QNAP x86-based NAS DOM Re-flash Guide

When the firmware on the DOM of QNAP NAS is corrupt, you can not boot up the NAS correctly. If you connect a monitor to the VGA port of QNAP NAS, you can see the NAS pass the POST but fail to access the firmware file on the DOM. You can try to use the following procedure to re-flash the firmware. Note: This guide only apply to QNAP x86-based NAS series. Currently the models include TS-239, SS-439, TS-439, TS-509, SS-839, TS-809/U, TS-239 Pro II, TS-439 Pro II and TS-x59 series.

A. Create a USB boot disk

The following procedures describe how to create a USB boot disk. You can then use this disk to booting up the NAS through USB port then re-flash the firmware file on the USB disk to the internal DOM(Disk on Module) on the NAS.

- Download the unetbootin from the following link: <u>http://unetbootin.sourceforge.net/</u>
- 2. Plug a USB flash drive to the PC. The USB flash drive should be 1GB or larger and the file system on the USB flash drive need to be FAT32.

		×
General Tools Har	dware Sharing ReadyBo	ost Customize
<u>کې</u>		
Type: Remo File system: FAT3	vable Disk 2	
Used space:	851,685,376 bytes	812 MB
Free space:	1, 161, 580, 544 bytes	1.08 GB
Capacity:	2,013,265,920 bytes	1.87 GB
	Drive G:	
	OK Cancel	Apply

- 3. Run unetbootin
- 4. On the Distribution, select "Damn Small Linux".

💷 UNetbootin		
Oistribution	== Select Distribution ==	► == Select Version == ►
Welcome to <u>UNetbootin</u> , t	== Select Distribution == . Arch Linux	<u> </u>
1. Select a distribution load below.	BackTrack CentOS	t above, or manually specify files to
2. Select an installat	Damn Small Linux	ng.
	Dreamlinux	
	Dr.Web AntiVirus Elive	
	Fedora	-
Diskimage	ISO 👻	
Custom	Kernel:	Initrd:
	Options:	
Show All Drives (Use v	vith Care)	
Type: USB Drive	▼ Drive: G:\	▼ OK Cancel

5. Make sure the Type on is USB Drive. Click OK to start download.

💷 UNetbootin				- • •
Oistribution	Damn Small Linu	x 🗸	Latest_Live	•
Homepage: <u>http://da</u> Description: Damn Sn Install Notes: The Liv installation is not requir	mnsmalllinux.org nall Linux is a minima e version loads the ed but optional.	alist distribution desigr entire system into RA	ned for older computer M and boots from mer	rs. nory, so
⑦ Diskimage	ISO 👻			
© <u>C</u> ustom	<u>K</u> ernel:		Init <u>r</u> d:	
	Options:			
Show <u>Al</u> l Drives (Us	e with Care)			
Type: USB Drive	▼ Dri <u>v</u> e:	G:\	• OK	Cancel

6. The program will download the file and install to the USB flash drive.



7. If you have problem on download the file, you can download the file manually through the following link:
<u>ftp://ibiblio.org/pub/Linux/distributions/damnsmall/current/dsl-4.4.10-initrd.</u>
<u>iso</u>

Then choose Diskimage and select the file to proceed.

💷 UNetbootin		×
Distribution	== Select Distribution ==	•
Welcome to <u>UNetbootin</u>	, the Universal Netboot Installer. Usage:	
1. Select a distrib	tion and version to download from the list above, or manually specify files to	
2. Select an insta	ation type, and press OK to begin installing.	
		_
Oiskimage	C:\Users\alan\Desktop\dsl-4.4.10-initrd.iso	
Custom	Kernel: Initrd:	
	Options:	
Show All Drives (Us	with Care)	
Type: USB Drive	▼ Drive: G:\ ▼ OK Cancel	

8. Click the Exit.

II UNetbootin	
1. Downloading Files (Done)	
2. Extracting and Copying Files (Done)	
3. Installing Bootloader (Done)	
4. Installation Complete, Reboot (Current)	
After rebooting, select the USB boot option in the BIOS boot menu. Reboot now?	
Reboot Now	Exit

9. Copy your DOM image(s) to the USB flash drive.

B. Use the USB boot disk to re-flash the DOM on the NAS.

- 1. Plug a VGA monitor, USB keyboard and your Bootable USB flash drive on the back of your NAS. Don't plug any HDD to the NAS.
- 2. Turn on your NAS and press F11 key repeatedly.
- 3. Select the USB flash drive as your boot device. If there is no the menu, reboot the NAS again and repeat step 2. NOTE: If there is two USB device, don't select USB DISK MODULE PMAP.

Pleas	e select boot device
USB: USB I	D ISK MODULE PMAP
USB Generi	IC USB Flash Disk
1 an	I i to nove selection
Diffic	to select boot device

4. On the following menu, select Default.

5. After boot up completely, you should see the following window.



- 6. Press Ctrl+Alt+Del to enter command line.
- 7. Input the following command:# sudo su# fdisk –I
- 8. You should see the following result:



/dev/sda is your flash drive. /dev/sdb which with about 128MB or 512MB size is your DOM that you want to reflash.

- 9. Input the following command:
 - # mkdir usbdrive
 - # mount /dev/sda1 /home/dsl/usbdrive
 - # cd /home/dsl/usbdrive
- 10. Input the following command:

cp /usbdrive/dom.img /dev/sdb

"dom.img" is your firmware name, /dev/sdb is the drive name of your dom.

11. Reboot your NAS.

reboot