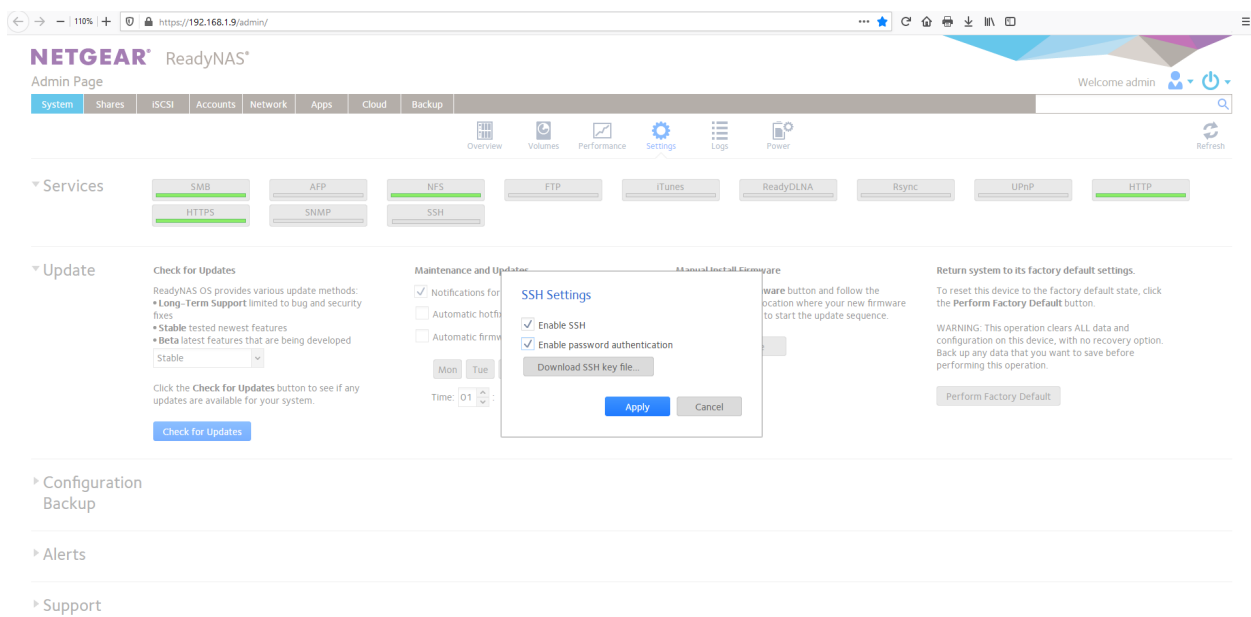# Remote SMART Monitoring of the Netgear ReadyNAS using HDSentinel

This document describes how to use HDSentinel to remotely monitor SMART information from the Netgear ReadyNAS.   This has been implemented and found to work on a Netgear ReadyNAS RN 104 (ARMv7 based) running Netgear ReadyNAS OS 6.10.2

1. Enable SSH on the ReadyNAS

- Logon to the ReadyNAS via the web interface. Click the **System** tab. In **Services**, click **SSH**

- Select the checkboxes for **Enable SSH** and **Enable password authentication.** Click **Apply**

The SSH service will be turned on and the indicator on the SSH option will turn green indicating that SSH access to the ReadyNAS has been enabled.
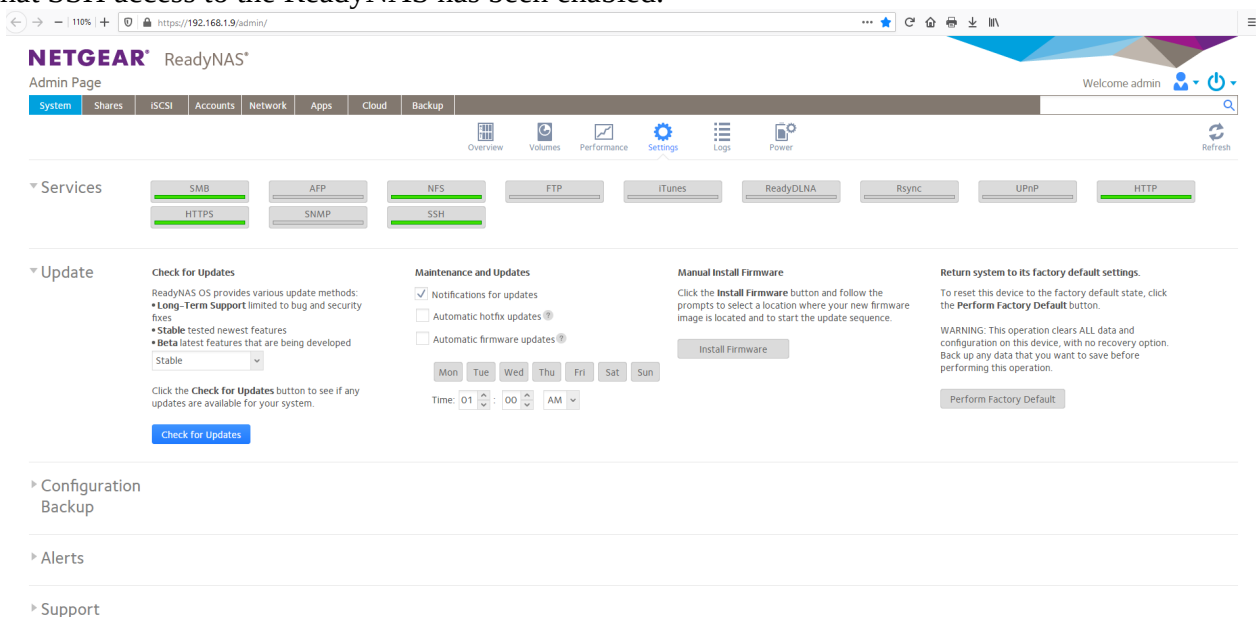
Remote SMART Monitoring of the Netgear ReadyNAS using HDSentinel

2. Logon via SSH to the ReadyNAS

- If a SSH client on Microsoft Windows is needed, download and use Putty from
  http://www.chiark.greenend.org.uk/~sgtatham/putty/
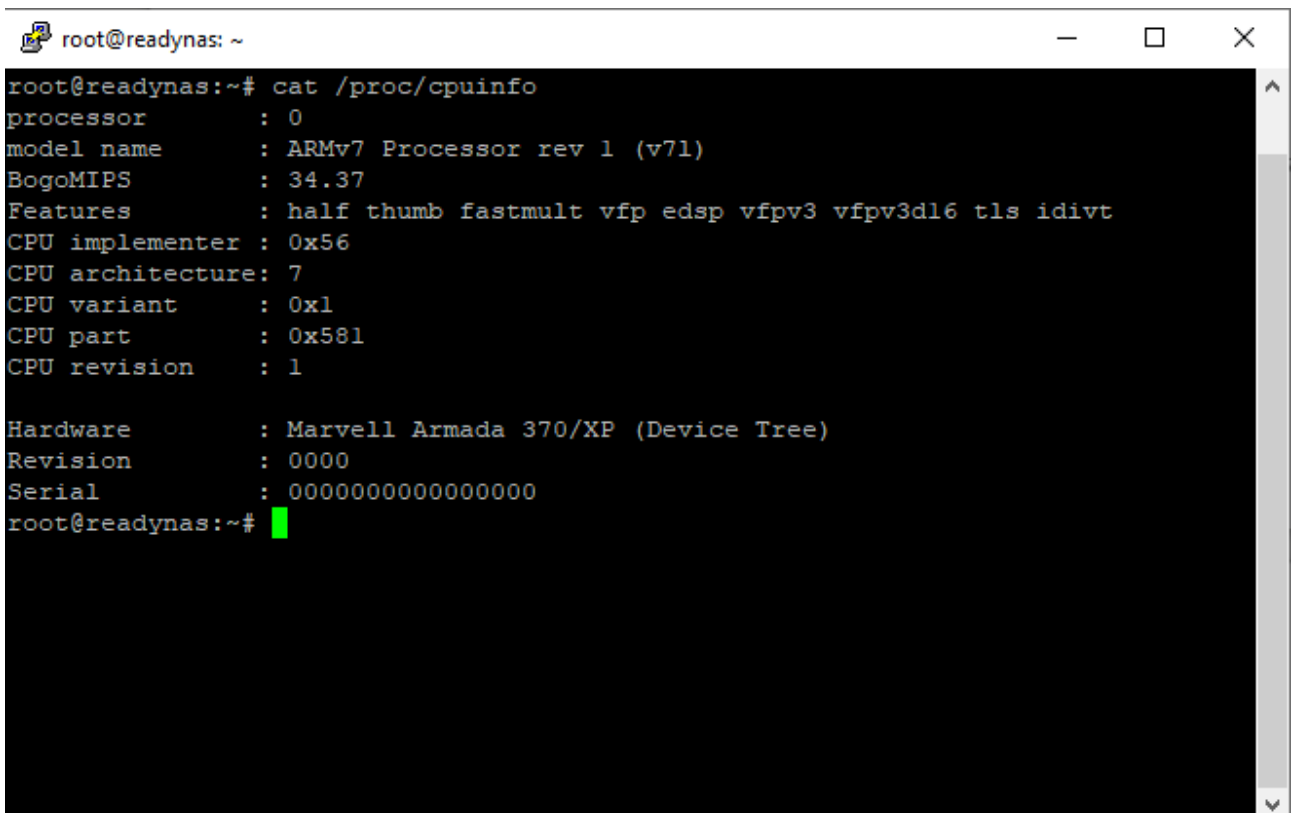 to logon to the ReadyNAS

  See
  https://support.rackspace.com/how-to/connecting-to-linux-from-windows-by-using-putty/

- On Linux use the ssh command to logon to the ReadyNAS

3. Download and setup the hdsentinelalarm software on the ReadyNAS

- Verify that the Netgear ReadyNAS is based on an ARM processor

  cat /proc/cpuinfo

If the model name in the output of the above command does not indicate an ARM based device, do not proceed further.

The file downloaded from the link specified in the wget command below will only work on the ARM based Netgear ReadyNAS devices and will not work on the Intel processor based Netgear ReadyNAS devices.

Remote SMART Monitoring of the Netgear ReadyNAS using HDSentinel

- Create a folder "hdsentinel" using the following command

  mkdir ~/hdsentinel

- Change directory to the newly created "hdsentinel" folder:

  cd ~/hdsentinel

- Download the ARMv5 version of hdsentinel as follows:

  wget http://www.hdsentinel.com/hdslin/armv5/hdsentinelarm

  Note: *The ARMv5 version of hdsentinel has been found to work as is on the ARMv7 based ReadyNAS RN 104.*

- Make the downloaded file executable:

  chmod 755 hdsentinelalarm

- Check whether the downloaded file works:

  ./hdsentinelalarm

  The output of the above command above should display information about the drives on the ReadyNAS.

- Identify a shared folder on the ReadyNAS that will hold the data output of the hdsentinelalarm command. *Note:* *This folder should be accessible either via SMB or NFS to the PC on which HDSentinel will be used to remotely monitor the ReadyNAS*

- Change directory to the folder identified in the above step

  cd *Replace with the full path to the shared folder*

- Create a html formatted SMART report in the folder identified above

  ./hdsentinelarm -r HDSReport.html -html

  This will create a HDSReport.html file in the folder

- Verify that the file HDSReport.html is displayed correctly in a browser on the PC from which the ReadyNAS will be monitored using HDSentinel.

  Open a browser (Google Chrome / Firefox / Edge etc.) In the browser address bar type the full UNC path to the file created in the command above.
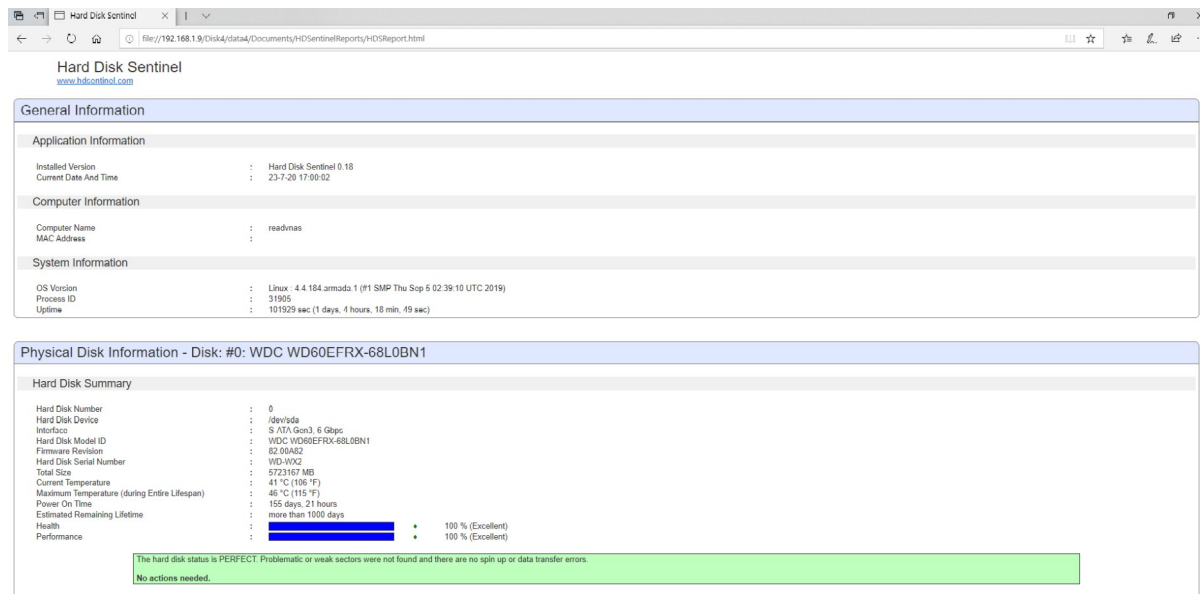
  As an example, type in:

Remote SMART Monitoring of the Netgear ReadyNAS using HDSentinel

\\192.168.1.9\Disk4\data4\Documents\HDSentinelReports\HDSReport.html
in the browser address bar.

Copy and save the full UNC path into a text file before pressing enter. The full UNC path will be needed in a subsequent step.

On pressing enter the browser will reformat the UNC path into the operating system dependent format specification and then attempt to load the file.

If the shared folder on the ReadyNAS and it's contents are accessible over the network, the HTML formatted report from HDSentinel on the ReadyNAS will be displayed.

If a 404 error message is displayed, recheck that the shared folder on the ReadyNAS is accessible and the file exists until entering the UNC path in the browser address bar correctly displays the report created by HDSentinel on the ReadyNAS.

4. Setup HDSentinel on the PC to retrieve information from the ReadyNAS

Start HDSentinel on the PC.

From the **File** menu, click **Configure NAS Disk Monitoring**

Remote SMART Monitoring of the Netgear ReadyNAS using HDSentinel

Click the **Add URL** button.

Remote SMART Monitoring of the Netgear ReadyNAS using HDSentinel

Enter the full UNC path including the file name of the SMART report file on the ReadyNAS or copy and paste the UNC path saved before testing visibility of the SMART report file in the browser.
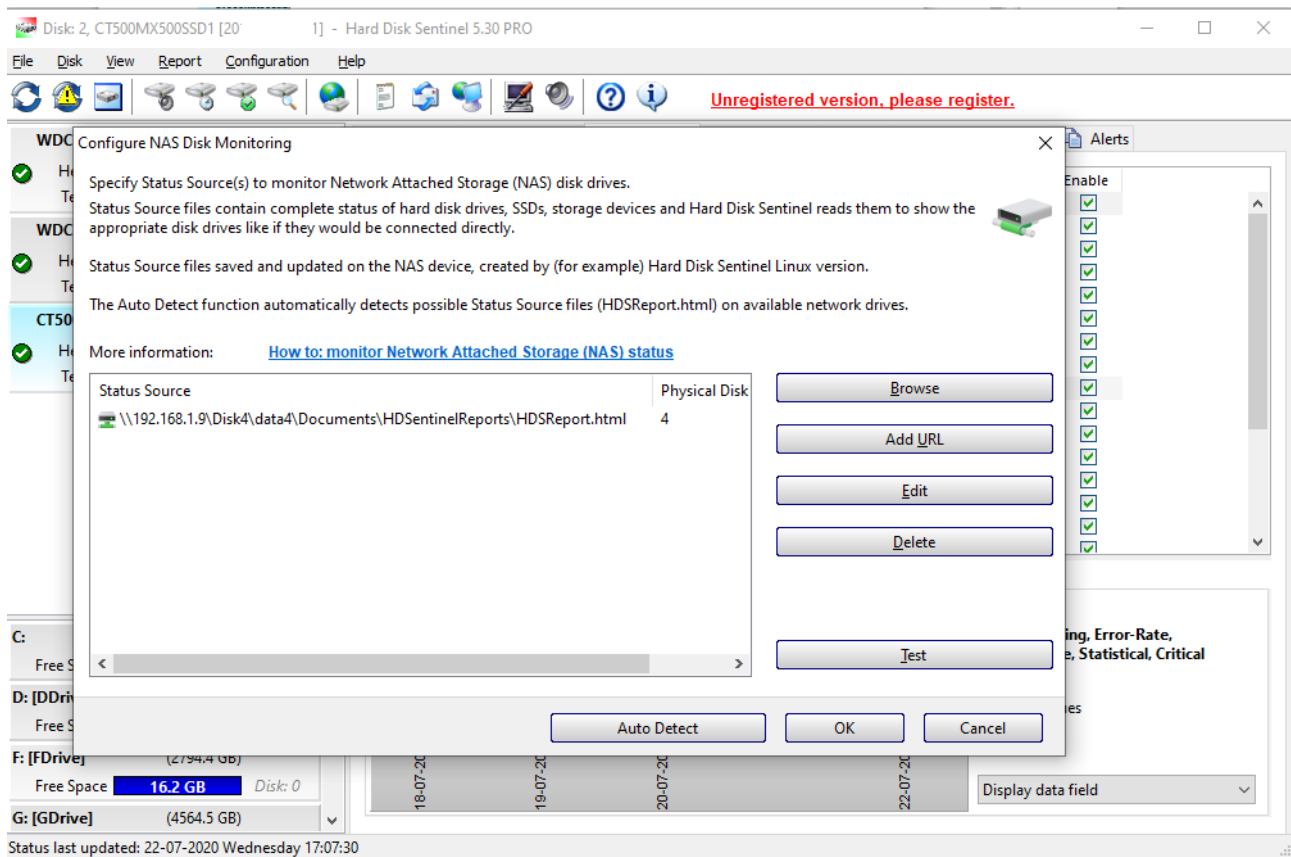
Click **OK**

Remote SMART Monitoring of the Netgear ReadyNAS using HDSentinel

HDSentinel will display the SMART information from the ReadyNAS

5. Create a scheduled task to have HDSentinel on the ReadyNAS automatically generate and update the SMART information report.

- Edit the crontab file:

    crontab -e

- Add the line below to the end of the file

*/15 * * * * /root/hdsentinel/hdsentinelarm -r /Disk4/data4/Documents/HDSentinelReports/HDSReport.html -html >/dev/null 2>&1

Notes:

(i) The entire command should be one continuous line and not two as shown which is due to the document formatting.

(ii) The above command runs the hdsentinelalarm command every 15 minutes to generate the SMART report into the HDSReport.html file in the network share location.

Remote SMART Monitoring of the Netgear ReadyNAS using HDSentinel

Replace

>*the periodicity */15,*
>*the location of the hdsentinelalarm file*
>*the location and name of the SMART report file HDSReport.html*

as appropriate.

- Save and exit.