Files dropped into subfolders are not detected by Folder Monitor rule

THE INFORMATION IN THIS ARTICLE APPLIES TO:

• EFT v6.3 and later

SYMPTOM

A Folder Monitor Event Rule of a network share works when files are dropped into the monitored folder; however, files dropped into subfolders are not detected even with the **Include Subfolders** option enabled. Folder Monitor detection works when it is pointed directly to subfolder. Permissions are set correctly.

WORKAROUND

EFT uses the Server Message Block (SMB) protocol to monitor remote folder shares with the FindFirstChangeNotification function. In this mechanism, EFT acts a client making an outbound long-term connection to a remote file server. If an Isilon-based network share is being used, you must enable the **SMB Performance Setting** for **Change Notify: All**, as shown below.

The Event Rule has to be disabled and re-enabled after this change takes place to begin functioning normally (i.e., to re-establish the Folder Monitor SMB subscription). Alternatively, you can restart the Site or Server service.

The default setting for the change notification option is **Change Notify: Nonrecurse**: http://doc.isilon.com/onefs/7.1.1/help/en-us/GUID-A378F153-450F-40CA-A45A-06FE1EFA1]

With the default setting, the SMB subscription notification will only respond to the folder being monitored, not recursively into the subfolders.
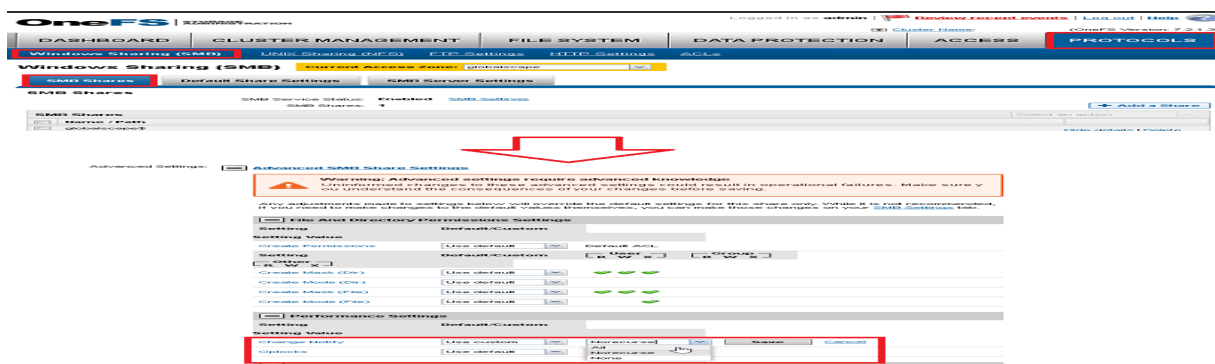
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MORE INFORMATION

When a file is dropped into a network share subfolder (e.g.,
\\NetworkShare\globalscape$\EFTRoot\MySite\test\Test), it appears the SMB notifications
that indicate "file added/created is not being sent across properly.

> *12-19-16 11:08:28,445 [5764] TRACE Events.FolderMonitor <> -
> CDirectoryWatcher::ValidateAndProcessChanges() invoked.*

> *12-19-16 11:08:28,445 [5764] TRACE Events.FolderMonitor <> -
> CDirectoryWatcher::ProcessChanges() invoked.*

> *12-19-16 11:08:28,461 [5764] TRACE Events.FolderMonitor <> -
> CDirectoryWatcher::ProcessChanges() finished with notification parsing; sending
> changes for processing by parent.*

> *12-19-16 11:08:28,461 [5764] TRACE Events.FolderMonitor <> -
> CDirectoryWatcher::SendChanges() is posting change for processing in event 'Folder
> monitor test Copy' to IOCP.*

> *12-19-16 11:08:28,461 [6856] TRACE Events.FolderMonitor.MySite <> -
> CFolderMonitorFactory::Impl::IoCompletionProc() awakened with valid Monitor
> Folder object.*

> *12-19-16 11:08:28,461 [6856] TRACE Events.FolderMonitor.MySite <> - Processing
> this folder event.*

> *12-19-16 11:08:28,461 [6856] TRACE
> Events.FolderMonitor.MySite.Folder_monitor_test_Copy <> -
> CFolderMonitor::ProcessFolderUpdates() for path
> [\\NetworkShare\globalscape$\EFTRoot\MySite\test\Test](\\NetworkShare\globalscape$\EFTRoot\MySite\test\Test) sub with file system event
> 3*

> *12-19-16 11:08:28,461 [6856] TRACE
> Events.FolderMonitor.MySite.Folder_monitor_test_Copy <> -
> CFolderMonitor::ProcessFolderUpdates() encountered FILE_ACTION_MODIFIED, but
> file is NOT in DEFERRED list, so we do nothing.*

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12-19-16 11:08:28,461 [6856] TRACE
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <> -
CFolderMonitor::ProcessFolderUpdates() has finished processing notification
structure.

Based on the packet captures, it appears as if the SMB file-created notifications are not sent across to EFT as expected/required when file activity is performed into a subfolder:

No.	Time	Source	Destination	Protocol	Length	Info
1	13:25:45.664247	10.48.174.108	10.48.174.10	SMB2	158	Notify Response
2	13:25:45.664466	10.48.174.10	10.48.174.108	SMB2	154	Notify Request
3	13:25:45.664776	10.48.174.108	10.48.174.10	SMB2	131	Notify Response, Error: STATUS_PENDING
4	13:25:45.709606	10.48.174.10	10.48.174.108	TCP	54	60059 → 445 [ACK] Seq=101 Ack=182 Win=509 Len=0
5	13:25:46.669003	10.48.174.108	10.48.174.10	SMB2	158	Notify Response
6	13:25:46.669197	10.48.174.10	10.48.174.108	SMB2	154	Notify Request
7	13:25:46.669484	10.48.174.108	10.48.174.10	SMB2	131	Notify Response, Error: STATUS_PENDING
8	13:25:46.725283	10.48.174.10	10.48.174.108	TCP	54	60059 → 445 [ACK] Seq=201 Ack=363 Win=508 Len=0
9	13:26:16.678475	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=200 Ack=363 Win=508 Len=1
10	13:26:16.678660	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=363 Ack=201 Win=16402 Len=0
11	13:26:46.694175	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=200 Ack=363 Win=508 Len=1
12	13:26:46.694470	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=363 Ack=201 Win=16402 Len=0
13	13:27:16.694339	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=200 Ack=363 Win=508 Len=1
14	13:27:16.694739	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=363 Ack=201 Win=16402 Len=0
15	13:27:46.694258	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=200 Ack=363 Win=508 Len=1
16	13:27:46.694430	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=363 Ack=201 Win=16402 Len=0
17	13:28:16.694342	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=200 Ack=363 Win=508 Len=1
18	13:28:16.694529	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=363 Ack=201 Win=16402 Len=0
19	13:28:46.694493	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=200 Ack=363 Win=508 Len=1
20	13:28:46.694769	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=363 Ack=201 Win=16402 Len=0
21	13:29:16.694481	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=200 Ack=363 Win=508 Len=1
22	13:29:16.694657	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=363 Ack=201 Win=16402 Len=0
23	13:29:24.491536	10.48.174.10	10.48.174.108	SMB2	178	Ioctl Request FSCTL_QUERY_NETWORK_INTERFACE_INFO
24	13:29:24.492781	10.48.174.108	10.48.174.10	SMB2	131	Ioctl Response, Error: STATUS_INVALID_PARAMETER
25	13:29:24.538228	10.48.174.10	10.48.174.108	TCP	54	60059 → 445 [ACK] Seq=325 Ack=440 Win=508 Len=0
26	13:29:54.491454	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=324 Ack=440 Win=508 Len=1
27	13:29:54.491620	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=440 Ack=325 Win=16402 Len=0
28	13:30:24.507102	10.48.174.10	10.48.174.108	TCP	55	[TCP Keep-Alive] 60059 → 445 [ACK] Seq=324 Ack=440 Win=508 Len=1
29	13:30:24.507256	10.48.174.108	10.48.174.10	TCP	60	[TCP Keep-Alive ACK] 445 → 60059 [ACK] Seq=440 Ack=325 Win=16402 Len=0

By comparison, when a file is dropped into the specific path of the folder monitor for the network share, not a subfolder (e.g., \\NetworkShare\globalscape$\EFTRoot\MySite\test), the file change notification for file added is received properly:

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12-19-16 11:17:46,685 [9636] DEBUG
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <File:
\\NetworkShare\globalscape$\EFTRoot\MySite\test\New Text Document (2).txt
Event: Folder monitor test Copy> - Conditions met. Executing event rule.

12-19-16 11:17:46,685 [6856] TRACE
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <> -
CFolderMonitor::ProcessFolderUpdates() could obtain exclusive lock on file, so ready
to process.

12-19-16 11:17:46,685 [6856] DEBUG
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <File:
\\NetworkShare\globalscape$\EFTRoot\MySite\test\New Text Document.txt> -
Processing file found by system notifications

12-19-16 11:17:46,685 [6856] TRACE
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <> -
CFolderMonitor::ProcessFolderUpdates() for path
\\NetworkShare\globalscape$\EFTRoot\MySite\test\New Text Document.txt with file
system event 3

12-19-16 11:17:46,685 [6856] TRACE
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <> -
CFolderMonitor::ProcessFolderUpdates() encountered FILE_ACTION_MODIFIED, but
file is NOT in DEFERRED list, so we do nothing.

12-19-16 11:17:46,685 [6856] TRACE
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <> -
CFolderMonitor::ProcessFolderUpdates() has finished processing notification
structure.

12-19-16 11:17:46,685 [9636] DEBUG
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <File:
\\NetworkShare\globalscape$\EFTRoot\MySite\test\New Text Document (2).txt
Event: Folder monitor test Copy> - Finished executing event rule.

12-19-16 11:17:46,685 [9636] TRACE
Events.FolderMonitor.MySite.Folder_monitor_test_Copy <File:
\\NetworkShare\globalscape$\EFTRoot\MySite\test\New Text Document (2).txt> -
Cleanup required for rule.

The packet capture contains quite a bit more information on the status of the file creation
notification:

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GlobalSCAPE Knowledge Base

https://kb.globalscape.com/Knowledgebase/11354/Files-dropped-into-subfolder...