penguinpunk.net qnap ts-831x hardware deployment revision 0.1

#### synopsis

QNAP have come a long way since they first launched their NAS range and it shows with their new hardware deployment process. This document provides visual guidance for the process of configuring the NAS from first power on. There's an overview of the process here - <u>https://start.qnap.com/en/index.php</u>. You can also read more about the TS-831X (the NAS in this example) here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product/model.php?II=237</u> and grab a copy of the user manual here - <u>https://www.qnap.com/en-au/product</u>

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## overview

The process to deploy a QNAP NAS is fairly straightforward:

- Discover the NAS;
- Update its firmware;
- Setup the network configuration; and
- Configure storage.

### Process

The NAS comes with a sticker on the chassis that talks about a "Cloud Key". Take a note of this and head to <u>http://install.qnap.com</u> to get started.



Figure 1 – Cloud Key Sticker

Once you get to this page, you'll need to enter the key.

QNAP Cloud Installation								
Find the Cloud Key p	rinted on your QNAP NAS a the installation.	nd then type it here to start						
Q 5	- 4	Enter						
Go to <u>str</u>	art.qnap.com for more information on	NAS installation.						
1 Start your NAS	2 Check if your device is connected to the Internet	3 Enter your Cloud Key						

#### Figure 2 – QNAP Cloud Installation

The first step is the register for a myQNAPcloud Account. Note that you won't be able to proceed to the next step until you've activated your account via the registration email they send you. This wasn't immediately apparent, but everything went smoothly once I'd confirmed my account.

7

myQNAPcloud				15 OSLA	
1 Sign in and register	2 Installing your	NAS			
nyQNAPcloud Account					
our QNAP NAS has been connected. Please create or s	ign in myQNAPcloud account t	o proceed.			
ith the myQNAPcloud account, the system will help yo nere you are, you can access and share all the data st	ou to easily complete the remo ored on your QNAP NAS anytir	te connection se ne and anywhere	ttings during the without care just	installation process. t by the internet.	No matter
ease note: Your myQNAPcloud account is not a NAS u rocess.	ser account. We will guide you	through setting	up your NAS use	r account later in the	e installation
I don't have myQNAPcloud	Create myQNAPclo	ud account			
If you don't have myQNAPcloud account, please set your primary email address as myQNAPcloud ID (OID) first You can also	myQNAPcloud ID (QID):	eg : example@qnap.com			
	Password :				
choose Create later 1.	Verify password :				
Sign in myQNAPcloud account If you already have myQNAPcloud account,	First name :				
you can sign in right away.	Last name :				
	Mobile number :	+886	optional		
		I agree to my	QNAPcloud Term	s of Use and QNAP P	rivacy
		Policy			
		Next step			

Figure 3 – myQNAPcloud Account

Your myQNAPcloud ID (QID) is your email address. Fill in the details as required (using dots for your password too?) and click Next step.

Sign in and register	2 Installing your	NAS		
nyQNAPcloud Account				
our QNAP NAS has been connected. Please create or	sign in myQNAPcloud account t	o proceed.		
th the myQNAPcloud account, the system will help nere you are, you can access and share all the data :	you to easily complete the remo stored on your QNAP NAS anytin	te connection settings during ne and anywhere without care	the installation process. just by the internet.	No matte
ease note: Your myQNAPcloud account is not a NAS ocess.	user account. We will guide you	through setting up your NAS	s user account later in the	installat
I don't have myQNAPcloud	Create myQNAPclo	ud account		
account and would like to create one If you don't have myQNAPcloud account, please set your primary email address as myQNAPcloud ID (QID) first. You can also	myQNAPcloud ID (QID):			
	Password			
	Tassword .			
choose create later 1.	Verify password :	•••••		
Sign in myQNAPcloud account	First name :	Dan		
you can sign in right away.	Last name :	Frith		
	Mobile number :	+61		
		✓ I agree to myQNAPcloud T Policy	Ferms of Use and QNAP Pr	ivacy
		Next step		

## Figure 4 – myQNAPcloud Details

You'll then need to create a device name. Note that this will need to be unique, so you likely won't be able to use something simple like *qnap831x*.

C myQNAPcloud		TS-831X English -
1 Sign in and register	2 Installing your NAS	
Register myQNAPcloud Please enter a name to register your QNAP NAS This will allow remote access to your QNAP NA	device name S. This name will be used to access your NAS remotely. IS and help you to connect to your NAS more easily after finishin	1g the installation process.
myQNAPcloud Device Name: After finishing the installation, you will be able using the following Internet address. .myqnapcloud.com	e to access your QNAP NAS remotely	
	Copyright	© QNAP Systems, Inc. All Rights Reserved.

Figure 5 – Register myQNAPcloud Device Name

Once this is done, you're ready to move on. In this example, I'd fired up the new device without any hard drives installed. You'll need to install at least one though.

(C) myQl	NAPcloud		TS-831X	💮 English 🕶
1 Sign in and re	egister	2 Installing your NAS		
	<b>?</b>	Hard Drive Missing Install and format at least one hard drive before using the NAS. A hard drive can to an empty disk bay without turning off the NAS. For the hard disk compatibility visit http://www.qnap.com/go/compatibility_hdd35.html Note: All the drive data will be cleared upon hard drive initialization. Please make sure the disk(s) are installed correctly.	n be inserted ty list, please	
۵ 🗱		Copyright © QNA	\P Systems, Inc. A	ll Rights Reserved.

Figure 6 – Hard Drive Missing

Once your drives are installed, the NAS goes and checks and updates the system firmware. The model I bought had shipped with 4.2.x (from mid-2016).



Note that this installation will wipe the installed disks. If this is of concern to you, you might need to re-evaluate which disks you want to use in the system.

C myQNAPcloud		TS-831X	🗰 English 🕶
1 Sign in and register	2 Installing your NAS		
	Install Firmware Click "Start" to download the latest firmware and install it automatically. All the drive data will be cleared upon firmware installation. Downloading firmware 78%		
	Copyright © Q!	NAP Systems, Inc. A	ll Rights Reserved.

Figure 8 – Downloading Firmware

Once the firmware is downloaded it will start to install. This is not the time to power off your NAS.



Figure 9 – Firmware Installation

Once this is completed, you can move on to the "Smart Installation Guide", which will take you through the steps necessary to configure admin credentials, network connectivity, and basic services to get you started.



#### Figure 10 – Smart Installation Guide

You'll likely want to change the name of the NAS from the default, and enter a strong password for the administrator account.

<b>O</b> myQNAPc	loud				TS-831X	English ·
0	0	0	0	0	0	
NAME / PASSWORD	DATE / TIME	NETWORK	SERVICES	DISK	SUMMAR	Y
Enter the	NAS name and a	dministrator's pa	ssword			
	NAS Name: NAS190F00					
	Username: admin					
	Password: Password					
Confirm	Password: Verify Passw	vord				
	Show pass	sword				
Tip Enter a unique name Z and a-z), numbers	e for the NAS in order to i 5 (0–9) and dash (–). Spac	dentify it quickly. The NA e and period (.) are not al	S name supports up to 14 c lowed.	haracters which may	include alphabets (A	<b>\-</b>
				Back Ne	Cano	cel

#### Figure 11 – NAS Name and Administrator Password

You can then set the time zone and time, either manually or via NTP.

C myQNAPcloud	1		TS-8	331X DEnglish -
0	<u> </u>	0	0	-0
NAME / PASSWORD DAT	TE / TIME NETWORK	SERVICES	DISK	SUMMARY
Set the date and	1 time			
Time Zone	e: (GMT+10:00) Brisbane	*		
Date / Time	e: O Same as the computer/device time			
	O Input Manually			
	2017/08/09 🛗 16 🗘	: 54 \$ : 14 \$		
	$\hfill \bullet$ Synchronize with an Internet time set	rver automatically		
	NTP Server: pool.ntp.org	Test		
Тір				
Enable "Synchronize with an Ir	nternet time server automatically" to synch	ronize the server time with t	he specified NTP server.	
			Back Next	Cancel

Figure 12 – Set the Date and Time

It's then time to configure the network settings. I left this as DHCP during this process and later set a static IP address. You should be able to set that manually at this stage if you like though. If you lose connectivity, you can use Qfinder to rediscover the NAS if required.

QNAP					TS-831X Inglish -
•	•			-0	<b>—</b> 0
NAME / PASSWORD DA	TE / TIME	NETWORK	SERVICES	DISK	SUMMARY
Configure the r	network sett	ings			
<ul> <li>Obtain an IP address aut</li> <li>Use static IP address</li> </ul>	comatically (DHCP	)			
I	P Address: 10	. 0 . 0	·		
Sul	bnet Mask: 255	· 255 \$ . 25	5 \$ . 0 \$		
Defaul	t Gateway: 10	. 0 . 0	·		
Primary D	NS Server: 10	. 0 . 0	•		
Secondary D	NS Server: 8	. 8 . 8	. 8		
Тір					
The default gateway IP is "0. synchronize with the NTP se	0.0.0". Enter a co rver or send alert	rrect DNS server IP if the emails.	NAS is configured with a s	tatic IP. Otherwise, the N	AS may fail to
				Back Next	Cancel

Figure 13 – Configure the Network Settings

Now it's time to select which basic file transfer network services you want to enable (Windows, Mac or Linux). You can also choose to deselect the default QNAP multimedia applications.

٦	INAP					TS-831X	● English +
	•				0	0	
	NAME / PASSWORD	DATE / TIME	NETWORK	SERVICES	DISK	SUMM	ARY
	Cross-plat	form file transfe:	r service				_
	Enable the following	) OS features to assist yo	u in doing cross-platfor	m file management, sharing, ar	nd transfer (multip	le choices are allo	owed):
	✓ Windows(SM	/B/CIFS, File Station, FTP	)				
	✓ Mac(AFP, SM □ Linux/UNIX	AB/CIFS, File Station, FTP (NFS, SMB/CIFS, File Stati	) on. FTP)				
	Enable the following	applications to provide	more services (multiple	choices are allowed):			
	✓ Photo Static	on 🗸	Music Station	✓ iTunes Server			
	DLNA Media	a Server 🗸	Download Station				
	Тір						
	Select the above servi the administration pa	ces to enable immediate ge to modify after finishi	ly after the system insta ing the installation.	llation is complete. To configur	e the detailed sett	ings, please log i	nto
					Back Ne	ext Ca	ancel

Figure 14 – Cross-platform File Transfer Service

Now you can configure the disks. In this configuration, I'm keeping it simple and creating a single volume across all of the disks. It's also possible to select multiple thin or thick volumes.

	DATE	/ TIME		NETWORK	SERVICES		DISK	SUMMARY	
Select th	ne disk co	onfig	uration						<b>a</b> p.6
The new storage pool pool, you can create I files. Please refer to t Please select the volu	l design allow: many volumes his tutorial for me type to cre Volume type:	s users to sat more eate. Stat	to combine isfy differen information ic Volume (S	e many RAID groups into it needs. For example, you i. single Volume) \$	one storage poo u can create two	l, providing volumes, or	greater flexibility t 1e for surveillance	o users. In the sto and another for st	rage oring
		This r snaps multij	nodel provio hot. The vo	des the best performance lumes will be created usin if you choose Static Volu	but without adv ng the selected o me.	anced featu drives. Please	res such as thin prie note: You will not	ovisioning and t be able to create	
		This r snaps multip	nodel provid hot. The vo ple volumes A SSD/HE	des the best performance lumes will be created usir if you choose Static Volu DD	but without adv ng the selected o me.	vanced featu drives. Please	res such as thin pro e note: You will not	ovisioning and t be able to create	
		This r snaps multip SAT	nodel provie hot. The vo ple volumes A SSD/HE Slot	des the best performance lumes will be created usin if you choose Static Volu DD Model	but without adv ng the selected o me.	ranced featu drives. Please Type	res such as thin pro- e note: You will not Bus Type	ovisioning and be able to create	
		This r snaps multip SAT	nodel provid hot. The vo ple volumes A SSD/HE Slot 3	des the best performance lumes will be created usin if you choose Static Volu DD Model WDC WD30EFRX-68ELU	but without adv ng the selected o me. JZNO 82.00A82	Type HDD	res such as thin pro- e note: You will not Bus Type SATA	ovisioning and t be able to create       Capacity       2794.52 GB	
		SAT	nodel provid hot. The vo ple volumes A SSD/HE Slot 3 4	des the best performance lumes will be created usin if you choose Static Volu DD Model WDC WD30EFRX-68EU WDC WD30EFRX-68EU	but without adv ng the selected of me. JZNO 82.00A82 JZNO 82.00A82	Type HDD HDD	e such as thin pro- e note: You will not Bus Type SATA SATA	Ovisioning and the able to create       Capacity       2794.52 GB       2794.52 GB	

Figure 15 – Select the Disk Configuration

The NAS supports a range of RAID configurations as well, although I'd obviously counsel against selecting RAID 0.

								C Ref
			5	WDC WD30EFRX-68EUZN0 82.00A82	HDD	SATA	2794.52 GB	. 1
		Sing	ile	WDC WD30EFRX-68EUZN0 82.00A82	HDD	SATA	2794.52 GB	
		RAII	0 0	WDC WD30EFRX-68EUZN0 82.00A82	HDD	SATA	2794.52 GB	
Encry	Hot Spare Drive: ypted Disk Volume:	Not	used	31 TB) ≎				
Encry	Hot Spare Drive: ypted Disk Volume: Bad Block Scan:	RAII	used	31 TB) \$				

Figure 16 – RAID Types

QNAP		TS-831X English -
<b></b>		
NAME / PASSWORD DATE /	TIME NETWORK SERVICES DISK	SUMMARY
SUMMARY		
NAME / PASSWORD		
NAS Name:	qnap831	
Username:	admin	
Password:	*****	
DATE / TIME		
Time Zone:	(GMT+10:00) Brisbane	
Time:	Synchronize with the NTP server: pool.ntp.org	
NETWORK		
Network:	Obtain an IP address automatically	
	Back	Apply Cancel

Once you've done this, you can then apply the configuration.

Figure 17 – Summary

You'll be warned again that the disks will be wiped as part of this configuration activity.



Figure 18 – Confirm Disk Configuration

The settings are then applied.

Applying the settings	
This process may take several minutes depending on the system hardware and hard drive capacit	у.
Starting the network services	
14%	
	Copyright © QNAP Systems, Inc. All Rights Reserved.

Figure 19 – Applying the Settings

Once this has finished you should be able to login to the web UI via the IP address or hostname (depending on your DNS configuration) and complete configuration of things such as email notification and share configuration. Note that it will take a while for the volume to complete initialisation, although it will be useable from the start.

#### conclusion

QNAP have come a long way with their NAS devices in terms of out of the box experience and initial configuration options. Hopefully this guide will help with any aspects of the process that might be confusing.