

# QSAN XCubeSAN 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
<b>System Name:</b> The maximum length of the system name is 32 characters. Valid characters are [ A~Z   a~z   0~9   -_ ].	XCubeSAN
<b>Admin Password:</b> The maximum length of the password is 12 characters. Valid characters are [ A~Z   a~z   0~9   ~!@#\$\$%^&* _-+=` \ ~!@#13!#4\$ ].	1234
<b>NTP Server:</b> FQDN (Fully Qualified Domain Name) or IP address of NTP (Network Time Protocol) server.	pool.ntp.org
<b>Time Zone:</b> Depending on your location.	(GM +08:00) Taipei
2. Management Port Setting	
Item	Value
<b>Management Port IP Address on Controller 1:</b> 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
<b>DNS Server Address:</b> IP address of DNS (Domain Name System) server.	8.8.8.8
<b>Management Port IP Address on Controller 2: (optional)</b> 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
<b>Email-from Address:</b> Email-from address to send event notification.	admin@company.com

<b>Email-to Addresses:</b> 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
<b>SMTP Server:</b> Network name or IP address of SMTP (Simple Mail Transfer Protocol) server.		smtp.company.com
<b>Syslog Server: (optional)</b> FQDN or IP address of syslog server.		syslog.company.com
<b>SNMP Trap Addresses: (optional)</b> 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
<b>4. iSCSI Port Configuration</b>		
<b>Item</b>		<b>Value</b>
<b>Onboard iSCSI Port IP Addresses:</b> IP address, subnet mask, and gateway of the iSCSI ports. <ul style="list-style-type: none"> <li>Onboard 2 x 10GBASE-T iSCSI (RJ45) ports</li> </ul>		
<b>Controller 1</b>	<b>Onboard LAN1</b>	<b>Onboard LAN2</b>
<b>IP Address</b>	10.10.1.1	10.10.2.1
<b>Subnet Mask</b>	255.255.255.0	255.255.255.0
<b>Gateway</b>	10.10.1.254	10.10.2.254
<b>Controller 2</b>	<b>Onboard LAN1</b>	<b>Onboard LAN2</b>
<b>IP Address</b>	10.10.3.1	10.10.4.1
<b>Subnet Mask</b>	255.255.255.0	255.255.255.0
<b>Gateway</b>	10.10.3.254	10.10.4.254
<b>Slot 1 iSCSI Port IP Addresses: (optional)</b> IP address, subnet mask, and gateway of the iSCSI ports. <ul style="list-style-type: none"> <li>2-port 25GbE iSCSI Host Card (SFP28)</li> <li>4-port 10GbE iSCSI Host Card (SFP+)</li> <li>2-port 1GBASE-T iSCSI Host Card (RJ45)</li> <li>4-port 1GBASE-T iSCSI Host Card (RJ45)</li> </ul>		

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					
<b>Slot 2 iSCSI Port IP Addresses: (optional)</b> IP address, subnet mask, and gateway of the iSCSI ports.						
<ul style="list-style-type: none"> <li>• 2-port 25GbE iSCSI Host Card (SFP28)</li> <li>• 4-port 10GbE iSCSI Host Card (SFP+)</li> <li>• 2-port 1GBASE-T iSCSI Host Card (RJ45)</li> <li>• 4-port 1GBASE-T iSCSI Host Card (RJ45)</li> </ul>						
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					
<b>Entity Name:</b> 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   -.: ].			lqn.2004-08.com.qsan			
<b>iSNS IP Address: (optional)</b> IP address of iSNS (Internet Storage Name Server) server.			10.1.1.1			
<b>CHAP Username: (optional)</b> 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			
<b>CHAP Password: (optional)</b> CHAP password. The length of the password is between 12 to 16 characters. Valid characters are [ A~Z   a~z   0~9   ~!@#%&* _-+=` ~pRQ13!#4\$R			123456789012			

<b>Mutual CHAP Username: (optional)</b> CHAP username. The maximum length of the username is 223 characters. Valid characters are [ A~Z   a~z   0~9   ~!@#%&*_+=[(){}];<>./ ].		mutualchap1
<b>Mutual CHAP Password: (optional)</b> CHAP password. The length of the password is between 12 to 16 characters. Valid characters are [ A~Z   a~z   0~9   ~!@#%\$%^&*_{}`\(){}[];: 13!#4\$R		123456789012
<b>5. Fibre Channel Port Configuration</b>		
<b>Item</b>		<b>Value</b>
<b>Slot 1 Fibre Channel: (optional)</b> 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) <ul style="list-style-type: none"> <li>• 2-port 32Gb Fibre Channel Host Card (SFP28)</li> <li>• 4-port 16Gb Fibre Channel Host Card (SFP+)</li> <li>• 2-port 16Gb Fibre Channel Host Card (SFP+)</li> </ul>		/
<b>Controller 1</b>	<b>Slot 1 FC1</b>	<b>Slot 1 FC2</b>
<b>Link Speed</b>	Auto	
<b>Topology</b>	Point-to-Point	
<b>Controller 2</b>	<b>Slot 1 FC1</b>	<b>Slot 1 FC2</b>
<b>Link Speed</b>	Auto	
<b>Topology</b>	Point-to-Point	
<b>6. Pool Configuration</b>		
<b>Item</b>		<b>Value</b>
<b>Pool Type:</b> Thick Provisioning, Thin Provisioning, or Auto Tiering (Thin Provisioning Enabled).		Auto Tiering
<b>Pool Name:</b> The maximum length of the pool name is 16 characters. Valid characters are [ A~Z   a~z   0~9   -_<> ].		PL1
<b>Disks:</b> Disk type, disk quantity, and the capacity.		SSD: 4x 100GB SAS: 4x 600GB NL-SAS: 4x 4TB
<b>RAID Level:</b> 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

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

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

iSCSI port of source unit. It can be auto or dedicated iSCSI port.		
<b>Target iSCSI Port IP Addresses:</b> iSCSI port IP addresses of target unit.		
<b>Target</b>	<b>Controller 1</b>	<b>Controller 2 (optional)</b>
<b>IP Address</b>	10.10.100.1	10.10.101.1
<b>Target CHAP Username: (optional)</b> CHAP username. The maximum length of the username is 223 characters. Valid characters are [ A~Z   a~z   0~9   ~!@#%&* _-+= (){}[]:;<>.?/ ].		chap2
<b>Target CHAP Password: (optional)</b> CHAP password. The length of the password is between 12 to 16 characters. Valid characters are [ A~Z   a~z   0~9   ~!@#%\$%^&* _-+=` \ '"/:13!#4\$R		123456789012
<b>Target Volume Name:</b> Select one of created volume for target.		RT1-PL1
<b>Target Volume Capacity:</b> Check the capacity of target volume.		8TB
<b>Schedule Remote Replications: (optional)</b> Define the cycle of remote replications.		Daily 02:00
<b>Traffic Shaping for Peak Hour: (optional)</b> Limit the transfer rate at peak hour.		100MB
<b>Traffic Shaping for Off-peak Hour: (optional)</b> Limit the transfer rate at off-peak hour.		200MB
<b>Off-peak Hour: (optional)</b> Define the off-peak hours.		Mon. ~ Fri. PM10:00 ~ AM06:59 Sat. ~ Sun.4(u)-.2ETQq392.62 2