

如何在 Windows Server 2022 啟用 MPIO

SAN and FAS Series White Paper

September 2022

PREFACE

Information, Tip and Caution

This manual uses the following symbols to draw attention to important safety and operational information.



INFORMATION:

INFORMATION provides useful knowledge, definition, or terminology for reference.



TIP:

TIP provides helpful suggestions for performing tasks more effectively.



CAUTION:

CAUTION indicates that failure to take a specified action could result in damage to the system.

TABLE OF CONTENT

Preface.....	1
Information, Tip and Caution.....	1
Table of Content.....	2
Audience	3
Environment	3
Topology.....	3
Configuration.....	4
設定 IP	錯誤! 尚未定義書籤。
安裝 MPIO	錯誤! 尚未定義書籤。 8
使用 iSCSI initiator 連線.....	錯誤! 尚未定義書籤。 0
套用 MPIO 設定	錯誤! 尚未定義書籤。 2
結論	13
適用於.....	13
參考文獻	13
Announcement	14
Appendix	15
Related Documents	15
Technical Support.....	15

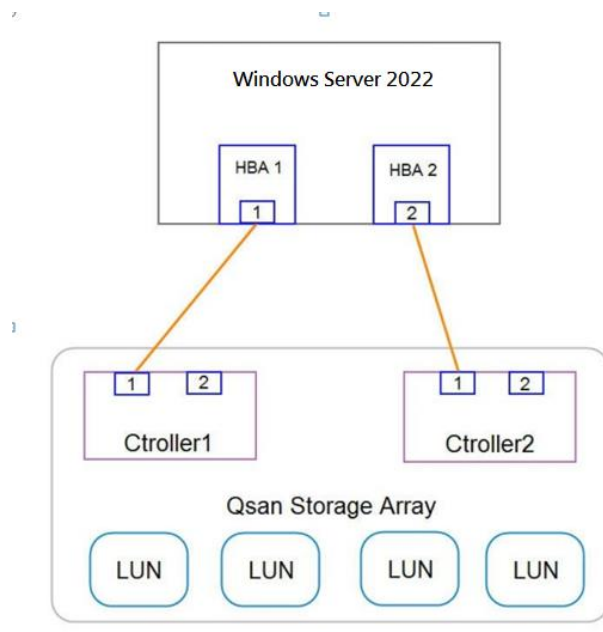
AUDIENCE

在本文檔中，我們將指導用戶了解如何在 Windows Server 2022 中為 Qsan 存儲配置 MPIO。雖然 MPIO 驅動程序也可以在 Qsan 存儲服務安裝程序中使用，但我們強烈建議客戶在 Windows Server 2022 中使用多路徑 I/O 而不是 Qsan MPIO 驅動程序。

Environment

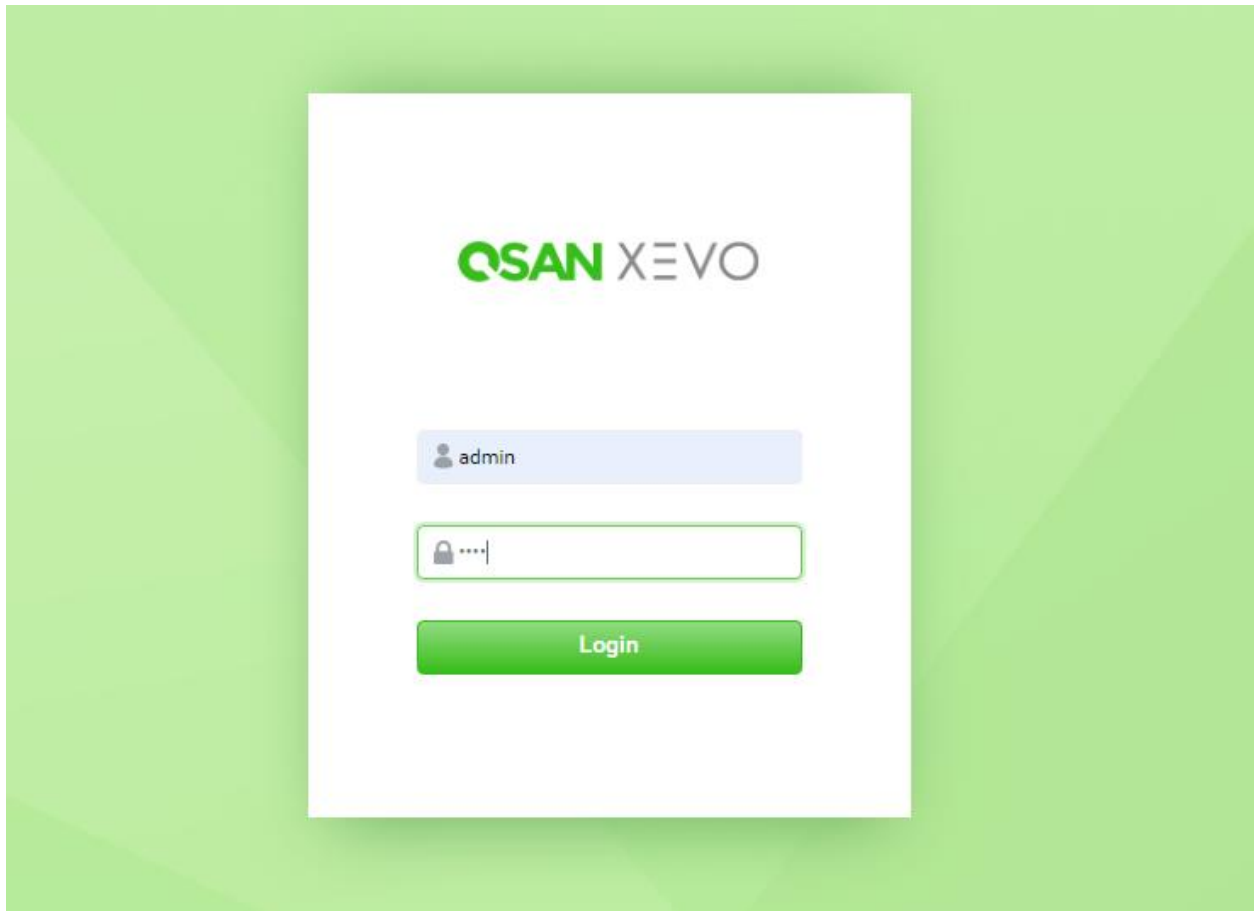
Host OS	Windows Server 2022
Storage	XS3324D/XF2026D/XF3126D
Firmware	V2.2.0
RAM	16GB
iSCSI data port	192.168.175.70/24 192.168.175.70/24

Topology



CONFIGURATION

1. 登入 XEVO 管理頁面。



2. 至 **System** 中的 **Data Ports** 中的 **iSCSI Ports**, 點擊 **set IP address**。

The screenshot shows the OSAN XEVO management interface. The 'Data Ports' section is active, displaying a table of iSCSI ports. A context menu is open over the first row, with 'Set IP Address' highlighted.

CTRL	Interface	Location	Port	Status	LAG	IP Address	Gateway	VLAN ID	Jumbo Frame	MAC Address
1	iSCSI (10Gb)	Onboard	LAN1	Up	N/A	192.168.175.70		N/A	Disabled	00:13:78:f9:a7:02
1	iSCSI (10Gb)	Set IP Address	LAN2	Down	N/A	8.8.8.8		N/A	Disabled	00:13:78:f9:a7:03
2	iSCSI (10Gb)	Set Link Aggregation	LAN1	Up	N/A	192.168.175.71		N/A	Disabled	00:13:78:f9:a7:0c
2	iSCSI (10Gb)	Set Default Gateway	LAN2	Down	N/A	192.168.12.1	192.168.12.254	N/A	Disabled	00:13:78:f9:a7:0d

3. 將控制器 1 LAN1 IP 設定為 192.168.175.70/24。

The 'Set IP Address' dialog shows the following configuration:

- DHCP ?
- Static
- IP Address: 192.168.175.70
- Subnet Mask: 255.255.255.0
- Gateway: (empty)

Buttons: Cancel, Apply

4. 將控制器 2 LAN1 IP 設定為 192.168.175.71/24。

Set IP Address

DHCP ?

Static

IP Address

Subnet Mask

Gateway

5. 打開“cmd”確認是否能夠 ping 到設定的 IP。

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.169]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ping 192.168.175.70

Pinging 192.168.175.70 with 32 bytes of data:
Reply from 192.168.175.70: bytes=32 time<1ms TTL=128
Reply from 192.168.175.70: bytes=32 time<1ms TTL=128
Reply from 192.168.175.70: bytes=32 time<1ms TTL=128
Reply from 192.168.175.70: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.175.70:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

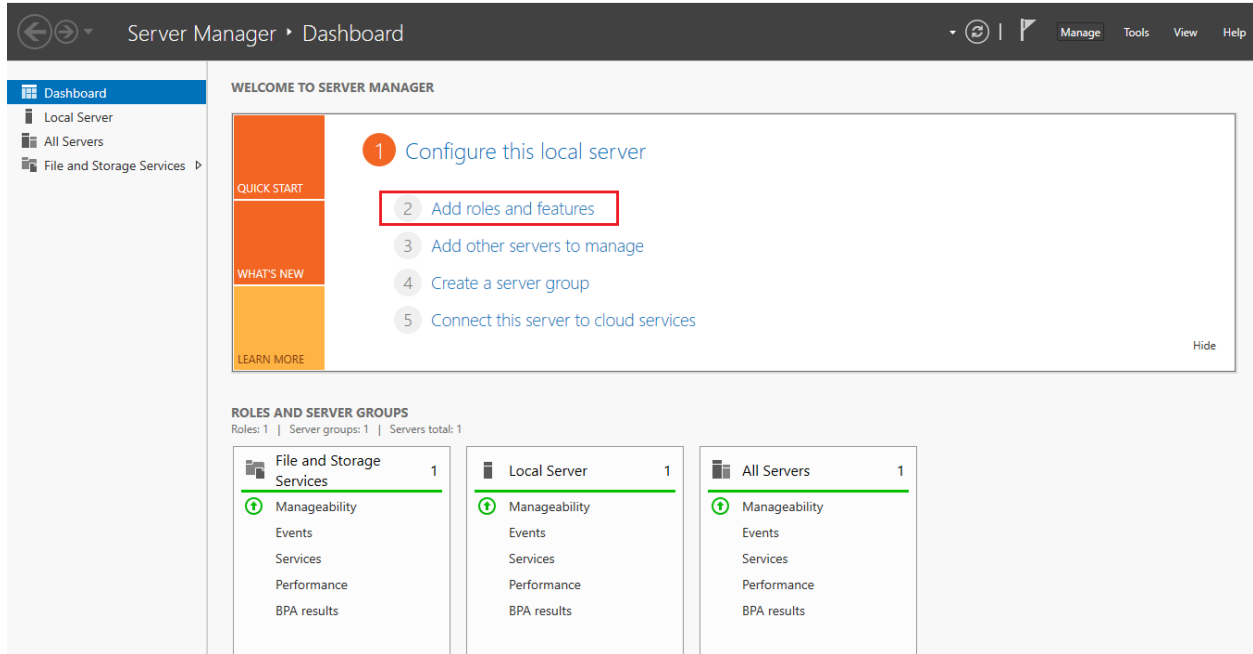
C:\Users\Administrator>ping 192.168.175.71

Pinging 192.168.175.71 with 32 bytes of data:
Reply from 192.168.175.71: bytes=32 time<1ms TTL=128
Reply from 192.168.175.71: bytes=32 time<1ms TTL=128
Reply from 192.168.175.71: bytes=32 time<1ms TTL=128
Reply from 192.168.175.71: bytes=32 time<1ms TTL=128

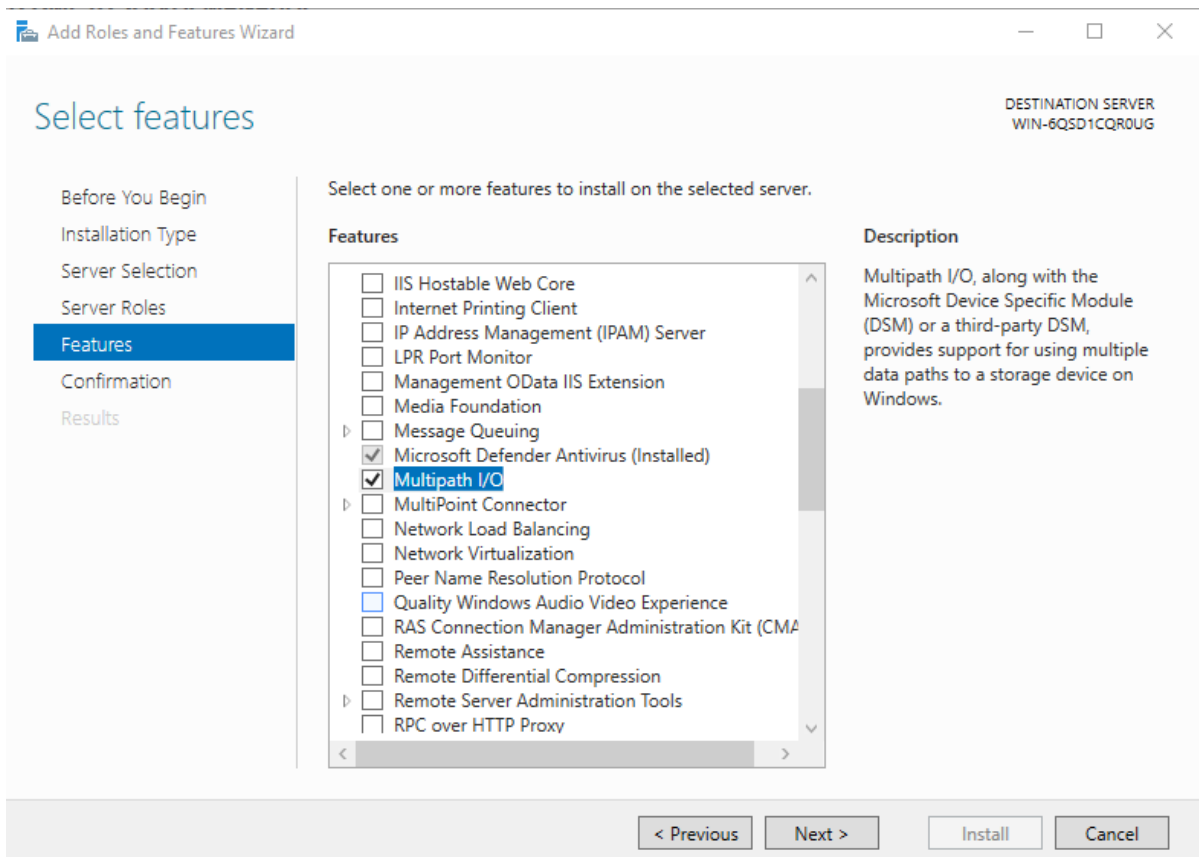
Ping statistics for 192.168.175.71:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

6. 打開 Server Manager 並點擊 Add Features。



7. 至 Feature 將 Multipath I/O 打勾，點擊 next 安裝 MPIO。



8. 回到管理頁面建立 Pool、Volume、HostGroup，並將“Volume_01”掛載至 HostGroup。

The screenshot displays the QSAN XEVO management interface. The top navigation bar includes 'Dashboard', 'Storage', 'Hosts', 'Protection', 'Analysis', 'System', and 'Messages'. The 'Hosts' section is active, showing 'Host Groups' on the left sidebar with 'HostGroup_001' selected. The main content area shows the configuration for 'HostGroup_001' with the following details:

- Protocol: iQN
- Volumes: 1
- Hosts: 1
- Enabled Data Ports: 4

Below this, a table lists two targets:

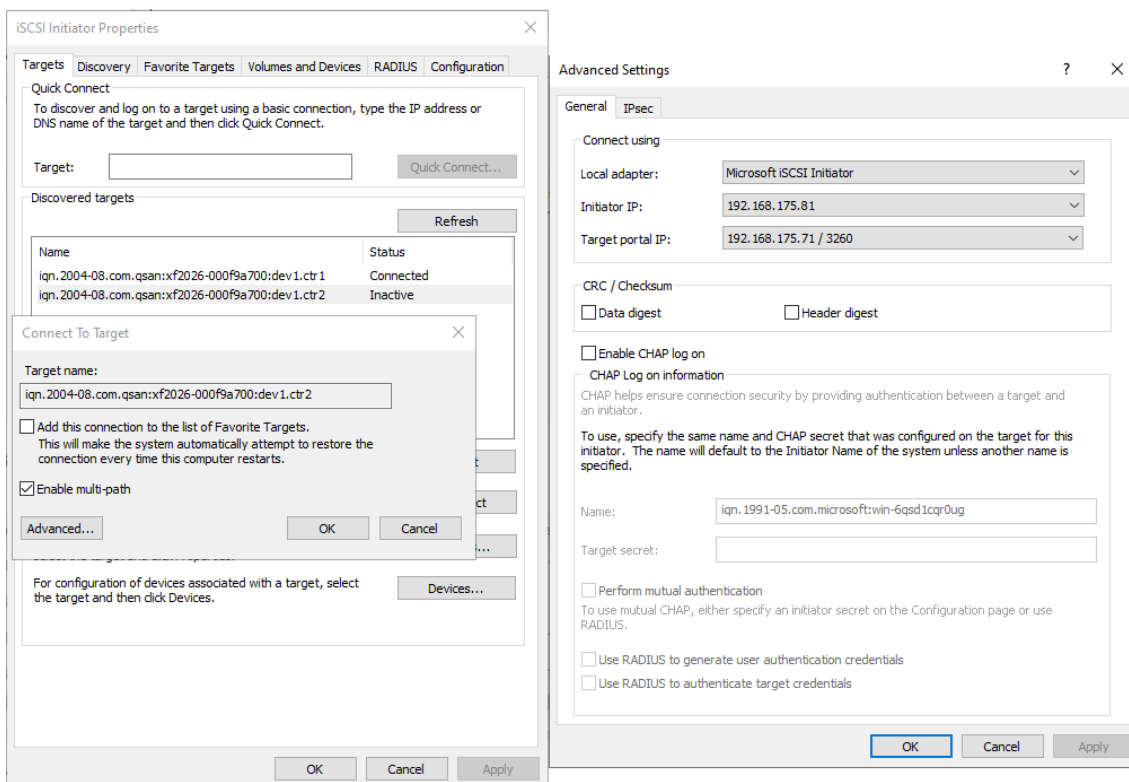
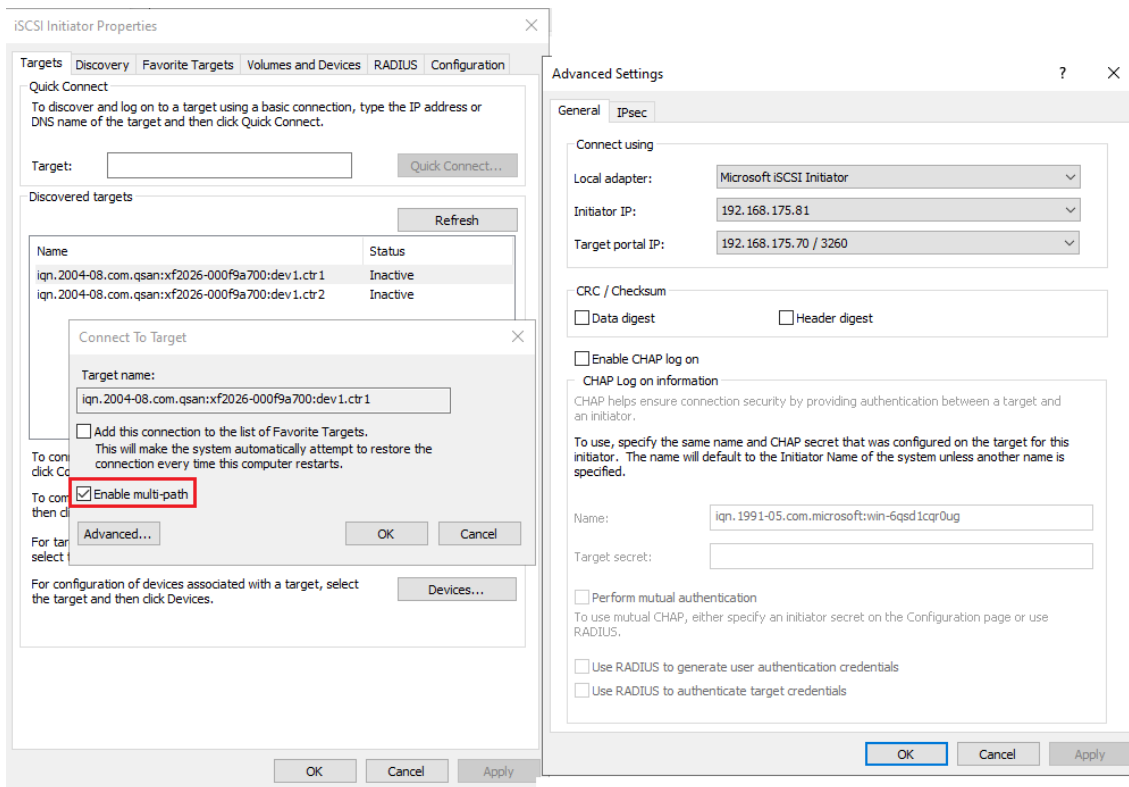
CTRL	Target Name	Alias	Slot 1	Slot 2	Onboard
1	iqn.2004-08.com.qsan:xf2026-000f9a700.dev1.ctr1	-	00 00		Onboard
2	iqn.2004-08.com.qsan:xf2026-000f9a700.dev1.ctr2	-	00 00		Onboard

Further down, the 'Host Profile' section is visible. The 'Connected Volumes' section shows one volume:

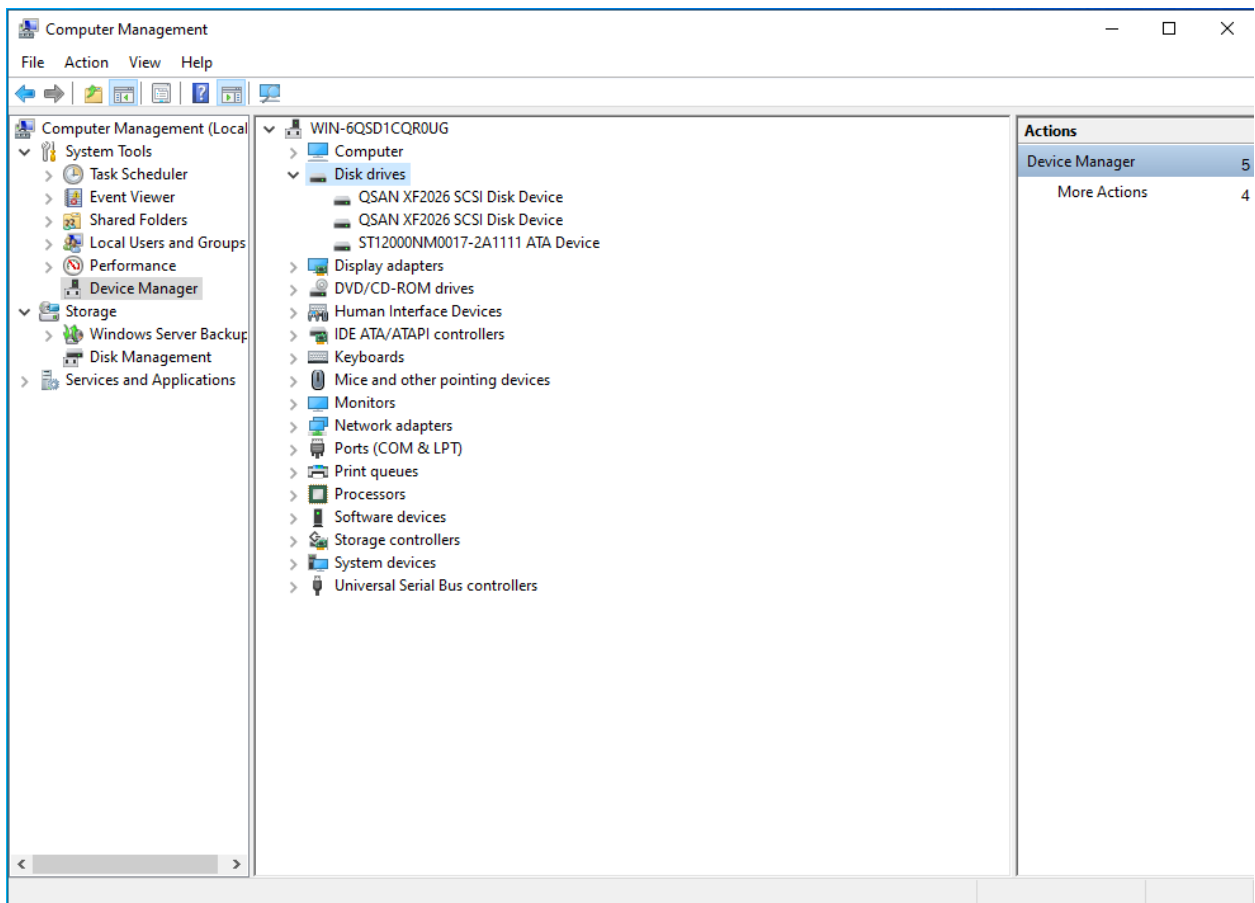
Volume Name	Capacity	LUN	Volume Type
Volume_01	500.00 GB	0	RAID Volume

The 'Volume_01' row is highlighted with a red box in the original image.

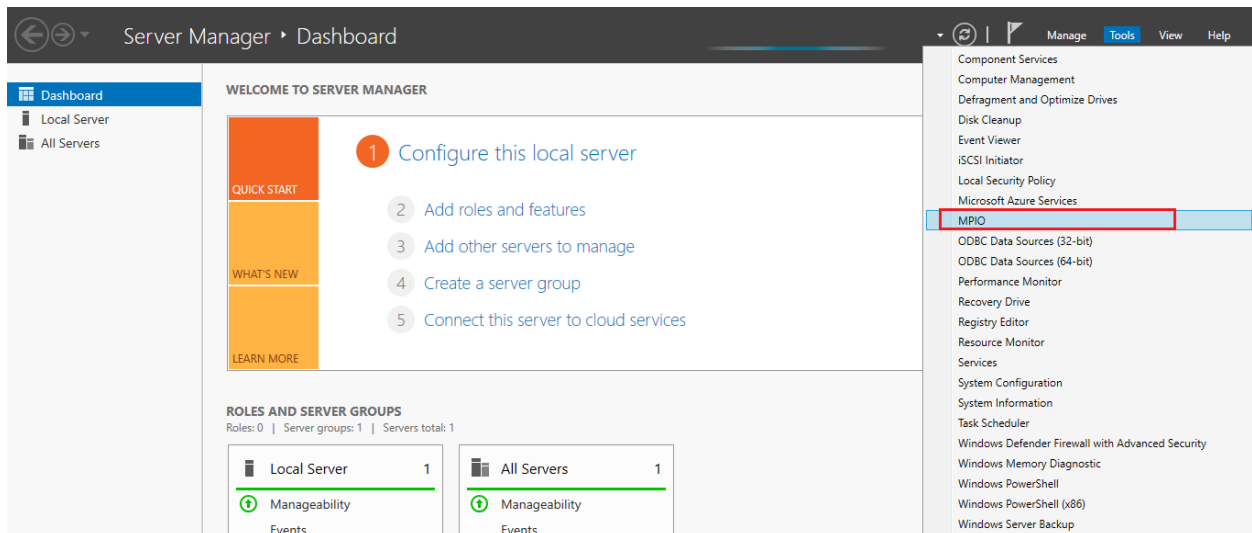
9. 以 XF2026D 為例，使用 iSCSI Initiator 將 XF2026D 的 LUN 連線至 Windows Server。



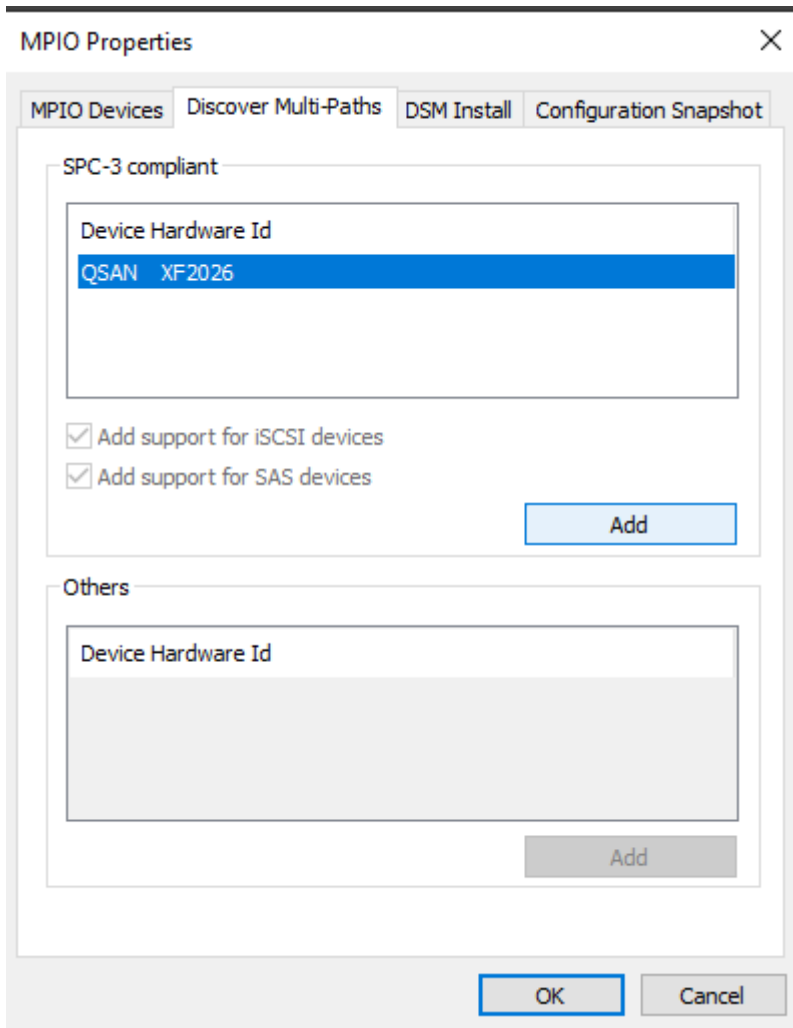
10. iSCSI Initiator 登錄成功後，可以在設備管理員中查看“QSAN XF2026 SCSI Disk Device”，當 MPIO 被禁用時，它會顯示兩個 Disk Device。



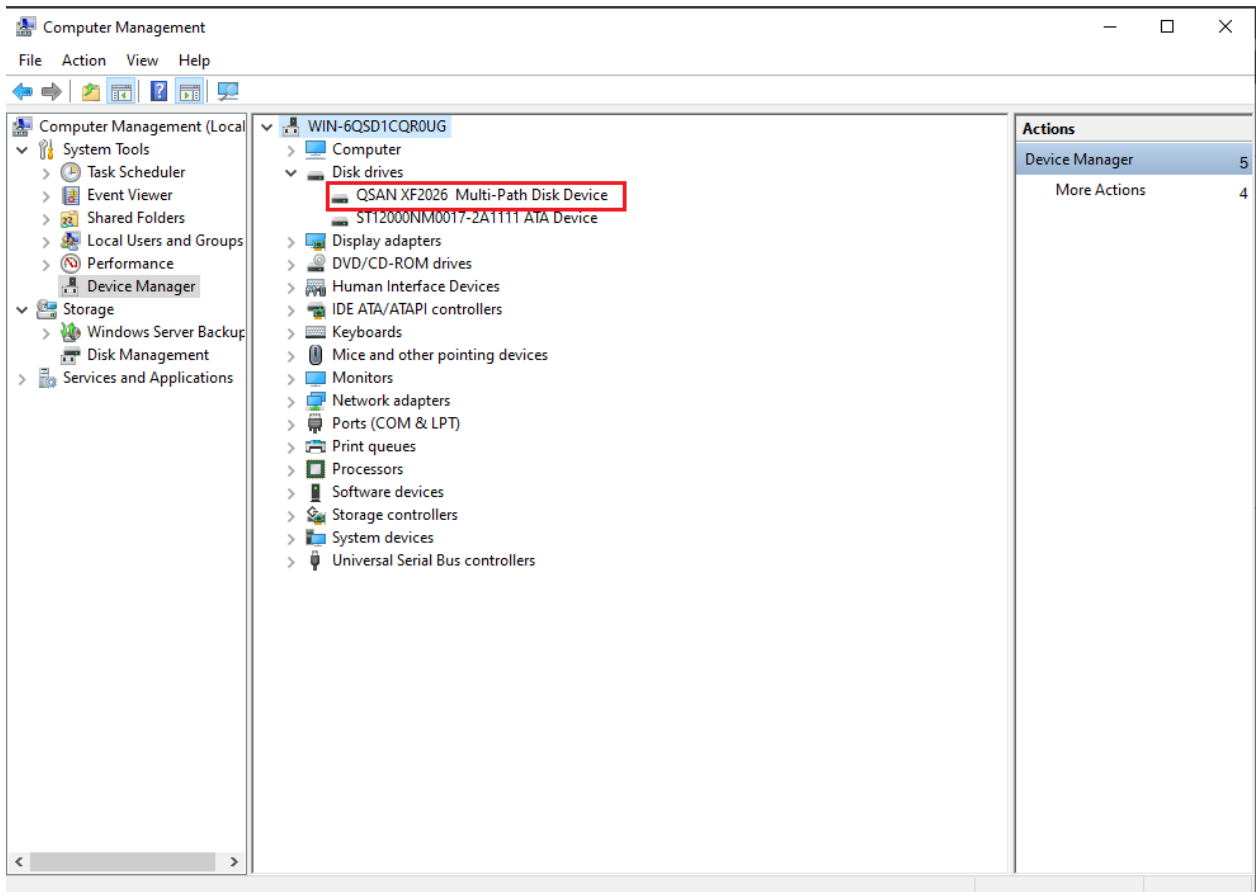
11. 在新增 Multipath I/O feature 後，可以在伺服器管理員的 Tool 中找到“MPIO”。



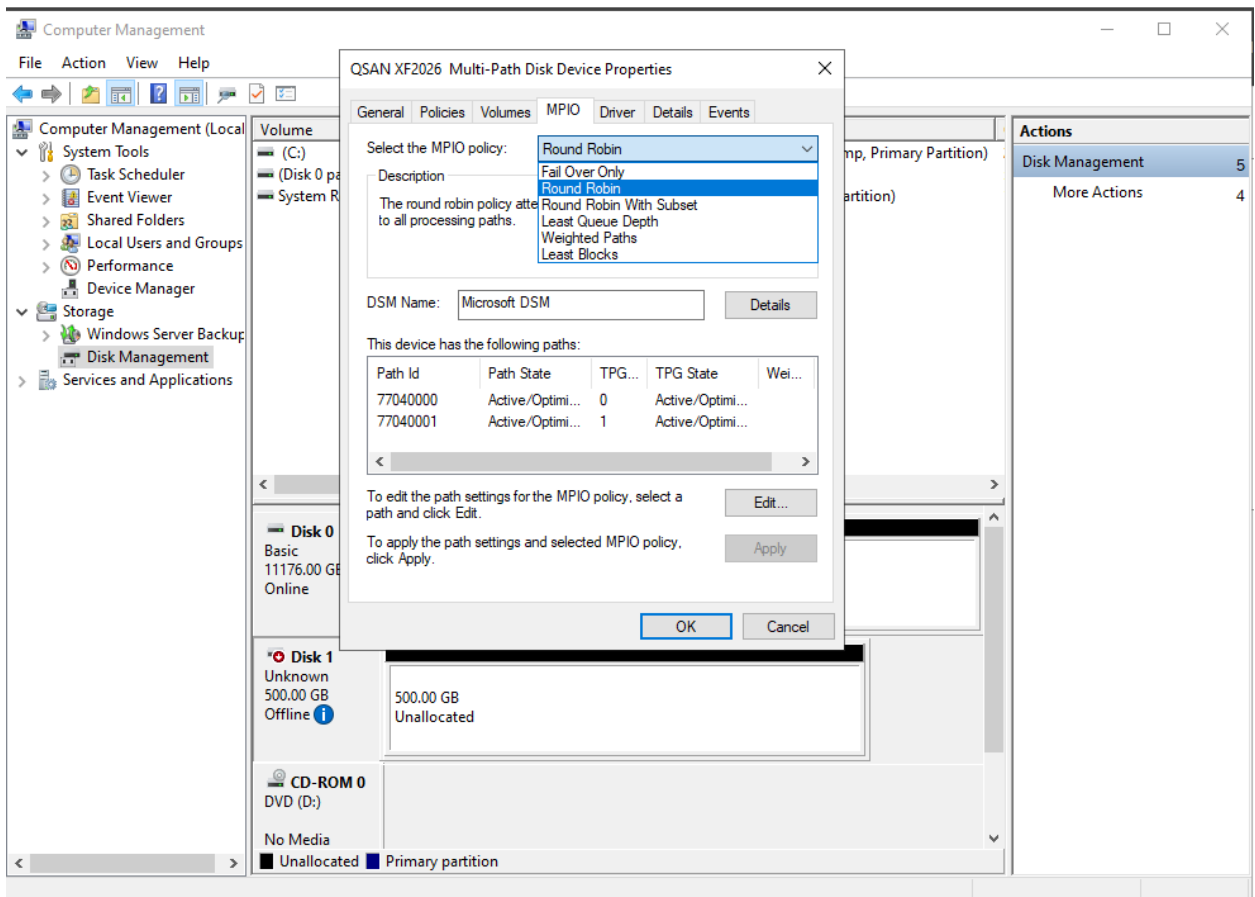
12. 在 MPIO Properties 視窗, 至“Discover Multi-Paths” label 選取 “QSAN XF2026” · 確認有勾選 “Add support for iSCSI devices” 後點擊“Add” 以套用設定。



13. 在裝置管理員中，確認掛載的 LUN 從兩個裝置變為 “Multi-Path Disk Device”，和先前 Windows OS 相比並不需要重啟才能夠產生作用。



14. 可以在“Disk Management”右鍵選取“Multi-Path Disk Device”的屬性，可以在此修改 MPIO Policy。



結論

MPIO 功能是 Windows Server 2022 的內建功能，需要在使用前啟用和配置。無需重啟服務器即可生效。與以前版本的 Microsoft Server 操作系統相比是一個優勢。

適用於

XS3324D/XF2026D/XF3126D

參考文獻

[XEVO Software Manual](#)

ANNOUNCEMENT

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September 2022

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APPENDIX

Related Documents

There are related documents which can be downloaded from the website.

- [All XCubeSAN Documents](#)
- [XCubeSAN QIG \(Quick Installation Guide\)](#)
- [XCubeSAN Hardware Manual](#)
- [XCubeSAN Configuration Worksheet](#)
- [XCubeSAN SANOS 4.0 Software Manual](#)
- [Compatibility Matrix](#)
- [White Papers](#)
- [Application Notes](#)

Technical Support

- Do you have any questions or need help troubleshooting a problem? Please contact QSAN Support, we will reply to you as soon as possible.
- Via the Web: https://www.qsan.com/en/contact_support.php
- Via Telephone: [+886-2-7720-6355](tel:+886-2-7720-6355) (Service hours: 09:30 - 18:00, Monday - Friday, UTC+8)
- Via Skype Chat, Skype ID: [qsan.support](https://www.skype.com/en/contacts/skype/qsan.support) (Service hours: 09:30 - 02:00, Monday - Friday, UTC+8, Summertime: 09:30 - 01:00)
- Via Email: support@qsan.com