# QNAP NAS with Meridian Sooloos Installation Guide

July 2015

MERIDIAN SOOLOOS

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## Before you begin



Before you configure your QNAP system for use with Meridian Sooloos, you may need to set up the QNAP product, including drive and firmware installation. QNAP provides a quick-start guide at: https://start.qnap.com/uk/index.php

You may need to install additional RAM in your QNAP product. For information on RAM upgrades and the size of compatible hard drives, see the **QNAP Hardware Notes Appendix** at the end of this document.

## Configuring the QNAP

Prior to installing the Meridian Sooloos package, the QNAP NAS needs to be configured. The following sections detail this configuration.

- Start by downloading the Meridian Sooloos QNAP package available from www.meridian-audio.com.
- Once downloaded, unzip the package and save it locally on your computer, noting the location.
- To complete the configuration, you will need to log into the QNAP QTS interface as administrator.



### **Disable Hard Disk Standby Mode**

- Open 'Control Panel'.
- Select 'System Settings' from the left-hand menu and then select 'Hardware'.
- In the General tab, ensure '**Enables hard disk standby mode**' is *not* ticked.

Γ	1	Enable configuration reset switch
		Enables hard disk standby mode: The status LED will turn off if there is no access within
1.		

• Click 'Apply All' to save the changes.



### Disable Firmware Notification

• Open 'Control Panel'.

Apply All

- Select 'System Settings' from the left-hand menu.
- Select 'Firmware Update'.
- In the 'Live Update' tab, make sure 'Automatically check if a newer version is available when logging into the NAS web administration interface' is *not* ticked.
- Click '**Apply**' to save the changes.

Automatically check if a newer version is available when logging into the NAS web administration interface. You can also check ONAP Download Center for any firmware or utility updates.

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NASD6FA7F	Control Panel ×			admin 🗸 Q 🔁 🌐 🖵					
		Control Panel		⊖ 0 ⊗					
Search Q	← → :::			?					
Overview		-	~						
System Settings	Live Update Firmware Update								
General Settings	Model:	TS-269L							
😝 Storage Manager	Current firmware version:	4.1.2							
Network	Date:	2015/01/26							
🔒 Security	System up time:	2 Day(s) 1 Hour(s) 19 Minute(s)							
Hardware	Check for Update Status	:Last checked 2015/03/05 16:26:32 Thursday							
💡 Power	Automatically check if a ne	werversion is available when logging into the N/	AS web administration interface						
Notification	You can also check <u>QNAP Dov</u>	vnload Center for any firmware or utility updates.	to web duministration interface.						
盲 Firmware Update	Apply								
👾 Backup / Restore	Арру								
External Device									
System Status									
👕 System Logs									
1 Privilege Settings									
Network Services									

### **Disable Image Thumbnail Generation**

This option is only available in QTS 4.1.2 and greater.

- Open 'File Station'.
- Select 'Settings' (cogwheel icon).
- In the Options list make sure 'Generate thumbnails' is *not* ticked.



• Click on 'Close'.

### **Create Sooloos Storage**

- Open 'Control Panel'.
- Select 'Privilege Settings' from the left-hand menu.
- Select 'Shared Folder.
- Click the '**Create**' button and from the resulting pull-down menu, select '**Shared Folders**'.









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- Enter the folder name as "Sooloos". *Note: this item is case sensitive.*
- Enter the description as "Sooloos Storage".

Folder Name:	Sooloos
Description:	Sooloos Storage

• Go to 'Advanced Settings' and click 'Edit'.

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NASD6FA7F	Control Panel				0	• • •		admin 🔻	० 2 🕀 🖵		
Control Panel											
Search Q	← → :::								?		
Overview	Shared Eolder Artyanced Permissions	Eolder Aggregation		/							
② System Settings	Create   Remove  Restore Default	Shared Folders									
1 Privilege Settings	Folder Name	Size	Folders	Files	Hidden	Volume			Action		
🔔 Users	Download	145 25 MD	12	100	No	DataVol1	_				
🎎 User Groups		Create A Shar	ed Folder								
💼 Shared Folders							^				
😋 Quota	Please fill out the following fields t	o create a shared fold	ler								
🚵 Domain Security	Folder Name:	Sooloos									
<sub>м</sub> Domain Controller	Description:	Sooloos Storage									
Network Services	Select the disk volume on which the sha	ared folder will be created	i.								
Applications	DataVol1	*					- 81				
	Configure access privileges for us	ers			[	Edit	- 81				
	Currently, only administrators have the	full permission on this fol	der.				- 81				
	Advanced Settings				ſ	Edit	- 81				
	Configure the settings of guest access	ight, recycle bin, hidden f	folder, etc.								

Close

Edit the 'Advanced Settings' as follows:

- Set Guest Access Right to '**Read/Write**'.
- Set Media Folder to '**No**'.
- Set Hidden Folder to 'No'.
- Set Lock File to 'No'.
- **Disable**' the Recycle Bin.
- Click the 'Create' button.

	SMB Encryption 😡						
Recycle Bin to administrators only for now.	Recycle Bin:	$\bigcirc$	Enable	۲	Disable		
Specify path automatically							
Enter nath manually	Path:		Specify path automa	atically	y		
		C	Enter path manually				
×					v		
Create Cancel						Create	Cancel

Advanced Settings

Media Folder:

Hidden Folder:

Lock File (Oplocks):

Guest Access Right: 🔞

Deny AccessRead only

Read/Write

No

No

No

Yes

Yes

Yes

The Sooloos shared directory is created, and can be seen in the list of shared folders. The associated settings can now be reviewed using the Action icons for the shared folder:



	Shared Folder Properties		8
Network share name:	Sooloos		
Comment (optional):	Sooloos Storage		
Disk Volume:	DataVol1	~	
Path:	/Sooloos	~	
Hide network drive			
Lock File (Oplocks)			
SMB Encryption ③			
Enable Network Recycle	Bin		
Enable write-only access	on FTP connection 😣		
Only allows applications t	o access files using the long file n	ame format. 🔞	

## **Configure Web Server**

- Open 'Control Panel'
- Select 'Applications' from the left-hand menu
- Select 'Web Server'.
- Change the Port number from its current value (*right*) to 81 and click on '**Apply**'.

OK

Cancel

1	Enable Web Server 🕧		
	Port number:	81	
	register_globals:	On On	Off



From now on, to enter the QNAP QTS interface you must append the port number 8080 to the IP address (for example: 192.168.1.101:8080).

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Control Panel										
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Cverview		Shared Folder Advanced Permissions	Folder Aggregation							
Privilege Settings		Folder Name	ared Folders Size	Folders	Files	Hidden	Volume	Action		
🔮 Users 🏩 User Groups		Download	145.35 MB	13	133	No	DataVol1			
Shared Folders		Public	0 KB	1	0	No	DataVol1			
🍼 Quota 🚵 Domain Security		Recordings	0 KB	1	0	No	DataVol1			
A Domain Controller		Web	4 KB	1	1	No	DataVol1			
Applications		homes	76 KB	11	5	No	DataVol1	<b>233</b>		

	A NASD6FA7F	Contr	rol Panel 🗙			©   ©
					Control F	anel
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	Overview					
ø	System Settings	Web	Virtual Hos	t.		
	Privilege Settings	w	/eb Server			
6	Network Services	Af	fter enabling this function	i, you can upload the v	vebpage files to "\	Neb" network share to publish your website.
Q	Applications		Enable Web Server	0		
	🚔 Station Manager		Port number:	80		
	HybridDesk Station		register_globals:	On On	Off	
	🖀 Backup Station		Enable secure co	nnection (HTTPS)		
[	Meb Server		Port number:	8081		
	A LDAP Server		Enable WebDAV			

### **Configuring the Network Interface**

There are two approaches for configuring the Network.

### Using a single network interface



Many QNAP systems have multiple network interfaces, and by default each network interface is configured to obtain individual IP addresses.

In this configuration, the Sooloos application expects to access the network using the first Ethernet interface, Ethernet 1.

Since Ethernet 2 is not being used, ensure it is unplugged.

• Open 'Control Panel'

• Select 'System Settings' from the left-hand menu

Link	Interface	DHCP	IP Address
•	Ethernet1 (1 GbE)	Yes	192.168.6.101

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Overview			CD/ID	W6 E	IDus Sonico	Rinding Brown					
System Settings			CF/IF	VVI-P1							
General Settings			IP Addr	ess							
🥞 Storage Manager											
💉 Network						51105	10.4.1	<b></b>	2.1	Refresh Port 1	Trunking
🔒 Security			Edit		Ethernet1 (1 GbE)	Vec	IP Address	255 255 255 0	Gateway	MAC address	100 M
Hardware					Ethemet2 (1 GbE)	Vee	132.100.0.101	200.200.200.0	152.100.0.1	00:08:08:06:FA:90	100 M
Power			4	0	Ethemetz (I GDE)	res		-	-	00.08.9B.D6.FA.00	
Notification											
Firmware Update			<b>D</b> 110 0					1			
🐞 Backup / Restore			DNS SE	erver			D	erault Gateway			
External Device			Obt	ain DNS s	erver address automatic	ally: 🕕	U	se the settings from:	Ethernet 1	*	
System Status			<ul> <li>Use</li> <li>Primary</li> </ul>	DNS serv	ring DNS server address	0 0					
System Logs			Seconda	ary DNS s	erver: 0 .0	.0 .0					
2 Privilege Settings											
Network Services			An	nlv							
Applications			, m	P.7							

• Select 'Network'.

Notice that only Ethernet1 has been issued with an IP address.

Default Gateway		
Use the settings from:	Ethernet 1	~

• Ensure the 'Default Gateway' is using settings from 'Ethernet 1'.

# Using a dual network interface configured for Port Trunking

- Ensure there are *two* Ethernet cables connected from the QNAP into a Gigabit Ethernet switch.
- Open 'Control Panel'
- Select 'System Settings' from the left-hand menu.
- Select 'Network'.
- Click on '**Port Trunking**'.
- From the **'Trunking Group 1'** list, select the mode as **'Balance-alb'**.
- Select the radio buttons under **'Trunking Group 1'**.
- Click 'Apply'.

The network will now restart, and you may need to reconnect to QTS. Notice the new Ethernet 1+2 on the network page.

Edit	Link	Interface	DHCP	IP Address	Subnet M
	•	Ethernet 1+2 (1 GbE)	Yes	192.168.6.101	255.255.2

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Overview	DID WilEi IDv6 Service B	inding Proxy DDNS Service					
🔅 System Settings		inding Proxy Done Schute					
General Settings	P Address						
🥞 Storage Manager						Refresh	of Trunking
K Network						MAC address	Speed
A Security		TCP/IP - Port Trunking			8	00:08:9B:D6:FA:7F	100 M
🔚 Hardware						00:08:9B:D6:FA:80	
Power	interface to hang or affect the overall pe	node. Please note that incompatible mo rformance. For more information, please c	de settings lick <u>here</u> .	gs might cause the netwo	rk	_	Þ
Notification     Gimmuore Lindete	later face	Chandelana	1	Trunking Group 1			
Packup / Pestore	Internace	Standalone	Ba	alance-alb 👻			
External Device	Ethernet 1	•		۲		~	
System Status	Ethernot 2						
System Logs	Etilemet 2			۲			
Privilege Settings	Use the settings from: Trunking Group	o 1 (Ethernet 1+2)					
Network Services							
Applications							
				Apply	Cancel		
			-			,	

## Installing the Sooloos QNAP Application



- This section details installing the Meridian Sooloos package on to the QNAP. Please ensure that the previous configuration sections have been followed before installing the Meridian Sooloos package.
- From the QNAP desktop open the '**App Center**'. It is recommended that you disable all unnecessary applications by turning them off.
- Click on 'Install Manually'.
- Browse to the location of the downloaded Meridian Sooloos QNAP package.
- Click on '**Install**' and follow the prompts to install the application.



Once the Meridian Sooloos application has been installed, it appears as an application in the App Center.



When upgrading a QNAP that already contains a Sooloos music library, there will be an initial delay before the Core becomes available due to the firsttime creation of the library database. The delay is dependent on the number of albums in the library and is only present on the first run after installation.

• Click '**Open**' in the Meridian Sooloos application section to launch the Sooloos WebClient (*right*) in a new tab.







### Troubleshooting the Sooloos QNAP App installation

**'Control Panel > System Logs'** can be used to view any errors that occurred when enabling the Sooloos application.

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Ξ	NASD6FA7F	Syste	em Logs 🛛 🗙			c 🕑 I C 🔒 🗖	admin 🔹 Q 🙎 🌐 🖵
					System Logs		<b>c</b> 0 8
							?
S	vstem Event Logs	system Connection Logs	Online Users	Syslog Client Management			
All events	Clear All	Save					Content Search 🛛 🗸
Туре	Date	Time	Users	Source IP	Computer name	Content	
0	2015/03/04	15:24:06	System	127.0.0.1	localhost	[App Center] Meridian Sooloos enabled.	
0	2015/03/04	15:24:06	System	127.0.0.1	localhost	[App Center] Meridian Sooloos 2.435 installation succeeded.	
0	2015/03/04	15:23:57	System	127.0.0.1	localhost	[SOOLOOS] System Core is enabled.	
0	2015/03/04	15:19:12	admin	192.168.6.100		[Share Folders] New share folder [Sooloos] created.	

## **Device Configuration**

This section details the available device configuration for a StoreQNAP operating in a Meridian Sooloos system.

Device configuration can be accessed via a Control, or using the Meridian Sooloos Configure application.

- On a Control, access the 'Device Manager'.
- Select the '**StoreQNAP**' from the device list.

This will bring-up the 'Device Configuration' page.

The device settings available are to activate or deactivate 'System Core' and 'Enable Storage'.

Device Manager						×
Model	Serial Number	Version	Device Build	IP Address	Description	
M5200	0024c50005f1	1.0	162	192.168.5.144	Zone	
ControlFifteen	001f7b5700f1	2.458	458	192.168.5.146		
Zone						
StoreQNAP	00089bd6fa7f	2.458	1537	192.168.5.130	Non-Sooloos Storage	

evice Co	nfiguration			
1odel	StoreQNAP	Version	2.458	
escription	Non-Sooloos Storage	Device Build	1537	
			100 160 5 170	
erial Number	00089bd6fa7f	IP Address	192.108.3.130	
erial Number Device Settir System Core	00089bd6fa7f	IP Address	192.108.3.130	

#### Alternatively:

- On a Windows PC, launch 'Meridian Sooloos Configuration'.
- Select the '**StoreQNAP**' from the device list.

StoreQNAP @ 00089bd6fa7f / 192.168.5.106 Non-Sooloos Storage

Meridian Sooloos Configuration - v25	
<b>Devices on network</b> (select a device to change properties)	
<b>MS200</b> @ 0024c5000d5f / 192.168.5.103 Zone	*
AudioEndpoint	
ControlPC @ f816544388a3 / 192.168.5.147	
ControlFifteen @ 001f7b5700f1 / 192.168.5.102	
Store Storage	
Audio Endpoint Zone	
StoreQNAP @ 00089bd6fa7f / 192.168.5.106 Non-Sooloos Storage	
ControIPC @ 6cf049e68897 / 192.168.5.143	
	÷

This will bring up the '**Properties**' page.

The device settings available are enable or disable 'System Core' and 'Enable Storage'.

• Click on 'Save' to store the configuration or 'Cancel' to disregard changes.

Meridian Sooloos Configuration - v25	3
Properties	*
System Core One sooloos device on your network must be the 'core' device. This device will be the centralized server in your system.	
Enable Storage II Enable the storage on this device. This will allow this device to self-update and store content.	m
Actions	
Reboot Run Turns off the machine, followed by turning it back on	
Shutdown Run Turns off the machine	
Restart Run Save Cancel	•

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## **Appendix: QNAP Hardware Notes**

The following is a recommended hardware specification for a QNAP running StoreQNAP. This document suggests two QNAP systems that employ Intel Celeron processors.

Note that QNAP products are not made by Meridian, and while the suggestions in this document have been tested by Meridian, we cannot guarantee performance or compatibility.

### QNAP TS-251

The QNAP TS-251 is suitable for the majority of customers who require a capable media storage system for use with Sooloos.

https://www.qnap.com/i/uk/product/model.php?II=142

### QNAP TS-453 Pro

The QNAP TS-453 is suitable for:

- The power user
- The user with an extensive collection
- Where there is a requirement to run an advanced RAID configuration, for example RAID 5;
- When the QNAP is required for other duties as well as running StoreQNAP.

https://www.qnap.com/i/in/product/model.php?II=149

The TS-453 is also available in a rack-mount version as the TS-453U.

### **RAM Expansion**

It is recommended to upgrade the RAM of the QNAP from its default (typically 1GB) to a minimum of 4GB. As a guide, you need about 2GB of RAM for every 2,000 albums in your collection. All QNAPs can be upgraded by the end user without invalidating the warranty. QNAP provides detailed instructions on upgrading the RAM modules for each specific unit on their website. The TS-251 is capable of being populated with 2 x 4GB RAM. This is advisable for large collections and when the QNAP is hosting other applications. When installing two memory modules, ensure that they are the same size and type of RAM for both memory slots.

The instructions to upgrade the RAM module in QNAP TS-251 can be found on the QNAP web site:

https://www.qnap.com/i/uk/support/con\_show.php?cid=9#5\_4

#### Hard drives

QNAP maintains a list of compatible hard drives for each QNAP product. For example, the hard drive list for the TS-251 can be found on the QNAP web site:

https://www.qnap.com/i/uk/product\_x\_grade/product\_intro. php?g\_cat=1&II=142

It is only possible to give broad guidelines on disk storage requirement for a given size of collection, as there are several variables. For example, if your entire collection is in FLAC format (having used Sooloos to import all your albums from CD), it will take up more space than a collection imported in lossy formats such as mp3 or AAC. As a guide, we would suggest you allow 1TB storage per 2,000 albums.

For a typical RAID configuration, two drives are used in parallel. You need an additional 1TB *on each drive* per 2,000 albums. We would recommend a minimum of 2 x 2TB drives: no more than 2 x 4TB should be necessary.