

Network Settings

MYTHEN Detector System

Version: V2



Table of Contents

<i>1. Document History</i>	<i>4</i>
1.1. Current document	4
1.2. Changes	4
<i>2. How to use this documentation</i>	<i>5</i>
2.1. Address and Support	5
2.2. Explanation of Symbols	6
2.3. Explanation of Terms	6
2.4. Disclaimer	7
<i>3. Warnings</i>	<i>8</i>
<i>4. Introduction</i>	<i>9</i>
<i>5. Changing the network settings</i>	<i>10</i>
<i>6. Appendix</i>	<i>14</i>
6.1. Table of Figures	14
6.2. Referenced Documents	14

1. Document History

1.1. Current document

<i>Version</i>	<i>Date</i>	<i>status</i>	<i>prepared</i>	<i>checked</i>	<i>released</i>
2	11.11.2015	released	DJ	AM	AM

1.2. Changes

<i>Version</i>	<i>Date</i>	<i>Changes</i>
1.0	03.03.2010	First version
1.1	05.03.2012	Document extension to entire MYTHEN product family
1.2.	24.10.2012	Screenshot update
1.3	11.06.2013	Adapted CD
2	11.11.2015	Updated to new postal address

2. How to use this documentation

Before you start to operate the MYTHEN detector system please read the User Manual and the Technical Documentation included in the documentation package carefully.

This document has been designed for the MYTHEN detector systems.

2.1. Address and Support

DECTRIS Ltd.
Taeferenweg 1
5405 Baden- Daettwil
Switzerland
Phone: +41 56 500 21 02
Fax: + 41 56 500 21 01

Website:

- www.dectris.com → support → Technical Notes → MYTHEN
- www.dectris.com → support → FAQ
- www.dectris.com → support → Problem Report

Email:







- support@dectris.com

Should you have questions concerning the system or its use, please contact us *via* phone, mail or fax.



Do not ship the system back before you receive the necessary transport and shipping information!

2.2. Explanation of Symbols

Symbol	Description
	Important or helpful notice
	Caution. Please follow the instructions carefully to prevent equipment damage or personal injury.
	DC-current
	AC-current
	Ground
	Functional earth

2.3. Explanation of Terms

Term	Description
GUI	G raphical U ser I nterface
DCS1	D etector C ontrol S ystem for 1 detector module
DCS6	D etector C ontrol S ystem for up to 6 detector modules
DCS24	D etector C ontrol S ystem for up to 24 detector modules
Detector module	The smallest fully functional unit of the detector (1280 channels).
DHCP	D ynamic H ost C onfiguration P rotocol
MAC-Address	M edia A ccess C ontrol address
IP-Address	I nternet P rotocol address

2.4. Disclaimer

DECTRIS Ltd. has carefully compiled the contents on this manual according to the current state of knowledge. Damage and warranty claims arising from missing or incorrect data are excluded.

DECTRIS Ltd. bears no responsibility or liability for damage of any kind, also for indirect or consequential damage resulting from the use of this system.

DECTRIS Ltd. is the sole owner of all user rights related to the contents of the manual (in particular information, images or materials), unless otherwise indicated. Without the written permission of DECTRIS Ltd. it is prohibited to integrate the protected contents published in these applications into other programs or other Web sites or to use them by any other means.

DECTRIS Ltd. reserves the right, at its own discretion and without liability or prior notice, to modify and/or discontinue this application in whole or in part at any time, and is not obliged to update the contents of the manual.

3. Warnings



Please read these warnings before operating the detector system.

- DO NOT TOUCH THE ENTRANCE WINDOW OF THE DETECTOR.
- Place the protective cover on the entrance window of the detector when it is not in use.
- The detector is not specified to withstand direct beam at a synchrotron. Such exposure will damage the exposed channels.
- The detector system should have enough space for proper ventilation. Operating the detector outside the specified ambient conditions could damage the system.
- The air inlets and outlets of the detector control system should not be blocked.
- Power down the detector system before connecting or disconnecting any cable.
- Before connecting the power supply to the mains-supply, check the supply voltage with the label on the power supply. Using an improper main voltage will destroy the power supply and could damage the detector.
- Make sure the cables are connected and properly secured.
- Avoid pressure or tension on the cables.
- Opening the detector, the detector control system or the power supply housing without explicit instructions from DECTRIS Ltd. will void the warranty.
- The embedded Linux operating system on the detector control system has customized software for controlling the MYTHEN detector system. Do not make any changes to the Linux operating system without explicit instructions from DECTRIS Ltd.

4. Introduction

The Detector Control System (DCS) hosts an embedded Linux system. The DCS is delivered either with DHCP running or with a fixed IP (default 192.168.0.90). The initial configuration of your system is described on the system information sheet under the keyword IP-Address.

If your DCS is configured with DHCP running, ask your IT administrator for the current IP address. The MAC-Address and the hostname of your DCS are described on the system information sheet with the keywords MAC-Address and Hostname.



Changing the network configuration of the DCS can cause malfunction of the communication, in which case the DCS will be no longer accessible. If you are not sure, do not change the network settings. If communication to the DCS is lost, there is no possibility to reset the DCS to delivery settings.

5. Changing the network settings

The method to change the network settings is described in the following for the case that DHCP is running on the DCS. In this case the DCS has the IP address 192.168.20.109.



The default fixed programmed IP address of the DCS is 192.168.0.90. If DHCP is running on the DCS connected to your local area network, replace the default IP address by the current IP address.



Depending on the network settings of the DCS, in the following, the IP 192.168.20.109 has to be replaced by the current IP address of your DCS.

Access your DCS with your web browser and your current IP address (Figure 1).

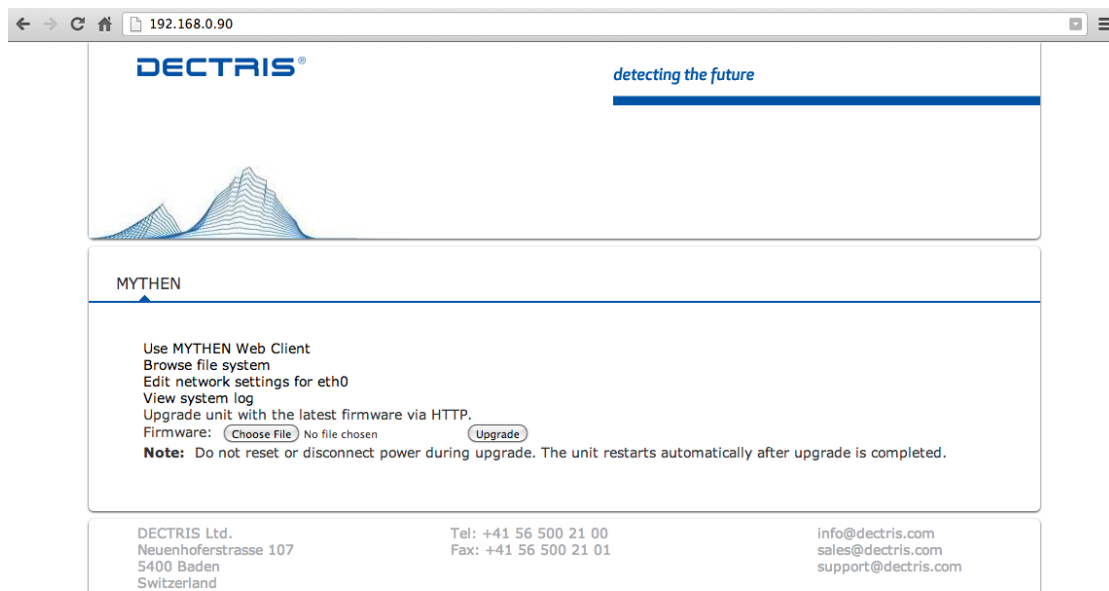


Figure 1 Login to the DCS via your web browser.

By clicking on *Edit network settings for eth0* you will be prompted to enter your username and password. The username is "root" and the password is given on the system information sheet (Figure 2).

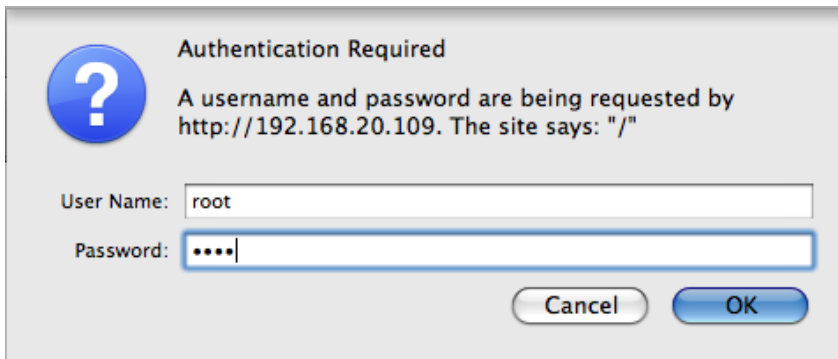


Figure 2 Entering your credentials.

After entering your credentials the configuration file `/etc/conf.d/net.eth0` is opened in an editable mode.

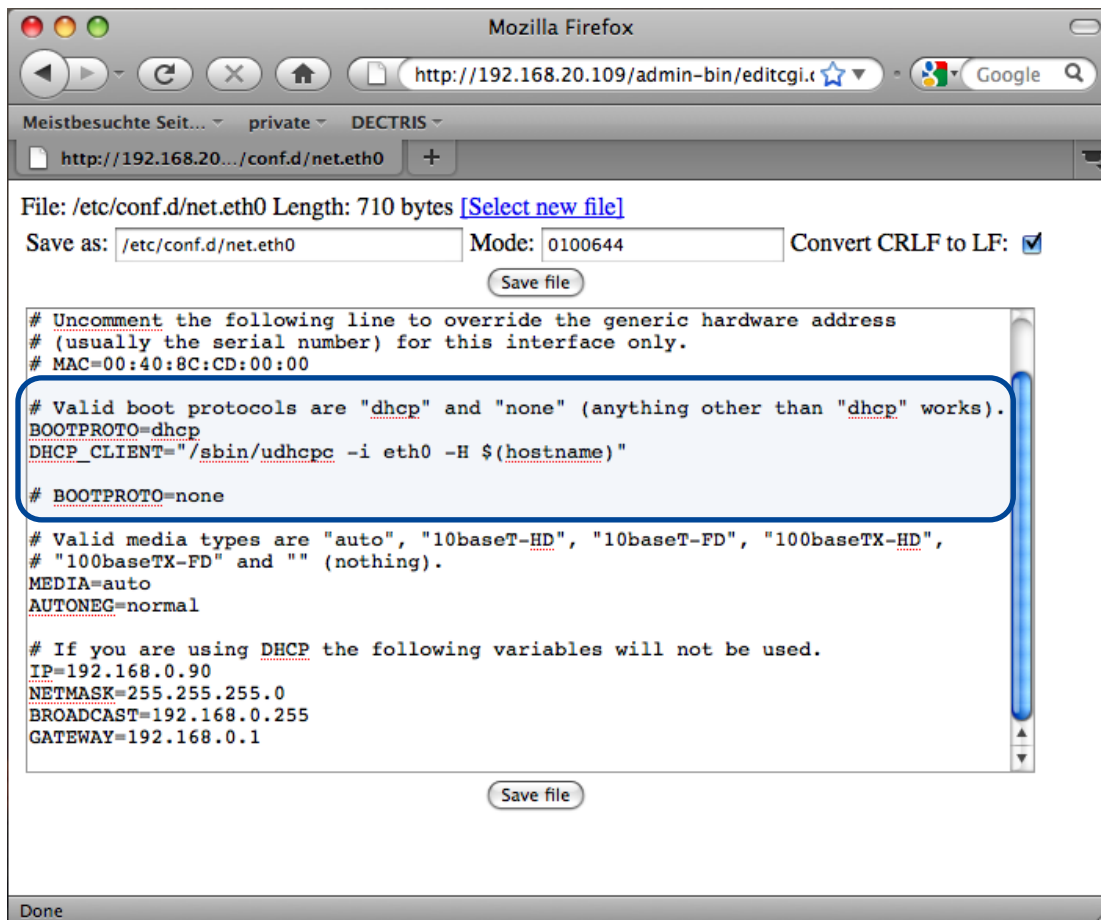


Figure 3 `/etc/conf.d/net.eth0` configuration file for DHCP.

Figure 3 shows the configuration file for DHCP settings. The highlighted paragraph should be as shown for DHCP operation.

That means:

```

# Valid boot protocols are "dhcp" and "none" (anything other than "dhcp"
works).
BOOTPROTO=dhcp
DHCP_CLIENT="/sbin/udhcpc -i eth0 -H $(hostname)"

# BOOTPROTO=none

```

The line `BOOTPROTO=none` is commented out. The lines `BOOTPROTO=dhcp` and `DHCP_CLIENT=[...]` are active.

If you want to change the network configuration to a fixed IP address e.g. 192.168.0.90, the highlighted paragraph should be as shown in Figure 4.

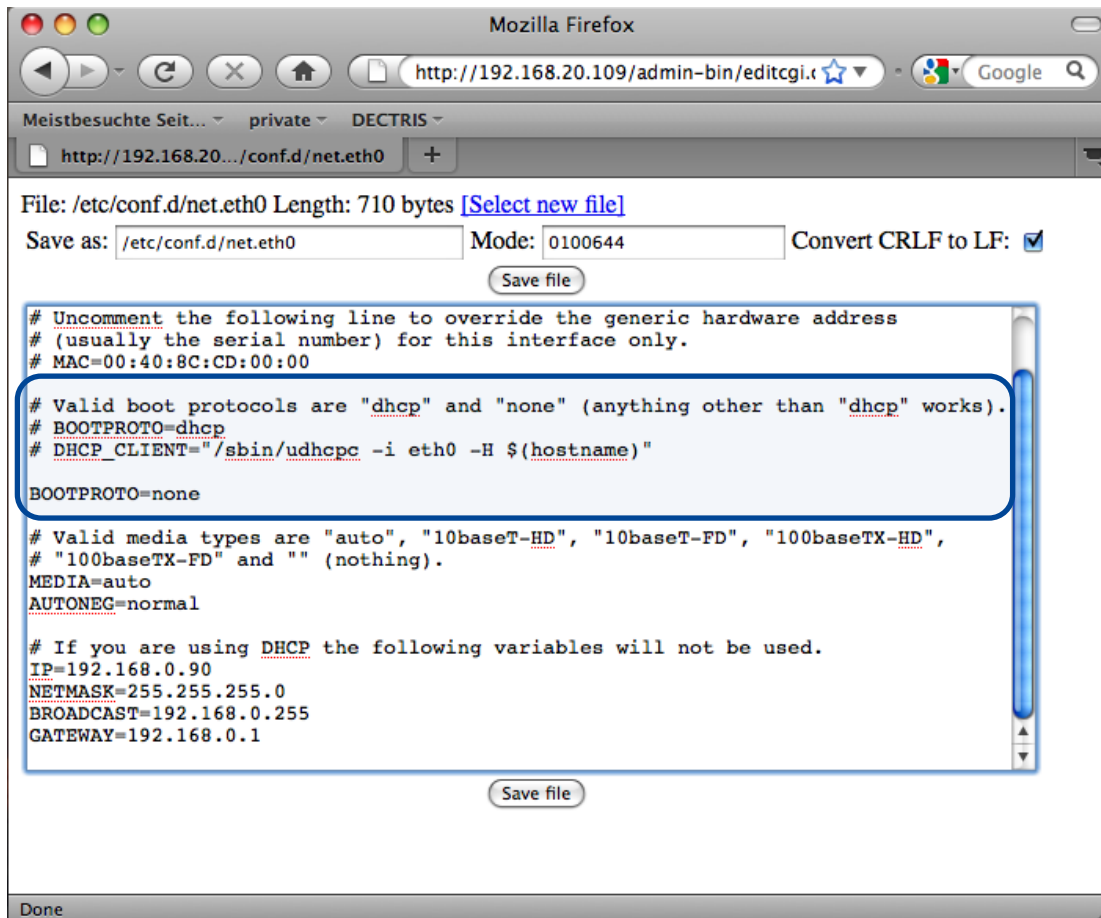


Figure 4 /etc/conf.d/net.eth0 configuration file for a fix IP address.

That means:

```
# Valid boot protocols are "dhcp" and "none" (anything other than "dhcp"
works) .
# BOOTPROTO=dhcp
# DHCP_CLIENT="/sbin/udhcp -i eth0 -H $(hostname) "

BOOTPROTO=none
```

The line *BOOTPROTO=none* is active. The lines *BOOTPROTO=dhcp* and *DHCP_CLIENT= [...]* are commented out.

After editing the file and convincing yourself that there are no bugs left, press the *Save file* button. **To activate the changes, the DCS has to be rebooted by pressing the RESET button on the DCS.**

6. Appendix

6.1. Table of Figures

Figure 1 Login to the DCS *via* your web browser. 10
 Figure 2 Entering your credentials. 11
 Figure 3 /etc/conf.d/net.eth0 configuration file for DHCP. 12
 Figure 4 /etc/conf.d/net.eth0 configuration file for a fix IP address. 13

6.2. Referenced Documents

All the following documents are available through DECTRIS Ltd. homepage.

https://www.dectris.com/technical_mythen.html#main_head_navigation

Term	Description
Firmware Update Guide	Firmware_Update-MYTHEN-V1_6.pdf
Module Handling Instrutions	Handling_Instructions-MYTHEN-V2_1.pdf
Linux Installation Guide	Linux_Installation-HowTo_MYTHEN-V1_3.pdf
Network Settings	Network_Settings-MYTHEN-V1_3.pdf
Quick Start Guide	QuickStart-MYTHEN-V2_1.pdf
Socket Interface Specifications	Socket_Interface_Spec-MYTHEN-V3.0.0-V1_1.pdf
Technical Documentation	Technical_Documentation-MYTHEN-V1_1.pdf
Trigger Notes	Trigger_Note-MYTHEN-V2_1.pdf
User Manual	User_Manual-MYTHEN-V2_1.pdf