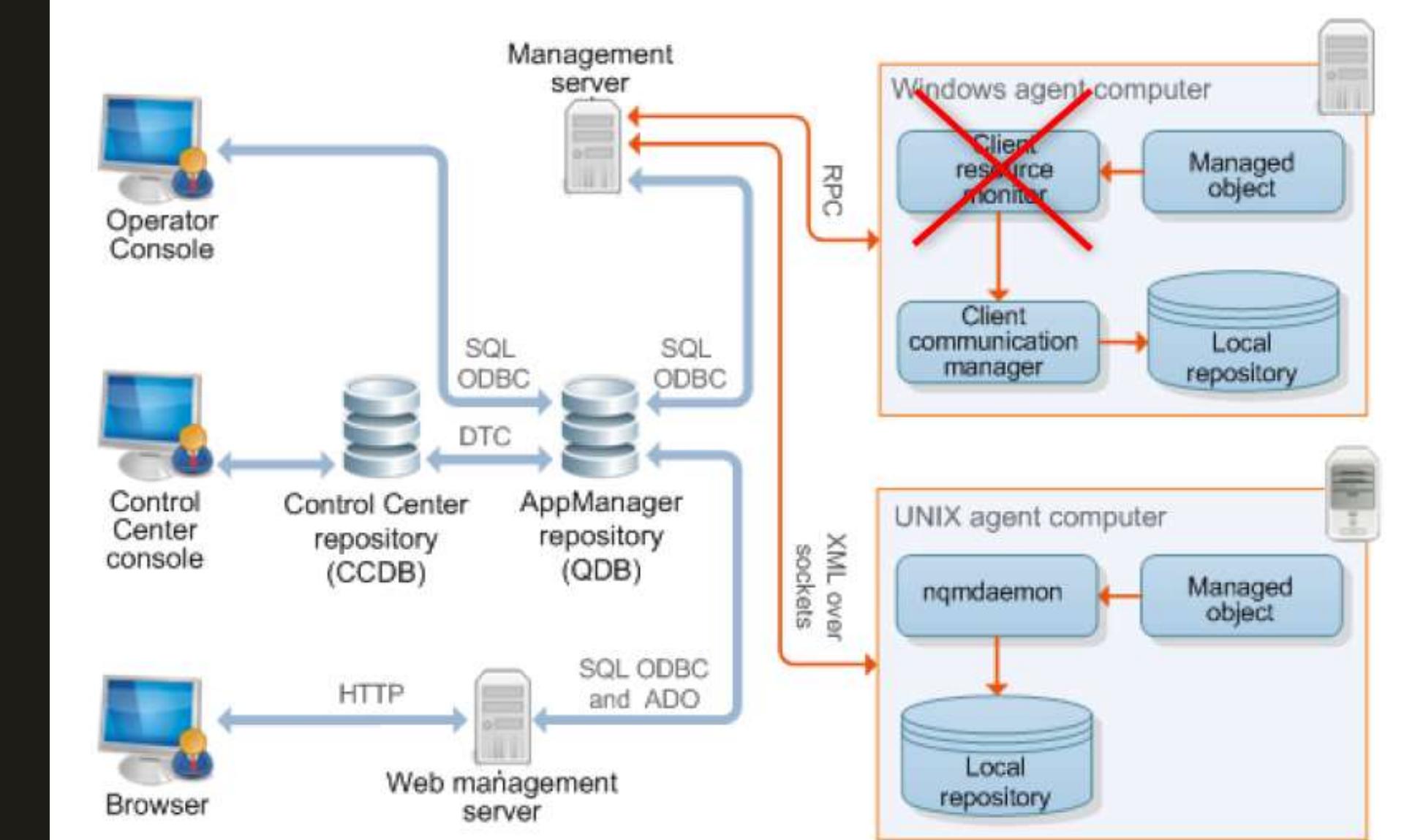
(PDH-CSV 4.0) (SA Western S (E:)\Avg. Disk sec/Transfer		Time	MT19WS2K8: LdiskTime (E:) msec
03/20/2023 00:54:43.820	0.458816667	3/20/2023 12:54:50 AM	404.50
03/20/2023 00:54:47.268	0.448772222	3/20/2023 12:54:19 AM	34.83
03/20/2023 00:54:50.721	0.3852	3/20/2023 12:53:44 AM	32.05

1 (PDH-CSV 4.0) (SA Western S (E:)\Avg. Disk sec/Transfer ▾ (C:)\Avg. Disk sec/Transfer ▾

Data Viewer		
	Time	MT19WS2K8: LdiskTime (C:) msec
144	03/20/2023 23:57:37.494	0.351705882
145	03/20/2023 23:57:36.459	0.26387561
146	03/20/2023 23:57:34.292	0.195061905
208	03/20/2023 23:56:13.113	0.043814286
209	03/20/2023 23:56:12.059	0.000275
210	03/20/2023 23:56:10.983	0.017072727
211	03/20/2023 23:56:09.794	0.000391892
212	03/20/2023 23:56:08.605	0.0002375
255	03/20/2023 23:54:57.753	0.38644898
256	03/20/2023 23:54:54.781	0.160871429
257	03/20/2023 23:54:53.792	0.21565

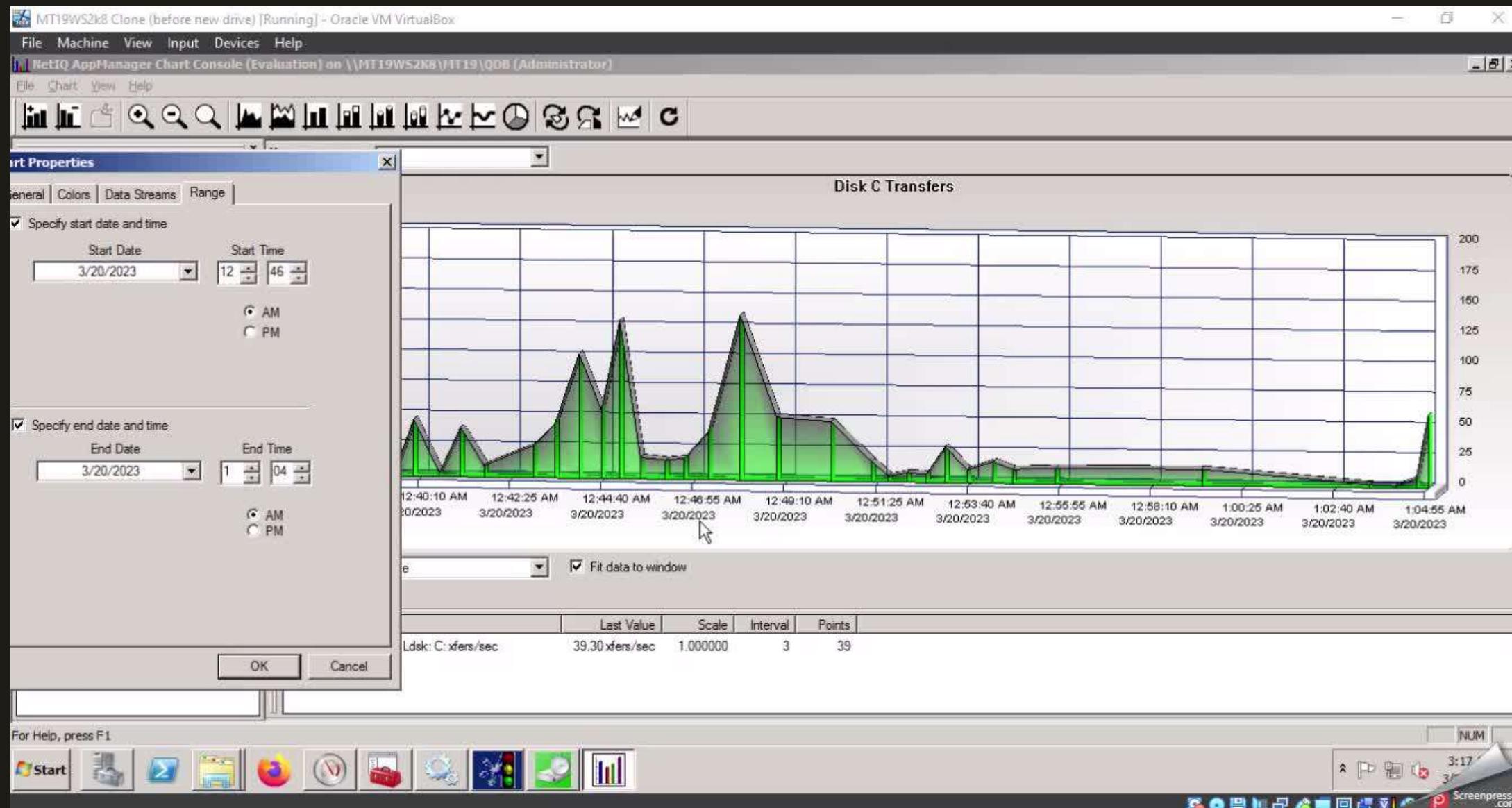
SCENARIOS

- Change the format of a removable disk while the ks is monitoring it.
- Stop the Client Resource Monitor service while the job is running.
- Create and delete mount points while running the KS.



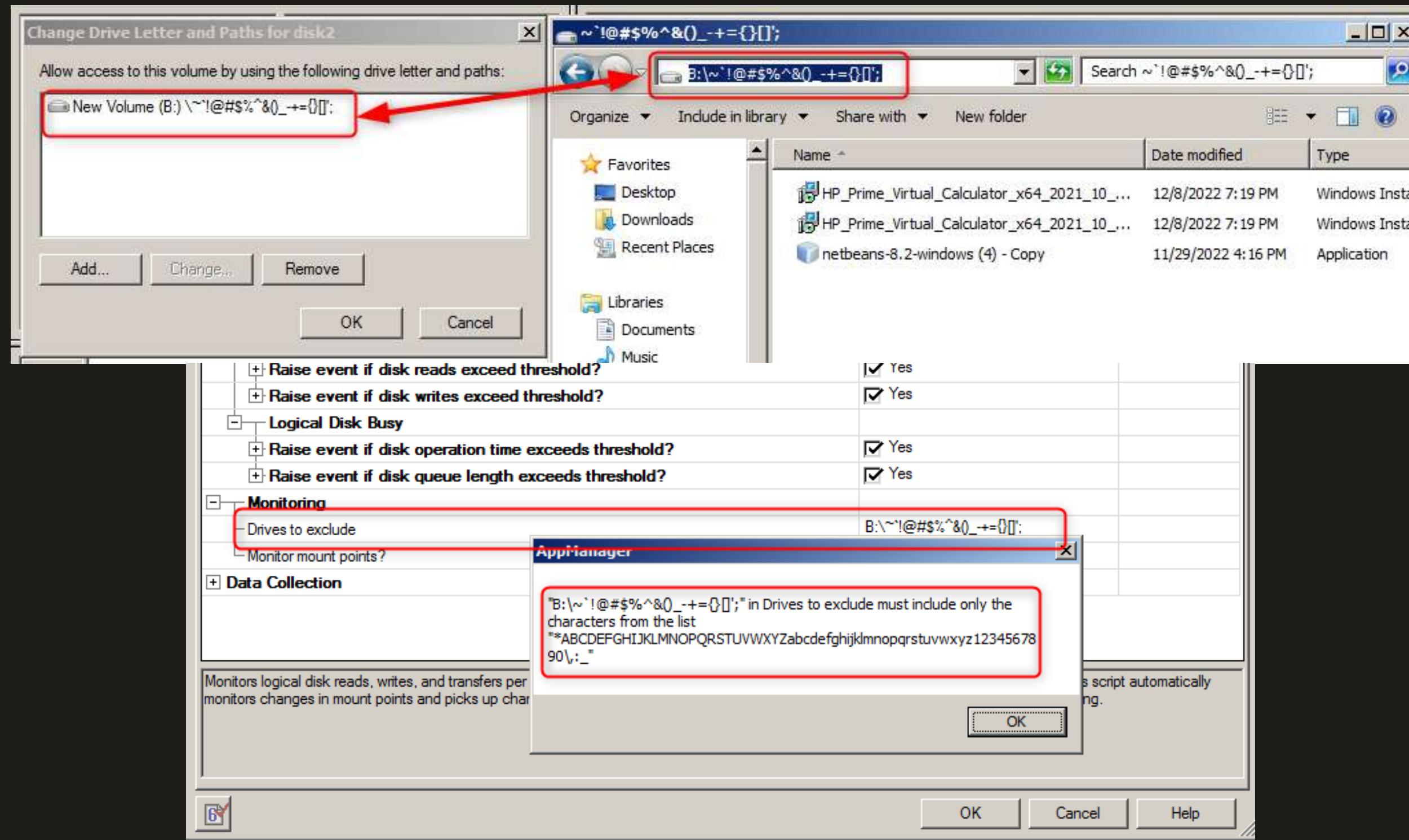
BUGS

- The collection of data is not validated with the Performance Monitor counters **High**
- "Drives to exclude" field doesn't allow special characters used for mount points. **Medium**
- Chart Console > Properties > Range > Start Time doesn't recognize 12AM as the start of the day **Low**



BUGS

- "Drives to exclude" field doesn't allow special characters used for mount points. **Medium**



NT_CpuByProcess

This script monitors CPU usage for each named process, as well as the total CPU usage for all named processes





- Windows Server 2008 r2
- 3 GB RAM
- 80GB Storage
- All AppManager Components



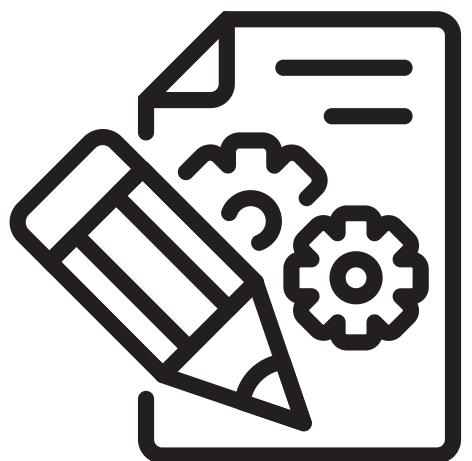
- Windows Server 2008 r2
- 3 GB RAM
- 60GB Storage
- Only Agents installed

Machines Used

Process of testing:

Exploratory Testing

Domain Table
HTSM
Test techniques



Test Cases

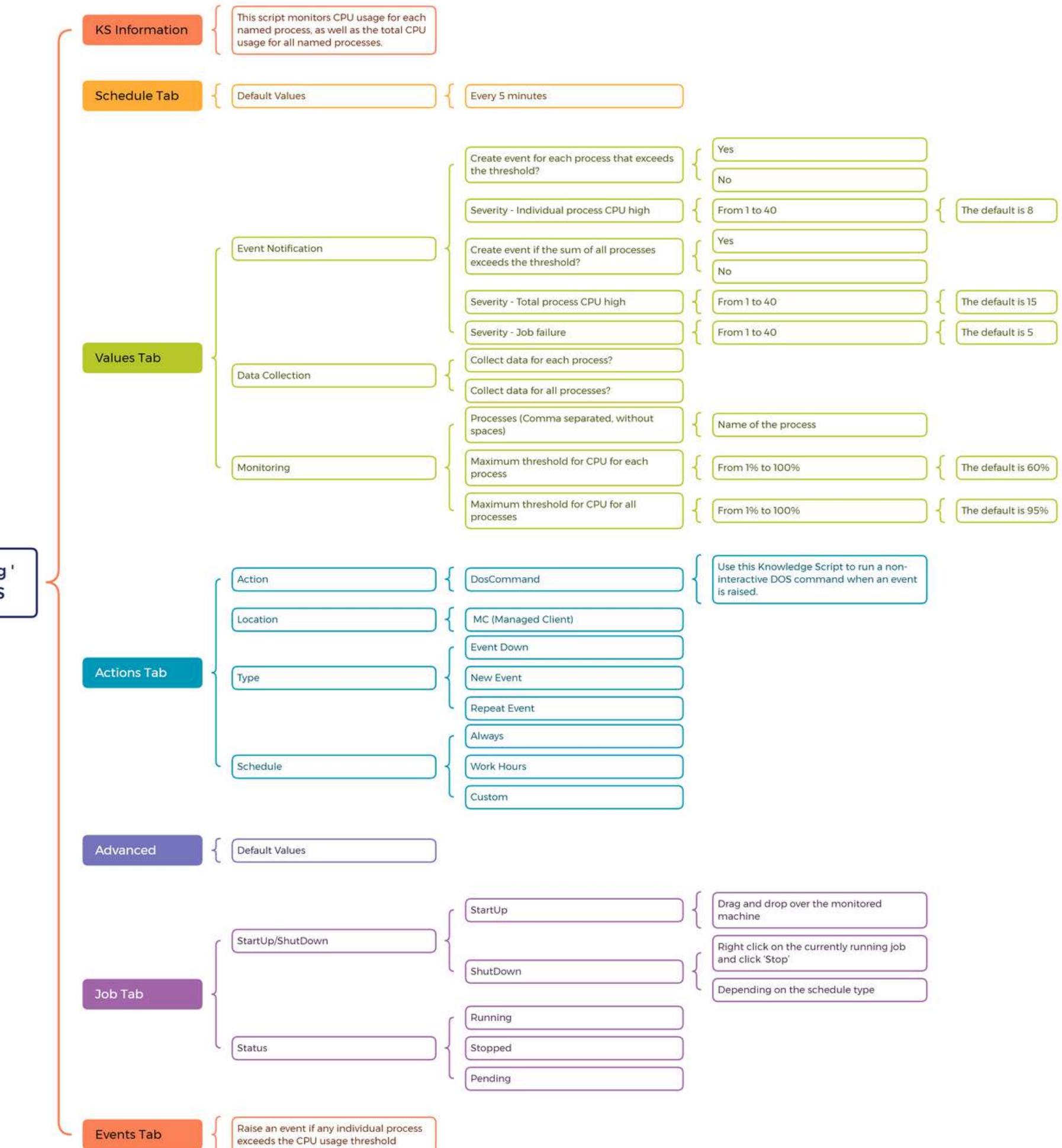
KS test and validation

Bugs



Exploratory Testing

Exploratory Testing 'CPUByProcess' KS



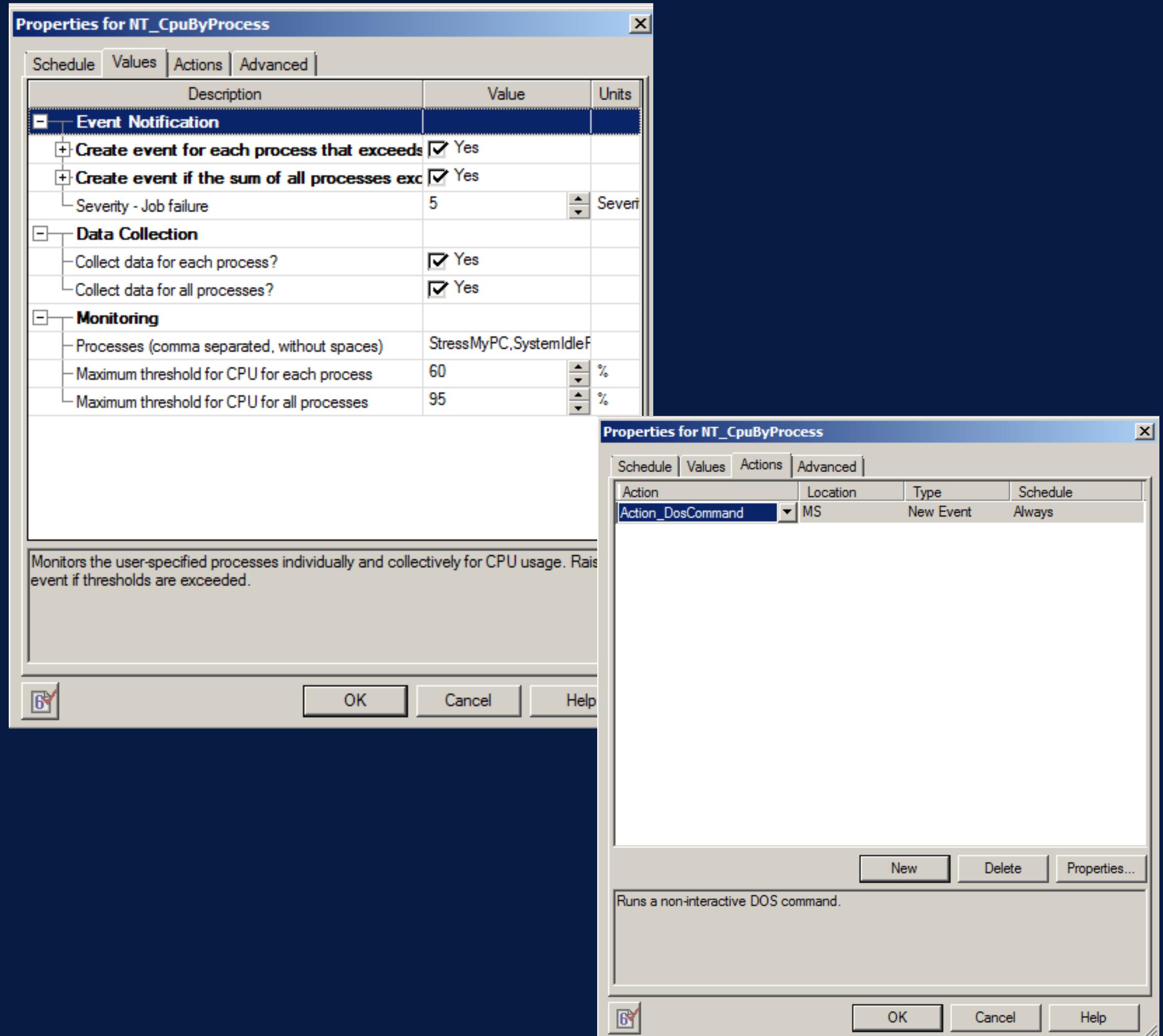
Scope

Values Tab:

- Event Notification
- Data Collection
- Monitoring

Action Tab:

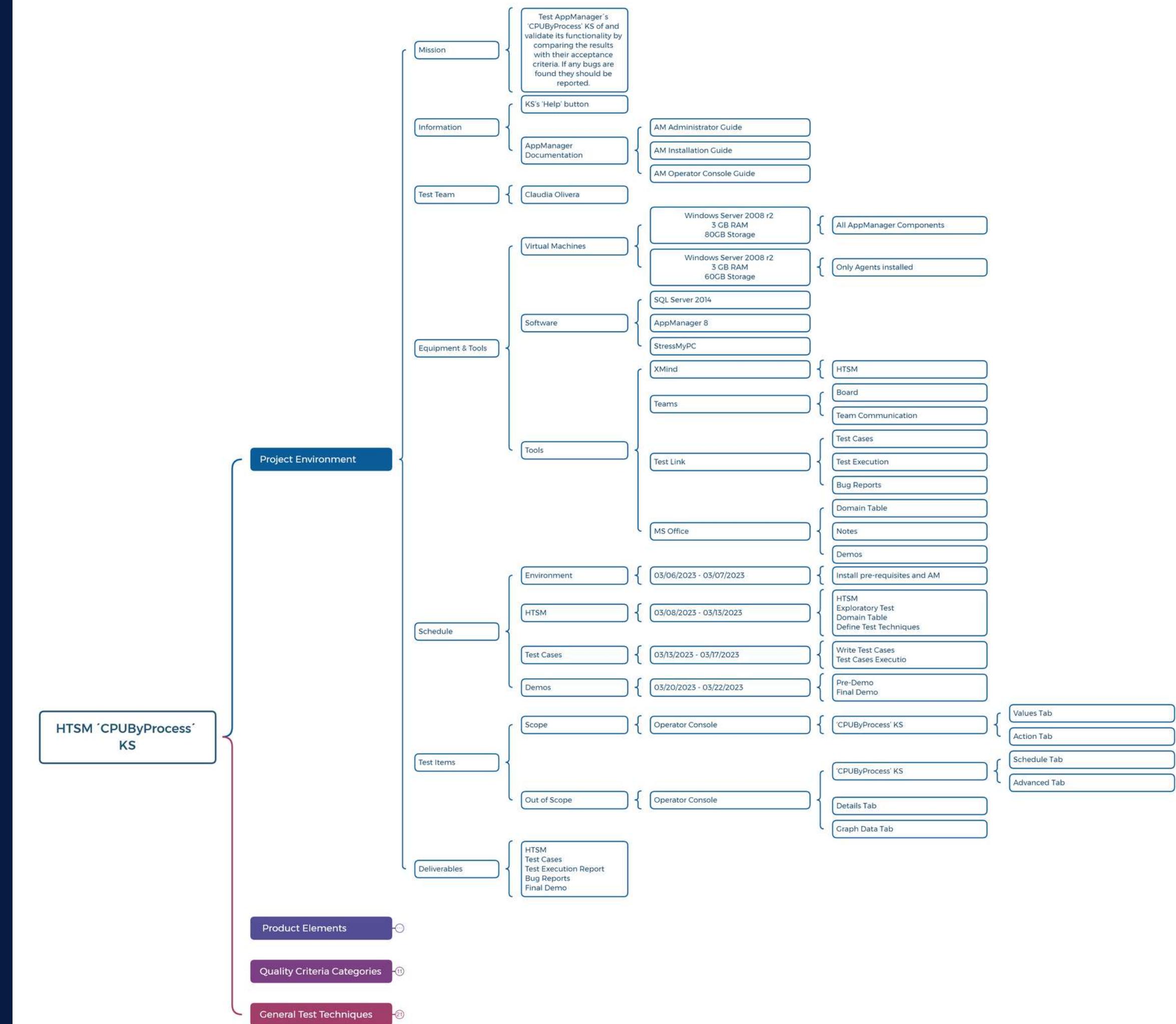
- Action
- Location
- Type
- Schedule



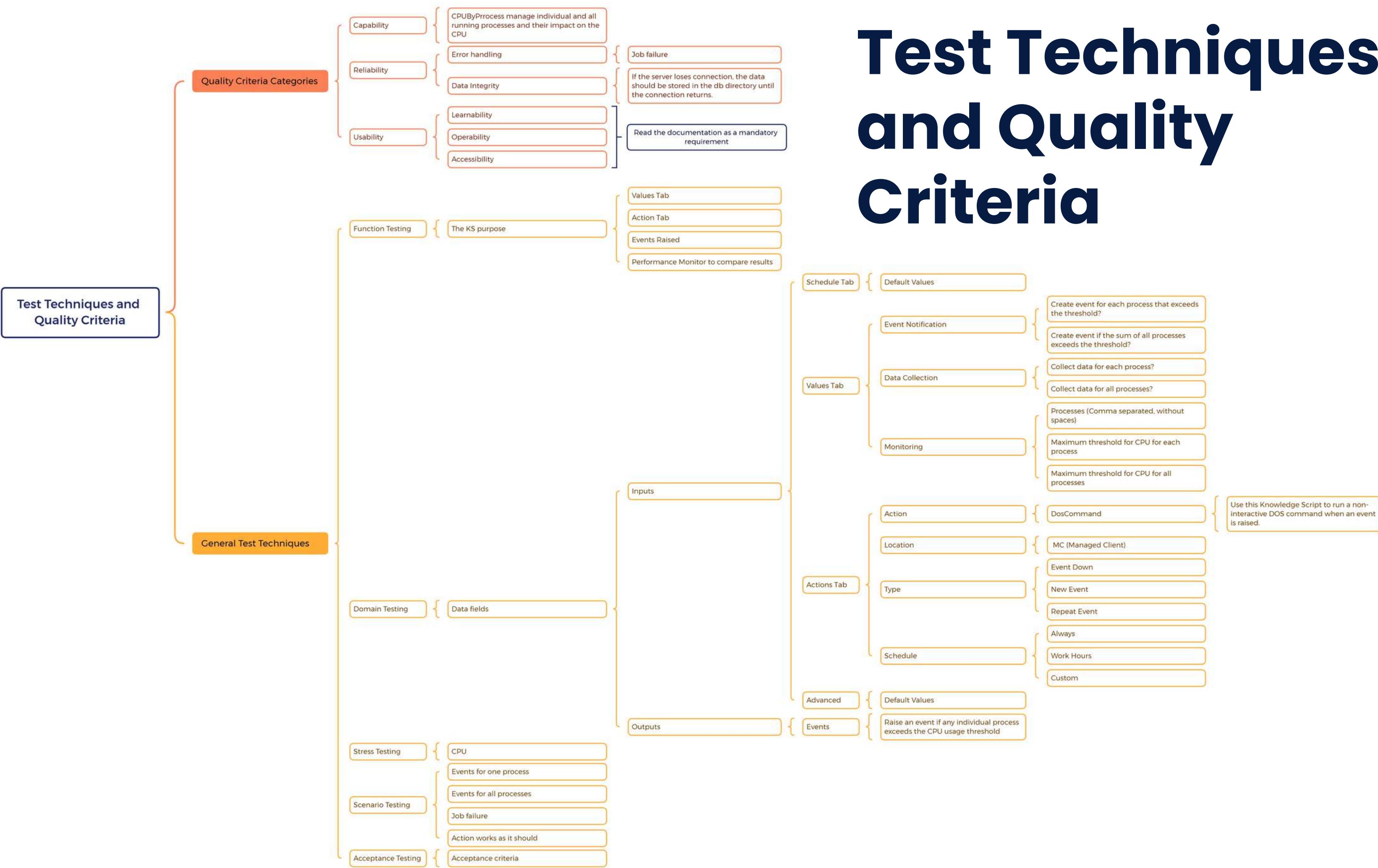
Domain Table

Tabs	Description	Valid Case	Invalid Case	Boundaries	Best Representative	Default
Event Notification						
Values	Create event for each process that exceeds the threshold?	'y' or "n"			y	y
	Severity - Individual process CPU high	1 - 40	< 1 ; > 40	1 - 40	8	8
	Create event if the sum of all processes exceeds the threshold?	'y' or "n"			y	y
	Severity - Total process CPU high	1 - 40	< 1 ; > 40	1 - 40	15	15
	Severity - Job failure	1 - 40	< 1 ; > 40	1 - 40	5	5
Data Collection						
Values	Collect data for each process?	'y' or "n"			y	y
	Collect data for all processes?	'y' or "n"			y	y
Monitoring						
Values	Processes	Name of the process with commas and no spaces	Name of the process without commas and spaces			
	Maximum threshold for CPU for each process	1% - 100%	< 1% ; > 100%	1% - 100%	60	60
	Maximum threshold for CPU for all processes	1% - 100%	< 1% ; > 100%	1% - 100%	95	95

HTSM



Test Techniques and Quality Criteria



Test Cases

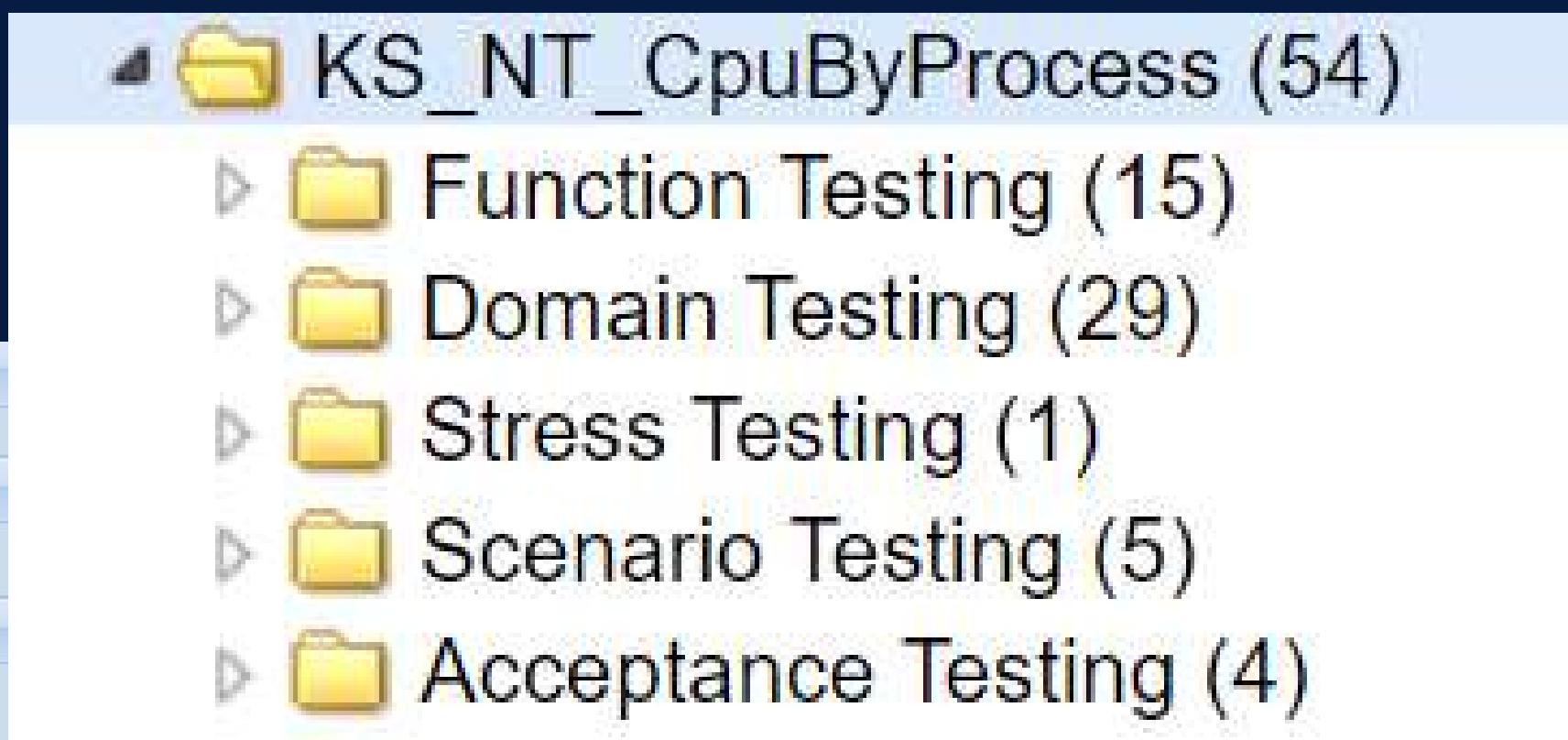
Mt01-243 : An event is raised when an individual process exceeds the CPU usage threshold - Version1 🐛 ⓘ

Summary
An event is raised in event tab when an individual process exceeds the CPU usage threshold

Preconditions

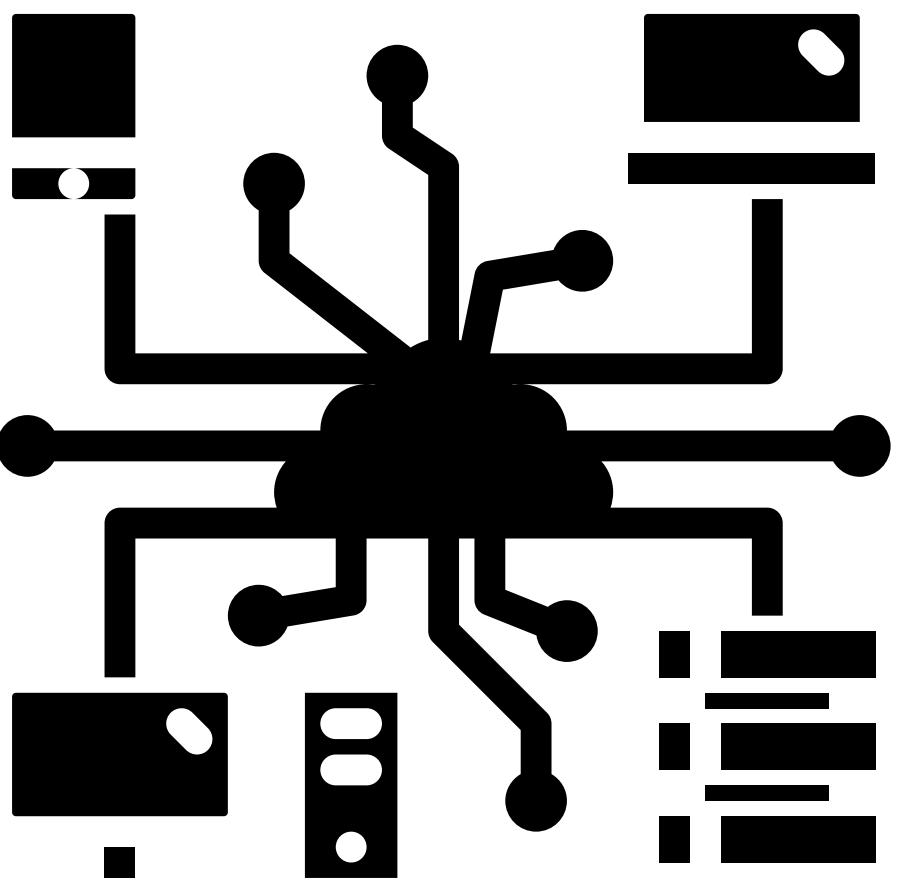
- Have AM's CpuByProcess KS configured with the default settings
- Have a stress tool to stress the CPU

#	Step actions	Expected Results	Execution
1	Drag and drop CpuByProcess KS to the computer managed to start running the job		Manual ✘ +
2	Stress the CPU according the CPU usage threshold configured (The default is 60%)		Manual ✘ +
3	Wait for an event	An event should be raised and display a message about the CPU usage.	Manual ✘ +



Scenarios

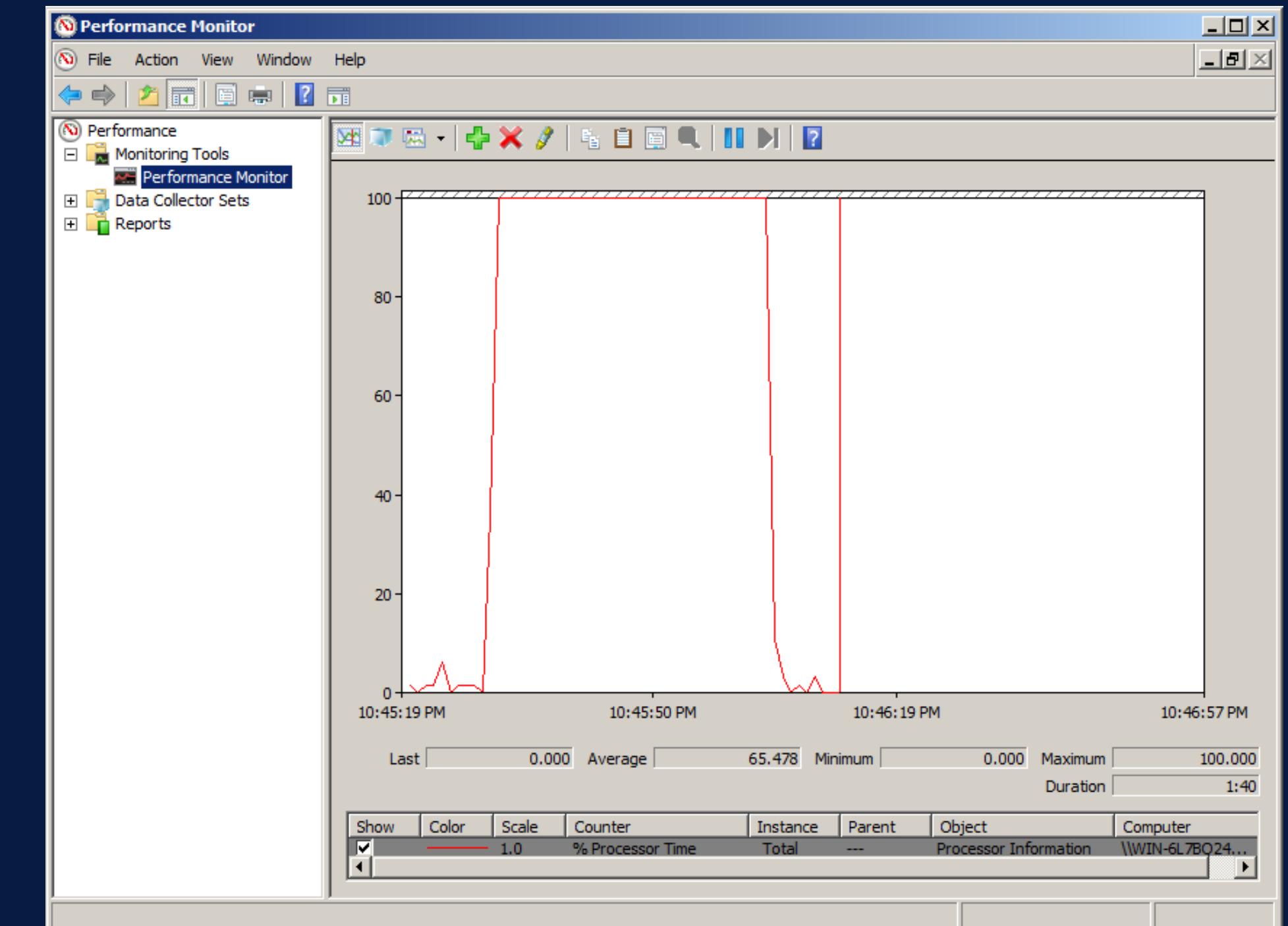
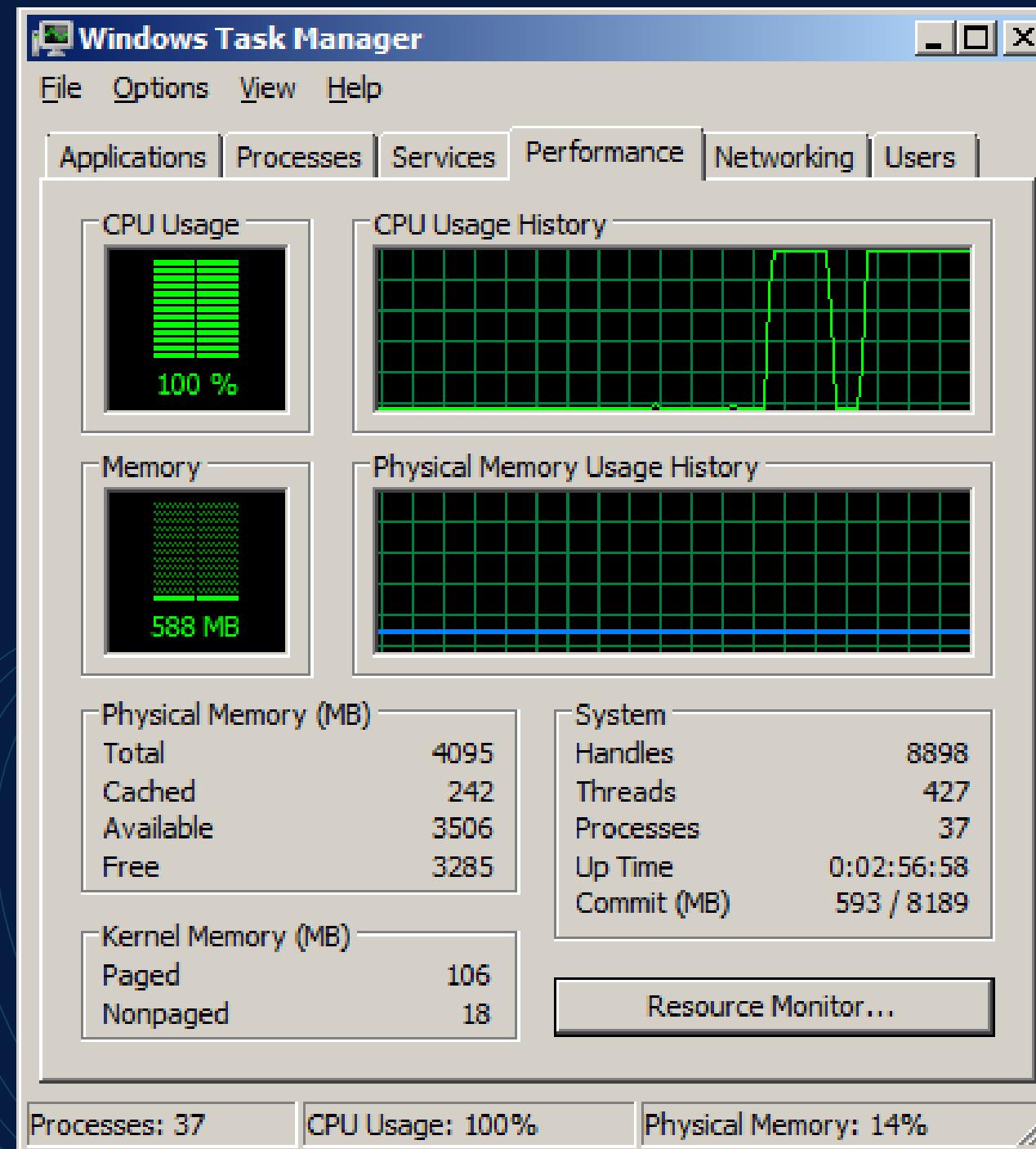
- MS Computer
- MC Computer
- Data collection
- Process that doesn't exist
- The monitored process stops



Validations and tools

Task Manager, Perfmon, StressMyPC

Maximum threshold for CPU for each process	60	%
Maximum threshold for CPU for all processes	95	%



Bugs

MC DosCommand action runs successfully but nothing happens on the other machine

264	Closed	48	WIN-6L7BQ24N22M	NT_CpuByProcess
265	Closed	48	WIN-6L7BQ24N22M	NT_CpuByProcess
267	Closed	48	WIN-6L7BQ24N22M	NT_CpuByProcess
262	Closed	48	WIN-6L7BQ24N22M	NT_CpuByProcess
263	Closed	48	WIN-6L7BQ24N22M	NT_CpuByProcess

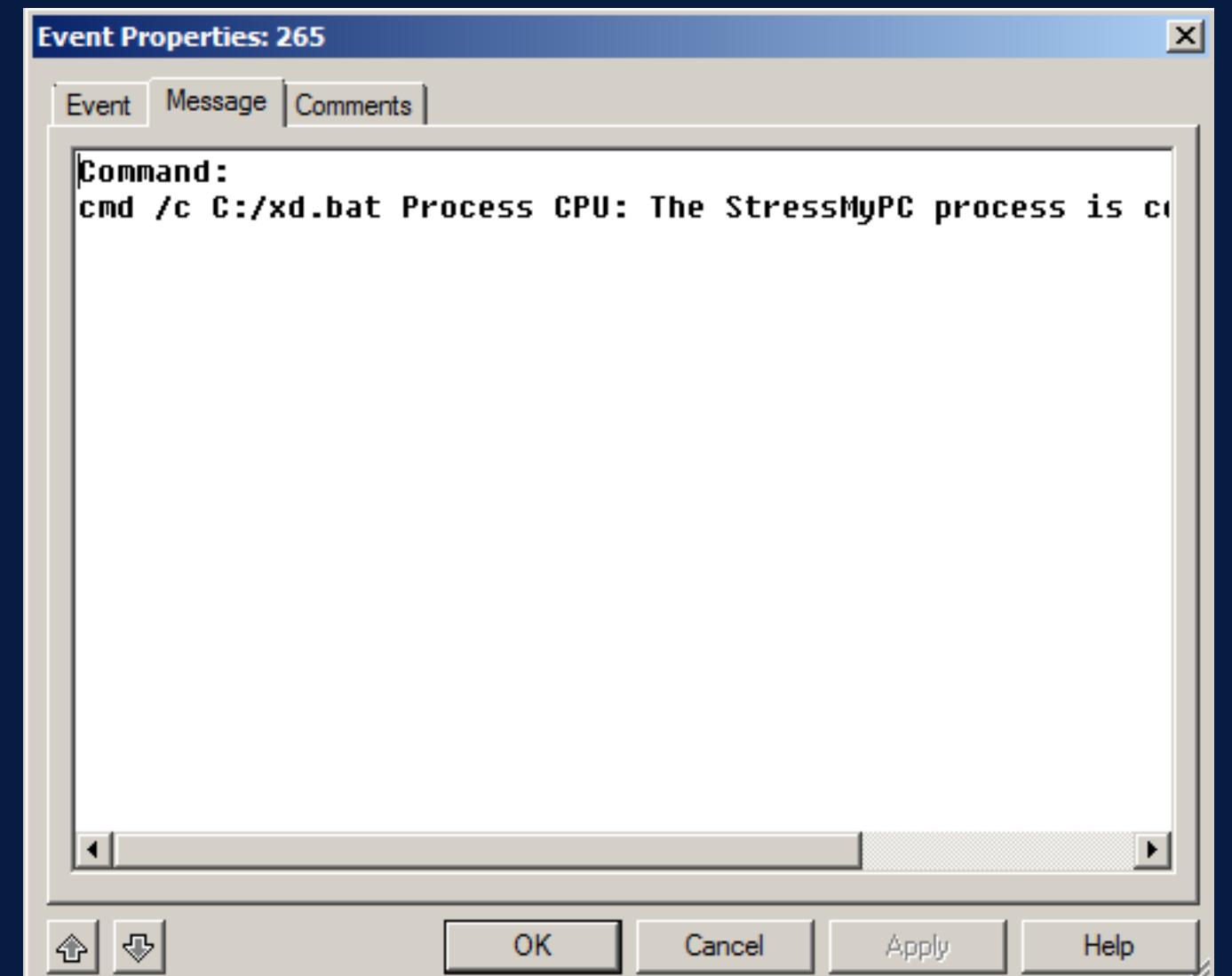
Event ID [266] Local Action: Action Results: Command test is successful (see detail message)

Event ID [263] Local Action: Action Results: Command test is successful (see detail message)

Event ID [266] Local Action: Action Results: Command test is successful (see detail message)

Process CPU: The StressMyPC process is consuming too much CPU

Process CPU: The StressMyPC process is consuming too much CPU



 xd - Notepad

File Edit Format View Help

```
cd C:\Users\Administrator
echo This is sample text > MyFile.txt
```

Administrator		
Computer > Local Disk (C:) > Users > Administrator		
Organize	Open	Share with
Name	Date modified	
Contacts	11/1/2022 9:21 PM	
Desktop	11/1/2022 10:21 PM	
Downloads	11/24/2022 2:44 PM	
Recent Places	11/23/2022 2:49 PM	
Favorites	11/1/2022 10:21 PM	
Links	11/1/2022 10:21 PM	
My Documents	11/1/2022 11:46 PM	
My Music	11/1/2022 10:21 PM	
My Pictures	11/1/2022 10:21 PM	
My Videos	11/1/2022 10:21 PM	
Saved Games	11/1/2022 10:21 PM	
Searches	11/1/2022 10:21 PM	
Computer	11/1/2022 10:21 PM	
Local Disk (C:)	11/1/2022 10:21 PM	
CD Drive (D:)	11/1/2022 10:21 PM	
VirtualBox	11/1/2022 10:21 PM	
Network	11/1/2022 10:21 PM	
.vscode	11/24/2022 2:45 PM	
Contacts		
Desktop		
Downloads		
Recent Places		
Libraries		
Documents		
Music		
Pictures		
Videos		
Computer		
Local Disk (C:)		
CD Drive (D:)		
SQL201		
New Volume (E:)		
Searches		
MyFile	3/16/2023 5:38 AM	
Script		

NT_Find Files



Monitor the number of files that match a set of criteria. This KS raises an event if the number of matching files crosses the threshold you specify

Mission

Verify that works according to the acceptance criteria and that the results are correct and reliable.

Environment



Windows Server 2012 R2

Microsoft SQL 2014

AppManager 8.0

{ Operator Console
QDB
Server Management
Agent}



Windows Server 2012 R2

AppManager 8.0 → Agent

Validation Tools



Exploratory Testing

Feature Tour
Variable Tour
Data Tour

Event Notification	
+ Raise event if threshold is exceeded?	<input checked="" type="checkbox"/> Yes
+ Raise event if a folder cannot be accessed?	<input type="checkbox"/> Yes
Severity - Job failure	5
Data Collection	
Collect file count data?	<input type="checkbox"/> Yes
Monitoring	
Logical drive letter(s) to search (use commas, no spaces)	
Root folder to begin the search	users
File name(s), can use * and ? wildcards	**
Search subfolders?	<input type="checkbox"/> Yes
File count threshold	500
File Filters	



Scope

Out Scope

Operator Console

- KS NT FindFiles
 - Values Tab
 - Events
 - Data
 - Monitoring
 - Advanced Tab
 - Event options

Operator Console

- KS NT FindFiles
 - Schedule Tab
 - Values Tab
 - Size (Tera)
- Actions Tab
- Advanced Tab
 - Data options

Control Center Console

Domain Table

Tab	Variable	Valid Case Equivalence Class	Invalid Case Equivalence Class	Boundaries and Special Cases	Comments	Tab	Variable	Valid Case Equivalence Class	Invalid Case Equivalence Class	Boundaries and Special Cases	Comments		
- Severity if threshold is exceeded - Severity if folder can not be accessed - Job Failure	1 - 40	< 1	0			File(s) name	0 - 512 characters	0 - 512 characters		abc			
		1 - 40	1					123		123			
			11					abc-12_3		abc-12_3			
			25										
			5					Empty value		Empty value			
			40				wildcards	*.*	Default Parameter	*.*			
	Logical Drive Letter(s) to Search	> 40	41					?.?		?.?			
		Special Characters	*+-/;?=;&%\$					513 characters		513 characters			
		Strings	abcdefghijklm...					Spaces		Spaces			
		Spaces						Special Characters		"+/;?=;&%\$			
		Empty value	Empty value										
Root Folder to Begin the Test	c/C - z/Z	< c/C	B:/			Values	< 0	< 0	- File Counter Threshold - File Size	-1			
		c/C - z/Z	C:/					0		0			
			E:/					500		500			
			F:/					2		2			
		Empty value	Empty value					99999		99999			
	Logical Drive Letter(s) to Search	Special Characters	*+-/;?=;&%\$	> 99999	> 99999		100000						
			Spaces		Special Characters		*+-/;?=;&%\$						
			Numbers		Strings		abcdefghijklm...						
			123456789		Spaces		Spaces						
		Empty value	Empty value							Empty value	Empty value		
Root Folder to Begin the Test	0 - 512 characters	0 - 512 characters	users				Sliding Date/Time Range	< 1	- Hours - Days - Months - Years	0			
			12_3-4					1		1			
			users/12_3-4					100		100			
			513 characters					> 100		101			
		Spaces						Special Characters		*+-/;?=;&%\$			
	Root Folder to Begin the Test	Special Characters	"+/;?=;&%\$					Strings		abcdefghijklm...			
								Spaces		Spaces			

Techniques Quality Criteria

PICT

Acceptance
Function
Domain
Combinatory
Scenario
Risk



Capability
Reliability

Logical Drive: 1, 2, 3
File Name: FileName, *, ?
File Type: FileType, *, ?
Threshold: 0, 500, 99999
Subfolder: Yes, No
If [File Name] = "FileName" then [Threshold] = 0;
If [File Type] = "FileType" then [Threshold] = 0;

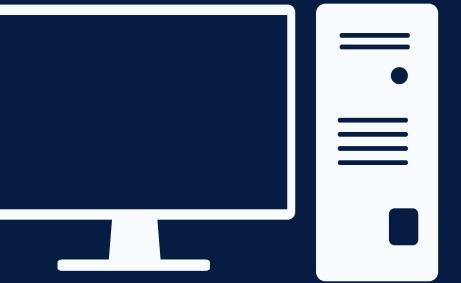
Logical Drive	File Name	File Type	Threshold	SubFolder
2	*	FileType	0	No
3	?	*	0	Yes
2	*	*	99999	Yes
1	?	?	0	No
2	?	?	0	Yes
3	*	*	99999	No
1	*	?	0	Yes
1	FileName	*	0	Yes
3	*	*	500	Yes
1	*	*	99999	No
3	FileName	?	0	No
3	FileName	FileType	0	Yes
1	*	*	500	No
1	?	FileType	0	Yes
2	FileName	?	0	No

Scenarios

Test in different agents



Test with different combinations



Test with changes during the monitoring



Test for a special type of folders



Test for special types of files



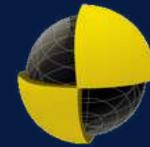
Test for multiple subfolders

Risk

Test with the SM down



Test Cases



TestLink

- ◀ KS_NT_FindFiles (149)
 - ▶ Function Testing (32)
 - ▶ Domain Testing (65)
 - ▶ Combinatory Testing (44)
 - ▶ Scenario Testing (5)
 - ▶ Acceptance Testing (2)
 - ▶ Risk Testing (1)

Mt01-65 : The KS raises an event with severity 1 when the threshold is 0 and is exceeded in agent 1 - Version1

Summary

This test verifies if the KS raises an event when is executed in one agent and the threshold is exceeded

Preconditions

1. Have AppManager installed
2. Be logged in with a valid account in the Operator Console of AppManger
3. Have an agent. Agent 1 is in which the SM is installed
4. Have one logical drive
5. Have a folder
6. Have at least 1 file (no matters the size or the attributes)

Validations

File Home Share View

← This PC ▶ New Volume (F:) ▶ Test

Favorites

- Desktop
- Downloads
- Recent places
- This PC
- Documents
- Downloads
- Music
- Pictures
- Videos
- Local Disk (C:)
- New Volume (F:)
- Network

Name Date modified

Bitmap - Copy - Copy (2)	3/12/2023 5:5
Bitmap - Copy - Copy (3)	3/12/2023 5:5
Bitmap - Copy - Copy (4)	3/12/2023 5:5
Bitmap - Copy (43)	3/12/2023 5:5
Bitmap - Copy (44) - Copy	3/12/2023 5:5
Bitmap - Copy (44)	3/12/2023 5:5
Bitmap - Copy (45) - Copy	3/12/2023 5:5
Bitmap - Copy (45)	3/12/2023 5:5
Bitmap - Copy (46) - Copy	3/12/2023 5:5
Bitmap - Copy (46)	3/12/2023 5:5
Bitmap - Copy (47) - Copy	3/12/2023 5:5
Bitmap - Copy (47)	3/12/2023 5:5
Bitmap - Copy (48) - Copy	3/12/2023 5:5
Bitmap - Copy (48)	3/12/2023 5:5
Bitmap - Copy (49) - Copy	3/12/2023 5:5
Bitmap - Copy (49)	3/12/2023 5:5
Bitmap - Copy (50) - Copy	3/12/2023 5:5
Bitmap - Copy (50)	3/12/2023 5:5
Bitmap - Copy (51) - Copy	3/12/2023 5:5
Bitmap - Copy (51)	3/12/2023 5:5
Bitmap - Copy (52) - Copy	3/12/2023 5:5

Common Specification : 569 items

Total 569

Logical Drives F

Root Folder Test

File Name **

Resource Sub Folders No

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\AppCrash_netc.exe_a625aa8129a41e2819b3dedca9f3447c715f_56fc7df6_cab_08d67a72 memory.hdmp

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\AppCrash_netc.exe_a625aa8129a41e2819b3dedca9f3447c715f_56fc7df6_cab_08d67a72 Report.wer

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\AppCrash_netc.exe_a625aa8129a41e2819b3dedca9f3447c715f_56fc7df6_cab_08d67a72 triagedump.dmp

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\NonCritical_x64_293c657dab722b022ce2443e89fd152937ef1_00000000_cab_03e075aa memory.hdmp

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\NonCritical_x64_94995ab25177e7c7298027ae617b93854df5_00000000_cab_03e0760a Report.wer

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\NonCritical_x64_94995ab25177e7c7298027ae617b93854df5_00000000_cab_03e0760a Report.wer

ListFiles - Notepad

File Edit Format View Help

22/2013 02:52 AM 1,120 Task Manager.lnk
22/2013 11:37 AM 2,236 Windows PowerShell.lnk
3 File(s) 3,694 bytes

rectory of C:\Users\All Users\Microsoft\Windows\WER\ReportQueue\AppCrash_netc.exe_a625aa8129a41e2819b3dedca9f3447c715f_56fc7df6_cab_08d67a72

10/2023 03:09 PM 3,045,345 memory.hdmp
10/2023 03:09 PM 10,608 Report.wer
10/2023 03:09 PM 89,818 triagedump.dmp
10/2023 03:09 PM 207,078 WER7812.tmp.appcompat.txt
10/2023 03:09 PM 5,294 WER7A55.tmp.WERInternalMetadata.xml
5 File(s) 3,358,143 bytes

rectory of C:\Users\All Users\Microsoft\Windows\WER\ReportQueue\AppCrash_netc.exe_a625aa8129a41e2819b3dedca9f3447c715f_56fc7df6_cab_08d67a72

Name Date modified Type Size

memory Crash Dump File 2,974 KB

Report.wer WER File 11 KB

triagedump Crash Dump File 88 KB

WER7A55.tmp.WERInternalMetadata XML File 6 KB

WER7812.tmp.appcompat Text Document 203 KB

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\AppCrash_netc.exe_a625aa8129a41e2819b3dedca9f3447c715f_56fc7df6_cab_08d67a72 memory.hdmp

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\NonCritical_x64_293c657dab722b022ce2443e89fd152937ef1_00000000_cab_03e075aa Report.wer

C:\users\All Users\Microsoft\Windows\WER\ReportQueue\NonCritical_x64_94995ab25177e7c7298027ae617b93854df5_00000000_cab_03e0760a Report.wer

ListFiles - Notepad

File Edit Format View Help

12/2023 07:38 PM 0 memory.hdmp
12/2023 07:38 PM 4,660 WER73C1.tmp.WERInternalMetadata.xml
2 File(s) 4,660 bytes

rectory of C:\Users\All Users\Microsoft\Windows\WER\ReportQueue\AppCrash_netc.exe_a625aa8129a41e2819b3dedca9f3447c715f_56fc7df6_cab_08d67a72

Name Date modified Type Size

memory Crash Dump File 0 KB

WER73C1.tmp.WERInternalMetadata XML File 5 KB

Event Status Job Computer Knowledge Script Last Occurrence Count Severity Message

1546 Open 1611 WIN-OKLKRFTN7M5 NT_FindFiles 3/19/2023 11:29:36 PM 1 11 File Count: At least 501 files matching the specified criteria have been found

1547 Open 1611 WIN-OKLKRFTN7M5 NT_FindFiles 3/19/2023 11:29:36 PM 1 11 File Count: At least 501 files matching the specified criteria have been found

1548 Open 1603 WIN-OKLKRFTN7M5 NT_FindFiles 3/19/2023 10:43:26 PM 1 11 File Count: At least 1 file matching the specified criteria have been found

554 1544 NULL 1603 33 WIN-OKLKRFTN7M5 2 1679280206 48 NT_FindFiles 11 File Count: At least 1 file matching the specified criteria have been found

555 1545 1544 1603 33 WIN-OKLKRFTN7M5 2 1679280206 48 NT_FindFiles 11 File Count: At least 1 file matching the specified criteria have been found

556 1546 NULL 1611 33 WIN-OKLKRFTN7M5 0 1679282976 48 NT_FindFiles 11 File Count: At least 501 files matching the specified criteria have been found

557 1547 1546 1611 33 WIN-OKLKRFTN7M5 0 1679282976 48 NT_FindFiles 11 File Count: At least 501 files matching the specified criteria have been found

Validations

Event | Message | Comments

File Count: Files matching the specified criteria have been found

Folder Name	File Name
E:\Size	10by
E:\Size	10by - Copy
E:\Size	10by - Copy (2)
E:\Size	10by - Copy (3)
E:\Size	10by - Copy (4)
E:\Size	10Kb
E:\Size	10Kb - Copy
E:\Size	10Kb - Copy (2)
E:\Size	10Kb - Copy (3)
E:\Size	10Kb - Copy (4)
E:\Size	3by
E:\Size	3by - Copy
E:\Size	3by - Copy (2)
E:\Size	3by - Copy (3)
E:\Size	3by - Copy (4)
E:\Size	3Kb
E:\Size	3Kb - Copy
E:\Size	3Kb - Copy (2)
E:\Size	3Kb - Copy (3)
E:\Size	3Kb - Copy (4)
E:\Size	Bitmap - Copy (2).bmp
E:\Size	Bitmap - Copy (3).bmp
E:\Size	Bitmap - Copy (4).bmp
E:\Size	Bitmap - Copy.bmp
E:\Size	Bitmap.bmp

Common Specification:

Total	25
Logical Drives	E
Root Folder	Size
File Name	**
Recurse Sub-Folders	No
File count threshold	More than 0
File Attributes	Archive or Hidden or System or Read-only
File Size	less than 99999 bytes

25 files found - Search: E:\Size\ (**)

File Edit View Search Tools Window Help

Size: **

Main Options Dates Attributes Scripting Compressed Files

File name: **

Containing text:

Look in: E:\Size\

Size (byte) > 0 < 99999 Modified: After: 3/13/2023

Name Location Size

Bitmap - Copy (2).bmp E:\Size\ 0 KB

Bitmap - Copy (3).bmp E:\Size\ 0 KB

Bitmap - Copy (4).bmp E:\Size\ 0 KB

Bitmap - Copy.bmp E:\Size\ 0 KB

Bitmap.bmp E:\Size\ 0 KB

Found: 25 items (65.06 KB)

Checked: 40 items (65.54 MB)

Status: Completed (< 1 sec)

Ready

Found: 25 items (65.06 KB)

Event | Message | Comments

File Count: Files matching the specified criteria have been found

Folder Name	File Name
G:\Test	DOC.doc
G:\Test	DOC.dot

Common Specification:

Total	2
Logical Drives	E,G
Root Folder	Test
File Name	D?C.DO?
Recurse Sub-Folders	No
File count threshold	More than 0
File Attributes	Archive or Hidden or System or Read-only

Administrator: PS G:\Test> Get-ChildItem -Path "G:\Test" -Filter "?OC.DOT"

Directory: G:\Test

Mode	LastWriteTime	Length	Name
-a---	3/12/2023 6:09 PM	22528	DOC.doc
-a---	3/12/2023 6:09 PM	22528	DOC.dot

PS G:\Test>

Bugs

Nº	Bug	Severity
1	The KS doesn't find all the files in the "users" folder	High
2	The KS raises an unhandled error event when the special character “ ” “ is used in "Root Folder" and "File Name" fields	High
3	The "AND" operator raises wrong events	High
4	The KS doesn't find files when the Files are in 2 of 3 Logical Drives	Medium
5	The KS doesn't raise an event when the folder has more than 50000 files	Medium
6	The KS doesn't find files using Gb as file size and Greater or Equal operators	Medium
7	The KS doesn't trim spaces when setting spaces at the beginning and then valid data in the threshold, size, root folder and file name fields	Low

The KS doesn't find all the files in the "users" folder - High

Actual Result

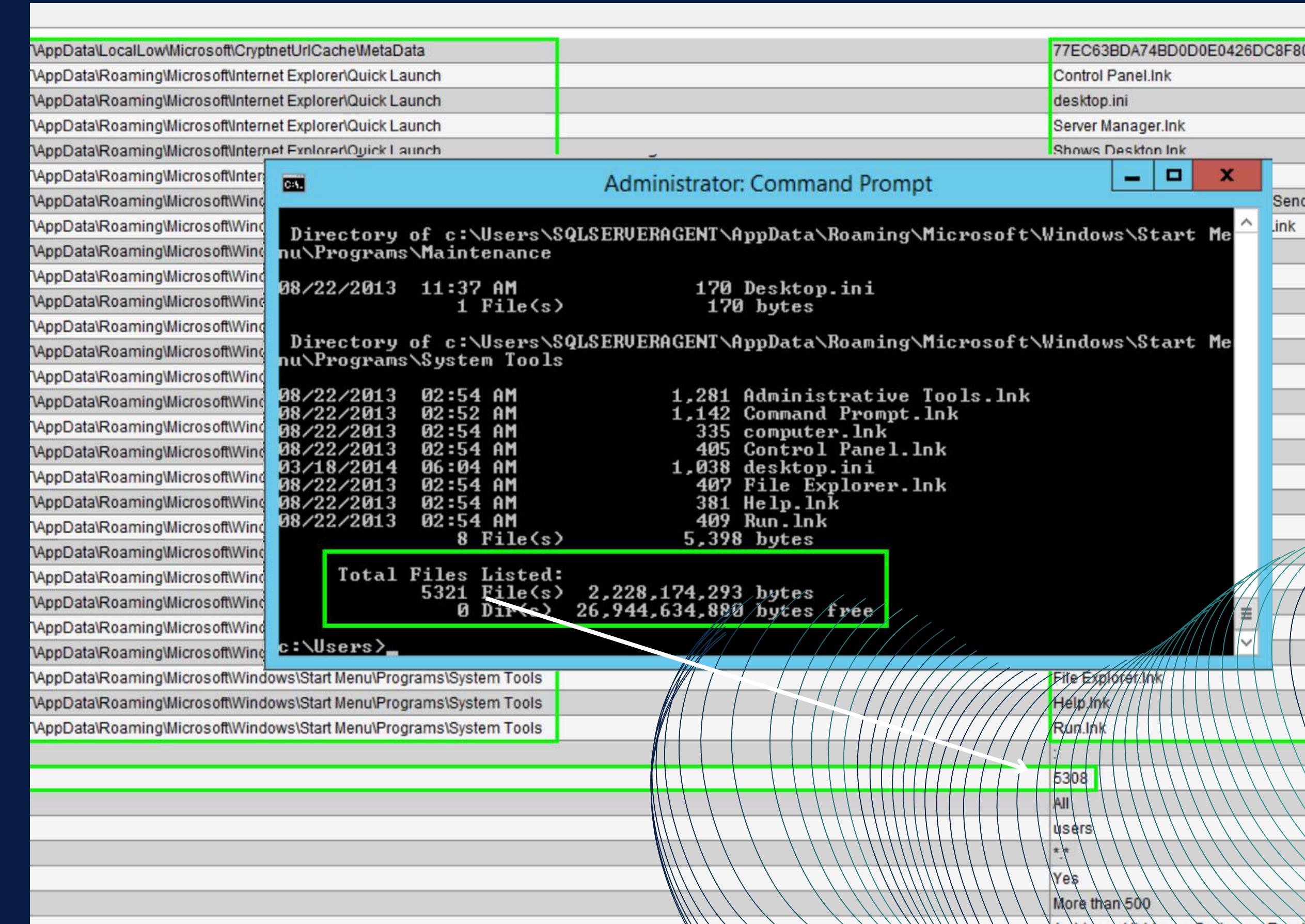
The KS doesn't find all the files of the "users" folder

Expected Result

The KS finds all the files of the "users" folder

Monitoring

Logical drive letter(s) to search (use commas, no spaces)	
Root folder to begin the search	users
File name(s), can use * and ? wildcards	**
Search subfolders?	<input type="checkbox"/> Yes
File count threshold	500



ListFiles - Notepad

File Edit Format View Help

1 File(s) 20,108 bytes

Directory of C:\Users\Administrator\AppData\Local\Microsoft\Windows\WER\ReportQueue\AppHang_explorer.exe_72df3e3df1b3a3a6ff15278d3b939971e5127b8e_5c1a5825_cab_05454c96

03/12/2023 07:58 PM	132,396,019	memory.hdmp
03/12/2023 07:59 PM	22,330	Report.wer
03/12/2023 07:59 PM	764,814	triagedump.dmp
03/12/2023 07:58 PM	4,404	WER4AE1.tmp.appcompat.txt
03/12/2023 07:58 PM	3,876	WER4B01.tmp.xml
03/12/2023 07:58 PM	5,364	WER4B61.tmp.WERInternalMetadata.xml

6 File(s) 133,196,807 bytes

Directory of C:\Users\Administrator\AppData\Local\Microsoft\Windows\WER\ReportQueue\AppHang_explorer.exe_72df3e3df1b3a3a6ff15278d3b939971e5127b8e_5c1a5825_cab_05454c96

03/13/2023 11:52 AM	21,316	Report.wer
---------------------	--------	------------

V01res00002.jrs
V01tmp.log
WebCacheV01.dat
viewedids.resp
a0f66 Report.wer
425c3 Report.wer
a1ee0d Report.wer
b8af4 Report.wer
_05454c96 memory.hdmp
_05454c96 Report.wer
_05454c96 triagedump.dmp
18903 Report.wer
0c9 Report.wer
09b Report.wer
d4d22a Report.wer
1 - Desktop.lnk
desktop.ini
1 - Run.lnk
2 - Search.lnk

Local Disk (C:) > Users > Administrator > AppData > Local > Microsoft > Windows > WER > ReportQueue > AppHang_explorer.exe_72df3e3df1b3a3a6ff15278d3b939971e5127b8e_5c1a5825_cab_05454c96

Name Date modified Type Size

memory 3/12/2023 7:58 PM Crash Dump File 129,293 KB

Report.wer 3/12/2023 7:59 PM WER File 22 KB

triagedump 3/12/2023 7:59 PM Crash Dump File 747 KB

WER4AE1.tmp.appcompat 3/12/2023 7:58 PM Text Document 5 KB

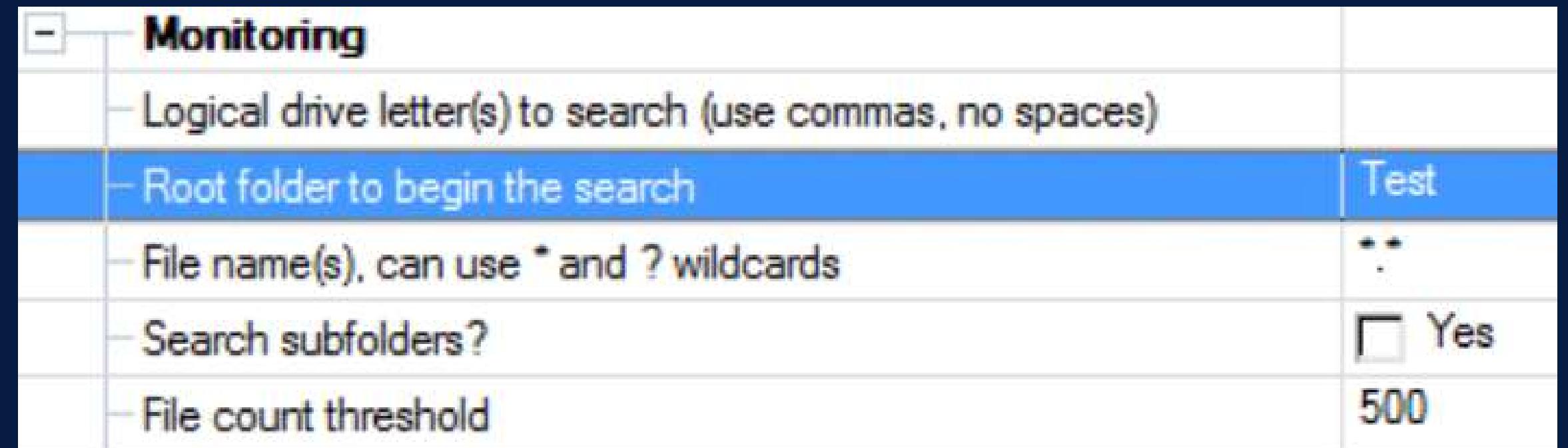
WER4B01.tmp 3/12/2023 7:58 PM XML File 4 KB

WER4B61.tmp.WERInternalMetadata 3/12/2023 7:58 PM XML File 6 KB

The KS doesn't find files when the Files are in 2 of 3 Logical Drives - Medium

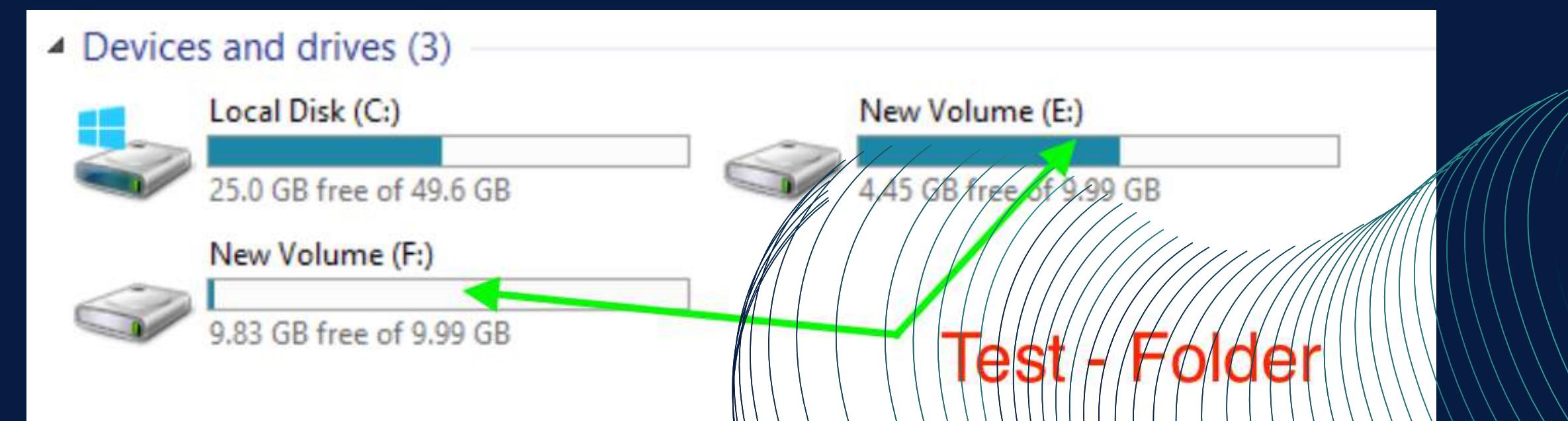
Actual Result

The KS doesn't find files when there are in 2 of 3 logical drives



Expected Result

The KS finds all the files when there are in 2 of 3 logical drives



532 files found - Search: E:\Test\ (*.*)

File Edit View Search Tools Window Help

Test: *.*

Main Options Dates Attributes Scripting Compressed Files Expert

File name: ** Wildcards Aa ?

Containing text: Boolean Aa ?

Look in: E:\Tes Subfolders Plain Text

Size (kB) > 999 < 999 Modified: After: 3/13/202 Before: Today

Name Location Size

Bitmap - Copy (102)... E:\Test\ 0 KB

Bitmap - Copy (102)... E:\Test\ 0 KB

Bitmap - Copy (103)... E:\Test\ 0 KB

Bitmap - Copy (103)... E:\Test\ 0 KB

Bitmap - Copy (104)... E:\Test\ 0 KB

Bitmap - Copy (104)... E:\Test\ 0 KB

Ready Found: 532 items (34.44 MB)

Found: 532 items (34.44 MB)

Checked: 532 items (34.44 MB)

Status: Completed (< 1 sec)

Summary Hits Text Pr...

Search Statistics

Test: *.*

Main Options Dates Attributes Scripting Compressed Files Expert

File name: ** Wildcards Aa ?

Containing text: Boolean Aa ?

Look in: F:\Tes Subfolders Plain Text

Size (kB) > 999 < 999 Modified: After: 3/13/202 Before: Today

Name Location Size

Bitmap - Copy (2).b... F:\Test\ 0 KB

Bitmap - Copy (3).b... F:\Test\ 0 KB

Bitmap - Copy (4).b... F:\Test\ 0 KB

Bitmap - Copy.bmp F:\Test\ 0 KB

Bitmap.bmp F:\Test\ 0 KB

CSV - Copy (2).csv F:\Test\ 1 KB

Ready Found: 585 items (45.00 MB)

Found: 585 items (45.00 MB)

Checked: 585 items (45.00 MB)

Status: Completed (< 1 sec)

Summary Hits Text Pr...

Search Statistics

Event Message Comments

E:\Test XLA.xla

E:\Test XLAM - Copy (2) - Copy.xlam

E:\Test XLAM - Copy (2).xlam

E:\Test XLAM - Copy (3) - Copy.xlam

E:\Test XLAM - Copy (3).xlam

E:\Test XLAM - Copy (4) - Copy.xlam

E:\Test XLAM - Copy (4).xlam

E:\Test XLAM - Copy (5) - Copy.xlam

E:\Test XLAM - Copy (5).xlam

E:\Test XLAM - Copy (6) - Copy.xlam

E:\Test XLAM - Copy (6).xlam

E:\Test XLAM - Copy (7) - Copy.xlam

E:\Test XLAM - Copy (7).xlam

E:\Test XLAM - Copy (8) - Copy.xlam

E:\Test XLAM - Copy (9) - Copy.xlam

E:\Test XLAM - Copy - Copy (2).xlam

E:\Test XLAM - Copy - Copy.xlam

E:\Test XLAM.xlam

E:\Test XLS - Copy (2) - Copy.xls

E:\Test XLS - Copy (2).xls

E:\Test XLS - Copy (3) - Copy.xls

E:\Test XLS - Copy (3).xls

E:\Test XLS - Copy (4).xls

E:\Test XLS - Copy (5) - Copy.xls

E:\Test XLS - Copy (5).xls

E:\Test XLS - Copy (6) - Copy.xls

E:\Test XLS - Copy (6).xls

E:\Test XLS - Copy - Copy (2).xls

E:\Test XLS - Copy - Copy.xls

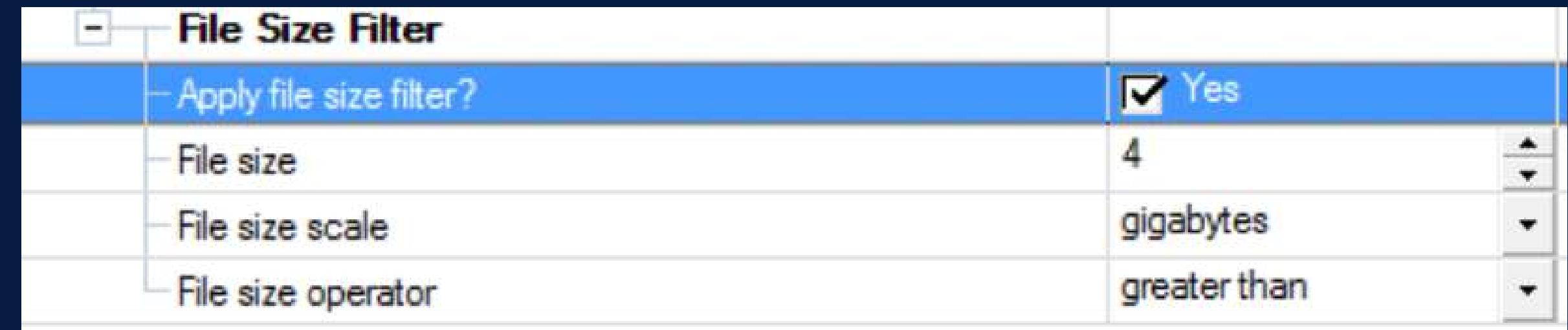
Common Specification:

Total	532
Logical Drives	All
Root Folder	Test
File Name	**
Recurse Sub-Folders	Yes
File count threshold	More than 0
File Attributes	Archive or Hidden or System or Read-only

The KS doesn't find files using Gb as file size and Greater or Equal operators - Medium

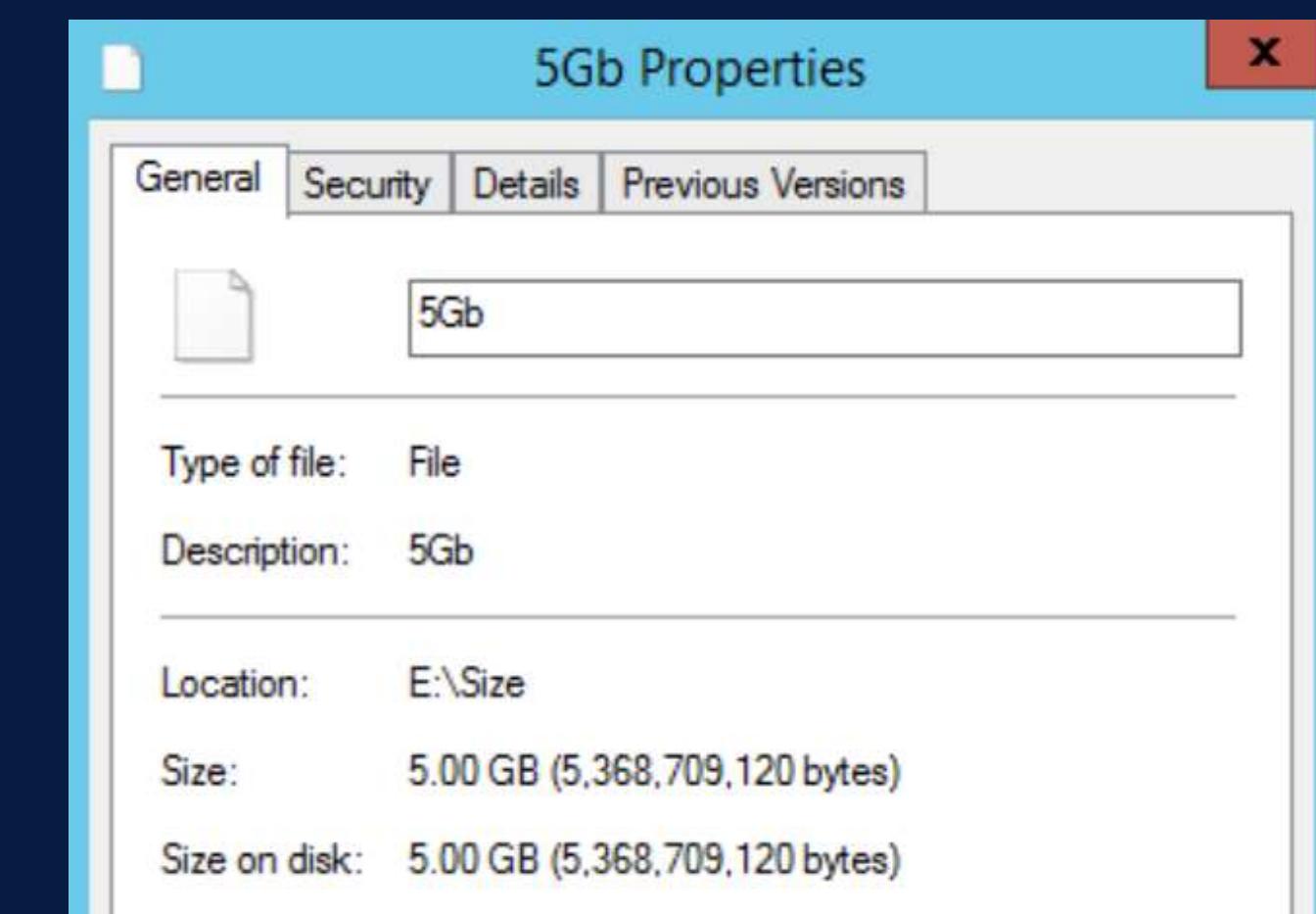
Actual Result

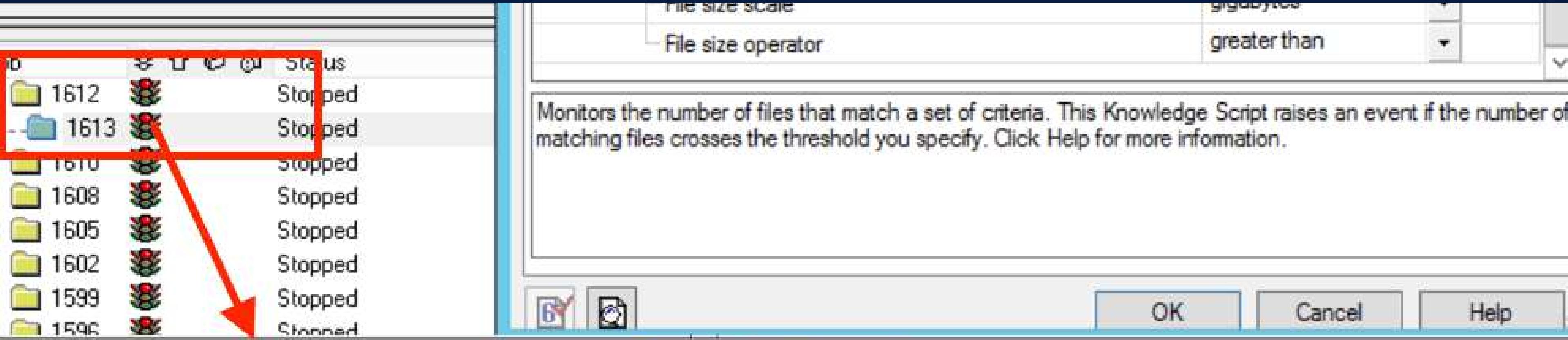
The KS doesn't find files using Gb as a file size filter and with greater or equal operators



Expected Result

The KS finds files using Gb as a file size filter and with greater or equal operators





Event	Status	Job	Computer	Knowledge Script	curl	Severity	Message
1545	Closed	1611	WIN-OKLKBFTN7M5	NT_FindFiles	11	File Count: At least 501 files matching the specified criteria have been found	
1547	Closed	1611	WIN-OKLKBFTN7M5	NT_FindFiles	3/19/2023 11:29:36 PM	11	File Count: At least 501 files matching the specified criteria have been found

Last job with event

A screenshot of a file search dialog titled "Size: **". The search parameters are set to "Look in: E:\Size\" with "Subfolders" checked, "Size (GB): 4", and "Modified: After: 3/19/2023". The results table shows one item: "5Gb" located at "E:\Size\" with a size of "5,242,880 ...". The "Search Statistics" panel indicates "Found: 1 item (5.00 GB)" and "Status: Completed (< 1 sec)". A red box highlights the search parameters and the results table.

Name	Location	Size
5Gb	E:\Size\	5,242,880 ...

Search Statistics

Found: 1 item (5.00 GB)
Checked: 45 items (5.45 GB)
Status: Completed (< 1 sec)

NT FOLDER FILE COUNT

- Number of files in a folder
- Raise events



Event	+ Raise event if a file is found
Severity	+ Raise event if a file is found
Data Collection	Collect file count data?
Monitoring	Logical drive letter(s) to search (use command)
	Root folder to begin the search
	File name(s), can use * and ? wildcards
	Search subfolders?
	File count threshold per folder
File Filters	File Attributes Filter
	File attribute operator
	Archive attribute
	Hidden attribute
	Read-only attribute
	System attribute
Date Modified Filter	- Apply date modified filter?
	Select time range
File Size Filter	- Apply file size filter?
	File size

Exploratory Testing

- Feature Tour
- Data Tour
- Configuration Tour



PROJECT ENVIRONMENT

Windows Server 2012



Windows Server 2012

PRODUCT ELEMENTS

Function- Scope
Data
Platform
Operations

QUALITY CRITERIA

Capability
Reliability

HTSM

HTSM NT_FOLDER
FILE COUNT

TEST TECHNIQUES

- Function Testing
- Domain Testing
- Combinatory Testing
- Scenario Testing
- Acceptance Testing

Properties for NT_FolderFileCount		
Schedule	Values	Actions
	Description	Value
-	Event Notification	
+ Raise event if threshold is exceeded?	<input checked="" type="checkbox"/> Yes	
+ Raise event if a folder cannot be accessed?	<input type="checkbox"/> Yes	
Severity - Job failure	5	Severity
-	Data Collection	
Collect file count data?	<input checked="" type="checkbox"/> Yes	
-	Monitoring	
Logical drive letter(s) to search (use commas, no spaces)	C	
Root folder to begin the search	users	
File name(s), can use * and ? wildcards	**	
Search subfolders?	<input checked="" type="checkbox"/> Yes	
File count threshold per folder	1	Files
-	File Filters	
+ File Attributes Filter		OR
File attribute operator		
Archive attribute	<input type="checkbox"/> Yes	
Hidden attribute	<input type="checkbox"/> Yes	
Read-only attribute	<input type="checkbox"/> Yes	
System attribute	<input type="checkbox"/> Yes	
+ Date Modified Filter		
Apply date modified filter?	<input type="checkbox"/> Yes	
Select time range	Fixed Time: 3/14/2023 9:44:00 PM To 3/15/202 ...	
+ File Size Filter		
Apply file size filter?	<input type="checkbox"/> Yes	
File size	10	*bytes
File size scale	megabytes	
File size operator	greater than	

Properties for NT_FolderFileCount		
Schedule	Values	Actions
	Schedule type	
<input type="radio"/> Run once		
<input checked="" type="radio"/> Regular intervals		
<input type="radio"/> X number of times		
<input type="radio"/> Daily schedule		
<input type="radio"/> Weekly schedule		
<input type="radio"/> Monthly schedule		
<input type="radio"/> Asynchronous		
Every:	30	Second(s)

Domain Table

Tab	Variable	Valid case	Invalid case	Boundaries
Values	Raise event if threshold is exceeded//Raise event if a folder cannon be accessed	Check box - Yes (checked) or (uncheck)		
	Severity - Exceeded threshold	1 to 40		1
	Severity - Folder not accessible			40
	Severity - Job failure		Letters or special characters	a,A,+,&,\$
			<1	-1
			>40	41
	Collect file count data	Check box - Yes (checked) or (uncheck)	Non characteres	Empty value
	Logical drive letter(s) to search (use commas, no spaces)	C		C
			Non-existent logical drive	Y,Z
			lowercase letter	c,d
			Non characteres	Empty value
	Root folder to begin the search	Existing routes on the machine for example: Users\o\Downloads		users, Windows
			non-existent routes	test/test/test
			Letters or special characters	a,A,+,&,\$
			Non characteres	Empty value
	File name(s), can use * and ? Wildcards	*.d?l *.dll	Letters or special characters	a,A,+,&,\$..
			Non characteres	Empty value
	Search subfolders	Check box - Yes (checked) or (uncheck)		
	File count threshold per folder	Integer numbers 1 to 9(20 times)		1,10,100,500,1000,5000,10000
			Limit number allowed by the KS	9(20 times)
			Negative numbers	-1
			Letters or special characters	a,A,+,&,\$
			Non characteres	Empty value
	File attribute operator	OR, AND (dropdown)		
	Archive attribute, Hidden attribute, Read-only attribute, System attribute, Apply date modified filter, Apply file size filter	Check box - Yes (checked) or (uncheck)		
	File size	1 to 9(20 times)		10,100,500,1000
			Negative numbers	-1
			Letters or special characters	a,A,+,&,\$
			Non characteres	Empty value
	File size scale	Bytes, kilobytes, megabytes, gigabytes, terabytes (dropdown)		
	File size operator	less than, grater than, equal to, not equal to (dropdown)		
Schedule	Regular Intervals	Every 1,2,5, 10 minutes		999 seconds
			>999	1000 seconds
			Letters or special characters	a,A,+,&,\$
			Non characteres	Empty value
			Negative numbers	-1

Mt01-152 : An event is raised with the Root folder "users" - Version 1

Summary
Verify if an event is raised with the Root folder "users" by default

Preconditions

- Have AppManger installed
- Be logged in Operator Console
- Have the NT tab
- Have a logical disk and files created

#	Step actions	Expected result
1	Click on FolderFileCount KS and drag and drop to the agent machine	
2	In the values tab, put local disk C (example: C) and leave	

TEST CASES

Functions Values tab

Mt01-185 : An event is raised if the "Severity- Exceeded threshold" is set to 1 - Version 1

Summary
Verify that an event is raised if the "Severity- Exceeded threshold" is set to 1

Preconditions

Create step

Status : Draft Importance : High Execution type :

Estimated exec. (min) : Save

Keywords : None

Select Keywords Add

Platforms : None

Requirements : None

DOMAIN TESTING

Domain Table

Mt01-596 : An event is raised if two logical drives are set with one root folder

Summary
Verify that an event is raised when setting two logical drives with a root folder

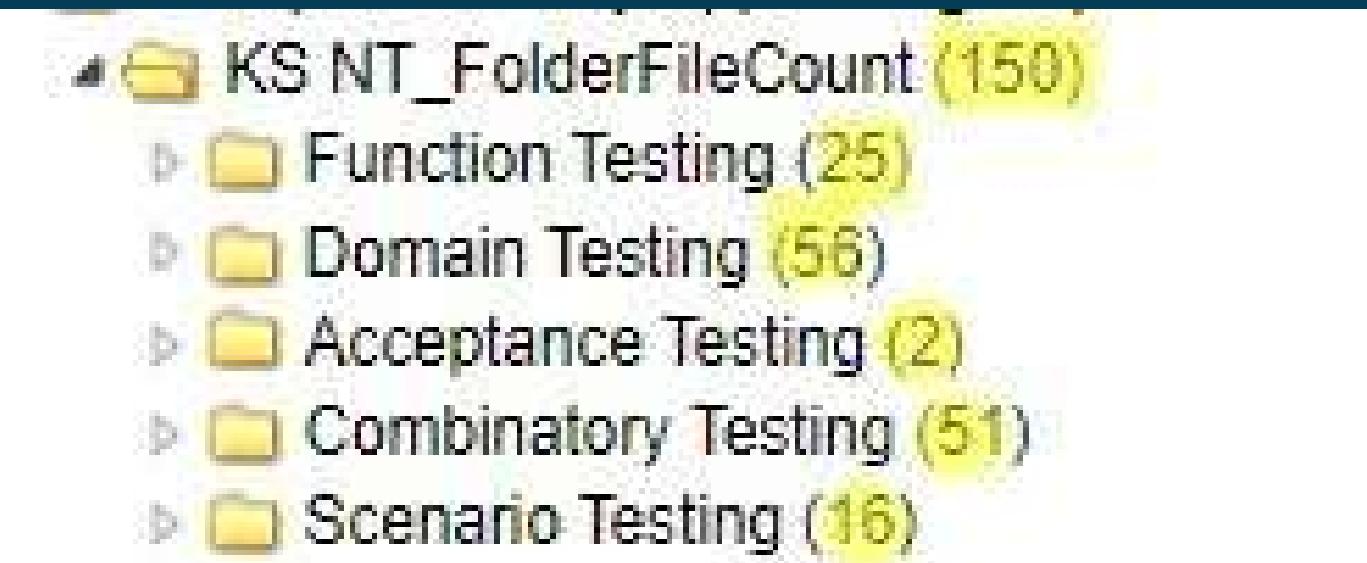
Preconditions

- Have AppManger installed
- Be logged in Operator Console
- Have the NT tab
- Have two logical disks and two folders with the same name created

#	Step actions	Expected result
1	Click on FolderFileCount KS and drag and drop to the agent machine	
2	In the values tab, set the two logical drives without commas (example: name of the folder that both logical drives have, set the threshold field to 1)	

COMBINATORY TEST

Combination between domain and function



VALIDATION TOOLS

- Command Prompt
- Explorer ++
- Folder Size Explorer
- Windows Explorer and Properties

Administrator: Command Prompt

```
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>dir
Volume in drive C has no label.
Volume Serial Number is ACFA-83E3

Directory of C:\Users\Administrator

03/17/2023  01:55 PM    <DIR>        .
03/17/2023  01:55 PM    <DIR>        ..
03/17/2023  08:23 PM    <DIR>        Contacts
03/19/2023  12:50 AM    <DIR>        Desktop
03/17/2023  08:23 PM    <DIR>        Documents
03/19/2023  12:52 AM    <DIR>        Downloads
03/04/2023  06:34 PM    <DIR>        Favorites
03/18/2023  07:50 PM    <DIR>        Links
03/04/2023  06:34 PM    <DIR>        Music
03/17/2023  01:55 PM    <DIR>        OneDrive
03/04/2023  06:34 PM    <DIR>        Pictures
03/04/2023  06:34 PM    <DIR>        Saved Games
03/04/2023  06:34 PM    <DIR>        Searches
03/04/2023  06:34 PM    <DIR>        Videos
               0 File(s)   0 bytes
               14 Dir(s)  49,737,527,296 bytes free
```

File Home Share View

Cut Copy path Move to Copy to Delete Rename New folder New item Open Select all Select none Invert selection

Clipboard Computer Local Disk (C:) Search Local Disk (C:) Favorites

Computer Network

Name	Date modified	Type	Size
aylen	3/18/2023 10:49 PM	File folder	
inetpub			
PerfLogs			
Program Files			
Program Files (x86)			
ProgramData			
Users			
vane			
Windows			
gdiplus.dll			
New Text Document (2)			
New Text Document			

Windows Properties

General Sharing Security Previous Versions

Windows

Type: File folder

Location: C:\

Size: 15.9 GB (17,093,643,109 bytes)

Size on disk: 16.0 GB (17,262,149,632 bytes)

Contains: 82,898 Files, 23,346 Folders

Created: Thursday, July 26, 2012, 1:37:59 AM

Attributes: Read-only (Only applies to files in folder) Hidden Advanced...

OK Cancel Apply

Administrator - Explorer++

File Edit Selection View Actions Go Bookmarks Tools Help

Address C:\Users\Administrator

Folders

Administrator

Desktop Computer Local Disk (C:) CD Drive (D:) VirtualBox Guest Additions New York (E:) para_la_MV (\VBOXSVR) Control Panel Libraries Network Recycle Bin Administrator chanti holi FOLDER D New folder vane

AppData Contacts Desktop Downloads Favorites Links My Documents My Music My Pictures My Videos OneDrive

48% Local Disk (C:)

Name	Size	Files	Status	Date Modified	Type	Folders
aylen	0 MB	0	*OK	3/18/2023 10:49 PM	File folder	0
gdiplus.dll				9/6/2001 1:00 AM	Application extension	
New Text Document (2)				3/18/2023 8:37 PM	Text Document	
New Text Document				3/18/2023 8:37 PM	Text Document	
Program Files				3/18/2023 10:55 PM	File folder	
Program Files (x86)				3/16/2023 12:21 AM	File folder	
ProgramData				3/17/2023 1:40 PM	File folder	
Users				3/15/2023 5:15 PM	File folder	
vane				3/19/2023 4:42 PM	File folder	
Windows				3/17/2023 2:06 PM	File folder	
Documents	133 MB	21	OK	3/19/2023 11:14 PM	File folder	2
inetpub	0 MB	76	OK	3/4/2023 8:58 PM	File folder	21
PerfLogs	0 MB	0	OK	7/26/2012 3:44 AM	File folder	0
CD Drive (D:) VirtualBox Guest Additions						
New York (E:)						
para_la_MV (\VBOXSVR) (Y:)						

VALIDATION EXAMPLE

TEST CASE- DOMAIN



Mt01-266 An event is raised if the "Hidden" attribute is checked - Version1

RAISED EVENT

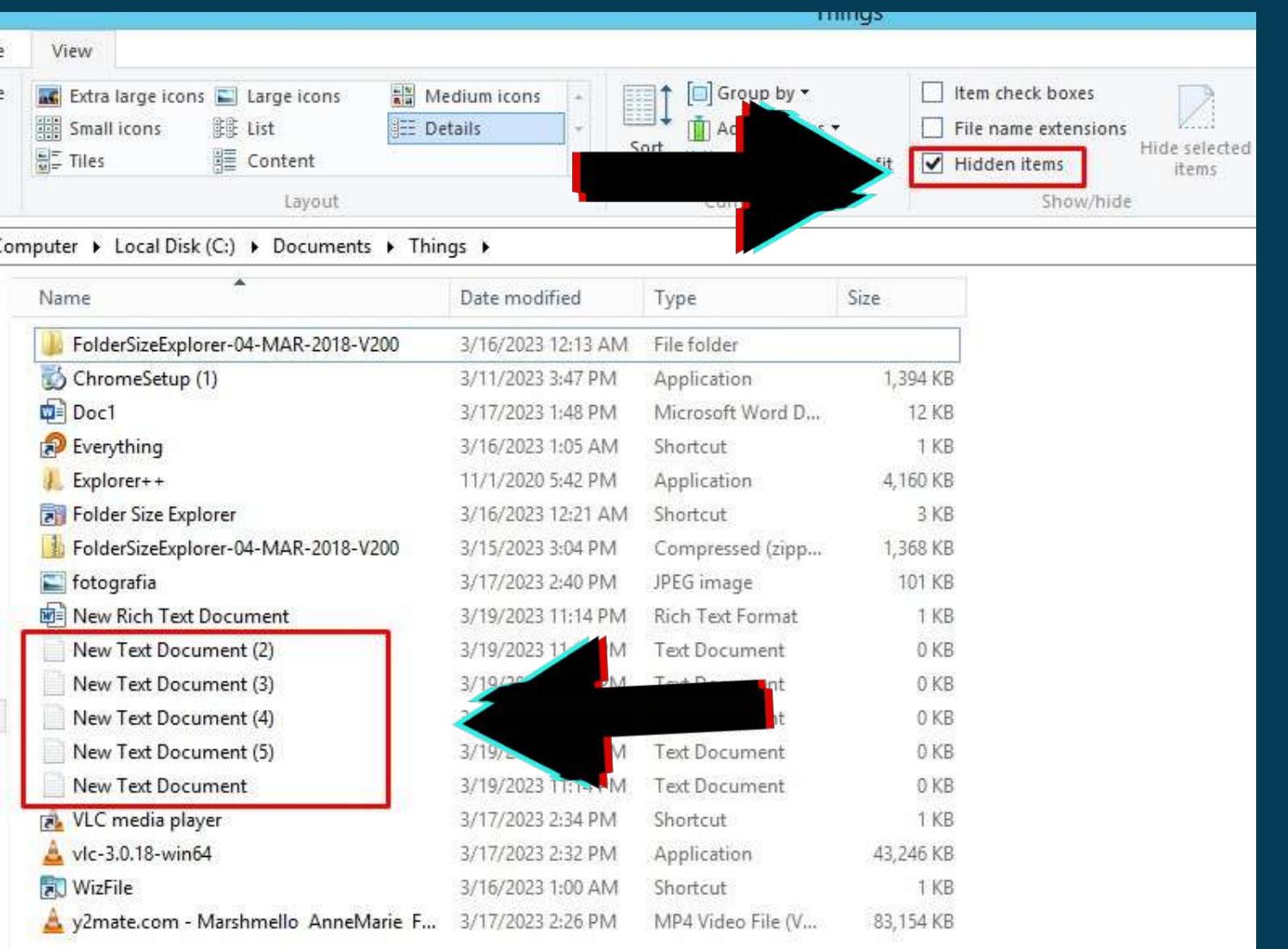
Summary
Verify that an event is raised if the "Hidden" is checked

Preconditions

Event Properties: 1188

Event	Message	Comments
Folder File Count: Folders with 1 or more files matching the specified criteria		
File Count	Folder Path	
5	C:\Documents\Things	
Total	1	
Logical Drives	C	
Root Folder	Documents\Things	
File Name	**	
Recurse Sub-Folders	Yes	
File count threshold	More than 1	
File Attributes	Hidden	

WINDOWS E.



FOLDER SIZE EXPLORER

Folder Size Explorer showing the 'Things' folder. A red box highlights several hidden files. A large red arrow points from a tooltip about protected operating system files to the highlighted files.

Name	Size	Type
FolderSizeExplorer-04-MAR-2018-V200	2 MB	File folder
ChromeSetup (1)	1 MB	Application
Doc1	0 MB	Microsoft Word Document
Everything	0 MB	Shortcut
Explorer++	4 MB	Application
Folder Size Explorer	0 MB	Shortcut
FolderPathExplor-04-MAR-2018-V200	1 MB	Compressed (zipped) Folder
fotografia	0 MB	JPEG image
New Rich Text Document	0 MB	Rich Text Format
New Text Document (2)	0 MB	Text Document
New Text Document (3)	0 MB	Text Document
New Text Document (4)	0 MB	Text Document
New Text Document (5)	0 MB	Text Document
New Text Document	0 MB	Text Document
VLC media player	42 MB	Shortcut
vlc-3.0.18-win64	0 MB	Application
WizFile	0 MB	Shortcut
y2mate.com - Marshmello AnneMarie FRIENDS Music Video OFFICIAL FRIENDZONE ANTHEM_1080p	81 MB	MP4 Video File (VLC)

CMD

```
cd C:\Documents\Things
dir /a:h
```

Administrator: Command Prompt

```
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>cd C:\Documents\Things

C:\Documents\Things>dir /a:h
Volume in drive C has no label.
Volume Serial Number is ACFA-83E3

Directory of C:\Documents\Things

03/19/2023  11:14 PM    0 New Text Document <2>.txt
03/19/2023  11:15 PM    0 New Text Document <3>.txt
03/19/2023  11:15 PM    0 New Text Document <4>.txt
03/19/2023  11:15 PM    0 New Text Document <5>.txt
03/19/2023  11:14 PM    0 New Text Document.txt
                           5 File(s)           0 bytes
                           0 Dir(s)  49,735,487,488 bytes free

C:\Documents\Things>
```

EXPLORER++

Things - Explorer++

Address: C:\Documents\Things

Folders

- Desktop
- Computer
- Local Disk (C:)
- SRecycle.Bin
- aylen
- Documents
- Documents and Settings
- inetpub
- PerfLogs
- Program Files
- Program Files (x86)
- ProgramData
- System Volume Information
- Users
- vane
- Windows
- CD Drive (D:) VirtualBox

Things

Name	Type
ChromeSetup (1).exe	Application
Doc1.docx	Microsoft Word Document
Everything.lnk	Shortcut
fotografia.jpg	JPEG image
New Text Document (2).txt	Text Document
New Text Document (3).txt	Text Document
New Text Document (4).txt	Text Document
New Text Document (5).txt	Text Document
VLC media player.lnk	Shortcut
WizFile.lnk	Shortcut
y2mate.com - Marshmello AnneMarie FRIENDS Music Video OFFICIAL FRIENDZONE ANTHEM_1080p	MP4 Video File (VLC)

SCENARIOS



Unexpectedly changing the logical drive to an invalid one, while the job is running



Verify that while a job is running, an event is raised when a file is unexpectedly deleted



The KS counts temporary Word files when they are opened



A job running with the date filter, and the modification date in a file is changed unexpectedly



An event is raised by monitoring a shared folder mapped from the Host



Severity

Combinatory Test ✓

HIGH

NT_FolderFileCount> The "AND" operator raises wrong events

Scenario Test ✓

MEDIUM

NT_FolderFileCount> The event message takes into account letters of logical drives that do not exist

Scenario Test ✓

MEDIUM

NT_FolderFileCount> The KS does not monitor a mapped logical drive containing a shared folder

Scenario Test ✓

MEDIUM

NT_FolderFileCount> A partial file generates an extra wrong count in an event

Scenario Test ✓

MEDIUM

NT_FolderFileCount> Logical drive value raises an event when the value is left blank

BUG #1



NT_FolderFileCount>The "AND" operator raises wrong events

Severity
HIGH

Combinatory Test Case:

Mt01-616 : The event is raised if the attributes are set: Archive AND Hidden AND Read-only AND System - Version1

File Filters

File Attributes Filter

File attribute operator: **AND** (highlighted with a red box)

Archive attribute: Yes

Hidden attribute: Yes

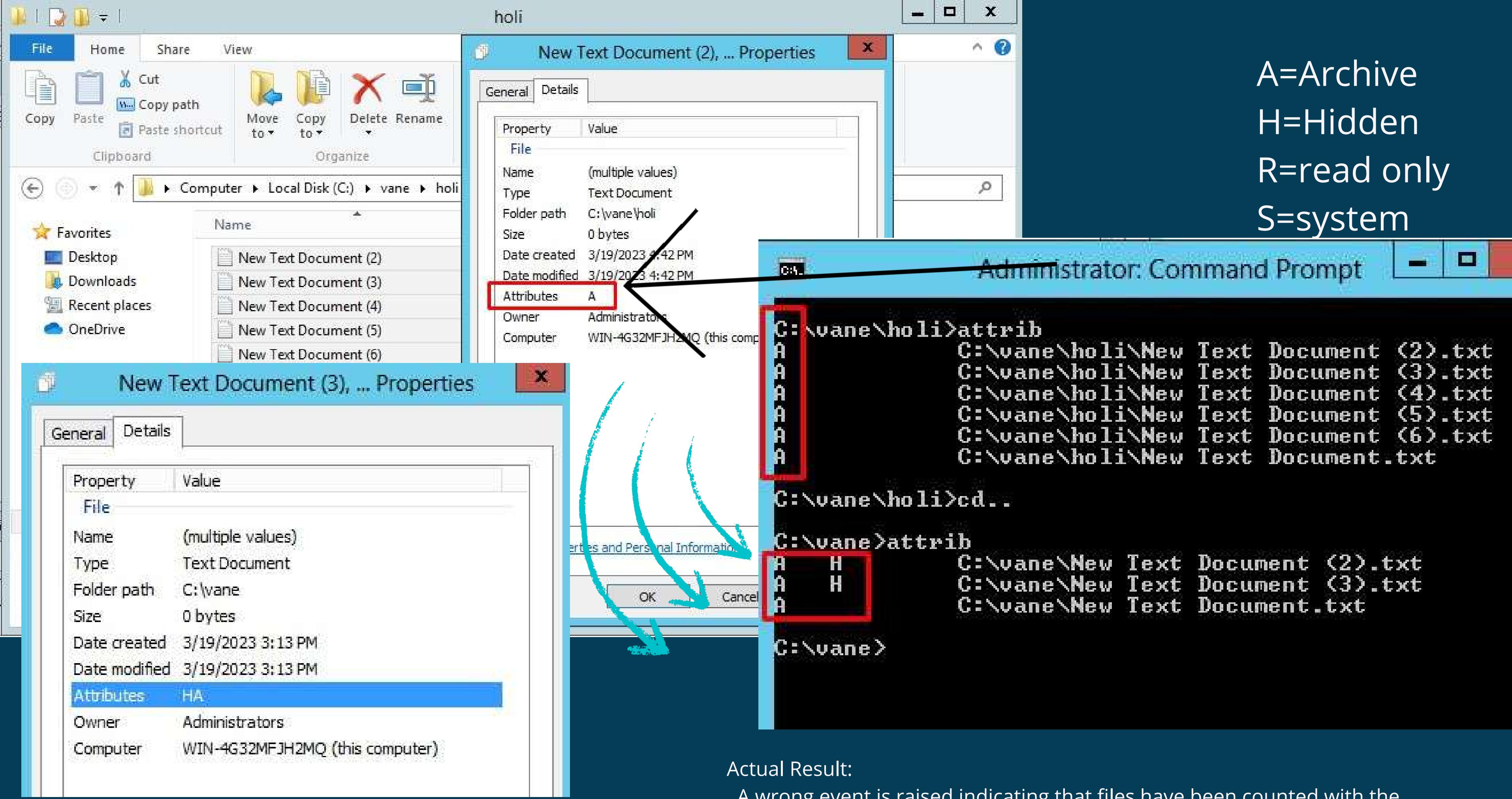
Read-only attribute: Yes

System attribute: Yes

Event Properties: 1213

Event	Message	Comments
Folder File Count: Folders with 0 or more files matching the specified criteria		
File Count	Folder Path	
3	C:\vane	
6	C:\vane\tholi	
Total	2	
Logical Drives	C	
Root Folder	vane	
File Name	.*	
Recurse Sub-Folders	Yes	
File count threshold	More than 0	
File Attributes	Archive and Hidden and System and Read-only	

A=Archive
H=Hidden
R=read only
S=system



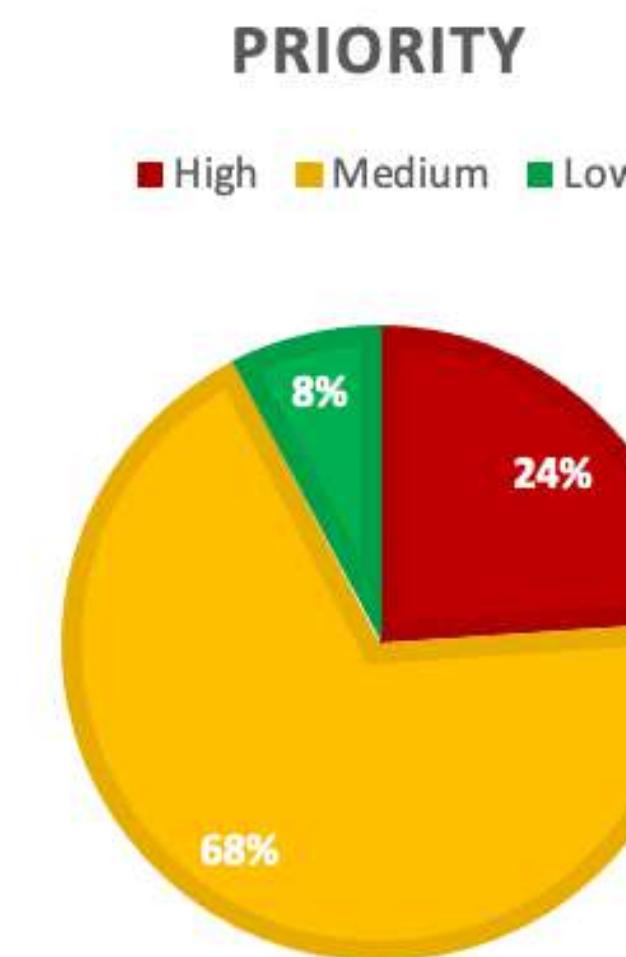
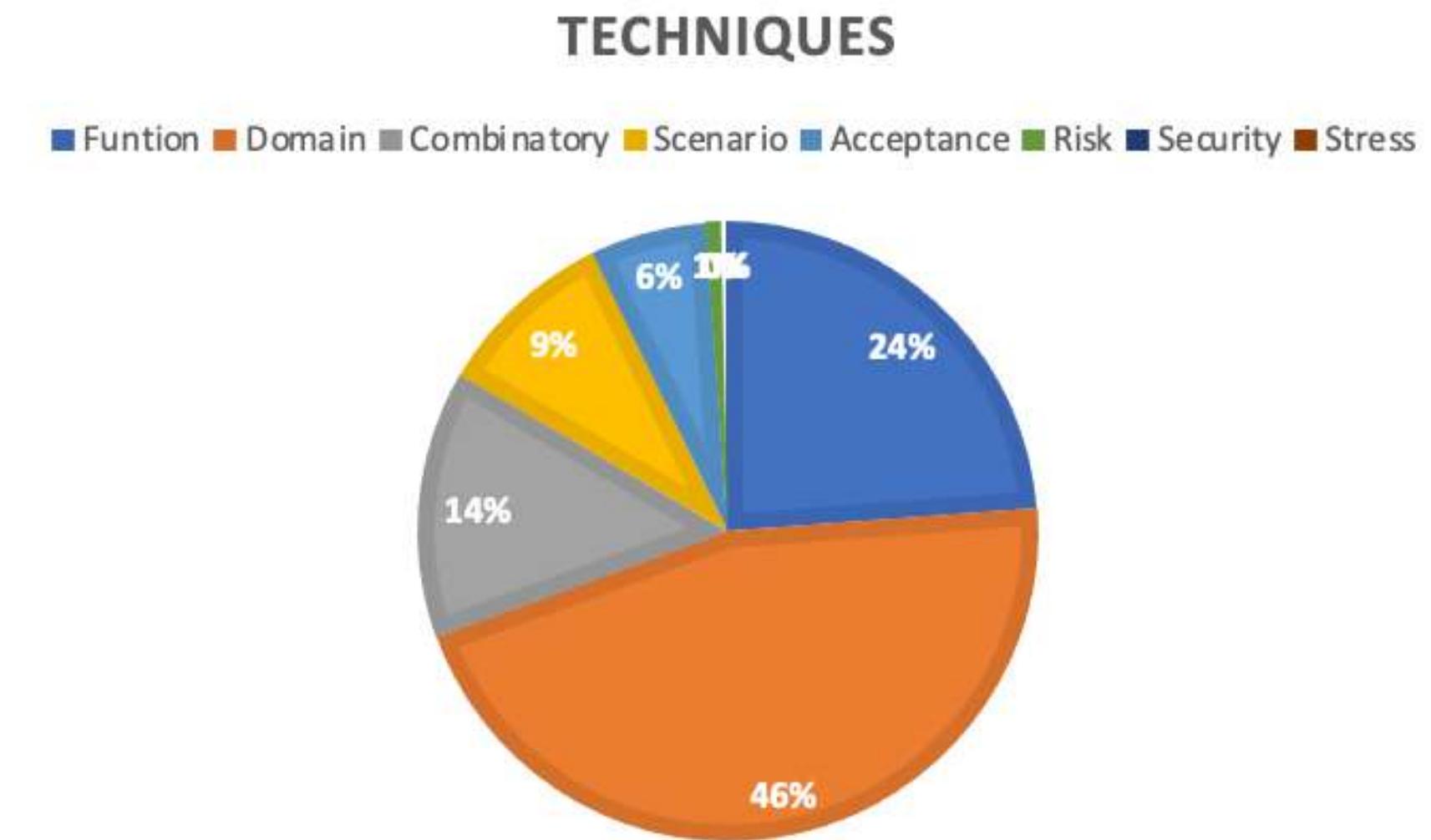
Actual Result:

A wrong event is raised indicating that files have been counted with the attributes: Archive AND Hidden AND Read only AND SYSTEM

General Metrics

Test Cases

Total Test Cases: 894

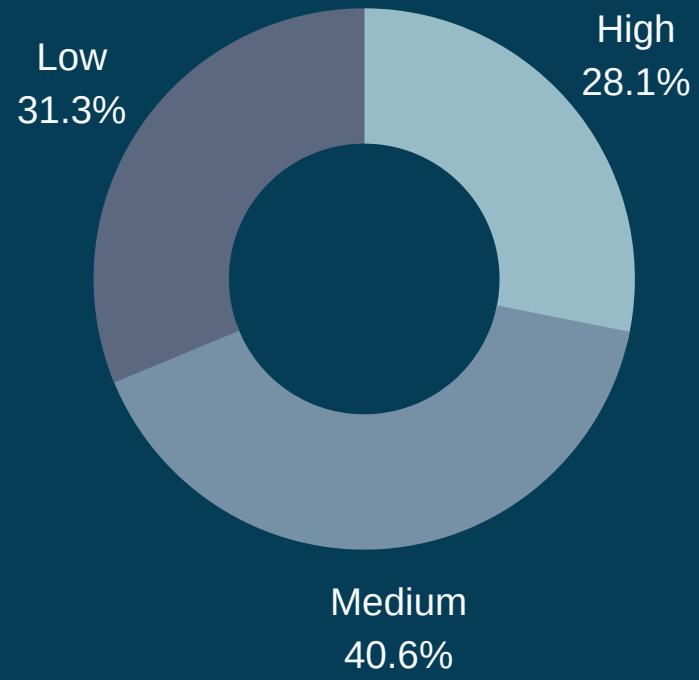


32 Bug report

9 High

13 medium

10 low



Bugs

High severity

NT_FileChanged>The KS is not able to monitor a system file

NT_FilesOpen> KS monitoring is inconsistent, resulting in events that are invalid or missed.

NT_FindFiles>The root folder and file name fields can be set with the special character

NT_FolderFileCount>The AND operator returns the same result as the OR operator in the raised event

NT_FindFiles>The KS doesn't find all the files when searching in the C disk and in the users folder

NT_FilesCompare >Events: The real size is not displayed for files with size equal or bigger than 2GB

NT_LogicalDiskStats>The collection of data is not validated with the Performance Monitor counters

The KS raises an unhandled error event when the special character “ ” is used

NT_FilesCompare > Events: The size of a 100GB file when is compared is displayed as 0 bytes

NT_FileChanged>The KS is not able to monitor a shared file with a network path on a remote Agent	Medium
NT_FolderFileCount> Logical drive value raises an event when the value is left blank	Medium
NT_FolderFileCount> A partial file generates an extra wrong count in an event	Medium
NT_LogicalDiskStats>"Drives to exclude" field doesn't allow special characters used for mount points	Medium
NT_FindFiles>The KS doesn't raise an event when the folder has more than 50000 files	Medium
NT_FindFiles>The KS doesn't find files when the Files are in 2 of 3 LD	Medium
NT_FolderFileCount> The KS does not monitor a mapped logical drive containing a shared folder	Medium
NT_FolderFileCount> The event message takes into account letters of logical drives that do not exist	Medium
NT_FileChanged> The KS doesn't recognize the "I" and "X" file attributes	Medium
NT_FileChanged>The file path of the remote Agent computer to be monitored can't be selected	Medium
NT_FindFiles>The KS doesn't find files using Gb as file size and Greater or Equal operators	Medium
NT_CpuByProcess > MC DosCommand action runs successfully but nothing happens on the other machine	Medium

CONCLUSIONS

32 Bugs were found:

- 9 High Severity
- 13 Medium Severity
- 10 Low Severity

Therefore, it was concluded that there can be a release because high-severity bugs are not critical

