QSAN XCbueSAN Series Configuration Worksheet

Use this worksheet to collect and record information for configuring the QSAN XCubeSAN series storage system. This worksheet should be used in conjunction with the XCubeSAN QIG (Quick Installation Guide). Refer to the chapter 2, Prepare for Installation in the XCubeSAN SANOS 4.0 Software Manual for an installation overview and additional chapters for setting up the system. The values in grey color are examples for your configuration reference.

1. Initial Configuration	
Item	**Value**
System Name: The maximum length of the system name is 32 characters. Valid characters are [A~Z | a~z | 0~9 | -_].	XCubeSAN
Admin Password: The maximum length of the password is 12 characters. Valid characters are [A~Z | a~z | 0~9 | ~!@#$%^&*_-+=`|\(){}[]:;"'<>,.?/].	1234
NTP Server: FQDN (Fully Qualified Domain Name)or IP address of NTP (Network Time Protocol) server.	pool.ntp.org
Time Zone: Depending on your location.	(GM +08:00) Taipei
2. Management Port Setting	
Item	**Value**
Management Port IP Address on Controller 1: IP address, subnet mask, and gateway of the management port on controller 1.	IP: 192.168.1.234 SM: 255.255.255.0 GW: 192.168.1.254
DNS Server Address: IP address of DNS (Domain Name System) server.	8.8.8.8
Management Port IP Address on Controller 2: (optional) IP address, subnet mask, and gateway of the management port on controller 2.	IP: 192.168.1.235 SM: 255.255.255.0 GW: 192.168.1.254
3. Notification Setting	
Item	**Value**
Email-from Address: Email-from address to send event notification.	admin@company.com

Email-to Addresses: Email-to addresses to receive event notification	Email-to Address 1: user1@company.com Email-to Address 2: user2@company.com Email-to Address 3: user3@company.com
SMTP Server: Network name or IP address of SMTP (Simple Mail Transfer Protocol) server.	smtp.company.com
Syslog Server: (optional) FQDN or IP address of syslog server.	syslog.company.com
SNMP Trap Addresses: (optional) FQDNs or IP addresses of SNMP (Simple Network Management Protocol) trap.	SNMP Trap Address 1: snmp1.company.com SNMP Trap Address 2: snmp2.company.com SNMP Trap Address 3: snmp3.company.com

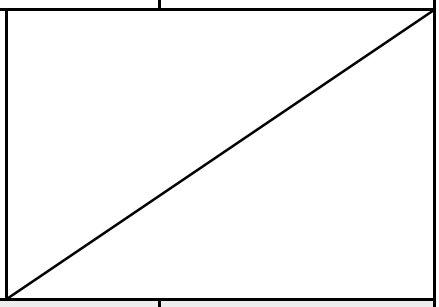
4. iSCSI Port Configuration

Item	Value
Onboard iSCSI Port IP Addresses: IP address, subnet mask, and gateway of the iSCSI ports. • Onboard 2 x 10GBASE-T iSCSI (RJ45) ports	

Controller 1	Onboard LAN1	Onboard LAN2
IP Address	10.10.1.1	10.10.2.1
Subnet Mask	255.255.255.0	255.255.255.0
Gateway	10.10.1.254	10.10.2.254
Controller 2	**Onboard LAN1**	**Onboard LAN2**
IP Address	10.10.3.1	10.10.4.1
Subnet Mask	255.255.255.0	255.255.255.0
Gateway	10.10.3.254	10.10.4.254

Slot 1 iSCSI Port IP Addresses: (optional) IP address, subnet mask, and gateway of the iSCSI ports. • 2-port 25GbE iSCSI Host Card (SFP28) • 4-port 10GbE iSCSI Host Card (SFP+) • 2-port 1GBASE-T iSCSI Host Card (RJ45) • 4-port 1GBASE-T iSCSI Host Card (RJ45)	

Controller 1	Slot 1 LAN1	Slot 1 LAN2	Slot 1 LAN3	Slot 1 LAN4
IP Address	10.10.11.1			
Subnet Mask	255.255.255.0			
Gateway	10.10.11.254			
Controller 2	**Slot 1 LAN1**	**Slot 1 LAN2**	**Slot 1 LAN3**	**Slot 1 LAN4**
IP Address	10.10.21.1			
Subnet Mask	255.255.255.0			
Gateway	10.10.21.254			

Slot 2 iSCSI Port IP Addresses: (optional) IP address, subnet mask, and gateway of the iSCSI ports. • 2-port 25GbE iSCSI Host Card (SFP28) • 4-port 10GbE iSCSI Host Card (SFP+) • 2-port 1GBASE-T iSCSI Host Card (RJ45) • 4-port 1GBASE-T iSCSI Host Card (RJ45)	

Controller 1	Slot 2 LAN1	Slot 2 LAN2	Slot 2 LAN3	Slot 2 LAN4
IP Address	10.10.31.1			
Subnet Mask	255.255.255.0			
Gateway	10.10.31.254			
Controller 2	**Slot 2 LAN1**	**Slot 2 LAN2**	**Slot 2 LAN3**	**Slot 2 LAN4**
IP Address	10.10.41.1			
Subnet Mask	255.255.255.0			
Gateway	10.10.41.254			

Entity Name: The entity name is for a device or gateway that is accessible from the network. The maximum length of the entity name is 200 characters. Valid characters are [a~z | 0~9 | -.:].	Iqn.2004-08.com.qsan
iSNS IP Address: (optional) IP address of iSNS (Internet Storage Name Server) server.	10.1.1.1
CHAP Username: (optional) CHAP (Challenge-Handshake Authentication Protocol) username. The maximum length of the username is 223 characters. Valid characters are [A~Z | a~z | 0~9 | ~!@#%^&*_-+=|(){}[]:;<>.?/].	chap1
CHAP Password: (optional) CHAP password. The length of the password is between 12 to 16 characters. Valid characters are [A~Z | a~z | 0~9 | ~!@#$%^&*_-+=`|\(){}[]:;"'<>,.?/].	123456789012

Mutual CHAP Username: (optional) CHAP username. The maximum length of the username is 223 characters. Valid characters are [A~Z | a~z | 0~9 | ~!@#%^&*_-+=|(){}[];;<>.?/].	mutualchap1
Mutual CHAP Password: (optional) CHAP password. The length of the password is between 12 to 16 characters. Valid characters are [A~Z | a~z | 0~9 | ~!@#$%^&*_-+=`|\(){}[]:;"'<>,.?/].	123456789012

5. Fibre Channel Port Configuration

Item	Value
Slot 1 Fibre Channel: (optional) Link speed and topology of the fibre channel ports. Topology support: FC-AL, point-to-point (16Gb and 32Gb Fibre Channel only support Point-to-Point topology) • 2-port 32Gb Fibre Channel Host Card (SFP28) • 4-port 16Gb Fibre Channel Host Card (SFP+) • 2-port 16Gb Fibre Channel Host Card (SFP+)	

Controller 1	Slot 1 FC1	Slot 1 FC2	Slot 1 FC3	Slot 1 FC4
Link Speed	Auto			
Topology	Point-to-Point			
Controller 2	**Slot 1 FC1**	**Slot 1 FC2**	**Slot 1 FC3**	**Slot 1 FC4**
Link Speed	Auto			
Topology	Point-to-Point			

6. Pool Configuration

Item	Value
Pool Type: Thick Provisioning, Thin Provisioning, or Auto Tiering (Thin Provisioning Enabled).	Auto Tiering
Pool Name: The maximum length of the pool name is 16 characters. Valid characters are [A~Z | a~z | 0~9 | -_<>].	PL1
Disks: Disk type, disk quantity, and the capacity.	SSD: 4x 100GB SAS: 4x 600GB NL-SAS: 4x 4TB
RAID Level: RAID level 0, 1, 3, 5, 6, 0+1, 10, 30, 50, 60, and N-way mirror RAID EE level 5EE, 6EE, 50EE, and 60EE	RAID 5

Raw Capacity: Sum of disk capacity.	18.8TB (= 100GB x 4 + 600GB x 4 + 4TB x 4)
Estimate Capacity: Estimate capacity according to the RAID level.	14.1TB (= 100GB x 3 + 600GB x 3 + 4TB x 3)
7. Volume Configuration	
Item	**Value**
Volume Name: The maximum length of the volume name is 32 characters. Valid characters are [A~Z | a~z | 0~9 | -_<>].	V1-PL1
Capacity: Required capacity of the volume.	8TB
Volume Type: RAID Volume or Backup Volume	RAID Volume
8. LUN Mapping Configuration	
Item	**Value**
Protocol: iSCSI or FCP.	iSCSI
Volume Name: Select one of created volumes.	V1-PL1
Allowed Hosts: iSCSI IQN or Fibre Channel WWNN for access control. Wildcard (*) for access by all hosts.	*
Target: iSCSI Target or Fibre Channel Target	0
LUN: Support LUN (Logical Unit Number) from 0 to 255.	LUN 0
Permission: Read-only or Read-write.	Read-write
9. SSD Cache Configuration	
Item	**Value**
SSD Cache Pool Name: The maximum length of the pool name is 16 characters. Valid characters are [A~Z | a~z | 0~9 | -_<>].	SCPL1
Cache Type: Read Cache (NRAID+) or Read-write Cache (RAID 1 or NRAID 1+).	Read Cache

I/O Type: Database, File System, or Web Service.	Database
SSDs: SSD quantity and the capacity.	SSD: 2x 400GB
Raw Capacity: Sum of disk capacity.	800GB
10. Snapshot Configuration	
Item	**Value**
Volume Name: Select one of created volumes.	V1-PL1
Snapshot Space: Reserved snapshot space for the volume.	1.6TB
Snapshot Name: The maximum length of the snapshot name is 32 characters. Valid characters are [A~Z | a~z | 0~9 | -_<>].	Snap-V1-PL1
Schedule Snapshots: (optional) Define the cycle of snapshots.	Daily 00:00
11. Local Clone Configuration	
Item	**Value**
Source Volume Name: Select one of created volume for source.	V1-PL1
Source Volume Capacity: Check the capacity of source volume.	8TB
Target Volume Name: Select one of created volume for target.	T1-PL1
Target Volume Capacity: Check the capacity of target volume.	8TB
Schedule Local Clones: (optional) Define the cycle of local clones.	Daily 01:00
12. Remote Replication Configuration	
Item	**Value**
Source Volume Name: Select one of created volume for source.	V1-PL1
Source Volume Capacity: Check the capacity of source volume.	8TB
Source iSCSI Port:	Auto

iSCSI port of source unit. It can be auto or dedicated iSCSI port.		
Target iSCSI Port IP Addresses: iSCSI port IP addresses of target unit.		
Target	**Controller 1**	**Controller 2 (optional)**
IP Address	10.10.100.1	10.10.101.1
Target CHAP Username: (optional) CHAP username. The maximum length of the username is 223 characters. Valid characters are [A~Z | a~z | 0~9 | ~!@#%^&*_-+=|(){}[]:;<>.?/].		chap2
Target CHAP Password: (optional) CHAP password. The length of the password is between 12 to 16 characters. Valid characters are [A~Z | a~z | 0~9 | ~!@#$%^&*_-+=`|\(){}[]:;"'<>,.?/].		123456789012
Target Volume Name: Select one of created volume for target.		RT1-PL1
Target Volume Capacity: Check the capacity of target volume.		8TB
Schedule Remote Replications: (optional) Define the cycle of remote replications.		Daily 02:00
Traffic Shaping for Peak Hour: (optional) Limit the transfer rate at peak hour.		100MB
Traffic Shaping for Off-peak Hour: (optional) Limit the transfer rate at off-peak hour.		200MB
Off-peak Hour: (optional) Define the off-peak hours.		Mon. ~ Fri. PM10:00 ~ AM06:59 Sat. ~ Sun. AM00:00 ~ PM23:59

March 2020

This edition applies to QSAN XCubeSAN SANOS (SAN Operating System) 4.0. QSAN believes the information in this publication is accurate as of its publication date. The information is subject to change without notice.