

D-SERVER - Technical Handbook

© Copyright 2017 NEAT Electronics

All rights reserved.

Document number: NE41 09010-02 v3.0

Revision date: 2017-09-06

Contact

NEAT Electronics AB

Varuvägen 2

SE246 42 Löddeköpinge

Sweden

Phone: +46 46 70 70 65

Fax: +46 46 70 70 87

www.neat-group.com/se/en

infosweden@neat-group.com

Contents

1	Introduction	7
1.1	About this handbook	7
1.2	D-SERVER system	7
1.3	Valid versions	7
1.4	Related documentation	7
2	System components	8
2.1	D-SERVER	8
2.1.1	D-SERVER kit	8
2.1.2	Connectors on the D-SERVER	9
2.1.3	D-SERVER LEDs	10
2.1.4	Insert a memory card	10
2.1.5	Connect the central power supply	10
2.1.6	Mounting the D-SERVER	11
2.2	D-TECT	12
2.2.1	D-TECT Kit	12
2.2.2	D-TECT connectors	12
2.2.3	Set address for a D-TECT unit	13
2.2.4	Mount the D-TECT units	13
2.2.5	Power requirements	14
2.3	Connecting D-TECT units to the D-SERVER	14
2.3.1	Connecting D-TECT units to a bus	14
2.3.2	Connect serial buses to the D-SERVER	15
2.4	D-BOX	15
2.4.1	D-BOX kit	15
2.4.2	D-BOX connectors	15
2.5	D-TECT IP	17
2.5.1	D-TECT IP Kit	17
2.5.2	D-TECT IP connectors	18
2.5.3	Power requirements	18
2.5.4	Mounting D-TECT IP units	18
2.6	D-TREX2G	19
2.6.1	D-TREX2G Kit	19
2.7	D-CALL IP	19
2.7.1	D-CALL IP/GSM kit	20
2.7.2	D-CALL IP/GSM connectors	20
2.8	Mounting D-CALL IP/GSM units	21
2.9	IP-DECT components	22
2.9.1	IP-DECT Server 400	22
2.9.2	Power requirements	23

2.9.3	Spectralink IP-DECT Base station	23
2.9.4	Spectralink DECT Repeater	23
2.9.5	Extra licenses	26
2.9.6	Larger systems	26
2.10	DECT handsets	26
2.11	NPU	26
2.11.1	NPU Kit	27
2.11.2	NPU connectors	27
2.11.3	NPU mounting	28
3	System setup	29
3.1	Preface	29
3.2	Scenario I	29
3.2.1	Hardware requirements	29
3.3	Scenario II	30
3.3.1	Hardware requirements	30
3.4	Scenario III	31
3.4.1	Hardware requirements	31
3.5	Scenario IV	32
3.5.1	Hardware requirements	32
3.6	Scenario V	33
4	Accessing the D-SERVER	34
4.1	Access the D-SERVER from a network	34
4.1.1	Connecting a D-SERVER to a existing LAN	34
4.1.2	Connecting a D-SERVER using a router	35
4.1.3	Direct connection between a PC and a D-SERVER	36
4.1.4	Web interfaces	37
4.1.5	Licences	38
4.1.6	Upload License	38
4.2	Samba	39
4.2.1	Backup Configuration	41
4.2.2	Backup License	42
4.2.3	Backup Log files	42
4.2.4	Backup Network Configuration	43
4.2.5	Backup SIP server configuration	43
5	The user interface	44
5.1	Status	44
5.2	Alarm configuration	45
5.2.1	Identifications	48
5.2.3	Entities	49
5.2.4	Destinations	51
5.2.5	Routing	51
5.3	DOOR opening	52
5.4	System settings	52
5.4.1	System parameters	53

5.4.2	Surveillance	60
5.4.4	Transceivers	60
5.4.6	COBS	60
5.4.7	SIP	61
5.4.8	ESPA 4.4.4	61
5.4.10	Logging	61
5.5	Administration	62
5.5.1	System logs	62
5.6	Reload configuration	62
6	Scenario configuration	63
6.1	Preface	63
6.2	Scenario I - Text solution (D-TECT)	63
6.3	Scenario II - Text solution (D-TECT IP)	76
6.4	Scenario III - Speech solution (DECT)	83
6.5	Scenario IV - Speech solution (GSM)	92
6.6	Scenario V - Speech solution (GSM) with D-TECT/D-TECT IP	98
7	Troubleshooting	105
7.1	Is the power D-SERVER powered on and running?	105
7.2	Enable debug logging	105
7.3	SSH clients	106
7.4	Bitwise configuration	107
7.5	Bitwise SFTP	109
7.6	Bitwise xterm	112
7.7	Console cable	114
	Appendix A Technical reference	115
	Appendix A.1 Technical specification	115
	Appendix A.2 Standard parts lists and spare parts	115
	Appendix B Connector tech specs	116
	Appendix B.1 Pin configuration for the serial bus from the D-SERVER	116
	Appendix B.2 Pin configuration for the serial bus to D-TECT units	116
	Appendix C D-SERVER Alarm types	117
	Appendix D NEAT Standard Alarm types	118
	Appendix E Message format specifiers	120
	Appendix F Equipment list	122

Document revision history

Date	Version	Revision details
2017-09-06	3.0	Release of v3.0

1 Introduction

1.1 About this handbook

This technical handbook describes how to install, configure and maintain a D-SERVER system.

1.2 D-SERVER system

In the D-SERVER system, a central server handles all alarms. The server collects triggered alarms, decides on the appropriate action and distributes the alarms to relevant receivers.

Typical environments where you will benefit from the D-SERVER system are larger nursing homes and geriatric clinics since almost everything can be configured from one central location (a webinterface); the D-SERVER compared to a system based on TREX2Gs where every TREX2G must be configured individually.

Also the functionality is extended compared to a TREX2G system.

1.3 Valid versions

This version of Technical Handbook is valid for:

Product	Required version	Boot loader
D-SERVER	16.03	
D-TECT	1.8	
D-TECT IP	2.02	1.06
D-TREX2G	5.4	
D-CALL	2.4.6	1.22.0
Spectratec 7722	1422 5100 PCS 16BC	
IP DECT (KWS400)	PCS PCS14C_ Build 48035	
NPU	1.9	

Table 1. The documentation is based on the following versions.

1.4 Related documentation

For more information on the D-SERVER system, read the following documentation:

System overview

The System Overview gives an introduction to the D-SERVER system and a basic understanding of the overall concepts.

The document number is NE41 09009-02.

2 System components

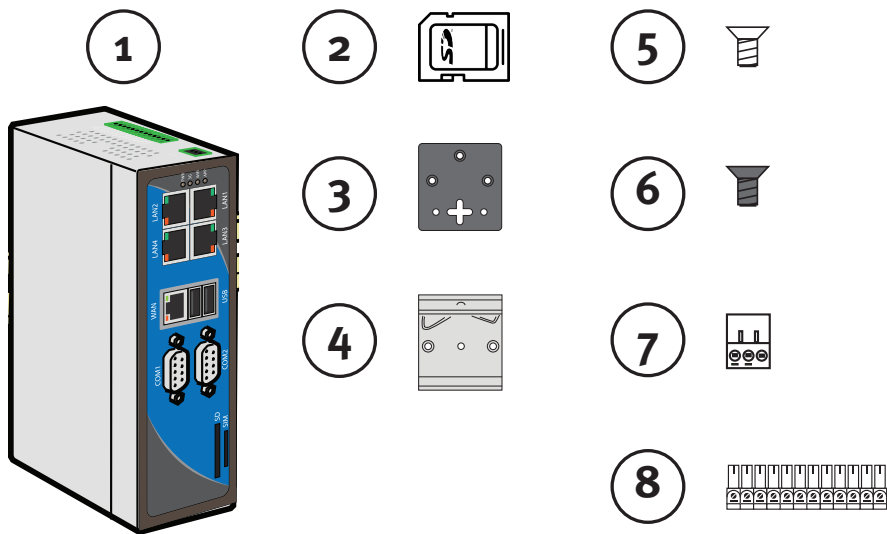
2.1 D-SERVER

The D-SERVER is the command central in a D-SERVER installation.

2.1.1 D-SERVER kit

The D-SERVER can be equipped with either 2 or 4 LAN ports (the 4 LAN-port version is used throughout this documentation) and only the LAN port 1 is used (see "2.1.2 Connectors on the D-SERVER" on page 9).

A standard D-SERVER kit contains the following parts.



Picture 1. Parts in a standard D-SERVER kit

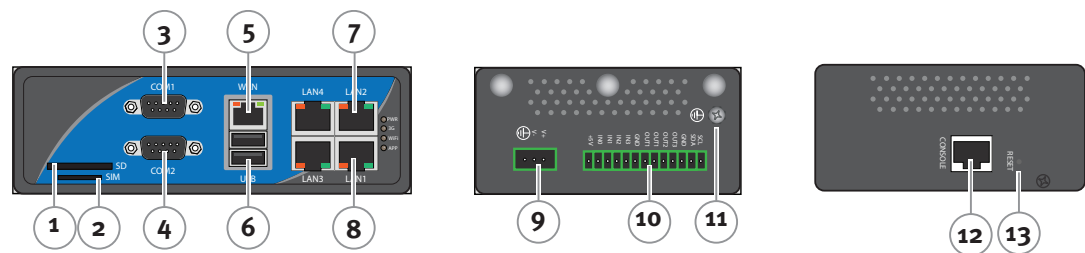
No	Part	Quantity
1	D-SERVER unit	1
2	SD Card (industrial grade) with OS and licenses	1
3	Wall brackets with key-hole slots	2
4	Clip for DIN-Rail mount	1
5	Metal coloured screws for DIN-mount rail clip	3
6	Black coloured screws for wall brackets	6
7	AC connector	1
8	DI/DO Port	1
-	AC adaptor (not displayed)	1
-	Quick Installation Guide (not displayed)	1

Table 2. D-SERVER kit parts denominations



The IP-address information on the D-SERVER label is NOT valid. Please refer to chapter "4 Accessing the D-SERVER".

2.1.2 Connectors on the D-SERVER



Picture 2. D-SERVER connectors (front and back)

No	Name	Description
1	SD card	Slot for Secure Digital (SD) memory card
2	SIM card	Not used
3	Port 1	RS-485 connector for the first serial bus
4	Port 2	RS-485 connector for the second serial bus
5	WAN port	Used to connect to a network. (Used with DHCP - dynamic IP-address). Port speed: 1Gbit.
6	USB ports	Used for ESPA v4.4.4 protocol
7	LAN 1	Used to connect directly to a PC. Pre-configured IP address: 192.168.253.254 Pre-configured gateway: 255.255.255.0. Port speed: 100Mbit
8	LAN 2	Not used
9	DC connector	Power supply
10	DI/DO Port	Not used
11	Ground	Ground screw
12	Console port	Cable ordered separately
13	Reset button	Not used

Table 3. D-SERVER connector denominations



The D-SERVER can be supplied with additional LAN ports (ports 3 and 4), but only WAN and LAN port 1 are used!

2.1.3 D-SERVER LEDs

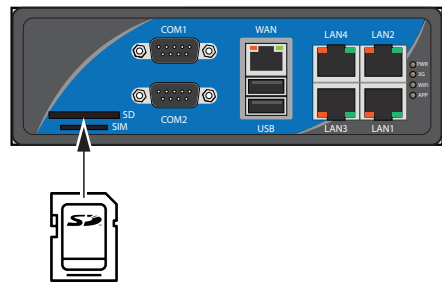
LED	Meaning
Power	Red - The D-SERVER is powered
3G	Not used
Wifi	Not used
APP	Green - The D-SERVER application is running

Table 4. D-SERVER LED indications

2.1.4 Insert a memory card

The SD card is of Industrial Grade (SLC) to ensure higher quality and better fault tolerance.

Ensure the power is switched off before inserting a memory card into the D-SERVER.



Picture 3. Inserting the SD card

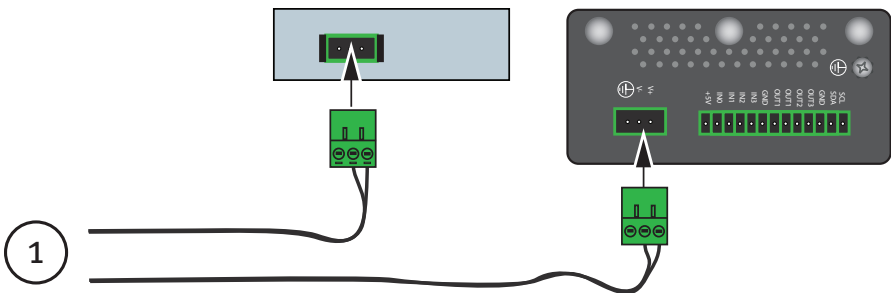
2.1.5 Connect the central power supply

Considerations

If you want to connect a PC to the D-SERVER through a router (dynamic IP-address/ DHCP), connect the WAN port on D-SERVER to the router before connecting the power supply for the D-SERVER. Otherwise the D-SERVER might not be accessible properly.

Connecting the power supply

1. The power supply (either a UPS or an AC/DC transformer) is represented by ①.
2. Connect a power cable between the power supply and the DC connection on the D-BOX.
3. Connect a power cable between the power supply and the DC connection on the D-SERVER.
4. Connect the power supply to the mains power line.

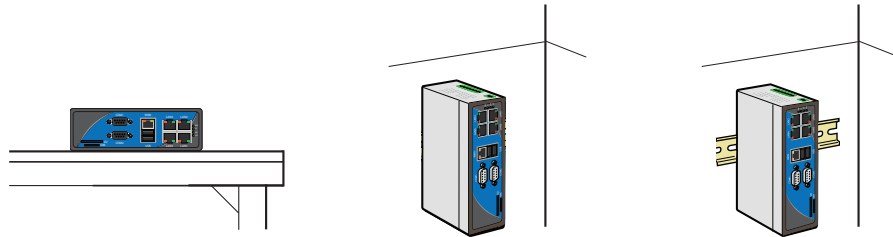


Picture 4. Power supply connection to D-Box and D-SERVER

2.1.6 Mounting the D-SERVER

The D-SERVER can be mounted in the following ways:

- Placed on a flat surface.
- Mounted with wall brackets.
- Mounted with a rail clip on a DIN-rail. The rail is mounted on a wall or in an equipment cabinet.



Picture 5. Mounting the D-SERVER

Considerations

Make sure that air can flow freely around the D-SERVER.

- Never mount the D-SERVER in a closed cabinet without adequate ventilation.
- Never mount the D-SERVER standing on a short side, this blocks the ventilation intake.

Mount the D-SERVER with wall brackets

5. Fit the wall brackets on the back on the D-SERVER and secure them with the supplied screws.
6. Mount two screws on the wall.
Make sure that these screws fit into the key-hole slots on the wall brackets.
7. Fit the key-hole slots onto the screws and hang the D-SERVER on them.

Mounting the D-SERVER on a DIN-rail

1. Mount the DIN-rail on a wall or similar.
2. Place the rail clip on the back of the D-SERVER, and secure the clip with the supplied screws.
3. Hook the lip of the rail clip onto the top of the DIN-rail.
4. Press the D-SERVER gently down until the rail clip snaps into place.

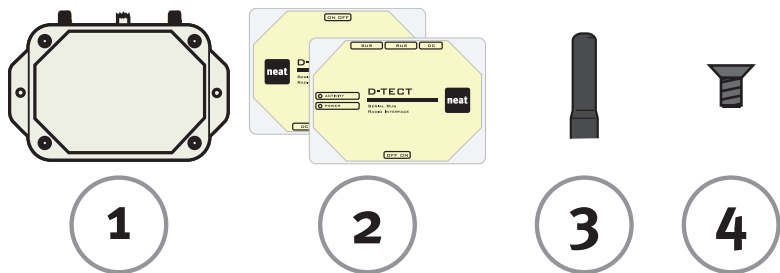
2.2 D-TECT

D-TECT is a radio device for the reception and distribution of alarms and events. While the D-SERVER is the central processing unit the D-TECT is a transceiver designed to receive incoming and distribute outgoing alarms and events. The information between the D-SERVER and the D-BOX is sent through a RS-485 cable(s) while the information between the D-BOX and D-TECT is sent through a network cable.



D-TECT requires a D-BOX to be supported in a D-SERVER system.

2.2.1 D-TECT Kit

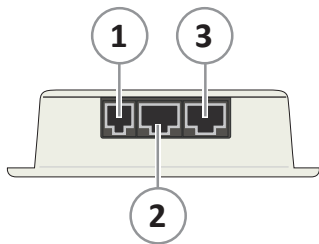


Picture 6. Parts in the D-TECT kit

No	Part	Quantity
1	D-TECT unit	1
2	Unit labels	2
3	Antennas	2
4	Cover screws	4

Table 5. D-TECT kit parts denominations

2.2.2 D-TECT connectors



Picture 7. D-TECT connectors

No	Name	Description
1	DC	Connector for the power supply (7-24 V _{DC}). (Not used when a central power supply is used).
2	BUS	Connector for the serial bus/central power supply.
3	BUS	Connector for the serial bus/central power supply.

Table 6. D-TECT connector denominations

The recommended cable between a D-BOX and D-TECT as well as between D-TECT and D-TECT is a an UTP Cat5e cable.

2.2.3 Set address for a D-TECT unit

Each D-TECT unit on the same serial bus must have a unique address. There are 15 possibilities: 1-9 and A-F (0 (zero) is forbidden). Two units on different serial buses can have the same address.

1. Remove the cover from the unit.
2. Turn the rotary switch to the desired address.



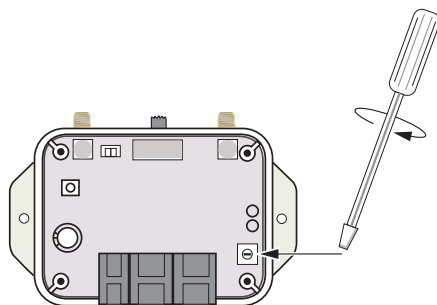
0 (zero) is forbidden!

3. Refit the cover and tighten the cover screws.

If the address for a unit is changed while powered on the unit must be powered off and powered on again for the new address to take effect.



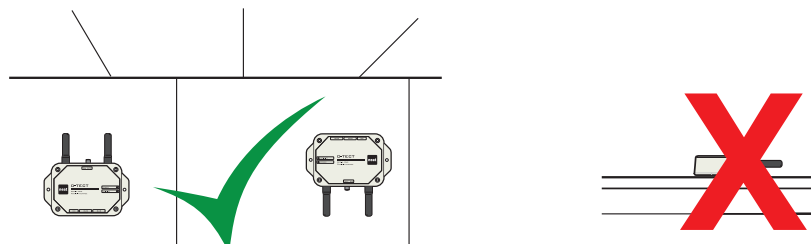
Note that configuring a D-TECT unit requires a NEAT Programming Unit (NPU) and the software D-TECT Programmer!



Picture 8. D-TECT address setting

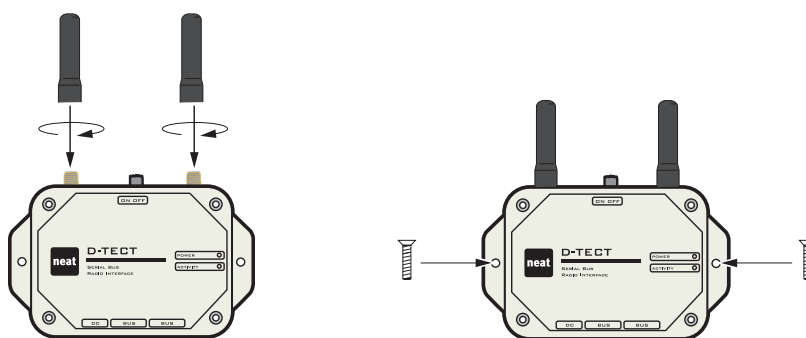
2.2.4 Mount the D-TECT units

D-TECT units must be installed in locations with good radio reception, for example high up on corridor walls. A unit can be placed with the antennas pointing up or down, but never horizontal, such as a lying on a table.



Picture 9. Mounting the D-TECT

1. Screw the antennas onto the antenna connectors.
2. Select the appropriate overlay if the unit is mounted with antennas up or down.
3. Mount the unit on the wall with screws.



Picture 10. Mounting a D-TECT unit with the antennas up

2.2.5 Power requirements

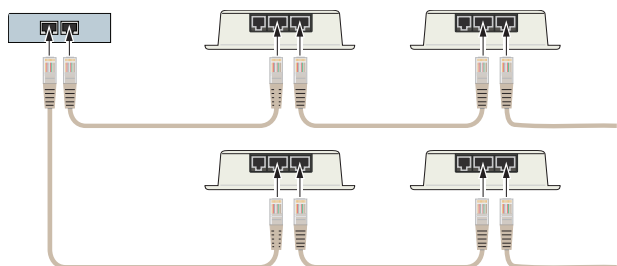
The D-TECT can be power supplied either one-by-one with an AC adaptor or centrally from a D-BOX (see below). When power supplied centrally only one cable is required per D-TECT since the BUS provides the units with both power and a communications bus.

The AC adaptor must supply voltage: $12V_{DC}$ and current: 1,5A. The nominal power consumption is 3W.

2.3 Connecting D-TECT units to the D-SERVER

2.3.1 Connecting D-TECT units to a bus

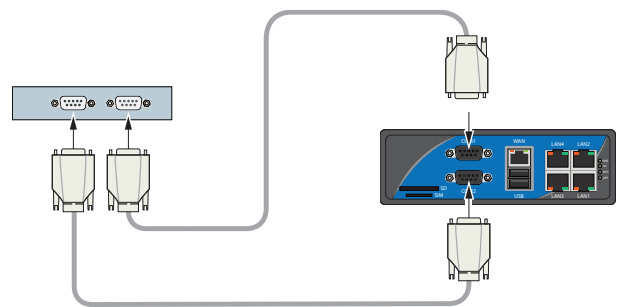
1. Connect the first D-TECT unit to the bus.
Connect a network cable between the D-Box and the BUS connector on the D-TECT unit.
2. Connect another D-TECT unit to the same bus.
Connect a network cable between the BUS connectors on the D-TECT units.
3. Repeat the previous step for each additional D-TECT unit you want to connect to the same bus.



Picture 11. Connecting D-TECTs to a bus using RJ11 cables

2.3.2 Connect serial buses to the D-SERVER

Connect DB9-cables between the RS-485 connectors on the D-SERVER and D-Box.



Picture 12. Connecting D-SERVER to a D-Box bus using DB9 cables

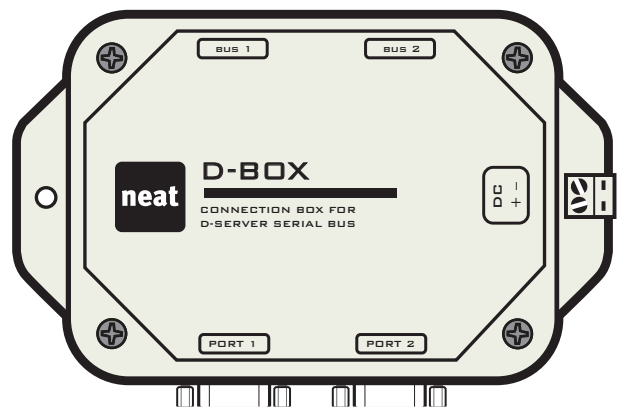
2.4 D-BOX

D-BOX is a unit that provides a central power supply to a chain of D-TECTs in a D-SERVER system. The D-BOX also provides communication channels between the D-SERVER and the connected D-TECTs.



Picture 13. D-BOX unit

2.4.1 D-BOX kit

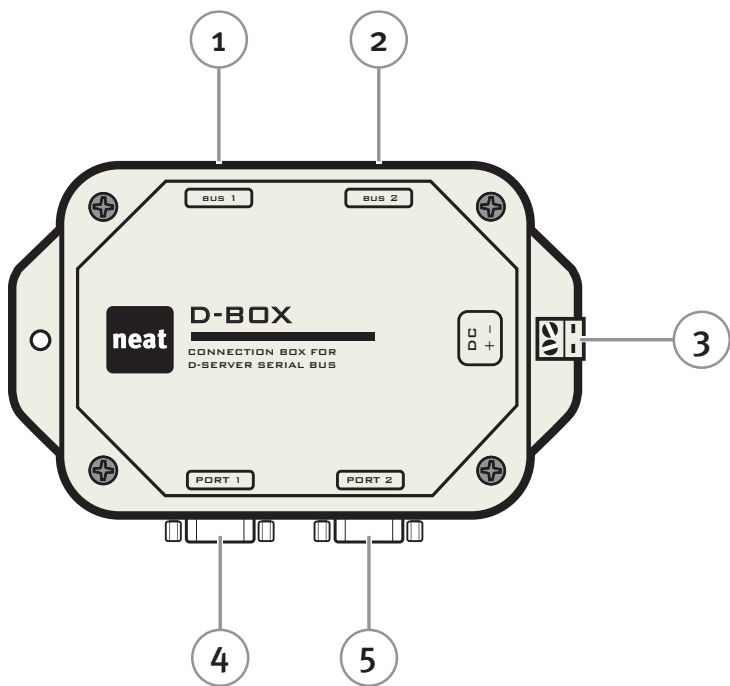


Picture 14. D-BOX unit

No	Part
1	D-BOX unit

Table 7. D-Box unit in kit

2.4.2 D-BOX connectors



Picture 15. D-BOX connectors

No	Denomination
1	Bus 1
2	Bus 2
3	DC IN
4	Port 1
5	Port 2

Picture 16. D-BOX connector denominations

2.5 D-TECT IP

The D-TECT IP is an IP-version of the D-TECT equipped with an Ethernet port (RJ45) enabling the unit to be installed in an existing LAN.
The D-TECT IP is pre-configured with the static IP address 192.168.0.1. This can be changed from the unit interface.

2.5.1 D-TECT IP Kit



Picture 17. D-TECT IP kit

No	Part
1	D-TECT IP unit

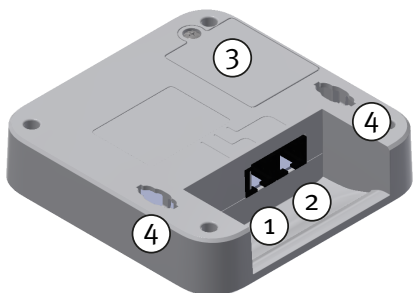
Table 8. D-TECT part denominations

The LED on the D-TECT IP indicates the connection status.

LED indication	Meaning
Fixed	The D-TECT is powered on and has a valid TCP connection with the D-SERVER.
Blinking	The D-TECT is powered on but has no valid TCP connection with the D-SERVER.

Table 9. D-TECT IP LED indications

2.5.2 D-TECT IP connectors



Picture 18. D-TECT IP connectors

No	Denomination
1	AC IN
2	Ethernet (RJ45)
3	Compartment with reset button
4	Keyholes (x2) for wall mounting

Table 10. D-TECT IP connector denominations

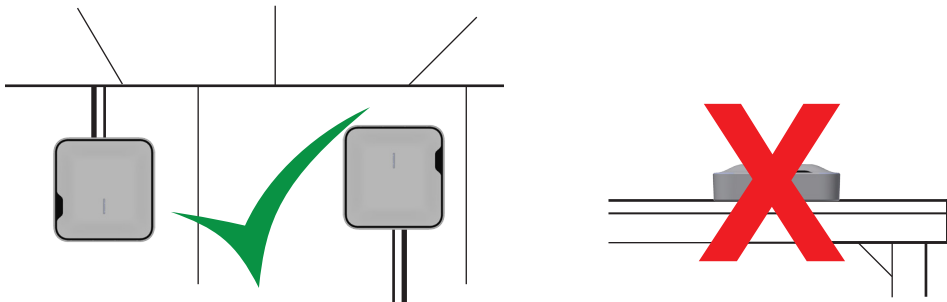
2.5.3 Power requirements

D-TECT IP can be power supplied either by a AC adaptor or by PoE (Power over Ethernet) class 2, mode A & B.

The AC adaptor must supply voltage: $7.5V_{DC}$ and current: 0.45A. Max power consumption is 3.3W. For recommended AC adaptors, see "Appendix G Recommended NEAT AC adaptors".

2.5.4 Mounting D-TECT IP units

D-TECT IP units must be installed in locations with good radio reception, for example high up on corridor walls. A unit can be placed up or down but never horizontal such as a lying on a table.



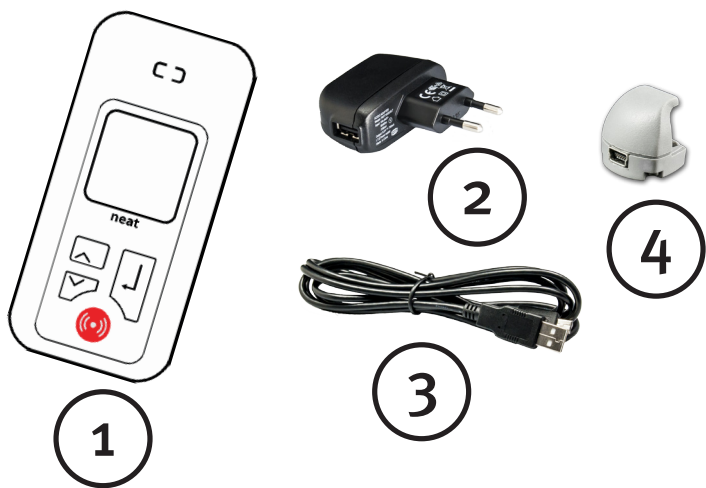
Picture 19. Mounting the D-TECT IP

1. Insert the ethernet cable (and if required a DC cable).
2. The unit starts up.
3. Hang the unit in the slots on the backside.

2.6 D-TREX2G

D-TREX2G is a hand held alarm receiver for easy and clear alarm reception and acknowledgement.

2.6.1 D-TREX2G Kit



Picture 20. D-TREX2G Kit parts

No	Part
1	D-TREX2G unit
2	AC adaptor
3	USB cable A - MiniUSB
4	Mini USB charging adaptor

Table 11. D-TREX2G kit part denominations



Configuring a D-TREX2G requires the software D-TREX2G Programmer (no NPU is required).

2.7 D-CALL IP

D-CALL is an IP connected care phone enabling voice communication in a D-SERVER system and has all the functionality of a regular care phone i.e. it can function as a hub for radio equipment in the user’s vicinity, e.g. a DOOR alarm, PIR for movement detection etc.

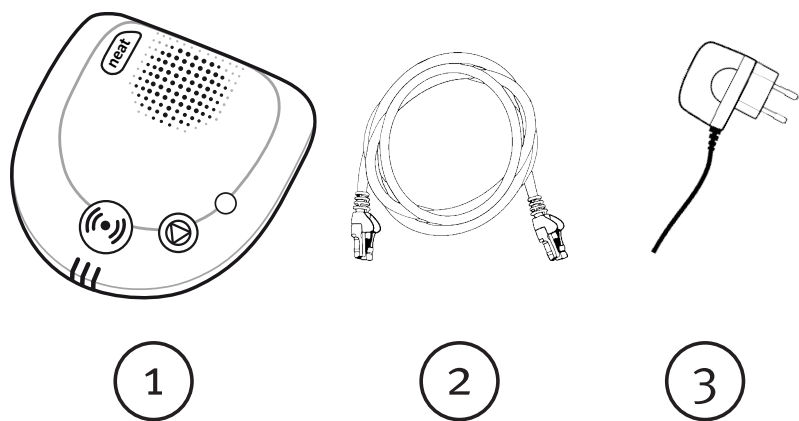
D-CALL has no built in logic and is designed to only receive incoming and distribute outgoing alarms and events, i. e. it acts as a tranceiver but with somewhat weaker readio coverage than D-TECT/D-TECT IP).

For extended functionality there is a version with GSM possibility available, the D-CALL IP/GSM.



Note that configuring a D-CALL unit requires a NEAT Programming Unit (NPU) and the software NEO IP/GSM Programmer.

2.7.1 D-CALL IP/GSM kit

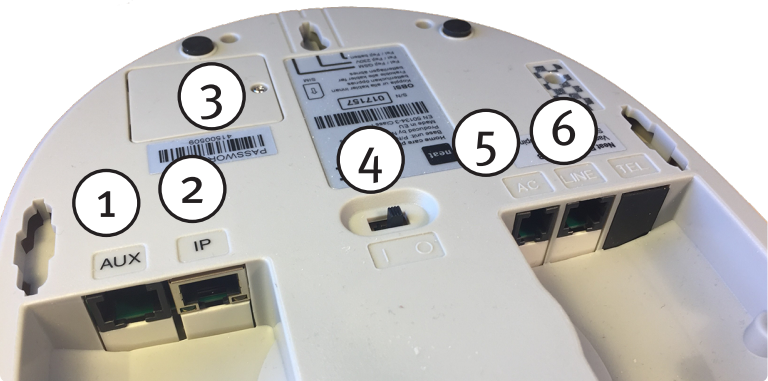


Picture 21. D-CALL kit contents

No	Part
1	D-CALL IP unit
2	LAN cable
3	AC Adaptor

Table 12. D-CALL IP kit part denominations

2.7.2 D-CALL IP/GSM connectors



Picture 22. D-CALL connectors

No	Denomination
1	Aux (Not used)
2	IP (Ethernet, RJ45)
3	Accumulator cover (SIM holder inside)
4	Power switch
5	AC (RJ11, 4/4)
6	Line (Only used for debugging)

Table 13. D-CALL IP connector denominations

The front LEDs on the D-CALL unit blinks (2s On/2s OFF) to alert the user of problems with the unit.

Indication	Reason
Green	No internet connection
Yellow	Weak accumulator
Red	Mains failure and/or faulty accumulator
All (Green, Red, Yellow) (fast blink 0.5s ON/0.5s OFF)	Radio interference

Table 14. D-CALL unit front LED indications

The Alarm button LED indicates unit actions/events.

Indication	Action/Event
Fixed	Normal mode (configurable)
Fast blink (0.5s ON/0.5s OFF)	Ongoing dialling/conversation
Blink (1s ON/1s OFF)	Waiting to make a call
Slow blink (2s ON/2s OFF)	Call failed

Table 15. Alarm button indications

2.8 Mounting D-CALL IP/GSM units

1. Ensure the unit powered off by putting the power switch to position “0”.
2. If required, insert the SIM card.
3. Connect the Ethernet cable into the connector marked “IP”.
4. Connect the AC adaptor to the connector marked “AC”.
5. Power on the unit by putting the power switch to position “1”.
6. Put the D-CALL IP/GSM on a table or side board. Or hang it on a wall by using the key hole slots on the back.



Normal installations usually run the D-CALL over IP (no GSM) or over GSM (no IP).

2.9 IP-DECT components

Spectralink IP-DECT components are suitable for small and medium installations. By default the IP-DECT Server 400 can manage up to 12 handsets and 6 channels (i.e. 6 simultaneous calls) and it is possible to add extra licenses extending the communication capability with up to 30 handsets and 12 channels.

Combined with IP-DECT Base stations and repeaters the cover range can be extended to fit most needs.

For more information on Spectralink D-TECT IP products, please refer to Spectralink product page: <http://www.spectralink.com/products/dect/infrastructure>

SPECTRALINK IP-DECT SERVER 400



Scalable IP-DECT solution that can grow and develop with your business

The Spectralink IP-DECT Server 400 is an excellent choice for small to medium-sized businesses (SMBs) that want a simple and flexible wireless solution. The scalable SIP solution supports up to 30 wireless users and 12 voice channels.

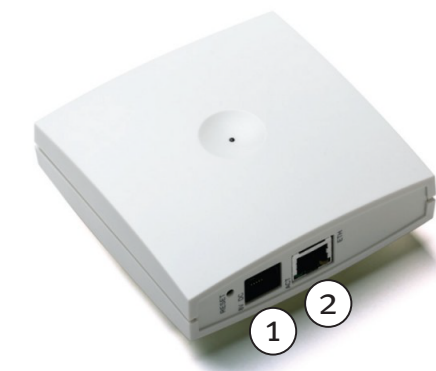
The Spectralink IP-DECT Server 400 can be deployed as a single-cell or a multi-cell solution. This scalability ensures that the Spectralink IP-DECT Server 400 can grow with your business when needed. Moreover the solution can be installed in multiple locations.

Upgrade the Spectralink IP-DECT Server 400 by adding license keys. With the license keys you can design the solution to support your exact business requirements.

Picture 23. Spectralink IP-DECT Server KWS400

2.9.1 IP-DECT Server 400

The IP-DECT Server 400 is a necessary component in a speech system since it works like a bridge between the DECT handsets and the D-SERVER SIP server thus enabling voice communication between D-CALLS and DECT handsets or SIP messages between the D-SERVER and DECT handsets in the D-SERVER system.



Picture 24. Connectors on IP-DECT Server 400

No	Name	Description
1	IN DC	DC connector for power supply (RJ11)
2	ETH	Ethernet (LAN) connector (RJ45)

Table 16. IP-DECT Server 400 connector denominations

2.9.2 Power requirements

The IP-DECT Server 400 can be power supplied either from an AC adaptor or via PoE Class 1.

2.9.3 Spectralink IP-DECT Base station

To add coverage range to the IP-DECT Server 400 up to three IP-DECT Base stations can be added.

SPECTRALINK IP-DECT BASE STATION



Over the air call signaling between your DECT server and handsets

The Spectralink IP-DECT Base Station controls the traffic in the air and provides the link between Spectralink wireless handsets and Spectralink DECT Servers. The Spectralink IP-DECT Base Station interoperates with the entire Spectralink DECT Server portfolio.

The Spectralink DECT Servers power the Spectralink IP-DECT Base Stations through standard Power over Ethernet (PoE) LAN cables or an external power supply can be used.

Each Spectralink IP-DECT Base Station has 11 speech channels and covers a circular area between 66 and 985 feet (20-300 meters) in diameter. Because coverage depends on location specifics such as building materials and interference, a site assessment before installation helps to determine the proper number and placement of base stations.

Picture 25. IP-DECT Base station

More information is found here: <http://www.spectralink.com/products/dect/infrastructure/spectralink-ip-dect-base-station>

2.9.4 Spectralink DECT Repeater

To further add coverage the IP-DECT Server 400 and each IP-DECT Base station can connect to three DECT repeaters each.

More information is found here: <http://www.spectralink.com/products/dect/infrastructure/spectralink-dect-repeater>

SPECTRALINK DECT REPEATER



Building block that extends the coverage area in a DECT solution

The Spectralink DECT Repeater is a building block to be used to extend the coverage area in a DECT solution. The Spectralink DECT Repeater does not increase the number of traffic channels, however provides a larger physical spreading of the traffic channels and thereby increases the coverage area established with the Spectralink DECT Base Stations. Spectralink DECT Repeaters are mainly used in areas with limited traffic.

The Spectralink DECT Repeater is available with either 2 or 4 speech channels. It is wireless and does not need physical connection to the Spectralink DECT Server, making it very easy to install. The Spectralink DECT Repeater can be supplied with an external directional antenna, which makes it possible to create radio coverage in a remote area without cabling to the rest of the installation. Power supply is required.

Picture 26. DECT Repeater

Depending on need and request different infrastructures can be created:

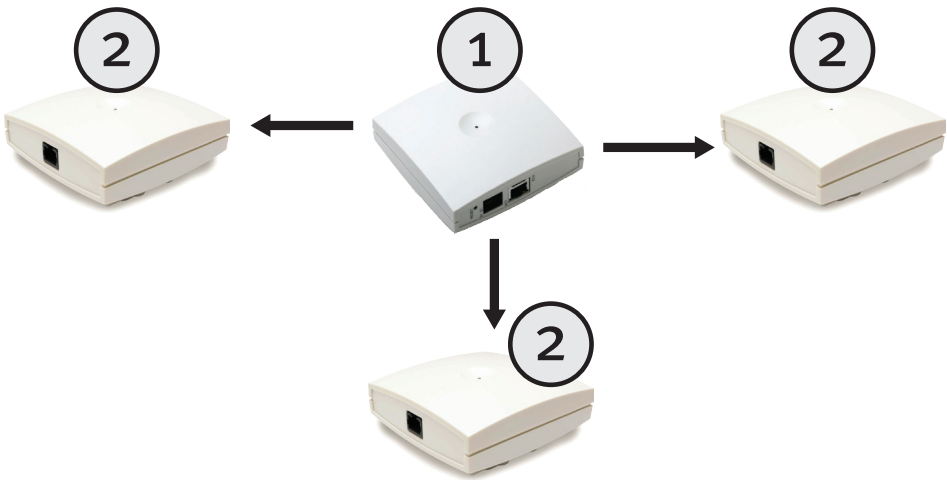
- Single cell
- Multi cell

2.9.4.1 Single cell structure

A single cell consist of one (1) IP-DECT Server 400 and it is possible to connect up to three repeaters to the IP-DECT Server with 2 (or 4, depending on license) channels to each repeater.

They can be connect in a star pattern or in a chain pattern.

Single cell star pattern

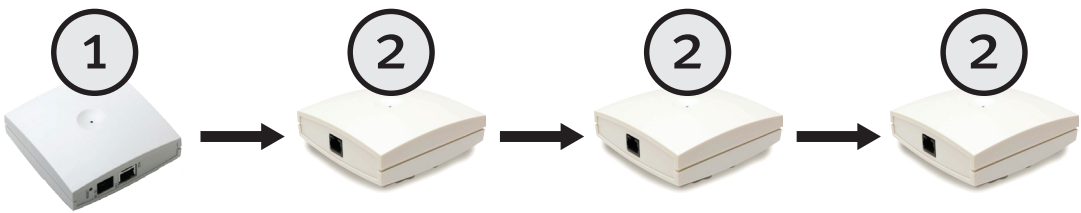


Picture 27. IP-DECT KWS 400 in a single cell star pattern setup

No	Denomination
1	IP-DECT Server 400
2	DECT Repeater

Table 17. Single cell star pattern setup parts

Single cell chain setup



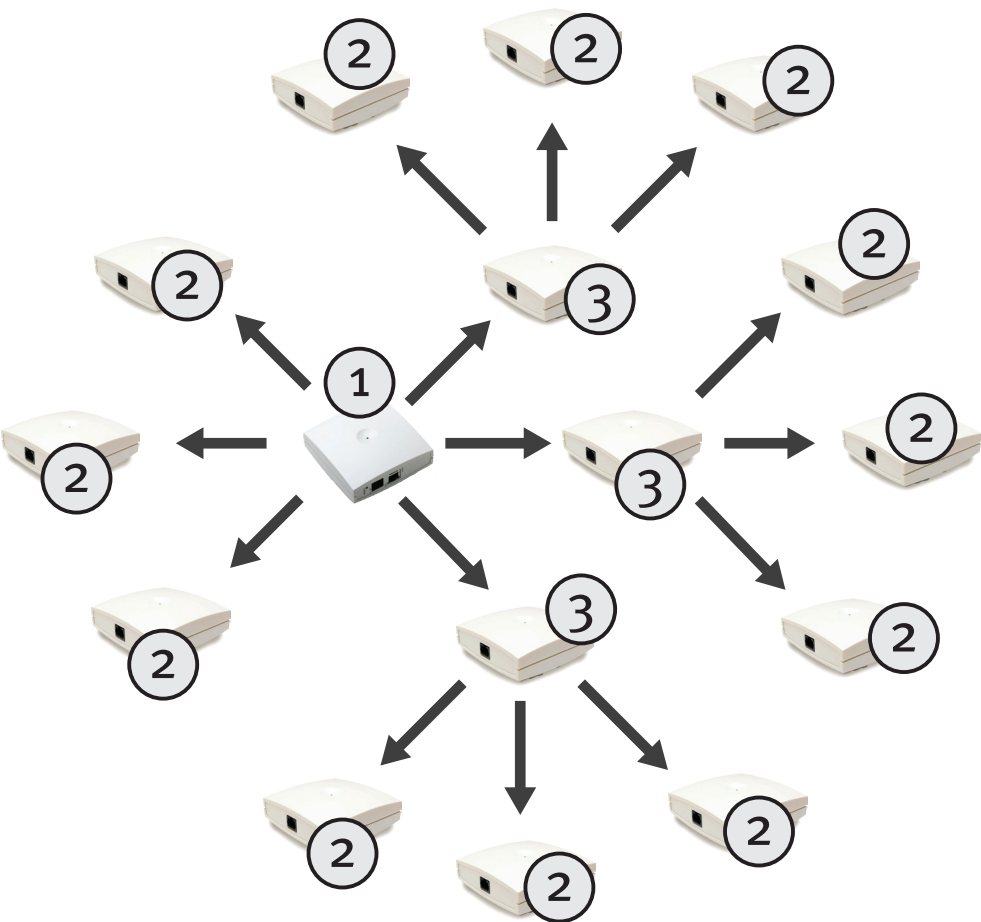
Picture 28. D-DECT Server 400 in a single cell chain pattern setup

No	Denomination
1	IP-DECT Server 400
2	DECT Repeater

Table 18. Single cell chain pattern sedtup parts

2.9.4.2 Multi cell structure

The multi cell structure allows to connect up to 3 base stations to an IP-DECT Server 400 and to each base station it is possible to connect up to 3 repeaters, thus creating a configuration with up to 12 repeaters (since it is also possible to connect repeaters directly to the IP-DECT Server 400).



Picture 29. Multi cell configuration

No Denomination	
1	IP-DECT Server 400
2	IP-DECT Base station
3	DECT Repeater

Table 19. Multi cell pattern setup parts

2.9.5 Extra licenses

By default a IP-DECT Server 400 can manage 12 handsets and 6 channels (simultaneous calls). To extend the functionality additional licenses are required.

- License up to 30 handsets and 12 channels in a single cell structure
- Multicell structure license
- Combined license (12 channels + 30 handsets + Multicell License)

2.9.6 Larger systems

For larger system Spectralink offers the IP-DECT Server 6500 which supports 1024 IP-DECT Base stations and 4096 handsets.

SPECTRALINK IP-DECT SERVER 6500



SIP server for larger businesses and enterprises

The Spectralink IP-DECT Server 6500 solution consists of a number of different infrastructure elements, which can be customized in accordance with your exact telephony needs today and easily be adjusted to suit any future changes in your organization.

Seamless handover between base stations, extensive radio coverage, messaging to handsets and value-added applications are just some of the benefits of the Spectralink IP-DECT Server 6500.

The Spectralink IP-DECT Server 6500 can be expanded with up to 1,024 Spectralink IP-DECT Base Stations and supports up to 4,096 wireless users. This extremely scalable solution is ideal for fast-growing organisations and enterprise environments. A flexible license option allows you to only pay for the users you need.

Picture 30. IP-DECT Server 6500

More information is found here: <http://www.spectralink.com/products/dect/infrastructure/spectralink-ip-dect-server-6500>

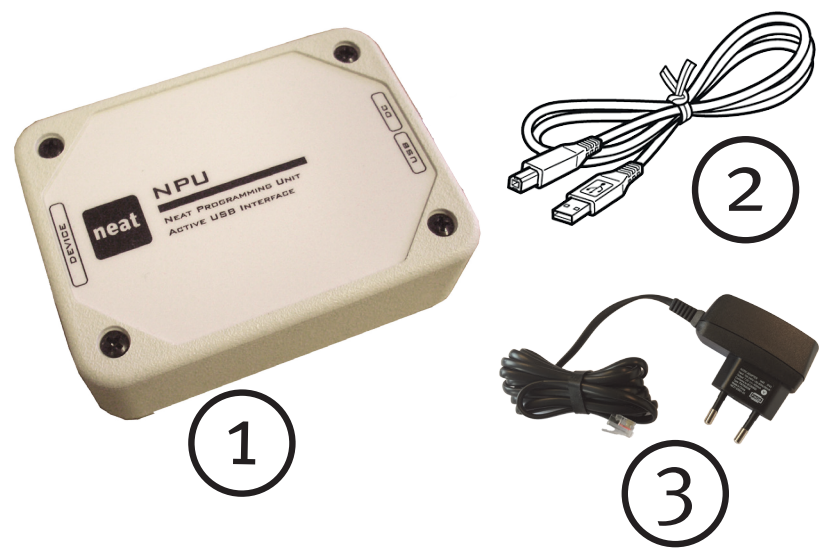
2.10 DECT handsets

The D-SERVER system supports the Spectralink 7722 DECT handset.

2.11 NPU

The NPU is a programming unit for configuration of several NEAT units, e.g. SMILE, ATOM, D-ATOM, D-TECT and D-CALL units.

2.11.1 NPU Kit

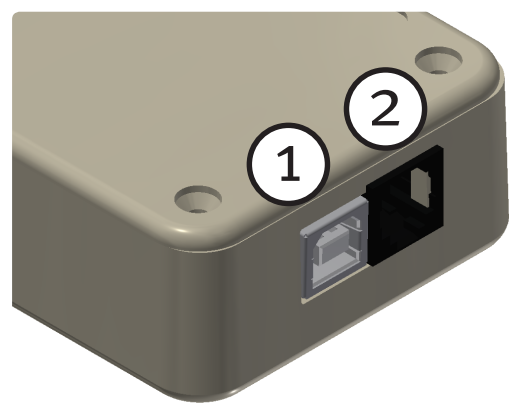


Picture 31. NPU kit parts

No	Part
1	NPU unit
2	USB A-B cable
3	AC adaptor

Table 20. NPU kit part denominations

2.11.2 NPU connectors



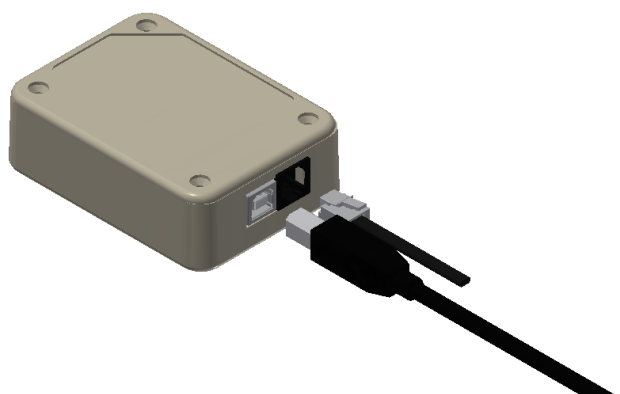
Picture 32. NPU connectors

No	Denomination
1	USB B female connector
2	AC (RJ11 female) connector

Table 21. NPU connector denominations

Note that there is also a cable with a mounted RJ11 male socket on the NPU and this is used for configuring D-CALL, D-TECT etc..

2.11.3 NPU mounting



Picture 33. Connecting USB and AC cable

1. Ensure the Windows drivers are installed on the local computer.
2. Connect the AC adapter to the AC connector.
3. Connect the USB cable to a USB port on the computer.
4. The NPU is now ready to be used for configuring units.

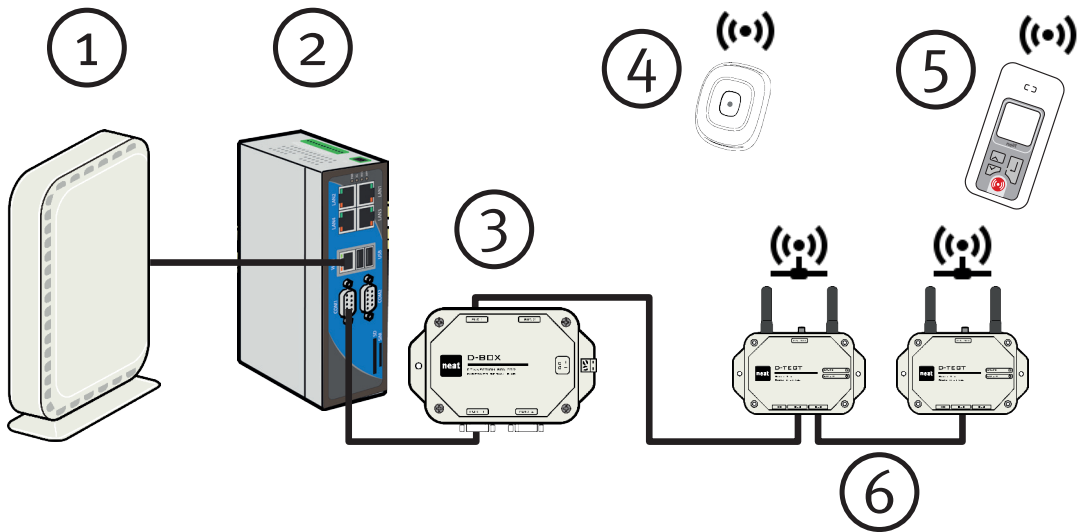
3 System setup

3.1 Preface

The following examples are common scenarios where a D-SERVER can be successfully used.

There are many more scenarios not covered in this chapter, but the intention is to get you started. The examples can easily be modified to support your requirements.

3.2 Scenario I



Picture 38. Scenario I with a D-BOX and D-TECTS

This scenario will cover how-to configure a D-Server with D-TREX 2G alarm receivers. A D-BOX together with two D-TECT's will be used as transceivers. The D-TECT's will communicate with the D-Server over a RS-485 bus. The end user will be equipped with a SMILE-STD button.

- Up to 30 D-TECT's can be installed.
- Max cable length per bus is limited to 1000 meters.
- The router is mandatory because of the DHCP server functionality.

3.2.1 Hardware requirements

#	System component	Quantity
1	Router	1
2	D-SERVER	1
3	D-BOX	1
4	SMILE STD	1
5	D-TREX2G	1
6	D-TECT	2

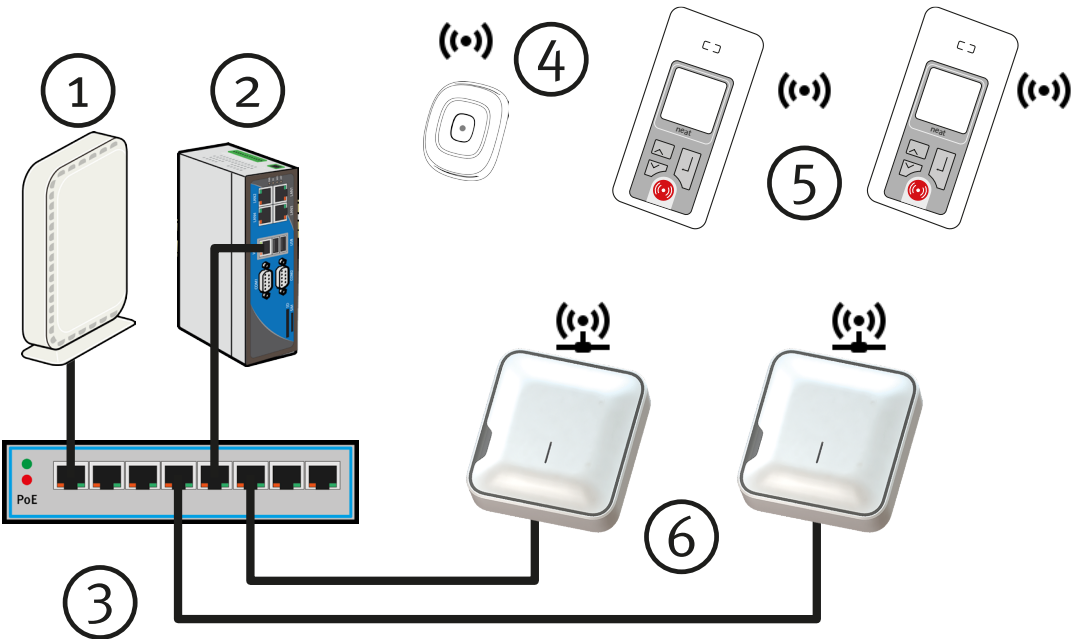
Table 23. Required scenario components

3.3 Scenario II

Scenario II is a repetition of Scenario I, but in this scenario, we will replace the D-BOX and D-TECTs with two D-TECT IPs. D-TECT IP is IP-based and one of several benefits is that you are not limited to a RS-485 bus to communicate with the D-SERVER. In practice this means that a D-SERVER and D-TECT IPs can be located in completely different locations as long as the devices are connected by a stable internet connection.

However, this scenario covers a local area network installation.

- D-TECT IP can be powered by PoE or a power adapter.
- An unlimited number of D-TECT IPs can be installed.
- You have the option to install the D-SERVER and D-TECT IPs in different locations as long as the devices can communicate with each other.



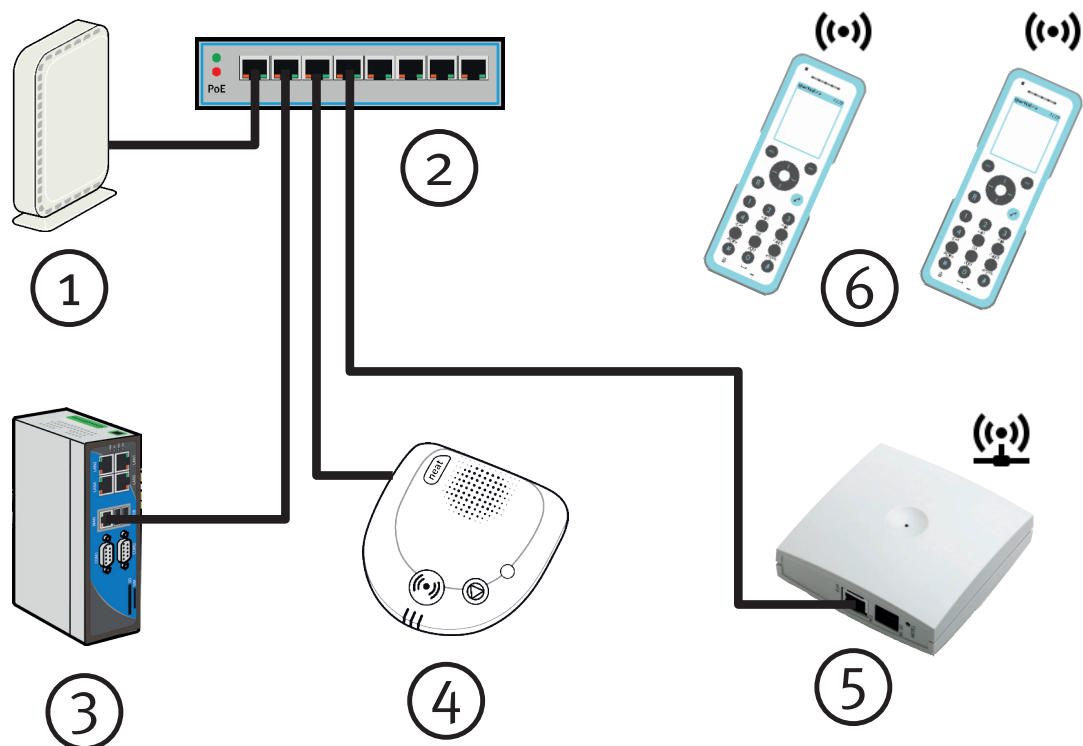
Picture 39. Scenario II with D-TECT IP and D-TREX2G

3.3.1 Hardware requirements

#	System component	Quantity
1	Router	1
2	D-SERVER	1
3	PoE Switch	1
4	SMILE STD	1
5	D-TREX2G	2
6	D-TECT IP	2

Table 24. Required scenario components

3.4 Scenario III



Picture 40. Scenario III with D-CALL, IP-DECT and Spectralink handsets

The demand of a cheap speech solution will be covered in this example. The example will introduce you to the built-in SIP server in the D-SERVER as well as the IP-DECT and DECT handsets. The end user will have an IP-based care phone (D-CALL) in their room.

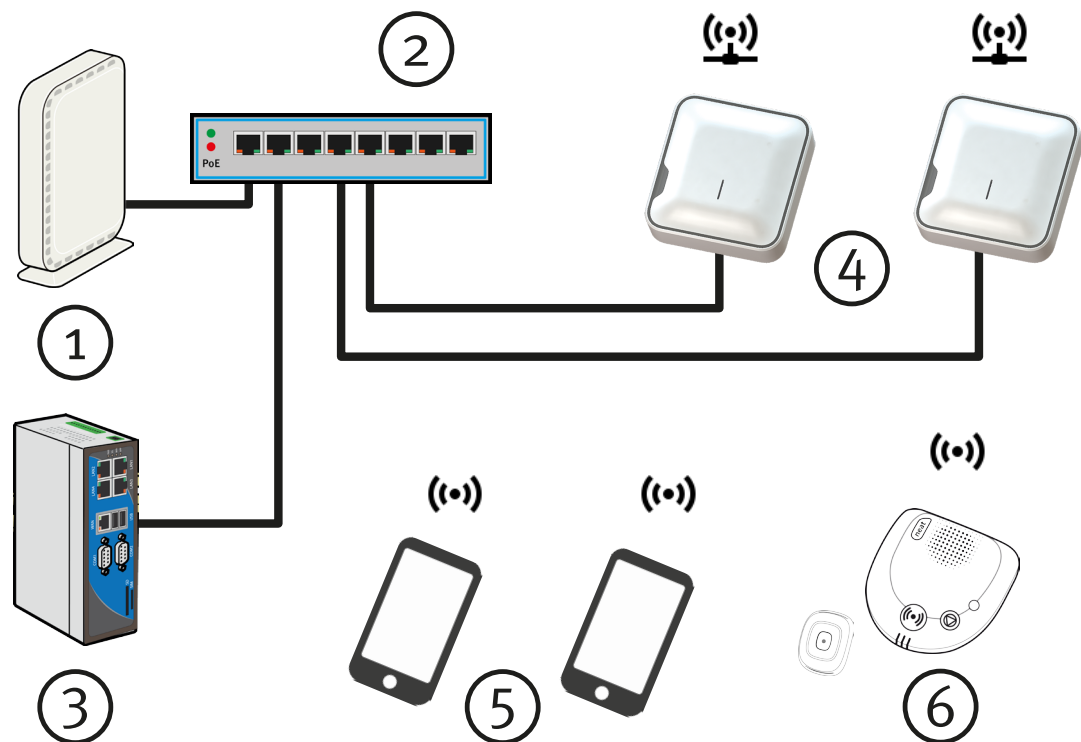
- All DECT handsets will receive a call when an alarm is triggered.
- The DECT handsets will stop ringing when someone answers.
- The D-CALL communicates over IP.
- The NPU is required to configure the D-CALL.
- The built-in SIP server requires a separate license.

3.4.1 Hardware requirements

#	System component	Quantity
1	Router	1
2	PoE Switch	1
3	D-SERVER	1
4	D-CALL	1
5	IP-DECT	1
6	IP-DECT Handset	2

Table 25. Required scenario components

3.5 Scenario IV



Picture 41. Scenario IV with D-TECT IP, D-CALL and smartphones

Another speech solution will be covered in this example. The nurses are equipped with cell phones and the end users with a D-CALL in their room. If a nurse is busy in a call the D-SERVER will try another number. The communication between the staff and end user is done over GSM.

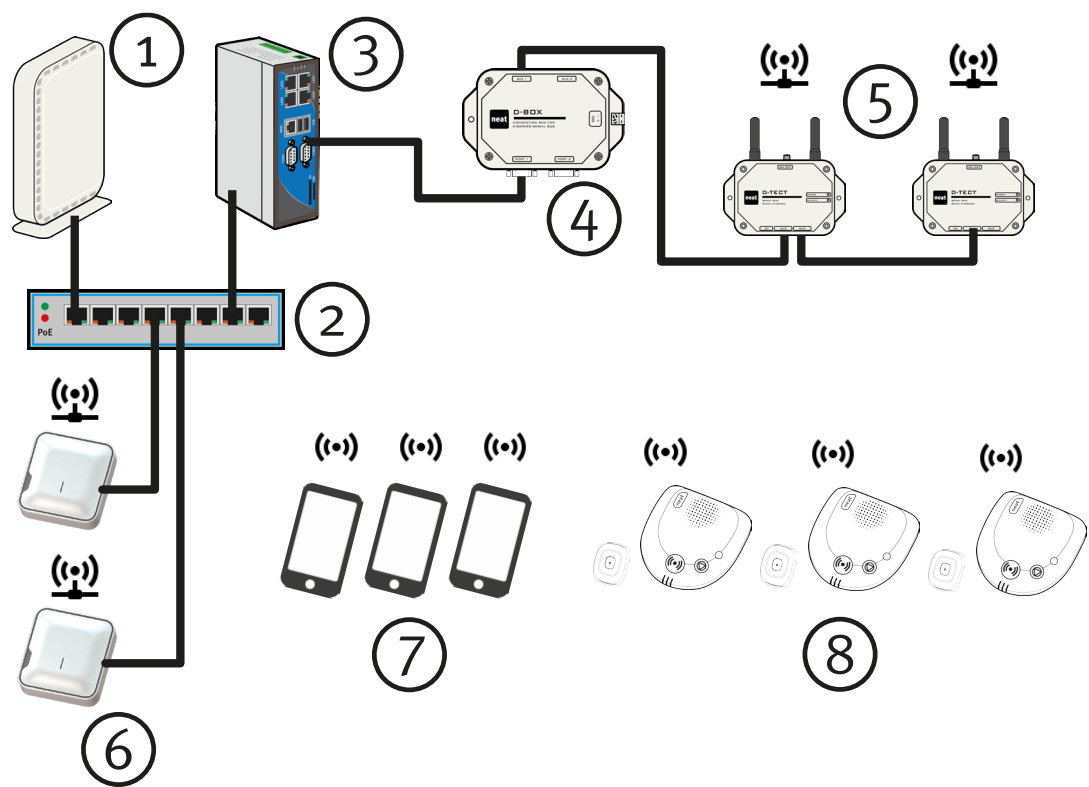
- No need for a SIP license but smartphones and D-CALLs requires a SIM card.

3.5.1 Hardware requirements

#	System component	Quantity
1	Router	1
2	PoE Switch	1
3	D-SERVER	1
4	D-TECT IP	2
5	Smartphone	2
6	D-CALL/SMILE-STD	1

Table 26. Required scenario components

3.6 Scenario V



Picture 42. EN

Scenario V is a repetition of Scenario IV but in this scenario we mix D-TECTs and D-TECT IPs and equip the end users with a SMILE-STD. The system has also grown in terms of devices.

- It's possible to mix D-TECT and D-TECT IP in a D-SERVER installation.

Hardware requirements

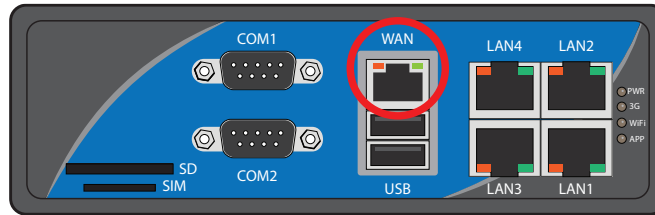
#	System component	Quantity
1	Router	1
2	PoE Switch	1
3	D-SERVER	1
4	D-BOX	1
5	D-DECT	2
6	D-TECT IP	2
7	Smartphone	3
8	D-CALL/SMILE-STD	3

Table 27. Required scenario components

4 Accessing the D-SERVER

4.1 Access the D-SERVER from a network

Accessing the D-SERVER out of the box is possible in two ways. If you choose to connect the D-SERVER directly to a network, you must use the WAN port. The reason you must use the WAN port is because the port is pre-configured to receive an IP-address from a DHCP server.

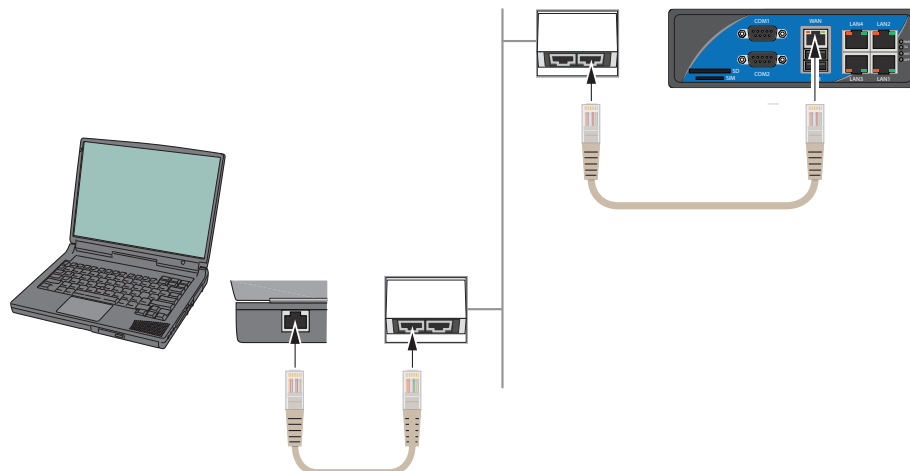


Picture 43. WAN Port on D-SERVER

Once the D-SERVER is connected to a network it will obtain an IP Address from the DHCP server.

4.1.1 Connecting a D-SERVER to a existing LAN

1. Connect a network cable between the PC and the network socket .
2. Connect a network cable between the D-SERVER (port WAN) and the network socket.



Picture 44. Connecting the D-SERVER directly to a network

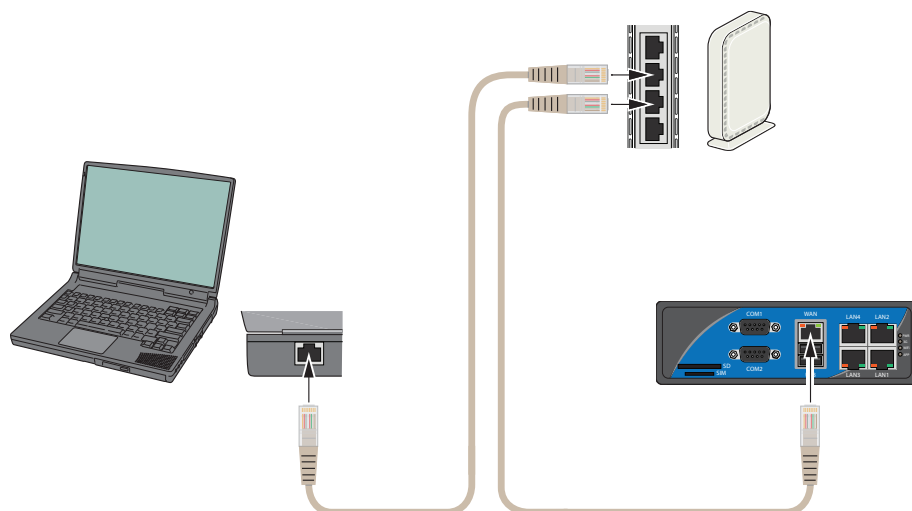


The example assumes a DHCP server is running in the network.

To figure out which IP address have been assigned to the D-SERVER contact your local administrator.

4.1.2 Connecting a D-SERVER using a router

1. Connect a network cable between the PC and any of the LAN ports in the router.
2. Connect a network cable between the D-SERVER (port WAN) and any of the LAN ports the router.



Picture 45. Connecting the PC and D-SERVER to a router

To figure out which IP address have been assigned to the D-SERVER login to the router and view connected devices or contact your local administrator.

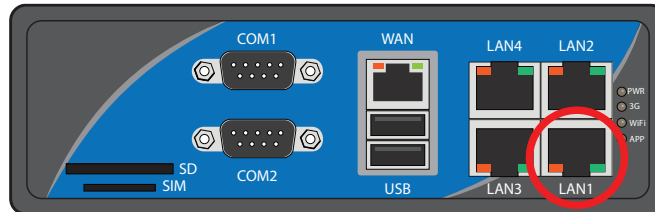


The D-SERVER WAN port can be configured to a static IP address from the D-SERVER web interface, see "4.1.4 Web interfaces".

4.1.3 Direct connection between a PC and a D-SERVER

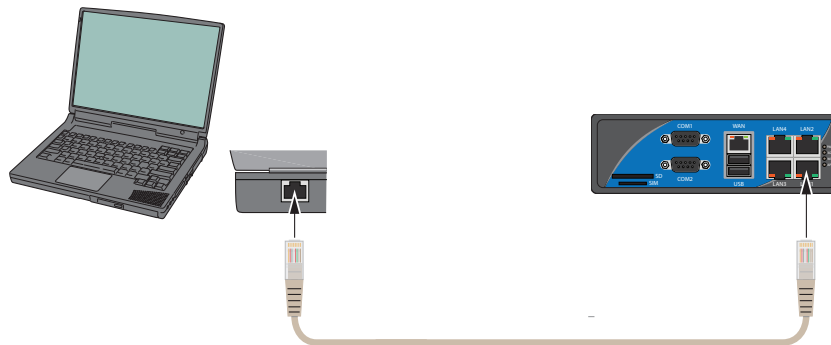
The second way to access the D-SERVER out of the box is through a direct network connection. The D-SERVER supports auto-negotiation (MDI/MDIX) so there is no need to think about using a cross cable or straight cable.

Before connecting a cable to the D-SERVER LAN1 port the computer's network card must be configured manually. NEAT recommends that you configure the IP address to 192.168.253.100 and netmask to 255.255.255.0. It is not necessary to configure a gateway.



Picture 46. LAN1 port on D-SERVER

Once the network configuration is ready, connect a network cable between the PC and D-SERVER (LAN1 port).



Picture 47. Direct connection to a PC

To access the D-SERVER with the pre-configured IP address type in the following URL (web address) **http://192.168.253.254:48465** into your browser.



LAN1 port is pre-configured out of the box to IP Address 192.168.253.254.

4.1.4 Web interfaces

The D-SERVER has two web interfaces and depending on selected port, you will either access the nurse or administrator web interface.

Interface	Port
Nurse web interface	80
Administrator web interface	48465

Table 28. Nurse and web administrator interface ports



- Status
 - Active alarms
 - Alarm log
 - Alarm receivers
 - Connected devices
 - Find user
- Alarm configuration
- Administration
- Reload configuration



- Status
 - Active alarms
 - Alarm log
 - Alarm receivers
 - Connected devices
 - Find user
- Alarm configuration
- Door opening
- System settings
- Administration
- Reload configuration

Picture 48. Nurse web interface

Picture 49. Administrator web interface



The nurse web interface has fewer configurable options than the administrator web interface.

The different web interfaces have different default login credentials.

Interface	Username	Password
Nurse web interface	user	alarm
Administrator web interface	sysadm	neat

Table 29. Default login credentials

This Technical Handbook will refer to the administrator web interface from now on and onwards.

To access the Administrator web interface, type in the following URL:
http://<server-ipaddress>:48465 (replace <server-ipaddress> with the D-SERVER's IP Address).

4.1.5 Licences

A few thing needs to be considered when ordering a D-SERVER License:

How many devices will be added to the system?	A device is referred to as an alarm source.	Options:	<ul style="list-style-type: none"> o (zero) up to 60 up to 135 up to 180 unlimited
Is SIP required in the system?		Options:	Yes/No
How many SIP devices will be added to the system?	A SIP device is referred to as a SIP account.	If yes:	<ul style="list-style-type: none"> up to 20 up to 40 >40 - (1) one licence per device

Table 30. D-SERVER and SIP license options



When ordering new D-SERVER with a license the license is preinstalled on the SD card.

If you need to upgrade your license, you will need to attach your license file in an email and send it to your local NEAT office. See "4.2.2 Backup License" for more information how to save your license.

4.1.6 Upload License

If you upgrade the memory card to a new D-SERVER release, you may need to re-upload the license again.

Uploading a license is done from **Administration > License information**.

neat

License information

Licensed to	Alarm source limit	SIP server enabled	SIP accounts limit	License valid	Serial Number
	∞	Yes	∞	No	550100989

Update license

Picture 50. License information web page



Besides uploading the license file when you upgrade/switch D-SERVER release, you may need to use the upload license feature when you transfer a license to another D-SERVER.

Transferring a license from one D-SERVER to another requires that you contact your local NEAT office.

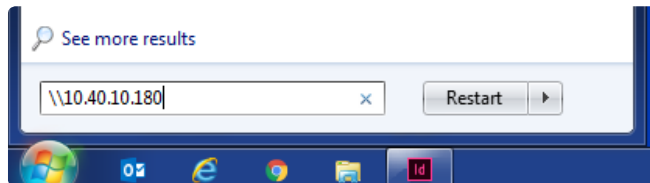
Never throw away a defect D-SERVER since your local NEAT office will request that you send in the defect unit before they can grant a new license without fees.

4.2 Samba

D-SERVER supports Samba.

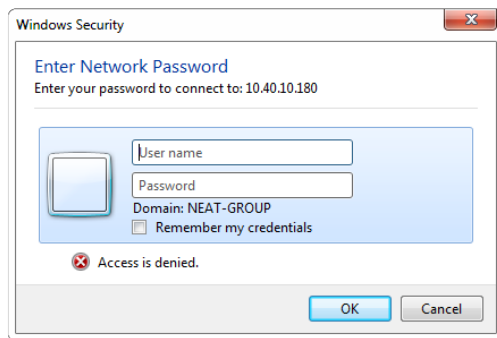
To access the D-SERVER through Samba click the Windows Start button and type: `\\<dserver-ipaddress>` where `<dserver-ipaddress>` is the assigned IP address to the D-SERVER. Press Enter.

In the examples below our D-SERVER has IP address 10.40.10.180.



Picture 51. Enter the path to access the shared Samba folders

After pressing the Enter key, enter the login credentials in the pop up window.



Picture 52. Enter login credentials

Samba login credentials:

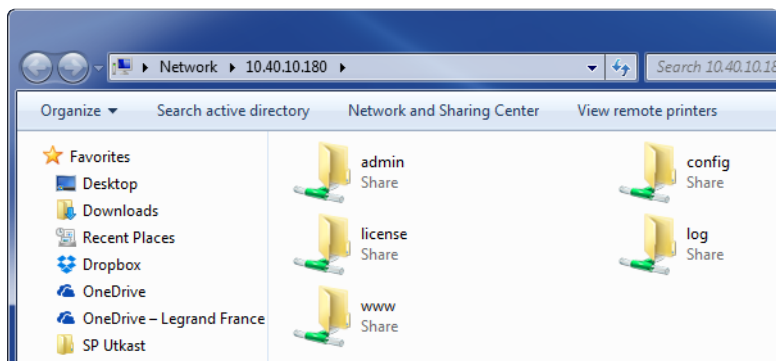
Username	Password
sysadm	neat
service	SwEga2Ruwa

Table 31. Samba login credentials



Service account has permission to access admin and www folder.

After a successful login five (5) folders will be visible. Please refer to "4.2.1 Backup Configuration", "4.2.2 Backup License" and "4.2.3 Backup Log files" for more information.

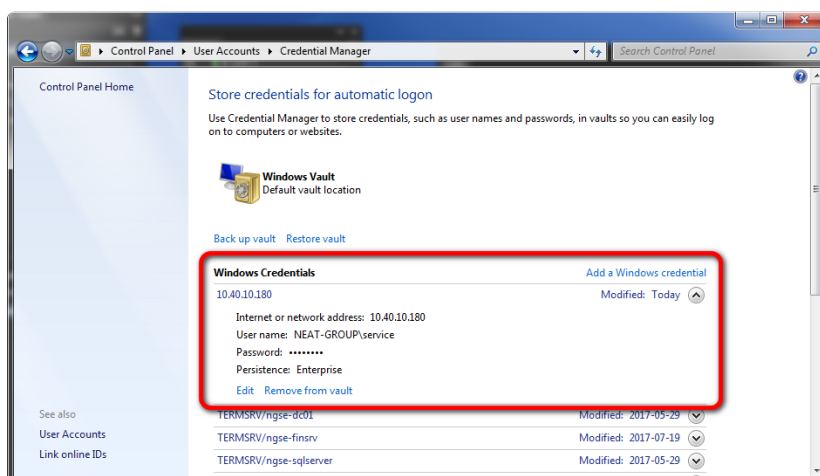


Picture 53. Available D-SERVER folders through Samba

Stored Samba credentials in the Windows vault



Make sure that the sysadm account credentials is not stored in Windows Vault if you have difficulties accessing the admin or www folder.



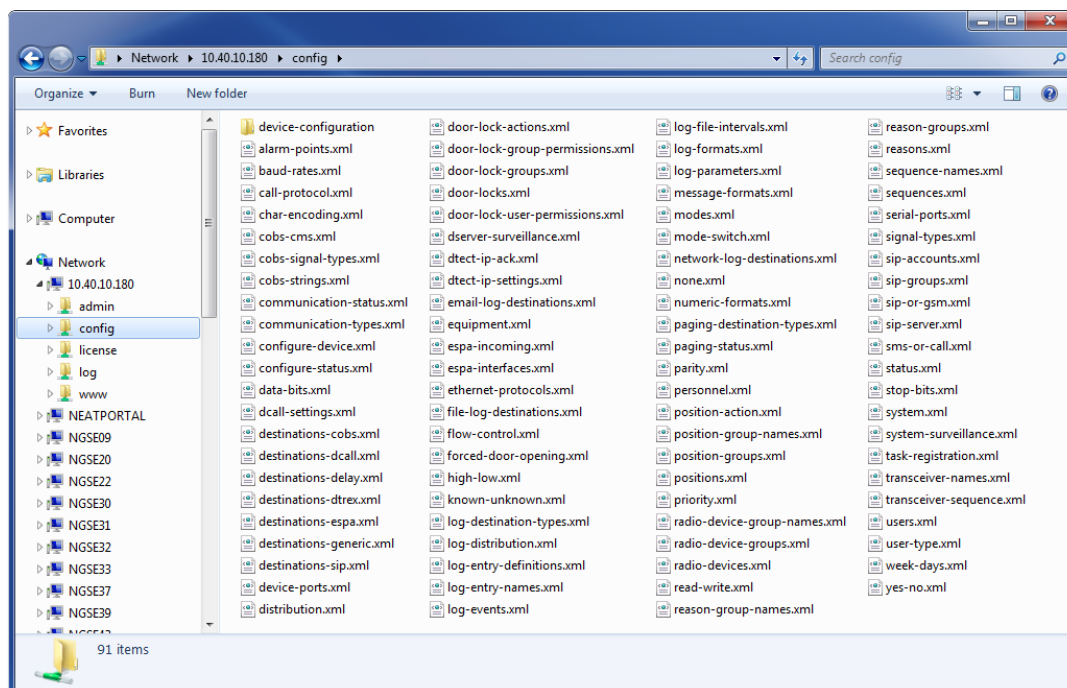
Picture 54. Windows vault with saved/cached password



To completely delete stored Samba credentials, first delete from the Windows Vault and thereafter reboot the PC. Restarting the PC is an important step in deleting the process.

4.2.1 Backup Configuration

Once you have logged in successfully through Samba, you can browse the **config** folder and view the current D-SERVER's configuration files. To backup the current configuration simply copy all the files to safe location.



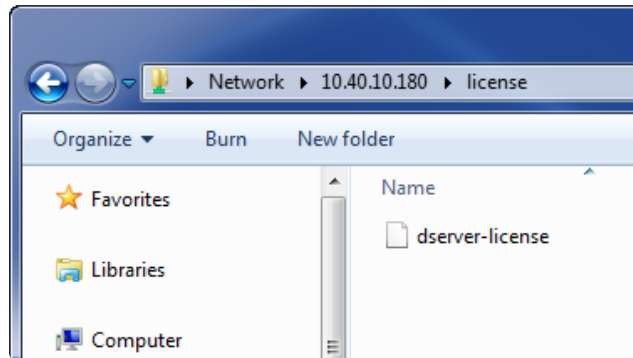
Picture 55. D-SERVER configuration files



SIP server configuration is not included in the config folder. Please refer to "4.2.5 Backup SIP server configuration".

4.2.2 Backup License

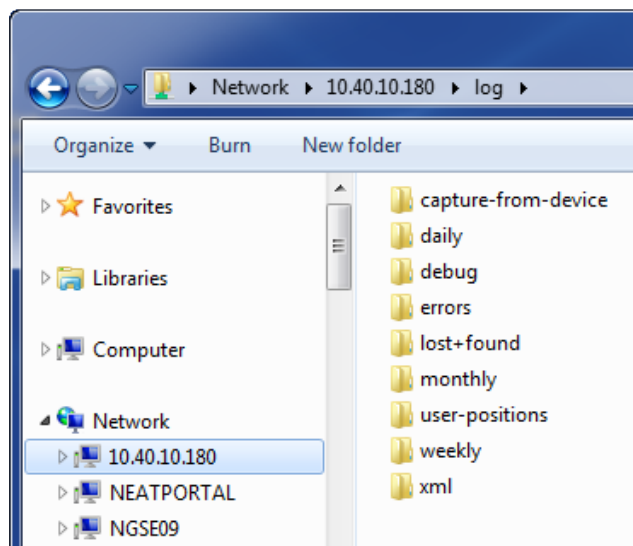
Once you have logged in successfully through Samba you can browse the **license** folder. The **license** folder contains the D-SERVER license. To make a copy of your license copy the license to a safe location.



Picture 56. D-SERVER license file

4.2.3 Backup Log files

Once you have logged in successfully through Samba, you can browse the **log** folder. The **log** folder contains various logs. To make a copy of the logs copy the folders to safe location.

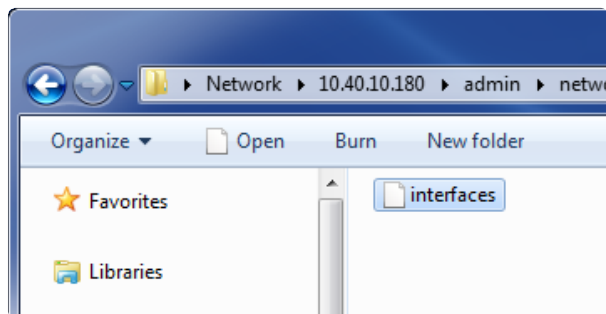


Picture 57. D-SERVER log folder

4.2.4 Backup Network Configuration

Browse to the **network** folder which can be found in the **admin** folder to backup the Network Configuration.

The interfaces file contains the network configuration. To backup your network configuration copy the file to a safe location.



Picture 58. D-SERVER network (interface) settings file

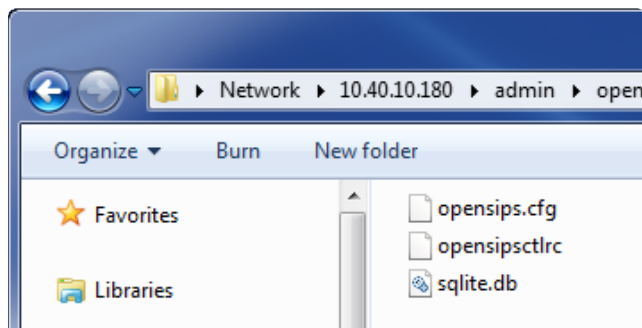


This action requires logging in with the service account.

4.2.5 Backup SIP server configuration

Browse to the **opensips** folder which can be found in the **admin** folder to backup the SIP server Configuration.

The folder has three (3) files and sqlite.db stores the table with the SIP server configuration. To backup your configuration copy all the files to a safe location.



Picture 59. D-SERVER SIP server configuration files



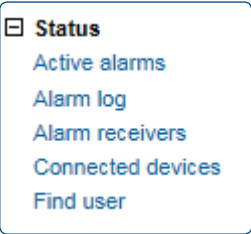
This action requires logging in with the service account.

5 The user interface

Before getting started with configuring an example, this chapter will familiarize the reader with the different menus. Please note that some menus and submenus are disabled by default.

Enabling the disabled menus/submenus can be done from **System settings > System parameters** (5.4.1).

5.1 Status



Picture 60. Status menu

Status contains information about active alarms, alarm history and logs, logged-in personnel, connected devices and last known positions for a user.

Active alarms	Displays a list of active alarms.
Alarm log	Displays a list of received alarms and various log files.
Alarm receivers	Displays a list of logged-in personnel.
Connected devices	Displays a list of connected hardware (e.g. D-TECT, D-TECT IP, D-CALL and COBS CMS).
Find user	Displays a list of users and their last positions. This feature can be enabled from System settings>System parameters>feature-personnel-location-info-enabled and requires at least one D-POS as well as an ferrite or loop antenna.

Table 32. Status menu items




*To export the positions found in "Find User", the XML logs must be downloaded via Samba. Logs can be found in **\log\user-positions**.*





















Once the D-SERVER configuration is finished, this menu is used mostly by the personnel.

5.2 Alarm configuration

When entering the Alarm Configuration menu a Configuration guide is displayed. This guide is intended to give an overview and the steps are very schematic and are only meant to give an orientation to the reader.

 Guide

Configuration guide

- 1 Enter identifications**
 -  Enter users
 -  Enter alarm points
 -  Enter personnel
 -  Enter positions
- 2 Enter radio devices and create groups**
 -  Enter all radio devices in the system and connect them to owners
 -  Create groups for alarm sources and destinations
 -  Define which radio devices each group will contain
- 3 Create alarm reason groups**
 -  Create groups for alarm reasons
 -  Define which alarm reasons each group will contain
- 4 Create position groups**
 -  Create groups for positions (D-POS)
 -  Define which positions each group will contain
- 5 Create system modes**
 -  Create system modes which the system can switch between at different periods of a day
 -  Define when the different system modes will be active
- 6 Create alarm sequences**
 -  Create D-TREX destinations for use in the alarm sequences
 -  Create generic destinations for use in the alarm sequences
 -  Create names of alarm sequences
 -  Define the sequences of destinations that alarms will be sent to
- 7 Define distribution list**
 -  Finally define which alarm sequence will be used when an alarm is activated

Picture 61. D-SERVER Configuration guide

Alarm configuration submenus



Picture 62. Alarm configuration menu

The Alarm configuration submenus covers all the necessary configuration options to configure a D-SERVER system.



Picture 63. Alarm configuration sub menus

Planning the configuration

Planning an installation in advance is an important step before configuring the D-SERVER. It is recommended to review the checklist below and prepare the answers in advance. Not all parameters are mandatory, but being prepared makes configuration easier.

Parameter	Mandatory?	Description
Identifications		
Users	Yes	Do you have a list of the names that will stay at the nursing home or the apartment numbers?
Alarm points	No	Will the nursing home have public areas (e.g. kitchen, toilets, terrace)? If so, do you have a list of various Alarm points?
Personnel	Yes	Do you have a list of the personnel which will work at the nursing home?
Positions	No	Will the nursing home use positioning with D-POS and ferrite antennas? If so, do you have a list of positions at the nursing home?
Equipment	No	Will the nursing home use any equipment in addition to the standard equipment? Does the nursing home have specific needs of equipment/alarm filtering?

Entities		
Devices	Yes	Do you have the radio codes of all that devices that will be used at the nursing home? Do you know who the units should belong to?
Device group names	Yes	Do you have an idea how many groups you need for the nursing home? Will the nurses work in shift? Day and Night? Then you need at least two groups for the nurses and at least one for devices.
Device group definitions	No	If you have several device groups, do you know which devices that should belong to which group?
Alarm reasons	No	Will you use any other Alarm reasons in addition to the standard reasons?
Alarm reason group names	No	Do you need to create more Alarm reason groups?
Alarm reason group definitions	No	Do you need to make changes to the pre configured Alarm reason groups?
Position group names	No	Do you want to place your positions into a position group?
Position group definitions	No	Do you need to make changes to your existing position groups or define new?
System mode names	No	Do you need to make changes to the default System modes names?
Time schedule	Yes	Will you use day and night shifts? Then you need to know when the day and night shifts starts.
Task registration	No	Only applicable for COBS C3110 and SMART1 systems.

Destinations		
Message formats	No	Do you need to make changes to message formats, e.g. include positioning in a alarm message? Positioning in a alarm message is not pre configured by default.
Signal types	No	Do you need to add or change signal types?
D-TREX destinations	No	If you have two device groups for personnel you will probably need to create the same amount of D-TREX destinations labeled the same name.
Generic destinations	No	Not applicable or will not be used.
Delay destinations	No	Not applicable or will not be used.
D-CALL destinations	No	Not applicable or will not be used.
Cobs destinations	No	Only valid for COBS 3110 and SMART1 systems.
ESPA destinations	No	Not applicable or will not be used.
SIP destinations	No	Not applicable or will not be used.

Routing		
Alarm sequence names	No	Which sequences do you want to create? If you have day and night shifts you probably want to create a Personnel Day and Personnel Night sequence.
Alarm sequence definitions	No	What will happen when a sequence is triggered, e.g. should Personnel Day get the alarm message first and if no one replies, should Personnel Night then get the alarm? Define it here.
Alarm distribution	No	For everything to work as intended you need to configure the alarm distribution. Alarms from your device group needs to know where they should be routed depending on time schedule. You also need to setup a distribution for Assistance alarms if this feature should be used.

Table 33. D-SERVER configuration check list

5.2.1 Identifications

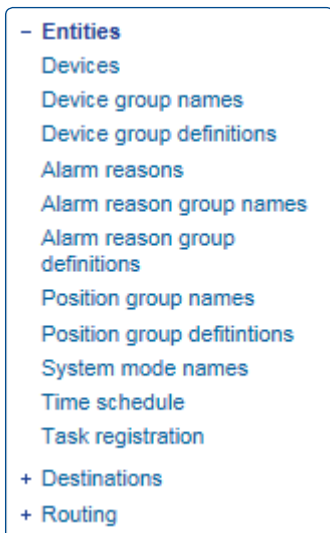
- Identifications

- Users
- Alarm points
- Personnel
- Positions
- Equipment

Users	Add a name or room number (e.g. "Ellen Swahn" or "Apartment 1")
Alarm points	Add a public place (e.g. "Dining room")
Personnel	Add personnel which will respond to alarms (e.g. "Nurse Jenny Colgan")
Positions	Add positions codes and descriptions (e.g. "1000 Dining room"). Feature require at least one D-POS and ferrite or loop antenna.
Equipment	Names that will be referred to in an alarm message (e.g. you can rename a D-CALL to Care phone) Equipment Filtering Equipment Filtering replaces System parameter rules-ignore-pir-during-presence (introduced in Application 1.18.61) and introduces more filtering options Which alarms should be filtered out during an ongoing alarm and during presence? Which devices should be able to send an Assistance alarm during presence?

Table 34. Identifications sub menu items

5.2.3 Entities



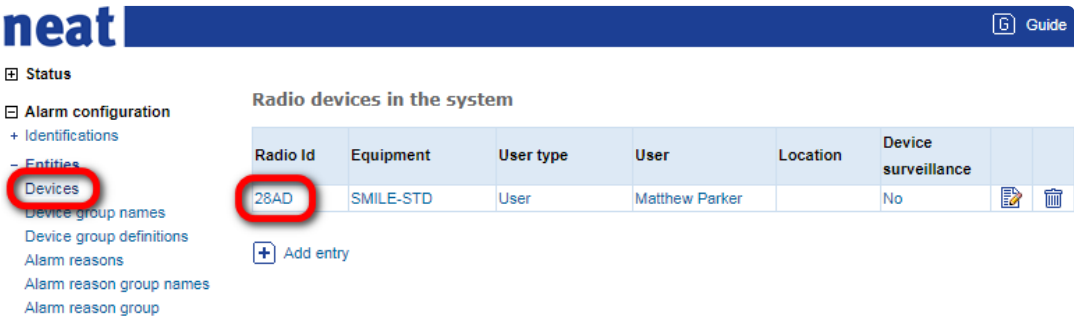
Picture 64. Entities sub menu

Devices	Associate a device to an owner (e.g. radio code "28AF" (SMILE-ID) to "Apartment 1")
Device group names	A) Create one or several groups which the personnel can log in to (e.g. Personnel Day and Personnel Night) B) All devices must belong to one or more groups (e.g. "Apartment 1-5")
Device group definitions	B) All devices must be sorted into one or more groups (e.g. "28AF" to "Apartment 1-5")
Alarm reasons	Predefined alarm reasons. It is possible to add more alarms reasons manually. See NE60 06001-01.
Alarm reason group names	Predefined alarm reason groups. It's possible to create more alarm reason groups manually.
Alarm reason group definitions	Define which alarm reasons that should belong to an alarm reason group.
Position group names	Create one or several position groups.
Position group definitions	Define which Positions that belongs to a Position group .
System mode names	Modify or create a new schedule.
Time schedule	Define the schedule (e.g. Monday: Day start at 07:00 and Night starts 21:00)
Task registration	Naming the different tasks. Feature can be enabled from System parameter (feature-task-registration-enabled). NOTE! This feature requires COBS C3110 or SMART1 handsets.

Table 35. Entitites sub menu items

Note on Devices

When viewing the devices it's possible to directly edit the parameters for D-ATOM, SMILE-STD and SMILE-ID by clicking on its Radio ID.



Picture 65. Configurable device

The parameters are displayed and the parameters with the icon are editable thus making it possible to configure the parameters "on the fly" for these units. In other words these units does not need to be handed in to a technician or similar for reconfiguration (i.e. no need for an NPU).

Configurable parameters for the device: 28AD

[Click here to read or write configuration!](#)

Group	Description	Data		
1. Button functions	Double press activated	0		
	Long press activated	0		
	Max time for double press (s)	2.5		
	Max time for long press (s)	2.5		
	Normal press activated	1		
2. Alarm Types	Alarm type for double press	41		
	Alarm type for long press	42		
	Alarm type for short press	0		
3. Radio ID Code, Alarm Delay	Battery test interval (h)	24		
	Block user alarms (0=4s, 1-255 minutes)	0		
	Number of missed ACK before sleep	19		
	Radio ID-code	28AD		
	Radio test alarm interval (h, 0 = disabled)	9		
4. Radio Transmissions	Number of long transmissions	3		
	Number of short transmissions	3		
5. Product information	Button counter	0		
	Production date (YYMMDD)	000000		
	Program type	SMILE-ID		

Picture 66. Configurable device parameters

The link **Click here to read or write configuration!** is a clickable link and means that it is possible to read from/write to these units directly from the D-SERVER without needing an NPU.

5.2.4 Destinations

Message formats	Defines how the alarm message should be presented/formatted in personnel handsets.
Signal types	A list of supported D-TREX 2G Signal types. Signal type can be configured in D-TREX 2G Programmer.
D-TREX destinations	Define which D-TREX device group [Destination group] that alarms should be sent to (e.g. "Personnel Day" to group "Personnel Day" and "Personnel Night" to group "Personnel Night")
Generic destinations	Will send out a radio broadcast from the specified radio id with the specified alarm reason.
Delay destinations	If you want to add a pause in an Alarm sequence definitions, you need to configure a Delay destination.
D-CALL destinations	Define which D-CALL that alarms should be sent to, and what actions the specified D-CALL should take.
Cobs destinations	Define which COBS device group [Destination group] that alarms should be sent to (e.g. Personnel Day to group Personnel Day and Personnel Night to group Personnel Night)
ESPA destinations	Define which ESPA devices that alarms should be sent to.
SIP destinations	Define which SIP device group [Destination group] that alarms should be sent to (e.g. "Personnel Day" to group "Personnel Day"). You need to configure SIP accounts before configuring SIP destinations.

Table 36. Destinations sub menu items



SIP accounts must be configured before configuring SIP destinations.

5.2.5 Routing

Alarm sequence names	Alarm sequence names allows you to create a new sequence (e.g. "Personnel Day", "Personnel Night"). You define the sequences on Alarm sequence definitions.
Alarm sequence definitions	Which personnel group should receive the alarms? for how long? and what will happen if no one takes an alarm? (e.g. if no one in Personnel Day takes the alarm, step 2 is then initiated and alarm sent to Personnel Night)
Alarm distribution	Distribution of alarms according to configured sequence (e.g. alarms from group "Apartment 1-5" [daytime] should be sent to sequence "Personnel Day")

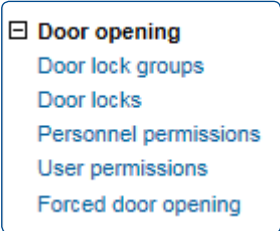
Table 37. Routing sub menu items



It's important that the administrator backups the D-SERVER configuration regularly.

5.3 DOOR opening

Door opening feature can be enabled from **System settings>System parameters>feature-door-opening-enabled**. Various configuration options related to door opening are accessible from this menu.



Picture 67. Door opening menu

Door lock groups	Define door lock groups and their respective group activation code.
Door locks	Define which WIOR devices that should be added to the specified group and what their respective relay action should be when a position message matching the specified position code is received.
Personnel permissions	Which personnel should have access to which doors.
User permissions	Which users should have access to which doors.
Forced door opening	Define what relay action to apply to a door lock group when a radio message with the specified alarm source and alarm reason is received. Used to open multiple doors at the same time.

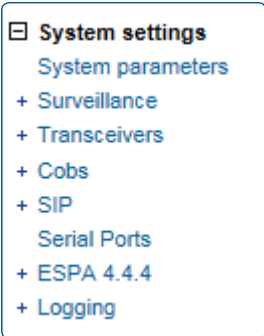
Table 38. Door opening menu items



Door opening feature is often used together with a D-POS, D-POS ANT, WIOR and (Ferrite Antenna).

5.4 System settings

System settings contains misc. system settings and displays a list of various System parameters. See "5.4.1 System parameters".



Picture 68. System settings menu

5.4.1 System parameters

System parameter	Description	Default value
alarm-log-size-in-web	Parameter control the appearance of tables in the D-SERVER web page. Determines the number of alarms that the alarm log lists.	20
bus-disconnect-timeout-sec	Parameter control how the D-SERVER communicates with a D-TECT unit. Determines for how long time a D-TECT unit can stop responding before the D-SERVER considers the unit as disconnected and stops polling it.	180
bus-query-new-interval-sec	Parameter control how the D-SERVER communicates with a D-TECT unit. Determines the time between checks for newly connected D-TECT units.	60
bus-rx-timeout-ms	Parameter control how the D-SERVER communicates on the serial bus. Determines the length of silence on the serial bus before sending a message.	300
bus-send-retries	Parameter control how the D-SERVER communicates on the serial bus. Determines the number of times that the D-SERVER tries to send a message to a D-TECT unit if it does not reply.	3
bus-tx-delay-ms	Parameter control how the D-SERVER communicates on the serial bus. Determines the length of silence on the serial bus before sending a message.	5
cobs-allow-handle-same-user-alarms	When a COBS device makes a presence or an alarm done indication, this flag will control if all other alarms from the same user should be set to presence/ready as well. Supported in Application v1.18.62 and forward.	0
cobs-allow-presence-without-action	Staff can select Presence from the C-3110 menu. No need to do a traditional Presence. Presence option is visible even if feature is disabled. Supported in Application 1.18.61 and forward.	0
cobs-open-door-number	Which number on the COBS C-3110 that should be treated as a door opening command.	1
cobs-presence-number	Which number on the COBS C-3110 that should be treated as a presence indication. Supported in Application v1.18.61 and forward.	3
cobs-talk-presence-timeout	Since we can only have one cobs-talk-presence indication in the system at the same time, this parameter controls how long the cobs-talk-presence indication remains in the system.	5
cobs-treat-presence-as-busy	If the system should treat COBS personnel that are present the same way they are treated when they are busy, i.e., low prio alarms will not be received. If Alarm distribution Priority is set to High, personnel will receive Assistance alarms despite they are busy. Supported in Application v1.20.00 and forward.	0

System parameter	Description	Default value
configuration-disable-ack-timeout	Tells the transceiver units in the system how long they should ignore ACK from a certain device. Normally, ACK is restored to normal operation after a config job has been completed.	600
configuration-job-timeout-dserver	How long before the dserver app should cancel the current D-ATOM/SMILE config job.	180
configuration-job-timeout-dtect	How long before the transceiver unit doing the configuration should cancel the current config job.	120
dcall-allow-alarm-override	If a D-CALL should be able to handle a new alarm before the current alarm is finished. Supported in Application v1.19.00 and forward.	0
debug-alarm-list	Low level logging of alarm reception and alarm cancellation.	0
debug-alarm-receivers	Logging for alarm receivers.	1
debug-changed-messages	Logging for the changed messages. When a personnel does presence against for example a D-ATOM, further alarms from that D-ATOM will be changed to an assistance alarm.	0
debug-cobs-transmission	Logging for COBS transmissions. Level 2 will log XML data as well.	0
debug-config	Logging of system parameters.	0
debug-configure-job	Logging of a D-ATOM/SMILE configuration job.	0
debug-door-opening	Logging of door openings.	0
debug-dtect	Logging of D-TECT units.	1
debug-dtrex-presence-list	Logging of D-TREX presence indications.	0
debug-email-log	Logging of e-mail logging.	0
debug-espa-4.4.4-alarm-reception	Logging of ESPA communication.	0
debug-ignored-messages	Logging of ignored radio messages.	0
debug-ip-transmission	Logging of IP transmissions to D-CALL/D-TECT IP.	1
debug-logging-enabled	Parameter enable debug-logging. “0” = logging is disabled “1” = logging is enabled	0
debug-network-log	Logging of logmessages sent over Ethernet.	1
debug-paging	Logging of paging sequences.	1
debug-radio-send-queue	Logging of the queues for transmission of radio messages.	0
debug-radio-transmission	Logging of radio transmission messages.	1
debug-retransmit-unknown	Logging of the re-transmission of unknown radio messages, see system parameter: retransmitunknown-send-count .	0
debug-router	Logging of the router task.	1
debug-serial-bus	Logging of communication on the serial bus. If the debug logging for the serial bus is enabled (debug-serial-bus changed to other value than zero (0)), the memory card in the D-SERVER can fill up very quickly. After that, all logging will stop working.	0

System parameter	Description	Default value
debug-signals	Logging of signals received by the D-SERVER application (reloading the D-SERVER settings and stopping the D-SERVER application).	1
debug-sip-task	Logging of the SIP communication. Introduced in Application v1.19.00	0
debug-xml-tables	Logging of configuration tables.	0
door-lock-pulse-time-personnel-sec	Determines how long the door should be kept open for personnel (in seconds).	3
door-lock-pulse-time-users-sec	Determines how long the door should be kept open for users (in seconds).	30
door-opening-broadcast-send-count	How many transmissions a forced door opening will send.	30
door-opening-forced-open-interval-minutes	How long to wait before starting transmission of the forced door opening again.	2
door-opening-forced-open-time-minutes	How long the door should be open during the forced door opening.	5
door-opening-ignore-time-sec	After a door opening job has completed, this controls how long to ignore a new door opening job from the same device.	5
door-opening-number-long-tx	How many messages with long preamble to send.	0
door-opening-number-short-tx	How many messages with short preamble to send.	3
door-opening-position-alarm-from-datom-personnel	This parameters controls if the personnel has a D-ATOM/SMILE device that sends a position alarm, if a door opening job should be sent.	1
door-opening-position-alarm-from-datom-user	This parameters controls if the user has a D-ATOM / SMILE device that sends a position alarm, if a door opening job should be sent.	1
door-opening-require-button-press	D-TREX 2G Return button is not required to open doors if disabled.	1
door-opening-trigger-alarm-from-datom-personnel	This parameters controls if a trigger alarm (alarm reason NONE) from a personnel should start a door opening job.	0
door-opening-trigger-alarm-from-datom-user	This parameters controls if a trigger alarm (alarm reason NONE) from a user should start a door opening job.	0
feature-door-opening-enabled	Enable door opening in the system.	0
feature-personnel-location-info-enabled	Controls if the "Where is" function in the D-TREX 2G should be enabled.	0
feature-presence-indication-enabled	Controls if presence should be activated in the system.	0
feature-rfid-reception-enabled	Controls if RFID reception should be activated on the D-TREX 2G.	0
feature-task-registration-enabled	Enable Task registration. Disabled by default.	0
feature-user-position-logging-enabled	Controls if user position should be logged and displayed in the web interface.	0
group-info-send-count	Controls how many transmissions to send to a D-TREX with group information.	5
ip-alive-time-check-sec	Controls the interval that D-CALL/D-TECT IP should send heartbeat messages.	240

System parameter	Description	Default value
ip-rx-port	Which port the D-CALL/D-TECT IP should connect to.	5001
ip-tx-timeout-sec	The timeout for messages being transmitted to D-CALL/D-TECT IP devices.	5
log-in-retry-timeout-sec	Parameter control the timing of login and logout. Determines for how long time the D-SERVER will handle new login messages from an alarm receiver as retransmissions of a previous login message.	120
log-out-all-timeout-sec	Parameter control the timing of login and logout. Determines for how long time the D-SERVER sends logout messages to all alarm receivers when the D-SERVER is reloaded or restarted. If not all alarm receivers are logged out when the D-SERVER is restarted, the value of this parameter may need to be increased.	10
log-out-forced-timeout-sec	Parameter control the timing of login and logout. When the configuration is reloaded and the user or group of a logged in D-TREX has been removed. That D-TREX is logged out by force from the D-SERVER. This parameter determines for how many seconds such a forced log-out message is transmitted by the D-SERVER.	10
log-out-retry-timeout-sec	Parameter control the timing of login and logout. Determines for how long time the D-SERVER will handle new logout messages from an alarm receiver as retransmissions of a previous logout message.	10
max-busy-time-sec	Parameter control the timing of status changes for alarm receivers. Determines the longest time that an alarm receiver is allowed to be in "Busy" mode. After this time has expired, the alarm receiver is automatically set to "Idle" mode.	300
network-timeout-ms	Logging over Ethernet. The longest time (milliseconds) allowed for transmission of a log message over the Ethernet.	100
paging-cancel-send-count	Parameter control the timing of radio transmissions. Determines the total number of transmissions for each paging cancellation message. If the D-SERVER system contains four D-TECT units and the value of this parameter is "4", each D-TECT unit will send the paging cancel message once. If not all alarm receivers are reached by the alarm cancellation messages, the value of this parameter may need to be increased. Note! Setting this value too high may slow down the system.	7
paging-confirmed-warning-enabled	If this parameter is set to "1", then a text message "Alarm already handled by..." is sent to any D-TREX that confirms an alarm that has already been confirmed by someone else.	1

System parameter	Description	Default value
paging-send-count-no-answer	When the specified number of radio transmissions has been done in one step of an alarm sequence, radio transmission stops. If no D-TREX unit has received the alarm, the D-SERVER continues immediately to the next step of the alarm sequence. Otherwise the D-SERVER waits until the duration of the current step in the alarm sequence has expired. If the value of this parameter is zero (0), then the D-SERVER keeps transmitting all alarms either until all destinations have received the alarm, OR until someone has confirmed the alarm, OR until the duration of the current step in the alarm sequence has expired.	64
personnel-location-message-not-present	Formats the text to send to D-TREX units when they performed a "Where is" operation.	[personnel]\nwas in\n[location]\nat [time]
personnel-location-message-present	Formats the text to send to D-TREX units when they performed a "Where is" operation.	[personnel]\nis in\n[location]
personnel-location-message-unknown	Formats the text to send to D-TREX units when they performed a "Where is" operation.	No information\nabout\n[personnel]
presence-location-preposition	Formats the text to send to D-TREX units when they performed a "Where is" operation.	in
presence-reminder-send-count	Sends out a reminder if someone accepts an alarm but doesn't do Presence. Requires that Require presence is enabled. Supported in Application v1.19.00 and forward.	3
presence-reminder-timeout	Presence reminder interval in seconds. Supported in Application v1.19.00 and forward.	240
radio-ignore-duplicate-accept-time-sec	Parameter control for how long time duplicate radio messages are ignored. The time in seconds since the alarm was received, that duplicate alarm confirmations are ignored. When a duplicate alarm confirmation is received within this time, a text message "Alarm already handled by..." is sent to the D-TREX unit that sent the duplicate alarm confirmation.	1800
radio-ignore-duplicate-ac-knowledge-time-sec	Parameter control for how long time duplicate radio messages are ignored. Determines for how long time the D-SERVER ignores duplicates of the same paging reply message from an alarm receiver. The time must be long enough to filter out duplicates of the same radio message from several D-TECT units, but short enough to catch retransmissions of the paging reply from the alarm receiver.	2
radio-ignore-duplicate-alarms-time-sec	Parameter control for how long time duplicate radio messages are ignored. Determines for how long time duplicates of the same radio message will be ignored by the D-SERVER, i.e. this parameter determines how often the same radio transmitter can send an alarm.	30

System parameter	Description	Default value
radio-tx-timeout-sec	Parameter control the timing of radio transmissions. Determines the longest time allowed for one radio transmission. Within this time, the message for radio transmission must be successfully sent to the D-TECT, the D-TECT must transmit the radio message and report back to the D-SERVER that radio transmission is completed.	5
radio-wait-after-tx-ms	Parameter control the timing of radio transmissions. Only one D-TECT is transmitting at any given time and this parameter determines the shortest pause between two radio transmissions. In systems with one or two D-TECT units, this parameter may need to be increased in order to allow the D-TECT units to receive radio messages between the radio transmissions.	200
ready-expire-time-sec	Parameter that extends the current sequence step timeout. Will be used when someone calls a D CALL, or makes presence on a user device.	600
repeat-paging-time	How long between repeated pagings of an alarm. D-CALL GSM? To avoid error: "CME ERROR: call barred" increase the parameter from 30 to 120s.	30
retransmit-unknown-at-alarm-rx-channel	If an alarm from a device not belonging to the system is received, this parameter controls on which radio channel to re-send the alarm on.	1
retransmit-unknown-long-tx-count	If an alarm from a device not belonging to the system is received, this parameter controls how many messages with long preamble to re-send the alarm with.	3
retransmit-unknown-send-count	If the value of this parameter is not zero (0), then all alarms from unknown radio transmitters will be retransmitted by the same D-TECT that received the alarm. The value of this parameter then determines how many radio transmissions will be used for the re-transmission of the unknown alarm.	0
retransmit-unknown-short-tx-count	If an alarm from a device not belonging to the system is received, this parameter controls how many messages with short preamble to re-send the alarm with.	3
rules-alarm-presence-type	Which alarm reason to use during changed messages when a personnel does presence at a user device.	20
rules-expire-time-sec	How long before the changed messages rules automatically expires. If someone do an anonymous presence but forgets to press Ready, ready will be performed by the D-SERVER automatically. Feature is only valid for presence without an alarm. rules-expire-time-sec is used for Auto Ready.	600

System parameter	Description	Default value
serial-port-name	Do not change this parameter! Determines the name of the serial port devices. There must be two entries for this parameter: Entry with value “/dev/ttyS1” Entry with value “/dev/ttyS2”	/dev/ttyS1
serial-port-name	Do not change this parameter! Determines the name of the serial port devices. There must be two entries for this parameter: Entry with value “/dev/ttyS1” Entry with value “/dev/ttyS2”	/dev/ttyS2
simple-paging-send-time-sec	Used for ESPA paging. 300 means how long the system will try to page all devices before timeout. If all devices replies, paging is stopped.	300
status-message-retry-timeout-sec	Parameter control the timing of status changes for alarm receivers. Status change requests from alarm receivers. This parameter determines how long new status change requests (with the same status) will be seen as duplicates of the same message. A new reply will be sent, but the “elapsed-timein-busy-mode” will not be reset. Status change messages sent by the D-SERVER The messages are sent because an alarm receiver has been too long in busy mode. This parameter determines how long the D-SERVER will keep sending the same status change message if no reply is received from the alarm receiver. The parameter “status-message-send-intervalsec” determines how often the message is re-transmitted.	60
status-message-send-interval-sec	Parameter control the timing of status changes for alarm receivers. Determines how often a status change message (receiver “Busy” or receiver “Idle”) is re-transmitted by the D-SERVER if there is no reply from the alarm receiver. This applies only when an alarm receiver has been too long in “Busy” mode.	3
system-id	The identification number for the D-SERVER system. The system-id value for the D-SERVER must be the same in all D-TREXes in the system. If there are several D-SERVER systems within range of each other, they must all have different system-id values.	1
table-page-size-in-web	Parameter control the appearance of tables in the D-SERVER web page. Determines the number of rows that are shown on each page for tables.	50
use-utf8-bom-in-log-files	Controls if the UTF8 BOM should be added in the log files.	1

System parameter	Description	Default value
user-from-previous-alarm-timeout-sec	If the value of this parameter is not zero (0), then the name of the user from the last previous alarm can be added to the text message of an assistance alarm, if the message format specifier %pnt% is used in the text message format for the assistance alarm. The value of this parameter then determines the maximum number of seconds that may have passed between the previous alarm and the assistance alarm for the name from the previous alarm to be used in the assistance alarm text message.	10
user-position-log-size	Controls the size of the user position log in the web interface.	5

Table 39. System parameters menu items

5.4.2 Surveillance

System surveillance	Define which equipment types that automatically should be added to the system surveillance group. If the connection to one of these devices are lost, an alarm from the system surveillance group will be generated. To receive these messages, an Alarm distribution has to be made.
D-SERVER surveillance	Define if the D-SERVER application should send out a radio message at a certain interval. Can be used to monitor that the D-SERVER is running.

Table 40. Surveillance menu items

5.4.4 Transceivers

Transceiver devices	Define which devices in the system that should act as transceivers. D-TECT and D-TECT IP devices are automatically added to this list when they are discovered.
D-CALL settings	Define which settings the D-SERVER should send to D-CALL devices when they connect.
D-TECT-IP settings	Define which settings the D-SERVER should send to D-TECT IP devices when they connect.
Transceiver send sequence	Define a send sequence for radio messages. Can be used to optimize performance for radio messages sent from the D-SERVER.

Table 41. Transceivers menu items

5.4.6 COBS

COBS CMS	COBS CMS connection configuration.
----------	------------------------------------

Table 42. COBS menu items

5.4.7 SIP

SIP server	You can enable the SIP server from here if you own a SIP license. You can also configure SIP clients.
SIP groups	If a SIP client receives an incoming call, you can configure that it should call a group of SIP clients. Called number only have to be registered in the SIP server.
SIP accounts	Define SIP accounts used by the D-SERVER application. Used in SIP destinations.

Table 43. SIP menu items

5.4.8 ESPA 4.4.4

ESPA interfaces	Define ESPA interfaces. Will be used for ESPA destinations and Incoming ESPA alarms.
Incoming ESPA settings	Define actions to take when an incoming ESPA alarm is received.
Serial Ports	Define serial port settings. Serial ports can be used for ESPA connections.

Table 44. ESPA 4.4.4 menu items

5.4.10 Logging

Network log destinations	Define a Network log destination, i.e. a remote server that should receive D-SERVER logs.
E-mail log destinations	Define email log destinations, i.e. an email address that should receive D-SERVER logs.
Log files	Define the file names and rotation interval for the D-SERVER logs.
Log entry names	Define the log entry names, will be used in the Log entry definitions.
Log entry definitions	Define how the log files should look and what parameters that should be included in the logs.
Log distribution	Define the logging distribution.

Table 45. Logging menu items

5.5 Administration

Administration	Description
Network	Network configuration can be configured on Network.
Date and time	Allows you to change date and time.
Version information	Displays D-SERVER release version and a list of installed components. Application component is upgraded frequently.
License information	Displays installed licenses. Upload new licenses from here.
Power down D-SERVER	Shutdown the D-SERVER.
Reboot the D-SERVER	Reboot the D-SERVER.
Restart the D-SERVER application	Restart the D-SERVER Application.
Upload new application	Upload a new D-SERVER Application (component) obtained from NEAT.

Table 46. Administration menu items

Note on upgrading!

The component "Application" can be upgraded from the menu item **Upload new application**. Upgrading to a newer version is possible as long as it stays in the same D-SERVER release, which means that Application v1.21.01 can be installed on a D-SERVER with v1.21.xx installed.

If you have a D-SERVER with release 16.01 and D-SERVER Application v1.20.00, you can't upload Application v1.21.00 as Application v1.21.00 belongs to D-SERVER release 16.03.

Upgrading the other D-SERVER components requires erasing the SD Card and writing a new image containing desired versions.

5.5.1 System logs


System logs	Description
Errors	Displays a list of System error log files.
Debug	Displays a list of various Debug logs.

Table 47. System logs menu items

Debugging can be enabled in the menu **System settings > System parameters**. NEAT can request debug logs depending on the technical issue and these debug logs are stored in the sambafolder **\System logs\Debug**.

5.6 Reload configuration

"Reload configuration" re-reads all configuration files and activates changes.

 **Reload configuration**

Picture 69. Reload configuration



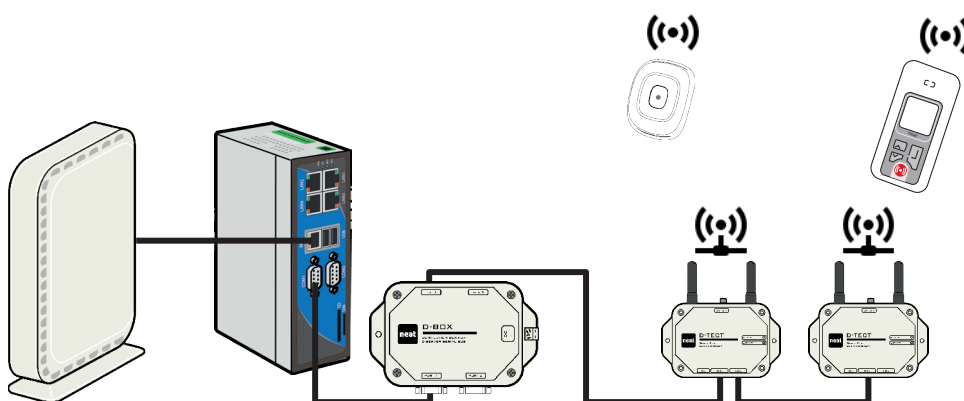
Clicking "Reload configuration" several times in a row may cause unexpected errors.

6 Scenario configuration

6.1 Preface

This chapter covers how to setup the 5 scenarios presented in chapter 3 step by step. The chapter assumes that necessary hardware is present and that the hardware is properly connected.

6.2 Scenario I - Text solution (D-TECT)



Picture 70. Scenario I overview

In the previous chapter, the importance of planning was mentioned.

Before starting the configuration some answers must be provided to the questions below. The extended version of the checklist can be found in the previous chapter.

Checklist

(Q = Check question. Checkmark = Answer)

Q: Do you have a list of the names that will stay at the nursing home or the apartment numbers?

✓: Matthew Parker

Q: Do you have a list of the personnel which will work at the nursing home?

✓: Charlotte Miller

✓: Emma Lopez

Q: Do you have the radio codes of all that devices that will be used at the nursing home? Do you know who the units should belong to?

✓: SMILE-STD (Radio ID: 101E) belongs to Matthew Parker.

Q: Do you have an idea how many groups you need for the nursing home? Will the nurses work in shift? Day and Night? Then you need at least two groups for the nurses and at least one for devices.

✓: We need two personnel groups because the nurses will work in shift.

✓: Personnel Day

✓: Personnel Night

✓: Since we only have one SMILE-STD in this scenario, one device group is enough
- Misc alarm sources

Q: Will you use day and night shifts? Then you need to know when the day and night shifts starts.

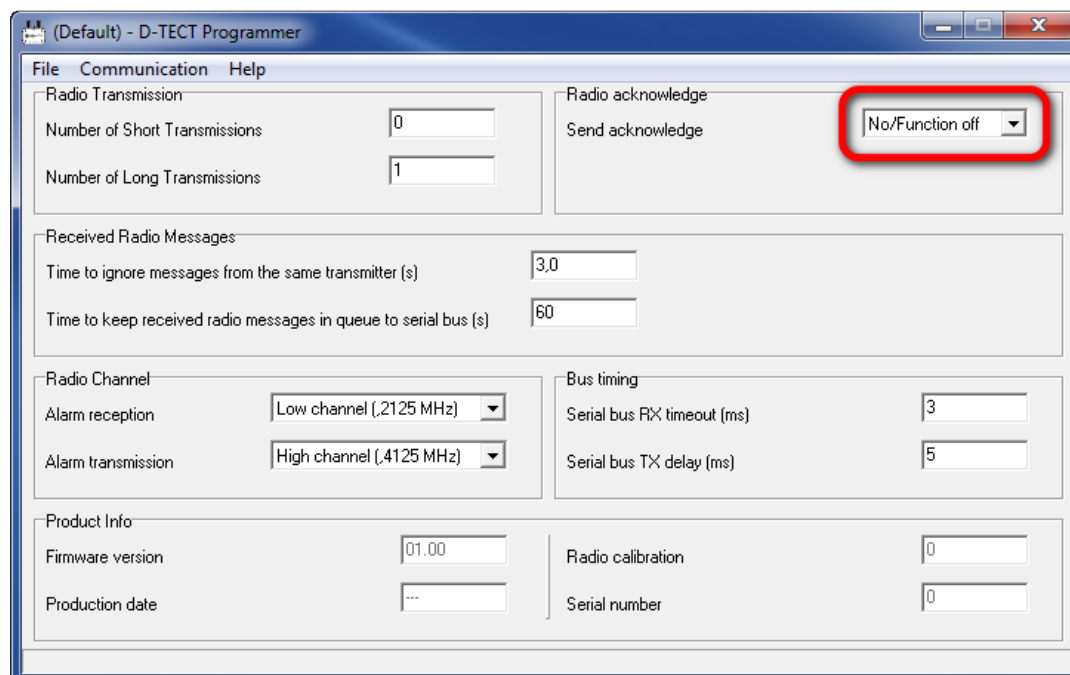
✓: Day shift starts 07:00 AM

✓: Night shift starts 09:00 PM

Scenario I requires D-SERVER, D-TECT and D-TREX 2G configuration. Let's start with the D-TECT configuration, thereafter the D-SERVER and finally D-TREX 2G.

D-TECT configuration

Read both D-TECTs configuration and change **Send acknowledge** to **No/Function off**.



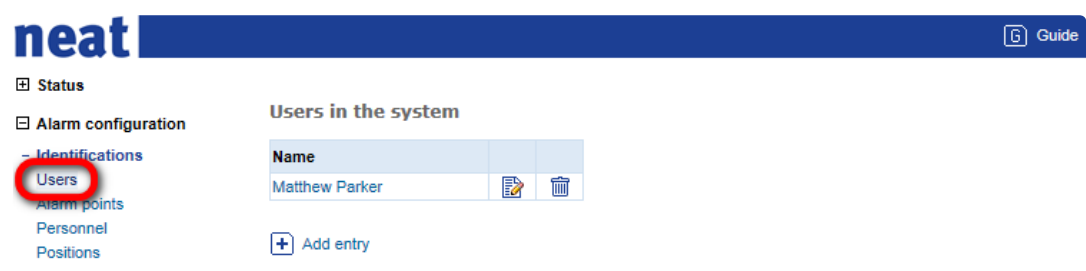
Picture 71. Change the D-TECT configuration



D-TECT configuration requires a NPU and D-TECT Programmer.

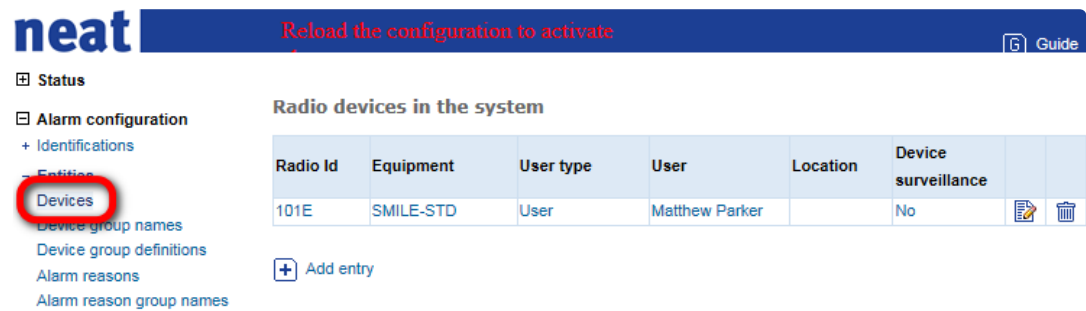
D-SERVER configuration

1. Open the D-SERVER administrator web interface.
2. Go to **Identifications > Users** to add the users who will stay at the nursing home. In our scenario, there is only one user: Matthew Parker.



Picture 72. Create user(s)

3. SMILE-STD (101E) is an unknown radio code for the D-SERVER. To associate 101E to Matthew Parker, go to **Entities > Devices**. When the SMILE-STD is associated to Matthew Parker, it's no longer an unknown radio code.



Picture 73. Add device(s)



Please note that "Reload configuration" is required to apply configuration.

4. To create necessary Personnel and Device groups, go to **Entities > Device group names**. Add **Personnel Day**, **Personnel Night** and **Misc alarm sources** group. It is important to select **Log-in allowed (Yes)** for Personnel Day/Night so the nurses can log into their groups. There's no need to configure Log-in allowed for the group **Misc alarm sources**.

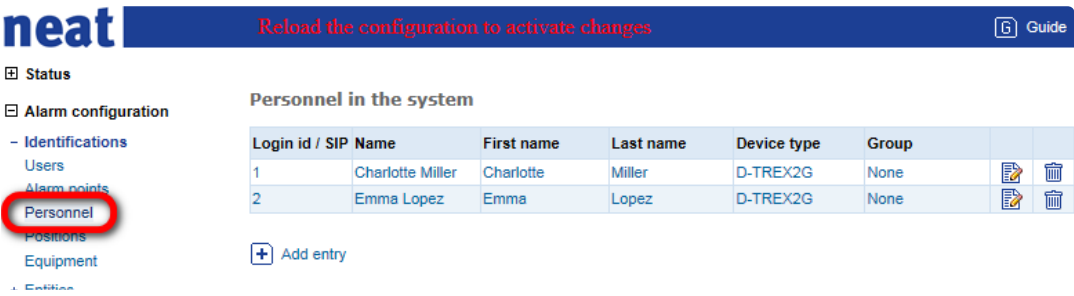


Picture 74. Define device group name(s)



The nurses (Charlotte Miller and Emma Lopez) must be informed about their Login ids. If Charlotte Miller is going to work the Day shift, she should login to Login id 1 (group 1). If Emma Lopez is going to work the Night shift, she should login to Login id 2 (group 2).

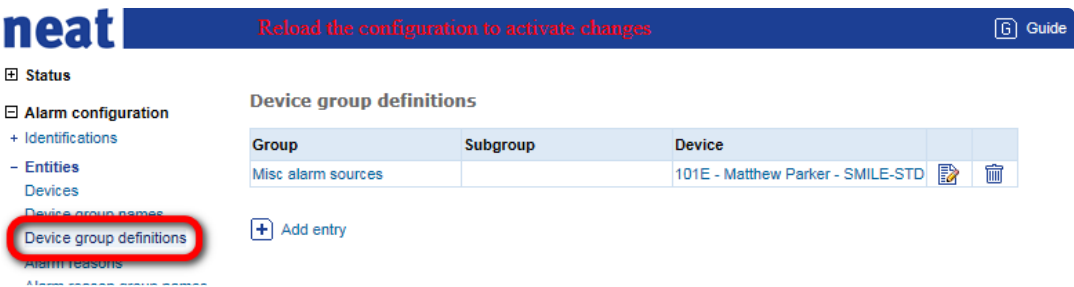
5. The D-SERVER does not recognize Charlotte Miller and Emma Lopez so they must be added to the system. Go to **Identifications > Personnel** to add Charlotte Miller and Emma Lopez.



Picture 75. Add personnel

i The personnel Login id is unique for each user. In our scenario Charlotte and Emma must be informed about their unique login id. For a successful login, the personnel needs to know their unique login id and what group they should login to. If Charlotte Miller should login to "Personnel Night" she must know her unique id (in this scenario it is 1) and which group id "Personnel Night" has (in this scenario it is 2). It is possible to create personnel with a generic name. For example Nurse Consultant 1, Nurse Consultant 2 etc..

6. Next step is to add all known devices into our Misc alarm sources group. Our scenario has only has one device (101E). Go to **Entities > Device group definitions**.



Picture 76. Define device group definition(s)

i If the system setup contains a lot of devices, add them into several device groups. E.g. devices belonging to Apartment 1-10, Apartment 11-20 and so on.

7. Since we will use shifts, we need to define the Time schedule. From our checklist, we know that the Day shift starts 07:00 AM and the Night shift starts 09:00 PM. Go to **Entities > Time schedule**.

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

Identifications

Entities

Devices

Device group names

Device group definitions

Alarm reasons

Alarm reason group names

Alarm reason group definitions

Position group names

Position group definitions

System mode names

Time schedule

Task registration

Destinations

Routing

System settings

Administration

Default configuration

Time schedule

Day of week	Hour	Minute	System mode		
1 Monday	07	00	Day		
	21	00	Night		
2 Tuesday	07	00	Day		
	21	00	Night		
3 Wednesday	07	00	Day		
	21	00	Night		
4 Thursday	07	00	Day		
	21	00	Night		
5 Friday	07	00	Day		
	21	00	Night		
6 Saturday	07	00	Day		
	21	00	Night		
7 Sunday	07	00	Day		
	21	00	Night		

Add entry

Picture 77. Create a time schedule

- As we want received alarms to be forwarded to our D-TREX 2G units we need to configure two D-TREX destinations. A D-TREX destination is only a preparation of handling alarms. Go to **Destinations** > **D-TREX destinations** and create a Personnel Day and Night destinations.

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

Identifications

Entities

Destinations

Message formats

Signal types

D-TREX destinations

Generic destinations

Delay destinations

Other destinations

System settings

Administration

Default configuration

D-TREX paging destinations

Name	Destination group	Message format	Signal	Require presence		
Personnel Day	Personnel Day	Alarm message	Normal beep	No		
Personnel Night	Personnel Night	Alarm message	Normal beep	No		

Add entry

Picture 78. Add D-TREX2G destinations

- In order for D-TREX 2G to receive alarms, we must configure routing. The first step is to create sequences. Create a sequence for Personnel Day and Personnel Night. Go to **Routing** > **Alarm sequence names**.

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

Identifications

Entities

Destinations

Routing

Alarm sequence names

Alarm sequence definitions

Alarm distribution

System settings

Administration

Default configuration

Alarm sequences

Sequence name		
Personnel Day		
Personnel Night		

Add entry

Picture 79. Define alarm sequence name(s)

10. Next step is to define the Alarm sequence. Go to **Routing > Alarm sequence definitions**.

In the configuration below, alarms sent to Personnel Day will be active for 240 seconds. If no one take care of the alarm, the alarm will be sent to group Personnel Night. If Personnel Night doesn't take care of the alarm within 240 seconds, the alarm is lost forever. The same goes for Alarm sequence: Personnel Night but the opposite way.

The screenshot shows the 'neat' configuration interface. On the left, a sidebar menu has 'Alarm sequence definitions' highlighted with a red circle. The main area is titled 'Alarm sequence definitions' and contains a table with the following data:

Alarm sequence	Order	Duration (s)	Destination type	Destination	Continue		
Personnel Day	1	240	D-TREX	Personnel Day	No		
	2	240	D-TREX	Personnel Night	No		
Personnel Night	1	240	D-TREX	Personnel Night	No		
	2	240	D-TREX	Personnel Day	No		

Below the table is a '+ Add entry' button.

Picture 80. Define alarm sequence definition(s)



It is recommended to configure Duration (s) to a higher value to prevent alarms from being lost.

11. To enable our sequences we need to configure Alarm distribution. Support for Assistance alarms can also be enabled from Alarm distribution. Go to **Routing > Alarm distribution**.

The configuration below enables user alarms to be sent to Personnel Day or Personnel Night depending on system time. We have also enabled support for Assistance alarms by configuring Order 3 to 6.

The screenshot shows the 'neat' configuration interface. On the left, a sidebar menu has 'Alarm distribution' highlighted with a red circle. The main area is titled 'Distribution of alarms' and contains a table with the following data:

Order	Device groups	Alarm reason groups	Position groups	System mode	Alarm sequence	Priority	Alarm reset		
1	Misc alarm sources	User alarms	All positions	Day	Personnel Day	Normal	Yes		
2	Misc alarm sources	User alarms	All positions	Night	Personnel Night	Normal	Yes		
3	Personnel Day	Assistance alarms	All positions	Day	Personnel Day	Normal	Yes		
4	Personnel Day	Assistance alarms	All positions	Night	Personnel Night	Normal	Yes		
5	Personnel Night	Assistance alarms	All positions	Day	Personnel Day	Normal	Yes		
6	Personnel Night	Assistance alarms	All positions	Night	Personnel Night	Normal	Yes		

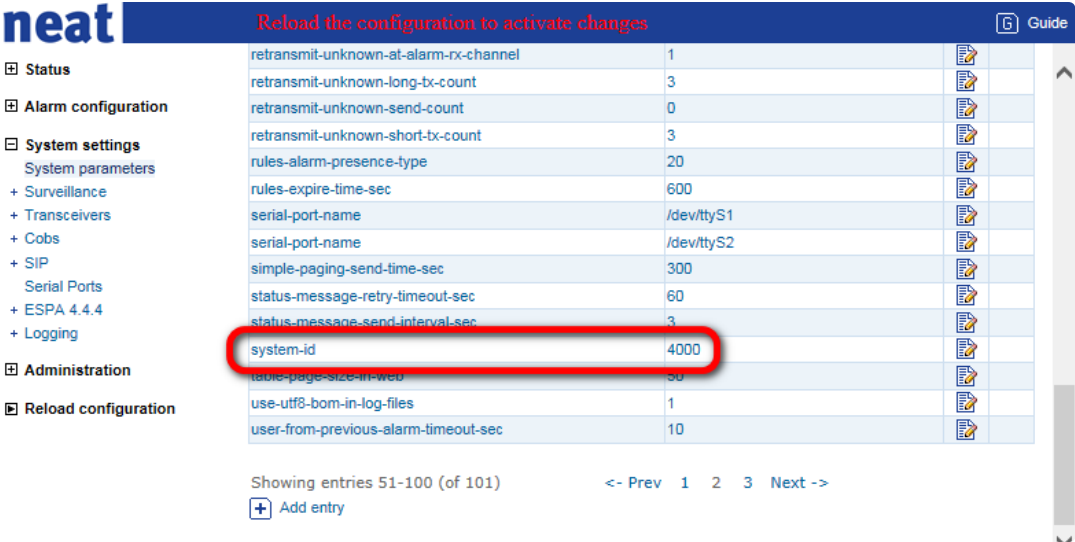
Below the table is a '+ Add entry' button.

Picture 81. Define alarm distribution routing



Note that Alarm reset is configured to Yes. If someone accepts an Alarm or Assistance alarm, it will disappear from other D-TREX 2G devices. If you are configuring a fire alarm, you probably want to configure Alarm Reset to No for that specific distribution.

12.The last step in the D-SERVER configuration is to change System ID to something else. This step is optional but recommended if you have several D-SERVERs running in your environment. Go to **System settings > System parameters** and change the parameter **system-id** to 4000.

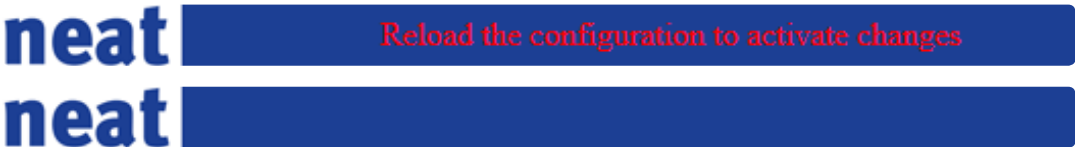


Picture 82. Set the D-SERVER System ID

13.Click Reload configuration to enable the configuration.



Note that the red "Reload the configuration to activate changes" disappears when the configuration is activated.

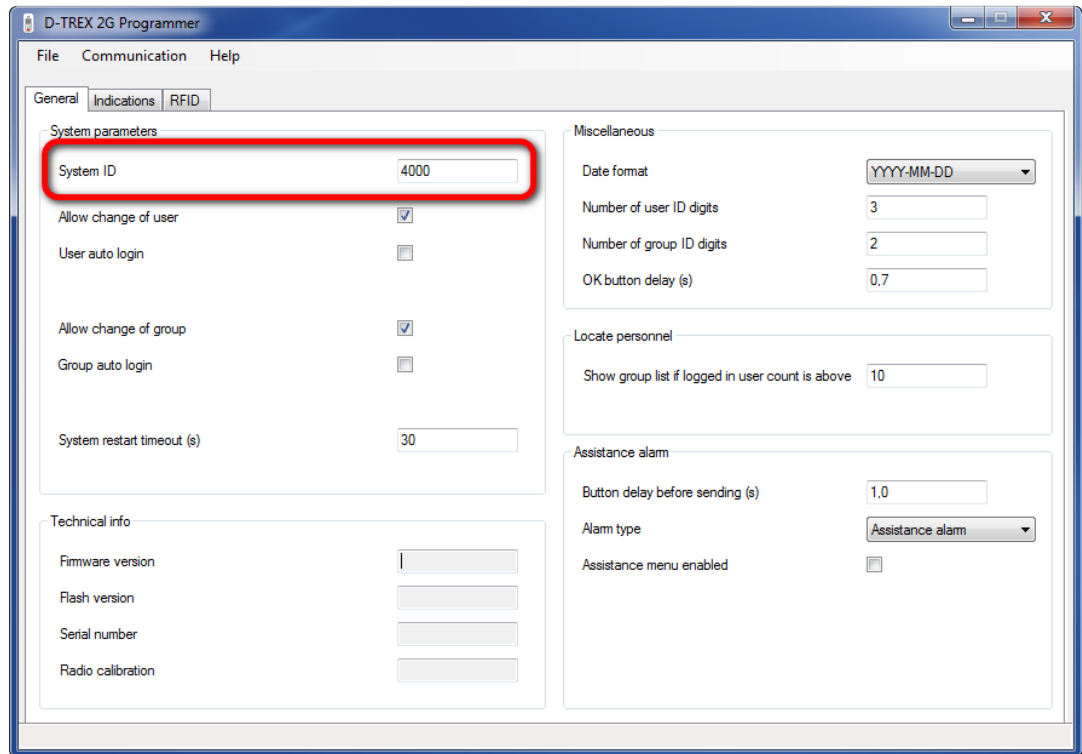


Picture 83. Reload the configuration notification

D-TREX 2G configuration

Since the System ID in the D-Server changed the System ID in D-TREX 2G must also be changed.

Start by reading the D-TREX 2Gs, change System ID and finally write configuration to both D-TREX 2Gs.

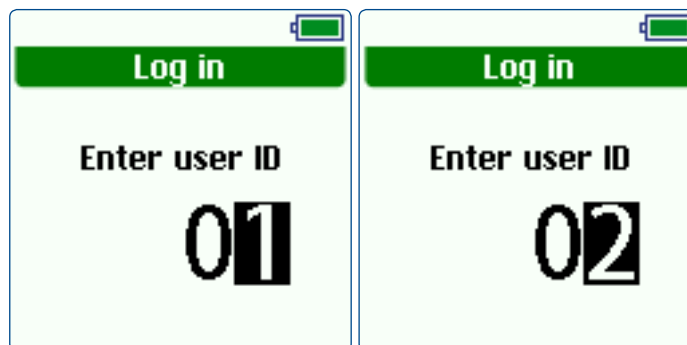


Picture 84. Change the System ID setting in D-TREX2G

Testing Scenario I - Text solution (D-TECT)

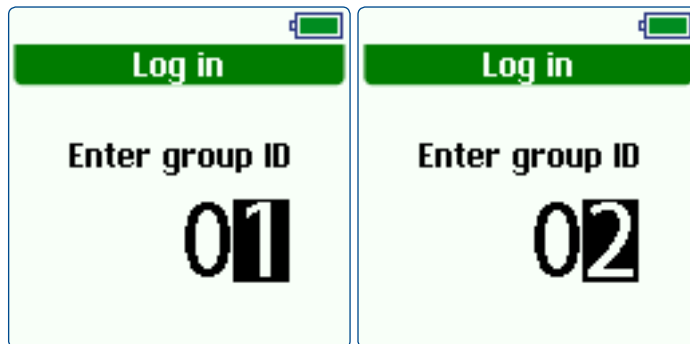
It's now time to test the scenario configuration.

1. Enter Charlotte Miller (1) and Emma Lopez (2) Login id.



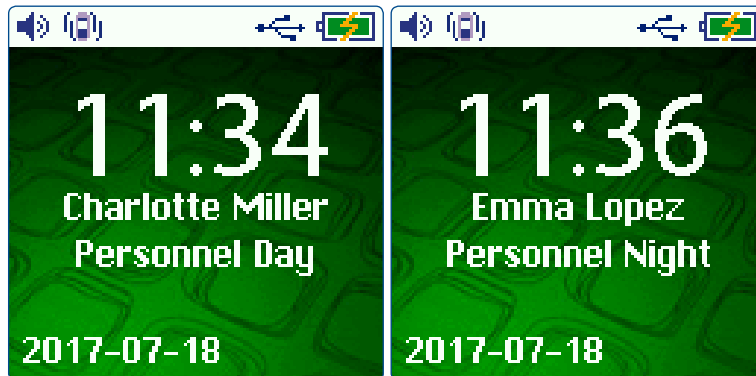
Picture 85. Enter the user logins

2. Enter group they should login to. Personnel Day (1) and Personnel Night (2).



Picture 86. Enter the user login groups

3. Verify that Charlotte Miller has logged in to Personnel Day and Emma Lopez to Personnel Night.



Picture 87. The logged in users and their login groups are displayed on the screen

4. Press the alarm button. If everything is working, Charlotte Miller will get an alarm message as she is logged into the group Daytime. Confirm the alarm.



Picture 88. D-TREX2G displaying a new alarm

Press the alarm button again and wait 240 seconds. If our sequences are working correctly, Emma Lopez should get an alarm message.

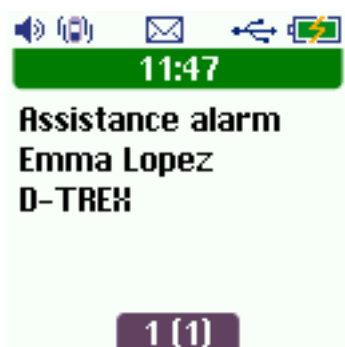
5. The last thing to test is **Assistance alarms**. Press and hold the red button (marked in red in the picture below) to send an **Assistance alarm**. In this example the Assistance alarm is sent from Emma Lopez to all other units in the system.



Picture 89. Press and hold the red alarm button to send an **Assistance alarm**



Picture 90. Assistance alarm sent confirmation in D-TREX2G



Picture 91. Assistance alarm received message on D-TREX2G

Modification #1 of Scenario I

It's quite common that the personnel wants to do presence/ready against the alarm button. To support this feature the SMILE-STD must be replaced with a SMILE-ID.

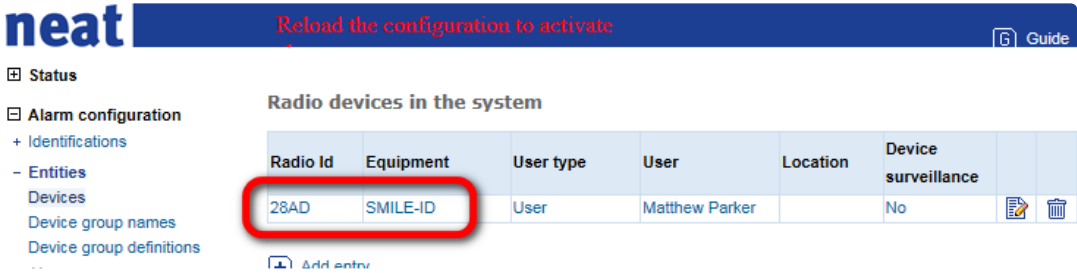


This feature only works with D-ATOM and SMILE-ID as they have RFID functionality.

The existing D-SERVER configuration is used but with some minor modifications.

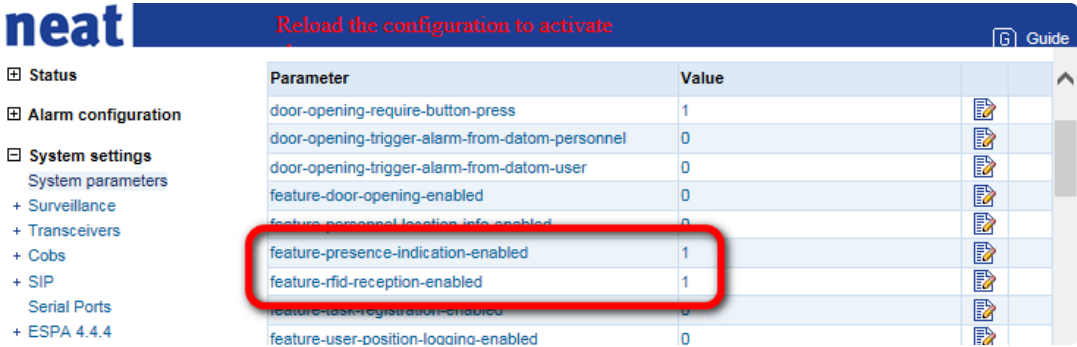
1. Replace SMILE-STD (101E) with a SMILE-ID. The SMILE-ID in this example has radio code 28AD.

Go to **Entities > Devices** and change the SMILE-STD to a SMILE-ID.



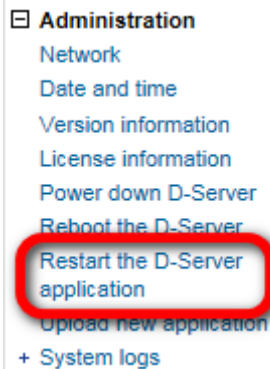
Picture 92. Change/add a SMILE-ID

2. Go to **System settings > System parameters** and enable **feature-presence-indication-enabled** and **feature-rfid-reception-enabled** by setting its values to 1.



Picture 93. Enable presence and RFID functionality in the D-SERVER system

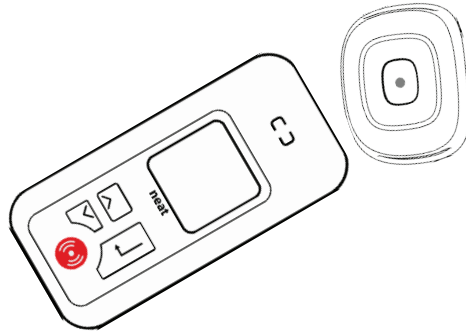
3. Reload the configuration.
4. Restart the D-Server application.



Picture 94. Restart the D-SERVER application

Testing presence/ready against a SMILE-ID button

Place the D-TREX2G close to the SMILE-ID.



Picture 95. EN

Press and hold the green **Return** button on D-TREX2G until the presence message is displayed. Press the green **Return** again to close the message and return to the main screen.



Picture 96. EN

Press the green **Return** button again to end presence and indicate Ready. Press the green **Return** button again to close the message and return to the main screen.



Picture 97. Ready indication in D-TREX2G



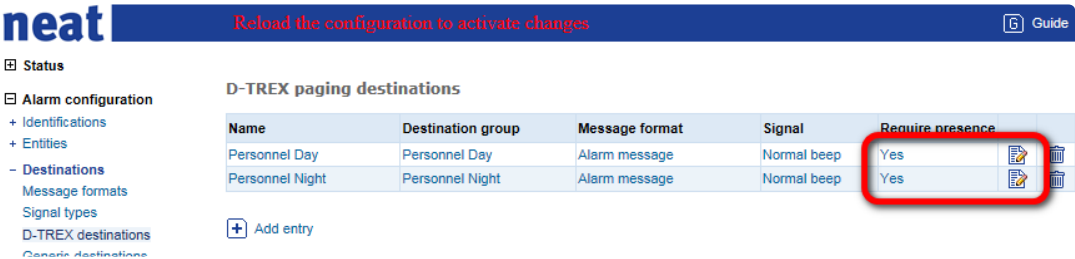
If you have trouble getting the solution to work, please check that the RFID is enabled on the SMILE-ID.

Modification #2 of Scenario I

Require presence is a feature that sends out a reminder if someone accepts an alarm but don't do Presence.

This is a continuation of Modification #1.

- 1. Go to **Destinations > D-TREX destinations** to enable the feature.

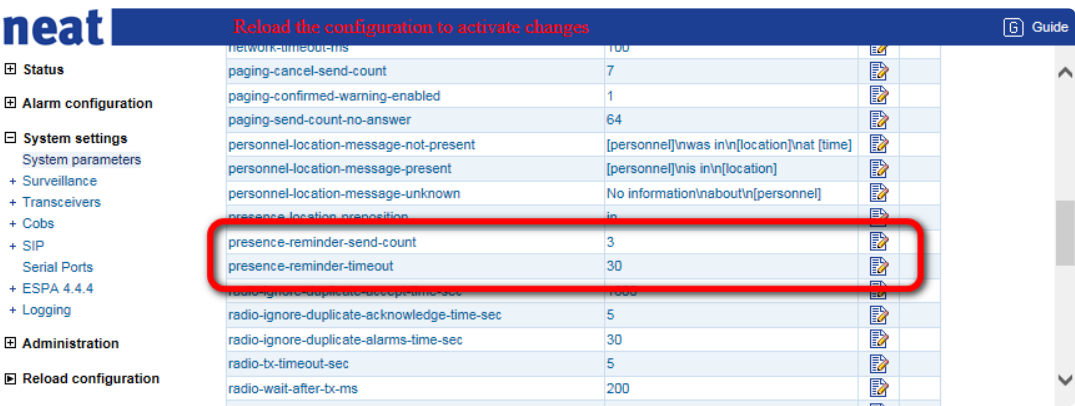


Picture 98. Enable Require presence for the D-TREX2G destinations

- 2. The default setting is to send out a reminder when 240 seconds have passed. The reminder will remind 3 times.



In this example a reminder will be sent out when 30 seconds have passed.



Picture 99. Changing the presence reminder settings

- 3. Reload the configuration.

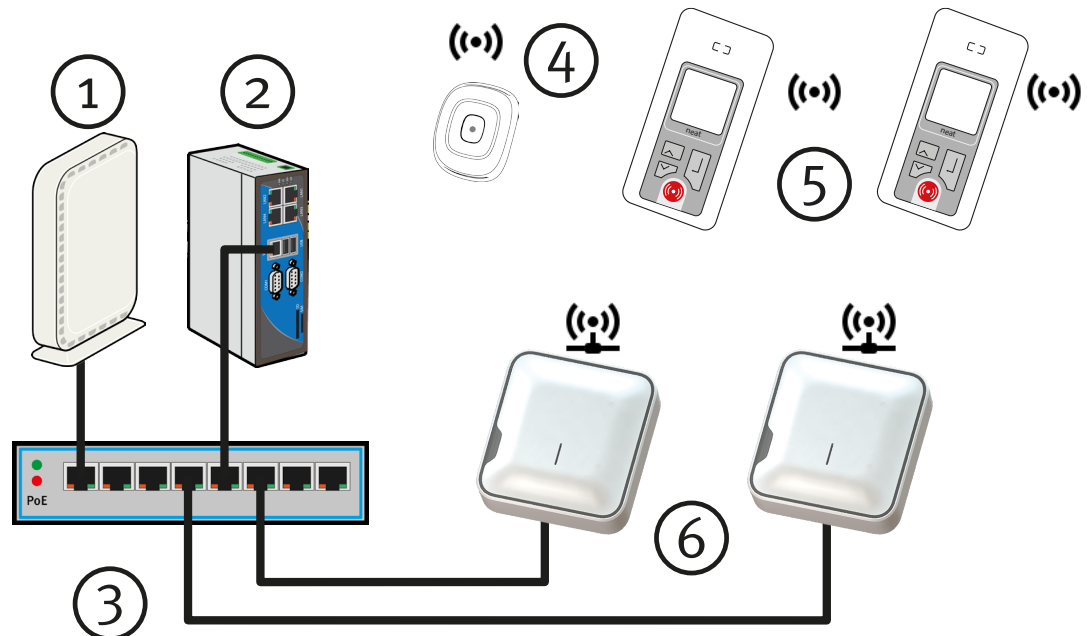
Testing Require presence

Press the SMILE-ID button. Confirm the alarm by pressing the **Return** button (alarm disappears from the display). Wait for the three reminders to pop up in the D-TREX 2G display.

Finish with a Presence/Ready.

6.3 Scenario II - Text solution (D-TECT IP)

This scenario resembles the previous scenario but D-TECT IPs are used. Follow the instructions below to configure the solution. If something is unclear, you can always go back to Scenario I.



Picture 100. Scenario II overview



Do not connect the D-TECT IP devices, as illustrated above, until the documentation mentions so!

As mentioned earlier, it's important to spend a few minutes on the checklist to facilitate the configuration.

Checklist

- Q: Do you have a list of the names that will stay at the nursing home or the apartment numbers?
- ✓: Matthew Parker
- Q: Do you have a list of the personnel which will work at the nursing home?
- ✓: Charlotte Miller
- ✓: Emma Lopez
- Q: Do you have the radio codes of all that devices that will be used at the nursing home? Do you know who the units should belong to?
- ✓: SMILE-STD (Radio ID: 101E) belongs to Matthew Parker.
- Q: Do you have an idea of how many groups you need for the nursing home? Will the nurses work in shift? Day and Night? Then you need at least two groups for the nurses and at least one for devices.
- ✓: We need two personnel groups because the nurses will work in shift.
 - Personnel Day
 - Personnel Night
- ✓: Since we only have one SMILE-STD in this scenario, one device group is enough.
 - Misc alarm sources

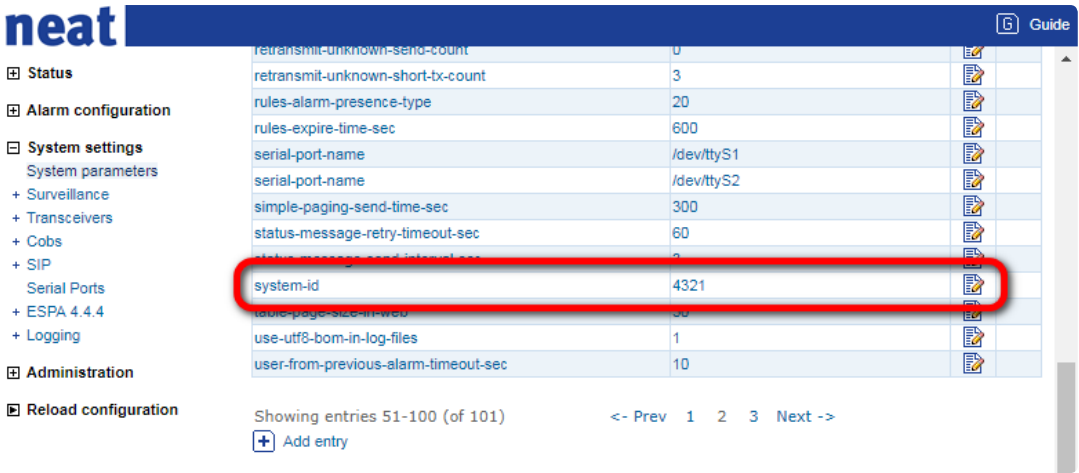
Q: Will you use day and night shifts? Then you need to know when the day and night shifts starts.

✓: Day shift starts 07:00 AM

✓: Night shift starts 09:00 PM

Before connecting the D-TECT IP units, a D-SERVER System ID must to be set. The default System ID is set to 1, but in this scenario the System ID 4321 is used.

Go to **System settings > System parameters** to configure System ID.



Picture 101. Set the System ID



Don't forget to reload the configuration after the System ID is changed.

D-TECT IP configuration

The D-TECT IP devices are pre-configured with a static IP (192.168.0.1) so it is important to connect one device at a time. Once you have connected a device you need to review Network and Server Settings.

The D-TECT Server IP address must be changed so it matches the D-SERVER IP address. The same goes for Server ID (System ID).

As mentioned above the System ID is set to 4321.



D-TECT IP Configuration

Status

Connected to server	Yes
Connected to debug server	No
IP Address	10.40.10.31
MAC Address	002217000EC8
Gateway	10.40.10.252
Netmask	255.255.254.0
DNS	10.40.10.202
Application Version	2.02 - revision 18186 - NEAT
Bootloader Version	1.06
Hardware Revision	02
Device Serial	3784

Network Settings

Use DHCP	<input checked="" type="radio"/> Yes <input type="radio"/> No
Static IP address	192.168.0.1
Netmask	255.255.255.0
Gateway	0.0.0.0
DNS	0.0.0.0
MAC Address	002217000EC8
Access code (Max 7 chars)	
<div>Update Settings</div>	

Server Settings

Server IP or hostname	10.40.10.180
Server Port	5001
Server ID (1 - 65534)	4321
Device ID (0001 - FFFE)	1002
Enable Debug Prints	<input type="radio"/> Yes <input checked="" type="radio"/> No
Debug Server IP	0.0.0.0
Debug Server Port	0

Picture 102. EN



Connected devices also displays if you have any D-TECT, D-CALL or a CMS connected to the D-SERVER.

To get this scenario working we also need to configure the D-SERVER and our D-TREX 2G units.

Let's begin with the D-SERVER configuration.

D-SERVER configuration

Here's a brief overview of the D-SERVER configuration. Please note that the configuration is identical to Scenario 1 but the System ID have changed.



If you are starting with an empty D-SERVER configuration but did a D-SERVER backup of Scenario 1, you do not need to configure the D-SERVER from scratch. Just restore Scenario 1 (see 4.2.1), change the System ID and reload the configuration.

The following screenshots is a re-cap and follows the same steps as for Scenario I.

neat

Guide

Status

Alarm configuration

Identifications

Users

Alarm points

Personnel

Positions

Users in the system

Name
Matthew Parker

Add entry

Picture 103. Add user(s)

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

Identifications

Users

Alarm points

Personnel

Positions

Equipment

Entities

Personnel in the system

Login id / SIP	Name	First name	Last name	Device type	Group
1	Charlotte Miller	Charlotte	Miller	D-TREX2G	None
2	Emma Lopez	Emma	Lopez	D-TREX2G	None

Add entry

Picture 104. Add personnel

neat

Reload the configuration to activate

Guide

Status

Alarm configuration

Identifications

Entities

Devices

Device group names

Device group definitions

Alarm reasons

Alarm reason group names

Radio devices in the system

Radio Id	Equipment	User type	User	Location	Device surveillance
101E	SMILE-STD	User	Matthew Parker		No

Add entry

Picture 105. Add device(s)

neat

Reload the configuration to activate

Guide

Status

Alarm configuration

+ Identifications

- Entities

Devices

Device group names

Device group definitions

Alarm reasons

Alarm reason group names

Alarm reason group

Device groups

Login id	Group name	Log-in allowed		
1	Personnel Day	Yes		
2	Personnel Night	Yes		
3	Misc alarm sources	No		

+ Add entry

Picture 106. Define the device group name(s)

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

+ Identifications

- Entities

Devices

Device group names

Device group definitions

Alarm reasons

Alarm reason group names

Alarm reason group

Device group definitions

Group	Subgroup	Device		
Misc alarm sources		101E - Matthew Parker - SMILE-STD		

+ Add entry

Picture 107. Define the device group definition(s)

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

+ Identifications

- Entities

Devices

Device group names

Device group definitions

Alarm reasons

Alarm reason group names

Alarm reason group definitions

Position group names

Position group definitions

System mode names

Time schedule

Task registration

+ Destinations

+ Routing

Time schedule

Day of week	Hour	Minute	System mode		
1 Monday	07	00	Day		
	21	00	Night		
2 Tuesday	07	00	Day		
	21	00	Night		
3 Wednesday	07	00	Day		
	21	00	Night		
4 Thursday	07	00	Day		
	21	00	Night		
5 Friday	07	00	Day		
	21	00	Night		
6 Saturday	07	00	Day		
	21	00	Night		
7 Sunday	07	00	Day		
	21	00	Night		

+ Add entry

Picture 108. Create a time schedule

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

+ Identifications

+ Entities

- Destinations

Message formats

Signal types

D-TREX destinations

Generic destinations

Delay destinations

D-TREX paging destinations

Name	Destination group	Message format	Signal	Require presence		
Personnel Day	Personnel Day	Alarm message	Normal beep	No		
Personnel Night	Personnel Night	Alarm message	Normal beep	No		

+ Add entry

Picture 109. Add D-TREX2G destinations

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

+ Identifications

+ Entities

+ Destinations

- Routing

Alarm sequence names

Alarm sequence definitions

Alarm distribution

Alarm sequences

Sequence name		
Personnel Day		
Personnel Night		

+ Add entry

Picture 110. Define alarm sequence name(s)

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

+ Identifications

+ Entities

+ Destinations

- Routing

Alarm sequence names

Alarm sequence definitions

Alarm distribution

Alarm sequence definitions

Alarm sequence	Order	Duration (s)	Destination type	Destination	Continue		
Personnel Day	1	240	D-TREX	Personnel Day	No		
	2	240	D-TREX	Personnel Night	No		
Personnel Night	1	240	D-TREX	Personnel Night	No		
	2	240	D-TREX	Personnel Day	No		

+ Add entry

Picture 111. Define alarm sequence definition(s)

neat

Reload the configuration to activate changes

Guide

Status

Alarm configuration

+ Identifications

+ Entities

+ Destinations

- Routing

Alarm sequence names

Alarm sequence definitions

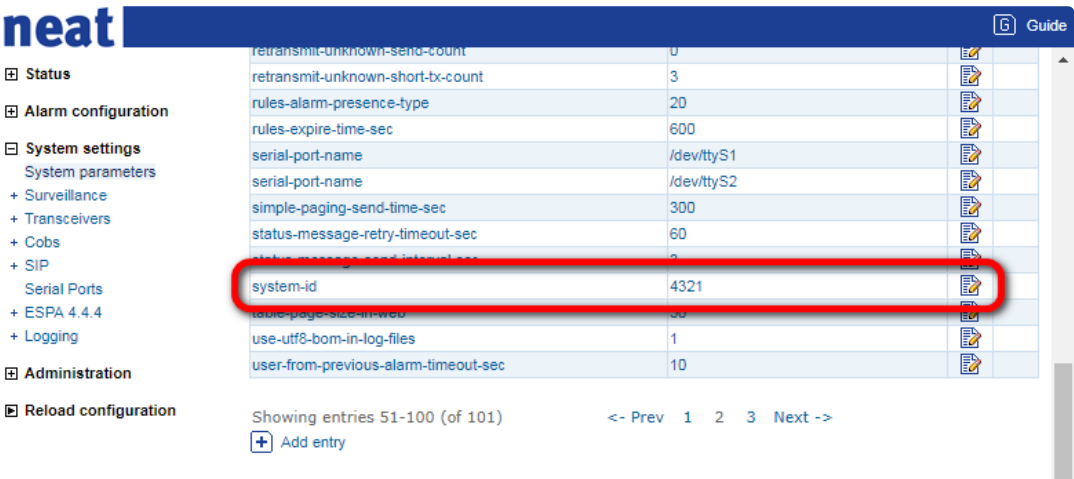
Alarm distribution

Distribution of alarms

Order	Device groups	Alarm reason groups	Position groups	System mode	Alarm sequence	Priority	Alarm reset		
1	Misc alarm sources	User alarms	All positions	Day	Personnel Day	Normal	Yes		
2	Misc alarm sources	User alarms	All positions	Night	Personnel Night	Normal	Yes		
3	Personnel Day	Assistance alarms	All positions	Day	Personnel Day	Normal	Yes		
4	Personnel Day	Assistance alarms	All positions	Night	Personnel Night	Normal	Yes		
5	Personnel Night	Assistance alarms	All positions	Day	Personnel Day	Normal	Yes		
6	Personnel Night	Assistance alarms	All positions	Night	Personnel Night	Normal	Yes		

+ Add entry

Picture 112. Define the alarm distribution

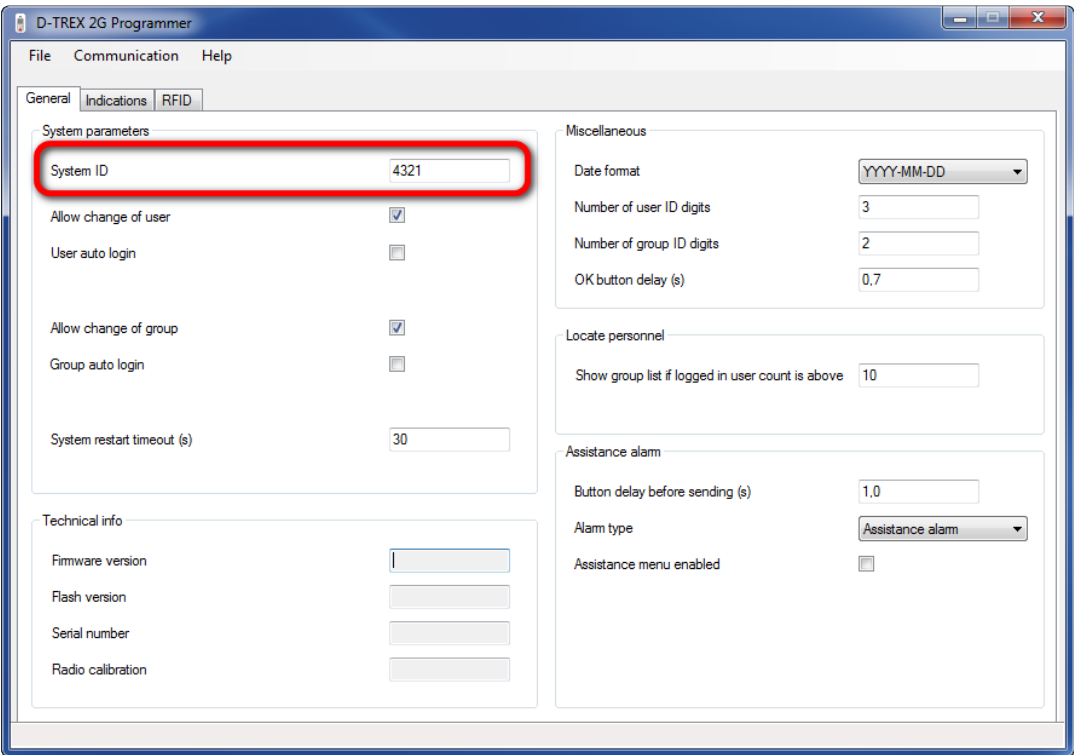


Picture 113. Set the D-SERVER system ID

D-TREX 2G configuration

To be able to log on to the D-SERVER system with D-TREX 2G units, System ID 4321 must be set in the D-TREX 2G Programmer.

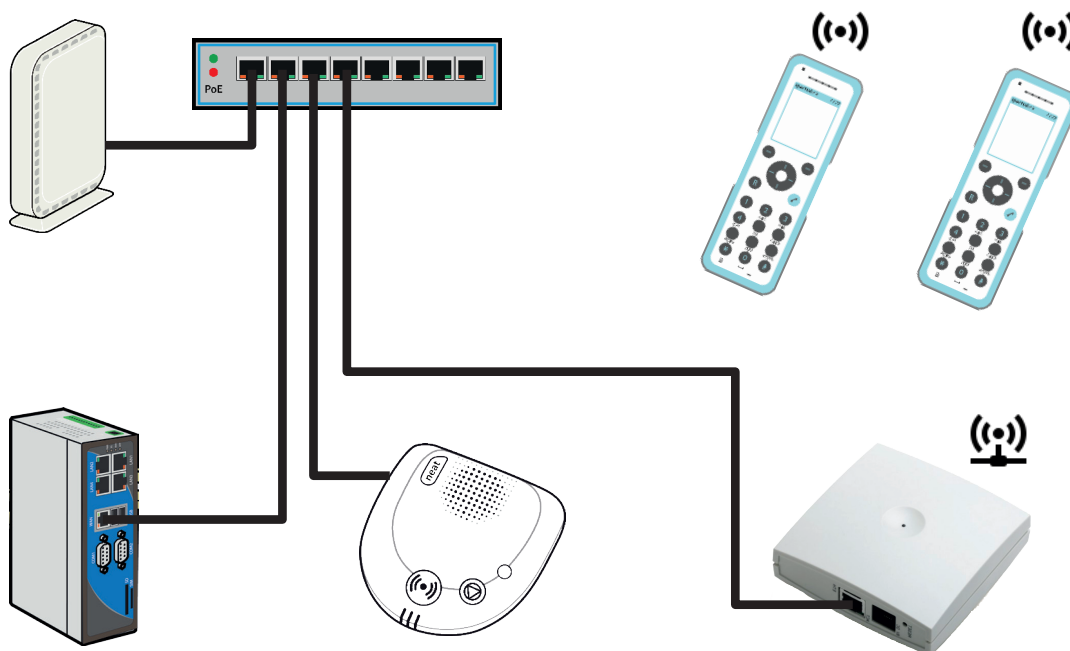
Write the edited configuration to the D-TREX 2G units. Test the solution afterwards.



Picture 114. Set the D-SERVER System ID in the D-TREX2G

6.4 Scenario III - Speech solution (DECT)

The goal of this scenario is to set up a cheap speech solution. The solution lacks Advanced Messaging, but this scenario will circumvent this by calling all handsets and stop ringing when someone from the personnel answers the call/alarm.



Picture 115. Scenario III overview



Scenario III requires a D-SERVER SIP license.

Again, review the checklist.

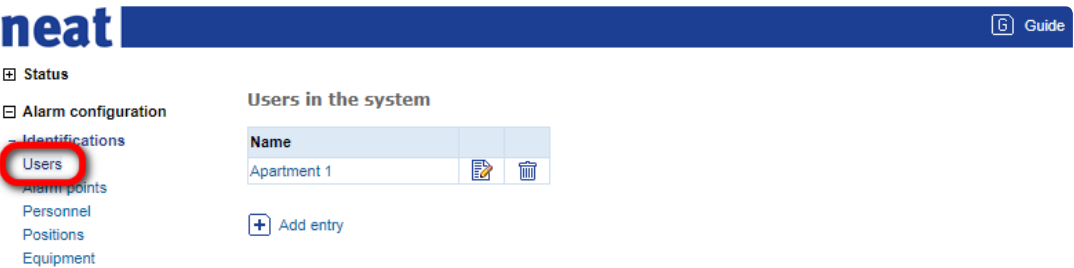
Checklist

- Q: Do you have a list of the names that will stay at the nursing home or the apartment numbers?
- ✓: Apartment 1
- Q: Do you have a list of the personnel which will work at the nursing home?
- ✓: Charlotte Miller
- ✓: Emma Lopez
- Q: Do you have the radio codes of all that devices that will be used at the nursing home? Do you know who the units should belong to?
- ✓: D-CALL (Radio ID: 0472) belongs to Apartment 1

- Q: Do you have an idea how many groups you need for the nursing home? Will the nurses work in shift? Day and Night? Then you need at least two groups for the nurses and at least one for devices.
- ✓: The personnel have requested one staff group that they can use 24/7.
- Staff
- ✓: Since we only have one D-CALL in this scenario, one device group is enough.
- Apartment 1.
- Q: Will you use day and night shifts? Then you need to know when the day and night shifts starts.
- ✓: No need.

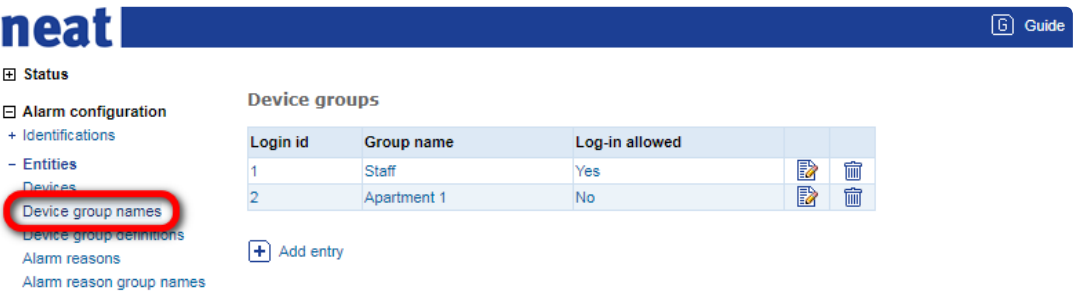
D-SERVER configuration

Go to **Identifications > Users** to add the users who will stay at the nursing home. In our scenario, we only have one user (Apartment 1). If there were more users, they'd be called Apartment 2, Apartment 3 etc..



Picture 116. Add user(s)

To create necessary Personnel and Device groups, go to **Entities > Device group names**. Add **Staff** and **Apartment 1**. It is important that you choose **Log-in allowed (Yes)** for Staff so the nurses can log in. There's no need to configure Log-in allowed for group Apartment 1. If we had more users, we would create additional device groups for Apartment 2, Apartment 3 etc..



Picture 117. Define device group name(s)

The D-SERVER will not recognize Charlotte Miller and Emma Lopez so the next step in the configuration process is to add the personnel. Go to **Identifications > Personnel** and add Charlotte Miller and Emma Lopez.

neat

Guide

Status

Alarm configuration

Identifications

Users

Personnel

Positions

Equipment

Entities

Personnel in the system

Login id / SIP	Name	First name	Last name	Device type	Group		
100	Charlotte Miller			SIP	Staff		
101	Emma Lopez			SIP	Staff		

Add entry

Picture 118. Add personnel

D-CALL (ID: 0472) is an unknown radio code for the D-SERVER. To associate the Radio ID 0472 to Apartment 1, go to **Entities > Devices**. When the D-CALL is associated to Apartment 1, it's no longer an unknown radio code.



The last four digits of the D-CALL serial number are the device's radio code.

neat

Guide

Status

Alarm configuration

Identifications

Entities

Devices

Device group names

Device group definitions

Alarm reasons

Alarm reason group names

Radio devices in the system

Radio Id	Equipment	User type	User	Location	Device surveillance		
0472	D-CALL	User	Apartment 1		No		

Add entry

Picture 119. Add device(s)

Next step is to add/configure all associated devices to Apartment 1. Our scenario has only has one device (Radio ID: 0472). Go to **Entities > Device group definitions**.

neat

Guide

Status

Alarm configuration

Identifications

Entities

Devices

Device group names

Device group definitions

Alarm reasons

Alarm reason group names

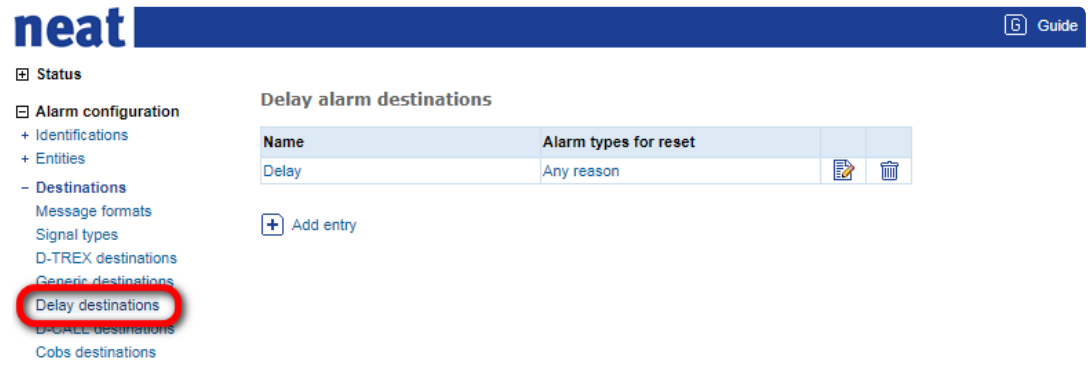
Device group definitions

Group	Subgroup	Device		
Apartment 1		0472 - Apartment 1 - D-CALL		

Add entry

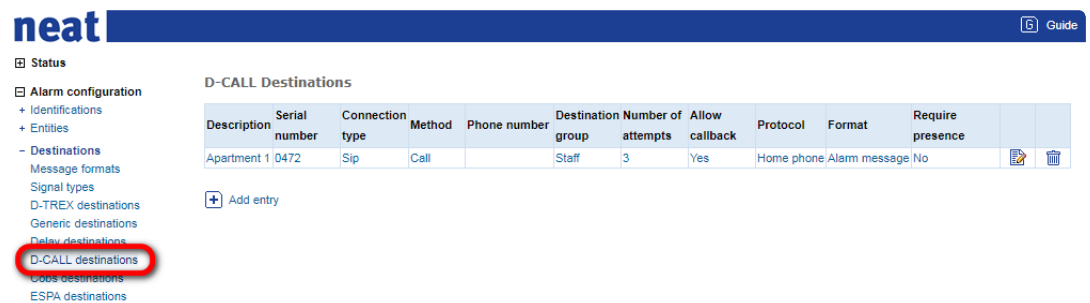
Picture 120. Define device group definition(s)

In this scenario, we want to make a pause between the alarm and that the phones start ringing. To prepare the pause a Delay destination is created. Go to **Destinations** › **Delay destinations**.



Picture 121. Add delay destinations

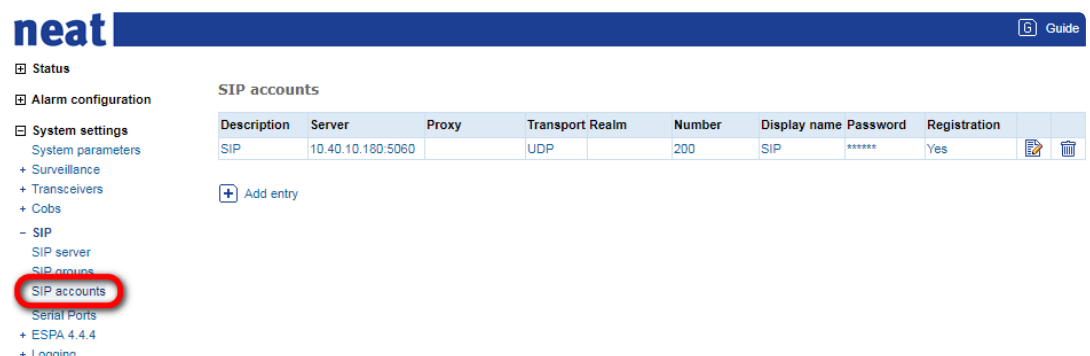
A D-CALL destination is only a preparation. Go to **Destinations** › **D-CALL destinations** to create a specific destination for Apartment 1. If the scenario had contained more apartments, a destination must be created for each Apartment.



Picture 122. Add D-CALL destinations

As we want the D-SERVER to send a SIP message (alarm) to our DECT phones we need to create a D-SERVER SIP account.

Go to **SIP** › **SIP accounts** to create an account.



Picture 123. Create SIP accounts



Note that 10.40.10.180 is referring to the D-SERVER in this example. You need to configure the IP address corresponding to your D-SERVER IP!

All SIP accounts (both software and hardware) need to connect to a SIP Server. Add 2 SIP accounts for the DECT phones, one for the D-CALL and another one for the local SIP account.

neat Guide

- Status
- Alarm configuration
- System settings
 - System parameters
 - Surveillance
 - Transceivers
 - Cobs
 - SIP
 - SIP server**
 - SIP groups
 - SIP accounts
 - Serial Ports
 - ESPA 4.4.4
 - Logging

SIP server

Disable

SIP clients

Number	Display name	Password	Online		
100	Charlotte Miller	*****	No		
101	Emma Lopez	*****	No		
200	SIP Account	*****	No		
300	300 - D-CALL 0472	*****	No		

+ Add entry

Picture 124. SIP server settings

A SIP destination is only a preparation. In this case, it's a preparation for the alarm message that will be sent to the nurses. Go to **Destinations > SIP destinations** to create a destination.

neat Guide

- Status
- Alarm configuration
 - Identifications
 - Entities
 - Destinations
 - SIP destinations**
 - Message formats
 - Signal types
 - D-TREX destinations
 - Generic destinations

SIP destinations

Name	Sip account	Method	Destination group	Use callback	Format	Require presence		
Staff	SIP	Sms	Staff	Yes	Alarm message	No		

+ Add entry

Picture 125. Add SIP destinations

Next step is to create a sequence. If there would be more users the sequences could be called Apartment 2, Apartment 3 etc..

Go to **Routing > Alarm sequence names** to create a sequence.

neat Guide

- Status
- Alarm configuration
 - Identifications
 - Entities
 - Destinations
 - Routing
 - Alarm sequence names**
 - Alarm sequence definitions
 - Alarm distribution

Alarm sequences

Sequence name		
Apartment 1		

+ Add entry

Picture 126. Define alarm sequence name(s)

Next step is to define the Alarm sequence.

Go to **Routing > Alarm sequence definitions**. The definition below sends out an alarm to the nurses, thereafter everything pauses 6 seconds and finally all DECT phones start ringing.

neat

Status

Alarm configuration

- Identifications
- Entities
- Destinations
- Routing
 - Alarm sequence names
 - Alarm sequence definitions
 - Alarm distribution

System settings

Alarm sequence definitions

Alarm sequence	Order	Duration (s)	Destination type	Destination	Continue		
Apartment 1	1	6	SIP	Staff	Yes		
	2	6	Delay	Delay	Yes		
	3	600	D-CALL	Apartment 1	No		

Add entry

Picture 127. Create alarm sequence definitions

To enable the sequences Alarm distribution must be configured. Go to **Routing > Alarm distribution**.

neat

Status

Alarm configuration

- Identifications
- Entities
- Destinations
- Routing
 - Alarm sequence names
 - Alarm sequence definitions
 - Alarm distribution

System settings

Distribution of alarms

Order	Device groups	Alarm reason groups	Position groups	System mode	Alarm sequence	Priority	Alarm reset		
1	Apartment 1	Any reason	All positions	Always	Apartment 1	Normal	Yes		

Add entry

Picture 128. Define alarm distribution

As mentioned earlier System ID 1 is not recommended. In this scenario we will change the System ID to 2222.

Go to **System settings > System parameters** to configure System ID.

neat

Status

Alarm configuration

System settings

- System parameters
- Surveillance
- Transceivers
- Cobs
- SIP
- Serial Ports
- ESPA 4.4.4
- Logging

Administration

Reload configuration

system-id

2222

Picture 129. Set the D-SERVER system ID



Don't forget to Reload the configuration once you are finished with the D-SERVER configuration.

IP-DECT 400 configuration

There are two important tabs when configuring the IP-DECT. The first one is found under **Configuration > SIP**.

Make sure "Default domain" and "Proxy 1" reflects the D-SERVER IP address.

spectralink **SIP-DECT Server 400**

Status Configuration Users Administration Firmware Statistics
General Wireless Server Security Certificates SIP Provisioning Import/Export

SIP Configuration

General

Local port ** 5060

Transport ** UDP ▾

DNS method ** A records ▾

Default domain ** 10.40.10.180

Register each endpoint on separate port ** ☐

Send all messages to current registrar ** ☐

Registration expire(sec) * 3600

Handset power off action Ignore ▾

Max forwards * 70

Client transaction timeout(msec) * 4000

SIP type of service (TOS/Diffserv) * 96

SIP 802.1p Class-of-Service * 3

GRUU ☒

Use SIPS URI ☒

TLS allow insecure ** ☐

TCP ephemeral port in contact address ** ☐

Proxies

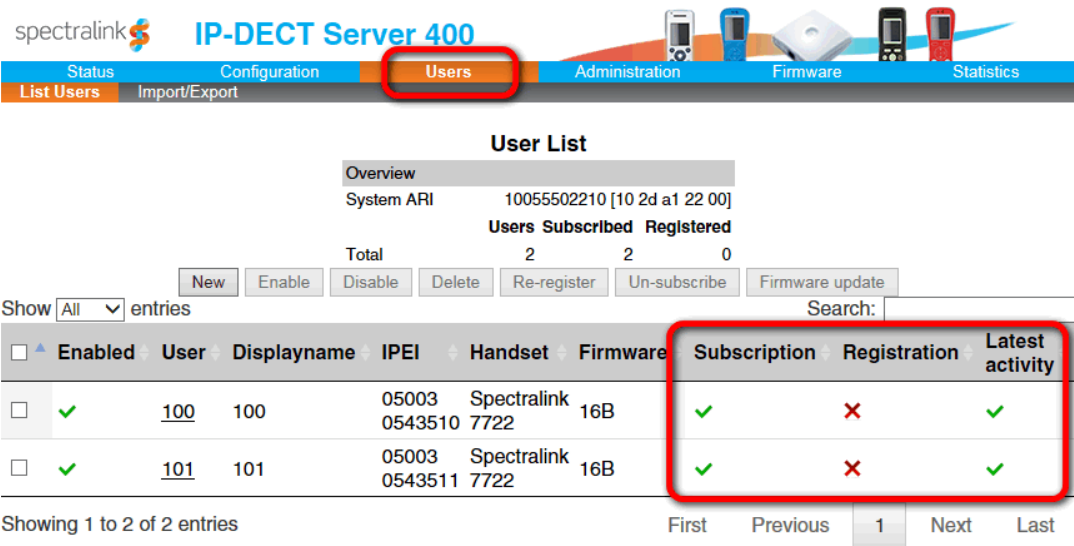
	Priority	Weight	URI
Proxy 1 **	1	100	sip:10.40.10.180 x
Proxy 2 **	2	100	
Proxy 3 **	3	100	
Proxy 4 **	4	100	

Authentication

Default user

Picture 130. Set the default domain IP and proxy address in the IP-DECTs

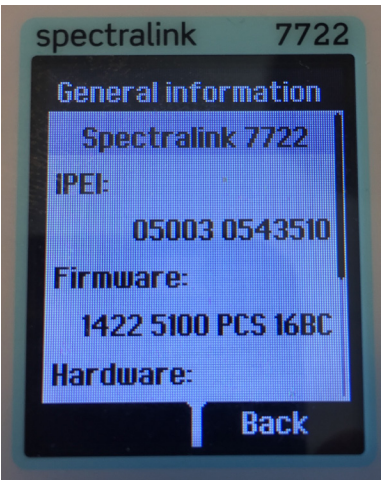
The second tab is found under **Users > List Users**. Make sure to add users 100 and 101 as configured in the D-SERVER. Once configuration is done, reboot the IP DECT.



Picture 131. Add users to the IP-DECTs



Each DECT phone has a unique IPEI number. In the IP-DECT handset go to **Menu > Status > General information** to find your IPEI number.



Picture 132. Spetcralink 7722 handset IPEI number



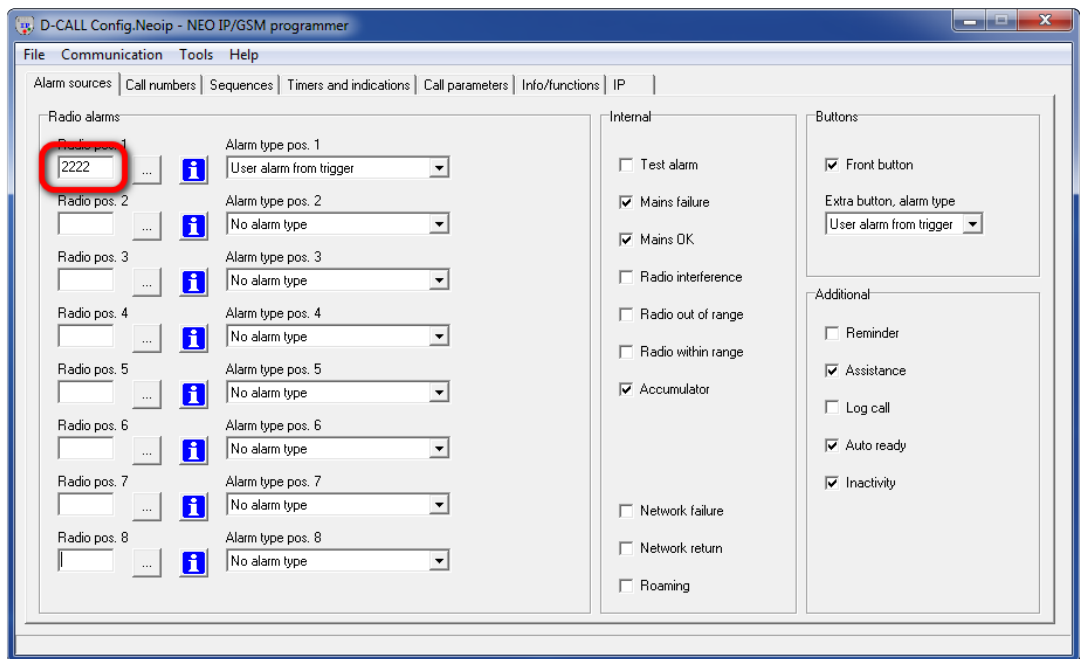
To establish a connection between the handset and IP-DECT select **Menu > Settings > Advanced... > Login > Create login** in the IP-DECT handset.



Once logged in make sure that **Subscription, Registration and Last Activity** has turned green.

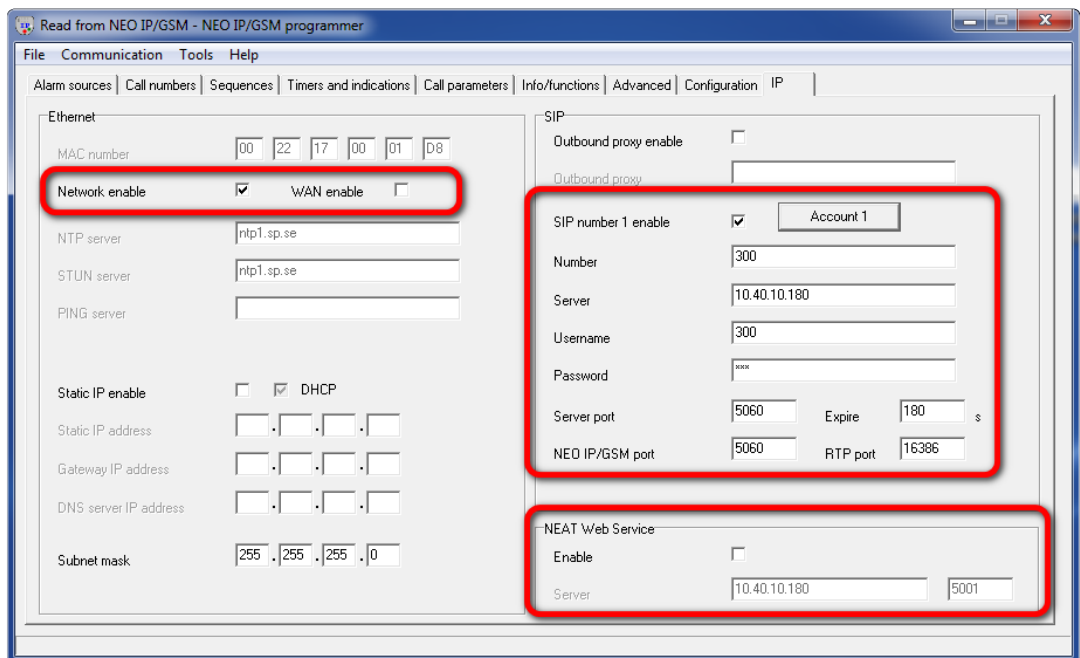
D-CALL configuration

The D-CALL Programmer has several tabs, but only two are relevant to this scenario. Ensure Radio pos. 1 reflects the D-SERVER System ID and that the rest of the configuration in your D-CALL is similar.



Picture 133. Set the D-SERVER system ID in D-CALL

On the IP-tab make sure that network is enabled and that SIP configuration reflects the configuration in the D-SERVER. Even if NEAT Web Service should be disabled, make sure that the NEAT Web Service server address reflects your D-SERVER IP-address.

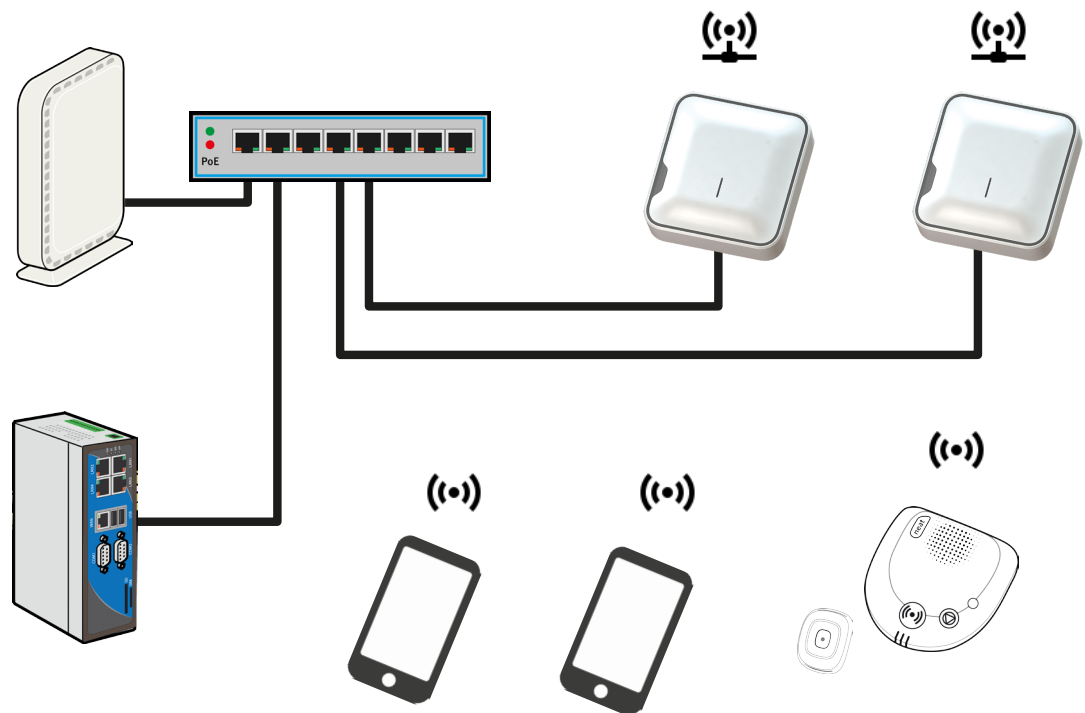


Picture 134. EN

Don't forget to write the D-CALL configuration to the unit. Once the configuration has been written, the solution can be tested.

6.5 Scenario IV - Speech solution (GSM)

The goal of this scenario is to configure a speech solution using GSM where the personnel uses a mobile phone as a handset. The scenario assumes that you have a D-SERVER with pre-configured D-TECT IPs.



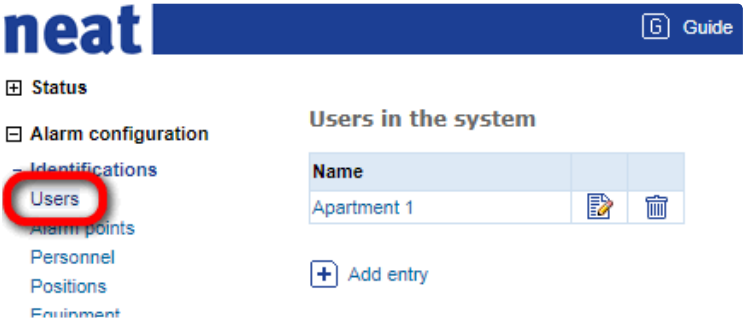
Picture 135. Scenario IV overview

Checklist

- Q: Do you have a list of the names that will stay at the nursing home or the apartment numbers?
- ✓: Apartment 1
- Q: Do you have a list of the personnel which will work at the nursing home?
- ✓: Charlotte Miller (Phone number: 0728894687)
- ✓: Emma Lopez (Phone number: 0764007207)
- Q: Do you have the radio codes of all that devices that will be used at the nursing home? Do you know who the units should belong to?
- ✓: D-CALL (Radio ID: 0472) belongs to Apartment 1
- ✓: SMILE-STD (Radio ID: 101E) belongs to Apartment 1
- Q: Do you have an idea how many groups you need for the nursing home? Will the nurses work in shift? Day and Night? Then you need at least two groups for the nurses and at least one for devices.
- ✓: No Staff group required
- ✓: Since we only have one D-CALL in this scenario, one device group is enough.
- Apartment 1.
- Q: Will you use day and night shifts? Then you need to know when the day and night shifts starts.
- ✓: No.

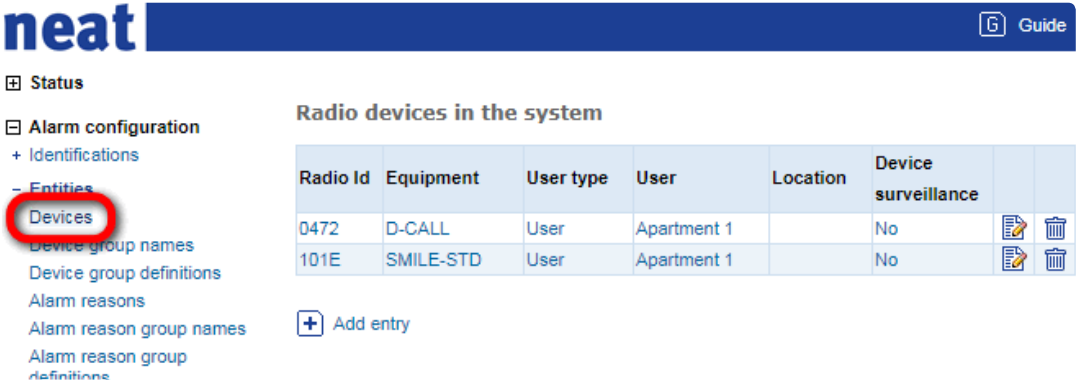
D-SERVER configuration

Go to **Identifications > Users** to add the users who will stay at the nursing home.



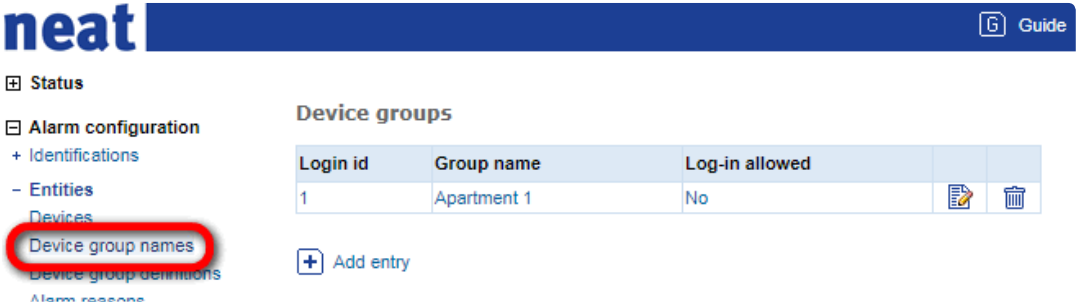
Picture 136. Add user(s)

Go to **Entities > Devices** and assign the SMILE-STD and D-CALL to Apartment 1.



Picture 137. Add device(s)

Go to **Entities > Device group names** and create a group for every apartment. In this scenario there is only one apartment (Apartment 1).



Picture 138. Create device group name(s)

Go to **Entities > Device group definitions** and assign the D-CALL (Radio ID: 0472) and SMILE-STD (Radio ID: 101E) to group Apartment 1.

Device group definitions

Group	Subgroup	Device		
Apartment 1		0472 - Apartment 1 - D-CALL		
		101E - Apartment 1 - SMILE-STD		

[+ Add entry](#)

Picture 139. Define device group definition(s)

In this scenario, we need to create two destinations because we want to call a second cell phone if the primary cell phone is busy. Go to **Destinations > D-CALL destinations** to create these destinations.

D-CALL Destinations

Description	Serial number	Connection type	Method	Phone number	Destination group	Number of attempts	Allow callback	Protocol	Format	Require presence		
Apartment 1 - 0728894687	0472	Gsm	Call	0728894687	No group	1	No	Home phone	Alarm message	No		
Apartment 1 - 0764007207	0472	Gsm	Call	0764007207	No group	1	No	Home phone	Alarm message	No		

[+ Add entry](#)

Picture 140. Add D-CALL destinations

Go to **Routing > Alarm sequence names** to create a sequence. One sequence for each apartment.

Alarm sequences

Sequence name		
Apartment 1		

[+ Add entry](#)

Picture 141. Create alarm sequence name(s)

Go to **Routing > Alarm sequence definitions** to define the sequence. When Apartment 1 requires assistance, the D-CALL will start with calling nr#1. If no one answers, the D-CALL will try with nr#2.

Alarm sequence definitions

Alarm sequence	Order	Duration (s)	Destination type	Destination	Continue
Apartment 1	1	30	D-CALL	Apartment 1 - 0764007207	No
	2	30	D-CALL	Apartment 1 - 0728894687	No

+ Add entry

Picture 142. Define alarm sequence definition(s)

To enable sequences **Alarm distribution** must be configured. Go to **Routing > Alarm distribution**.

Distribution of alarms

Order	Device groups	Alarm reason groups	Position groups	System mode	Alarm sequence	Priority	Alarm reset
1	Apartment 1	User alarms	All positions	Always	Apartment 1	Normal	Yes

+ Add entry

Picture 143. Add alarm distribution

Alarm sequence definitions

Alarm sequence	Order	Duration (s)	Destination type	Destination	Continue
Apartment 1	1	30	D-CALL	Apartment 1 - 0764007207	No
	2	30	D-CALL	Apartment 1 - 0728894687	No

+ Add entry

Picture 144. Define alarm sequence definition(s)

In this scenario the System ID is set to 1386. To configure System ID go to **System settings > System parameters**.

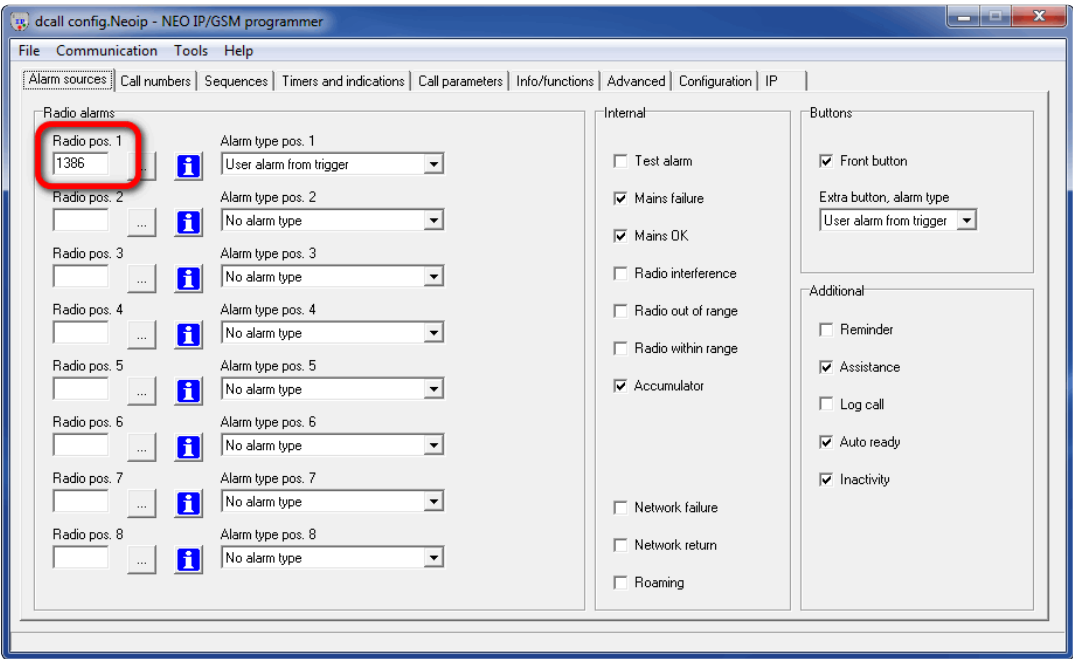
retransmit-unknown-send-count	0
retransmit-unknown-short-tx-count	3
rules-alarm-presence-type	20
rules-expire-time-sec	600
serial-port-name	/dev/ttyS1
serial-port-name	/dev/ttyS2
simple-paging-send-time-sec	300
status-message-retry-timeout-sec	60
status-message-send-interval-sec	2
system-id	1386
user-page-access-time-sec	200
use-utf8-bom-in-log-files	1
user-from-previous-alarm-timeout-sec	10
user-position-log-size	5

+ Add entry

Picture 145. Set the D-SERVER system ID

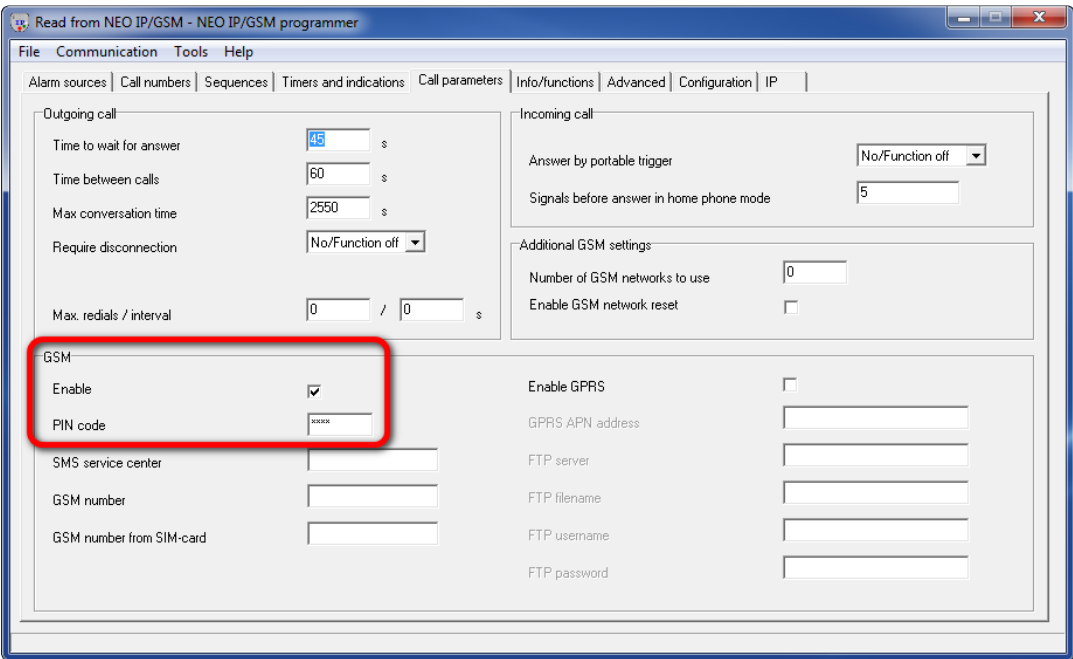
D-CALL configuration

The D-CALL Programmer has several tabs, but only three are relevant to this scenario. Make sure Radio pos. 1 reflects the D-SERVER System ID and that the rest of the configuration in your D-CALL is similar.



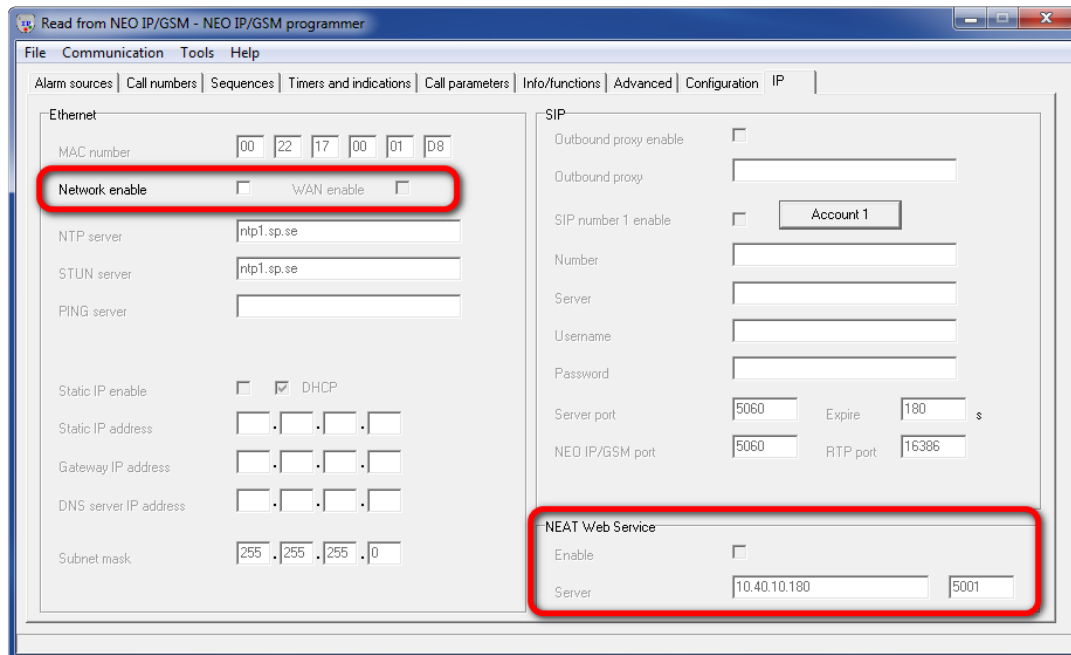
Picture 146. Set the D-SERVER system ID in D-CALL

On Call parameters tab, make sure that GSM is enabled.



Picture 147. Enable GSM in D-CALL

On the IP tab make sure that network is disabled. Even if NEAT Web Service should be disabled, make sure that the **Server** address reflects your D-SERVER IP address.

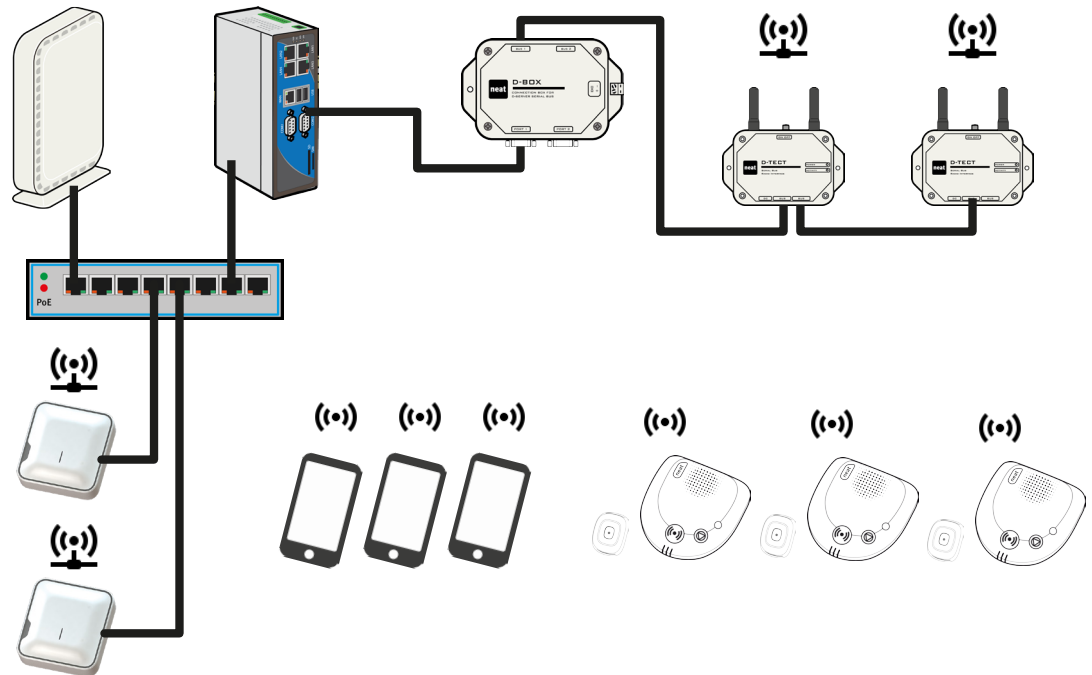


Picture 148. Disable Network but ensure NEAT web service server and port is set correctly

Don't forget to write the D-CALL configuration to the unit. Once the configuration has been written to the D-CALL the solution can be tested.

6.6 Scenario V - Speech solution (GSM) with D-TECT/D-TECT IP

The primary goal of this scenario is to configure a speech solution using GSM where the personnel uses a mobile phone as a handset. Compared to the previous scenario this scenario has been scaled up. The scenario uses both D-TECTs and D-TECT IPs as transceivers.



Picture 149. Scenario V overview



Do not connect the D-TECT IP devices, as illustrated above, until the documentation mentions so!

Checklist

Q: Do you have a list of the names that will stay at the nursing home or the apartment numbers?

✓: Apartment 1

✓: Apartment 2

✓: Apartment 3

Q: Do you have a list of the personnel which will work at the nursing home?

✓: Charlotte Miller (Phone number: 0728894687)

✓: Emma Lopez (Phone number: 0764007207)

Q: Do you have the radio codes of all that devices that will be used at the nursing home? Do you know who the units should belong to?

✓: D-CALL (Radio ID: 0472) belongs to Apartment 1

✓: D-CALL (Radio ID: 6039) belongs to Apartment 2

✓: D-CALL (Radio ID: 6269) belongs to Apartment 3

✓: SMILE-STD (Radio ID: 101E) belongs to Apartment 1

✓: SMILE-STD (Radio ID: 28AF) belongs to Apartment 2

✓: SMILE-STD (Radio ID: 289D) belongs to Apartment 3

Q: Do you have an idea how many groups you need for the nursing home? Will the nurses work in shift? Day and Night? Then you need at least two groups for the nurses and at least one for devices.

✓: No Staff group required

✓: Apartment 1

✓: Apartment 2

✓: Apartment 3

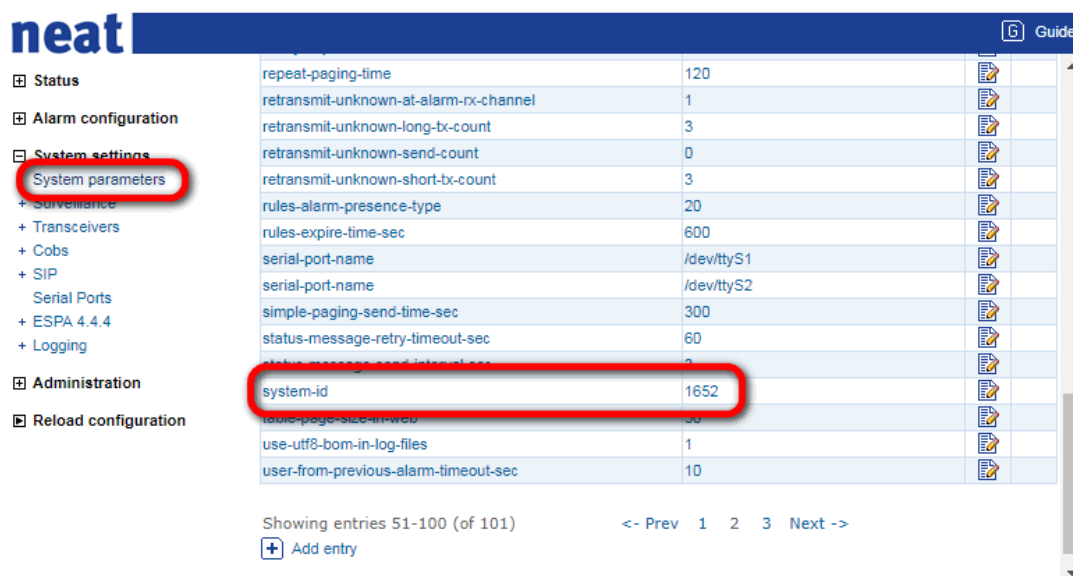
Q: Will you use day and night shifts? Then you need to know when the day and night shifts starts.

✓: No need.

D-SERVER configuration

Before connecting the D-TECT IP devices to D-SERVER, a System ID must be configured. In this scenario System ID 1652 is chosen. Go to **System settings > System parameters** to set the System ID.

Once the System ID is set start connecting/configuring the D-TECT IPs, one at a time.



Picture 150. Set the D-SERVER system ID

Go to **Status** > **Connected devices** to verify that the D-TECT IPs are successfully connected to the D-SERVER.

Equipment	Device name	Device address	Device ID	Software version	Time	Status
D-TECT-IP	D-TECT-IP 1006	Unknown	0000	-	2017-07-19 16:29:34	Disconnected
D-TECT-IP	D-TECT-IP 1007	Unknown	0000	-	2017-07-19 16:29:34	Disconnected
D-TECT-IP	D-TECT-IP 1001	10.40.10.69:56228	1001	2.02	2017-07-19 16:29:37	Connected
D-TECT-IP	D-TECT-IP 1002	10.40.10.31:62570	1002	2.02	2017-07-19 16:29:37	Connected

Picture 151. Check that the D-TECT IPs are listed in Connected devices

Go to **Identifications** > **Users** to add the users who will stay at the nursing home.

Name		
Apartment 1		
Apartment 2		
Apartment 3		

Picture 152. Add user(s)

Go to **Entities** > **Devices** and assign the D-CALL and SMILE-ID buttons to respective Apartment.

Radio Id	Equipment	User type	User	Location	Device surveillance		
0472	D-CALL	User	Apartment 1		No		
101E	SMILE-STD	User	Apartment 1		No		
289D	SMILE-STD	User	Apartment 3		No		
28AF	SMILE-STD	User	Apartment 2		No		
6039	D-CALL	User	Apartment 2		No		
6269	D-CALL	User	Apartment 3		No		

Picture 153. Add device(s)

Go to **Entities** > **Device group names** and create a group for every Apartment.

Login id	Group name	Log-in allowed		
1	Apartment 1	No		
2	Apartment 2	No		
3	Apartment 3	No		

Picture 154. Create device group name(s)

Go to **Entities > Device group definitions** to config which devices that should belong to group Apartment 1, Apartment 2 etc..

Device group definitions

Group	Subgroup	Device		
Apartment 1		0472 - Apartment 1 - D-CALL		
		101E - Apartment 1 - SMILE-STD		
Apartment 2		28AF - Apartment 2 - SMILE-STD		
		6039 - Apartment 2 - D-CALL		
Apartment 3		289D - Apartment 3 - SMILE-STD		
		6269 - Apartment 3 - D-CALL		

[+ Add entry](#)

Picture 155. Define device group definition(s)

Go to **Destinations > D-CALL destinations** to create destinations. As there are two nurses and three apartments six destinations must be created.

D-CALL Destinations

Description	Serial number	Connection type	Method	Phone number	Destination group	Number of attempts	Allow callback	Protocol	Format	Require presence		
Apartment 1 - Charlotte Miller	0472	Gsm	Call	0728894687	No group	1	No	Home phone	Alarm message	No		
Apartment 1 - Emma Lopez	0472	Gsm	Call	0764007207	No group	1	No	Home phone	Alarm message	No		
Apartment 2 - Charlotte Miller	6039	Gsm	Call	0728894687	No group	1	No	Home phone	Alarm message	No		
Apartment 2 - Emma Lopez	6039	Gsm	Call	0764007207	No group	1	No	Home phone	Alarm message	No		
Apartment 3 - Charlotte Miller	6269	Gsm	Call	0728894687	No group	1	No	Home phone	Alarm message	No		
Apartment 3 - Emma Lopez	6269	Gsm	Call	0764007207	No group	1	No	Home phone	Alarm message	No		

[+ Add entry](#)

Picture 156. Add D-CALL destinations

Go to **Routing > Alarm sequence names** to create a sequence, one sequence for each apartment.

Alarm sequences

Sequence name		
Apartment 1		
Apartment 2		
Apartment 3		

[+ Add entry](#)

Picture 157. Create alarm sequence names

Go to **Routing > Alarm sequence definitions** to define the sequence. Once Apartment 1-3 requires assistance, the D-CALL will start with calling phone #1. If there is no answer the D-CALL tries with phone #2.

neat

Guide

Status

Alarm configuration

- Identifications
- Entities
- Destinations
- Routing
 - Alarm sequence names
 - Alarm sequence definitions**
 - Alarm distribution

System settings

Administration

+ Add entry

Alarm sequence definitions

Alarm sequence	Order	Duration (s)	Destination type	Destination	Continue		
Apartment 1	1	30	D-CALL	Apartment 1 - Charlotte Miller	No		
	2	30	D-CALL	Apartment 1 - Emma Lopez	No		
Apartment 2	1	30	D-CALL	Apartment 2 - Charlotte Miller	No		
	2	30	D-CALL	Apartment 2 - Emma Lopez	No		
Apartment 3	1	30	D-CALL	Apartment 3 - Charlotte Miller	No		
	2	30	D-CALL	Apartment 3 - Emma Lopez	No		

Picture 158. Define alarm sequence definitions

To enable our sequences we need to configure Alarm distribution. Go to **Routing > Alarm distribution**.

neat

Guide

Status

Alarm configuration

- Identifications
- Entities
- Destinations
- Routing
 - Alarm sequence names
 - Alarm sequence definitions
 - Alarm distribution**

System settings

Administration

+ Add entry

Distribution of alarms

Order	Device groups	Alarm reason groups	Position groups	System mode	Alarm sequence	Priority	Alarm reset		
1	Apartment 1	User alarms	All positions	Always	Apartment 1	Normal	Yes		
2	Apartment 2	User alarms	All positions	Always	Apartment 2	Normal	Yes		
3	Apartment 3	User alarms	All positions	Always	Apartment 3	Normal	Yes		

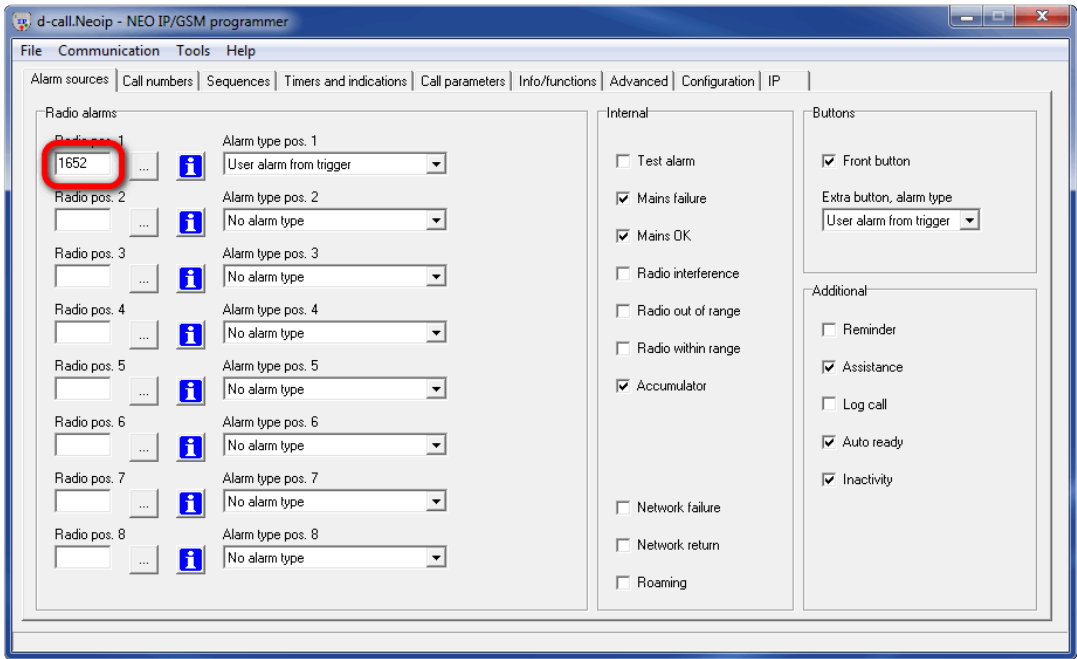
Picture 159. Add alarm distribution

D-CALL configuration



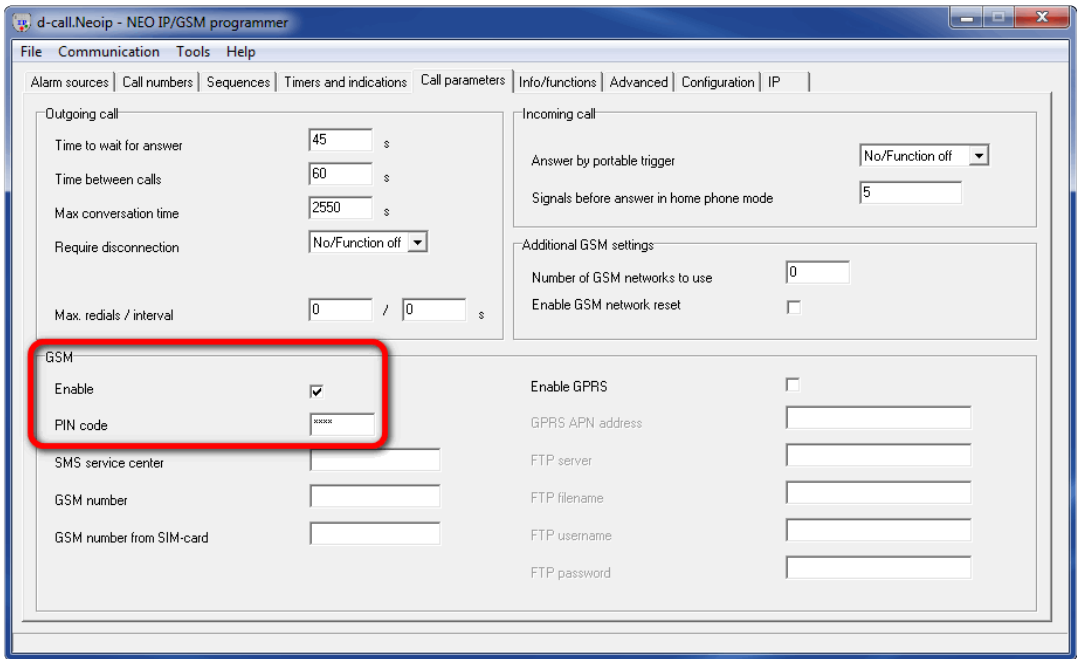
The D-CALL configuration procedure is the same for all three D-CALLs.

The D-CALL Programmer has several tabs, but only three are relevant to this scenario. Make sure Radio pos. 1 reflects the D-SERVER System ID and that the rest of the configuration in your D-CALL is similar.



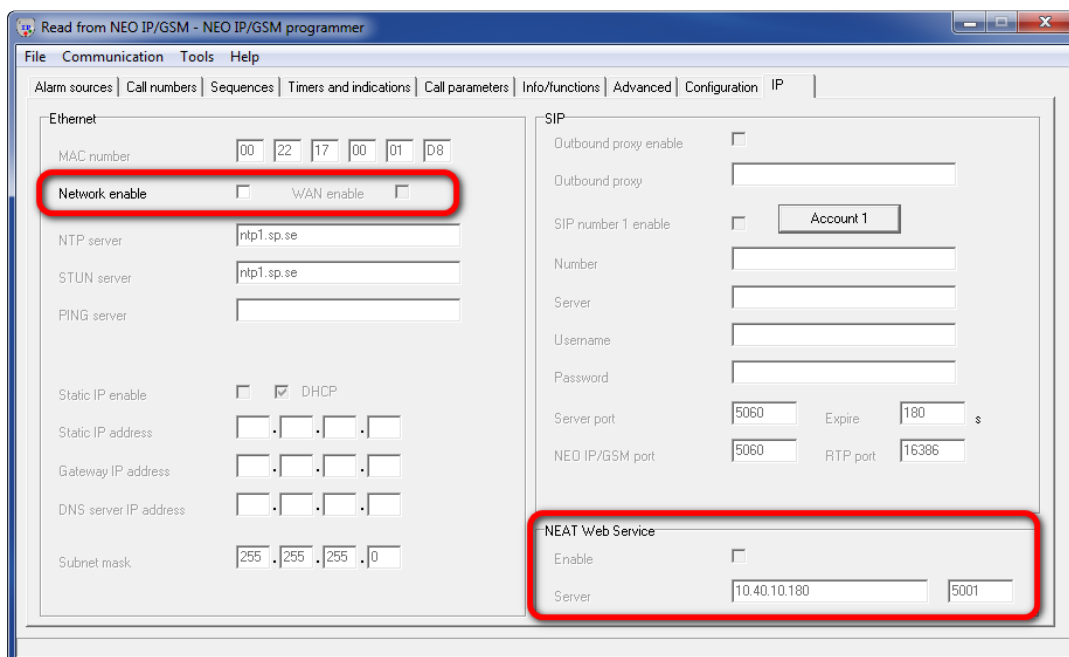
Picture 160. Set the D-SERVER system ID in D-CALL

On **Call parameters** tab, make sure that GSM is enabled.



Picture 161. Enable GSM in D-CALL

On the IP tab make sure that network is disabled. Even if NEAT Web Service should be disabled, make sure that the Server address reflects your D-SERVER IP.



Picture 162. Disable Network but ensure NEAT web service server and port is set correctly

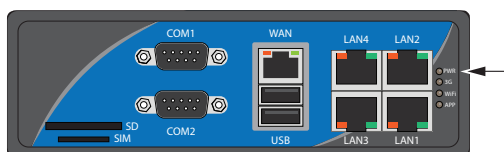
Don't forget to write the D-CALL configuration. Once the configuration has been written, test the solution.

7 Troubleshooting

7.1 Is the power D-SERVER powered on and running?

Check the LEDs:

- PWR (red) - should be on, fixed light
- APP (green) - should be on, fixed light
- Network link LED (on connected network interface) Amber - should be blinking, Green should be on, fixed light



Picture 163. Check LEDs

7.2 Enable debug logging

The debug logs can be of great use to resolve configuration issues or detect hardware related errors. To enable debug logging, go to **System settings > System parameters**. Make sure **debug-logging-enabled** is set to 1 and that the D-SERVER configuration is reloaded.

By default a set of popular debug logs have been preselected.

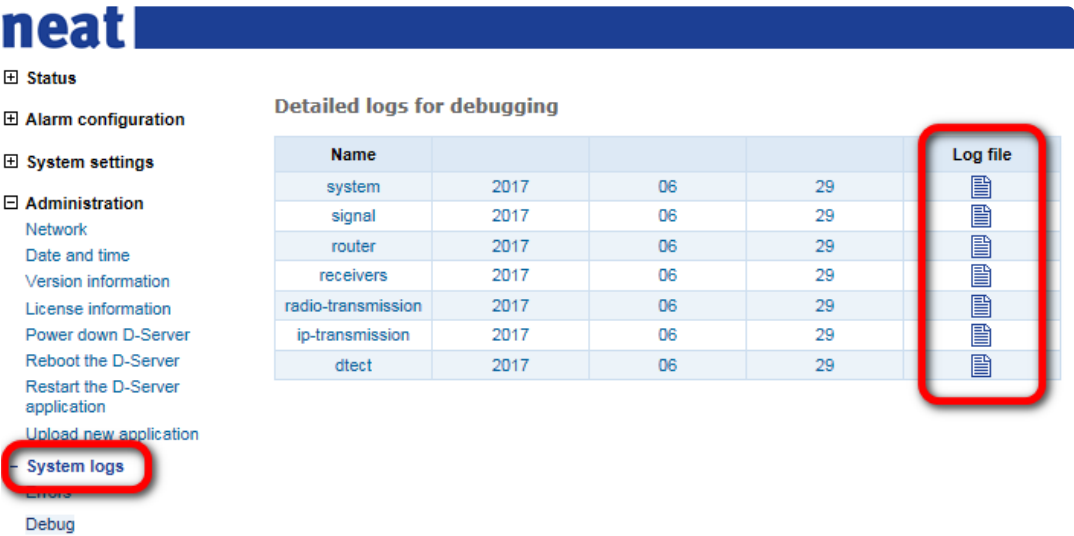
neat			
<ul style="list-style-type: none"> Status Alarm configuration System settings <ul style="list-style-type: none"> System parameters Surveillance Transceivers Cobs SIP Serial Ports ESPA 4.4.4 Logging Administration Reload configuration 			
	cobs-talk-presence-timeout	0	
	cobs-treat-presence-as-busy	0	
	configuration-disable-ack-timeout	600	
	configuration-job-timeout-dserver	180	
	configuration-job-timeout-dtct	120	
	dcall-allow-alarm-override	0	
	debug-alarm-list	0	
	debug-alarm-receivers	1	
	debug-changed-messages	0	
	debug-cobs-transmission	0	
	debug-config	0	
	debug-configure-job	0	
	debug-door-opening	0	
	debug-dtct	1	
	debug-dtrex-presence-list	0	
	debug-email-log	0	
	debug-espa-4.4.4-alarm-reception	0	
	debug-ignored-messages	0	
	debug-ia-transmission	1	
	debug-logging-enabled	1	
	debug-network-log	1	
	debug-paging	1	

Picture 164. Enable debug



Some debug tasks results in huge log files and should therefore only be activated for a short period of time!

To view and download the logs, go to **Administration > System logs**.



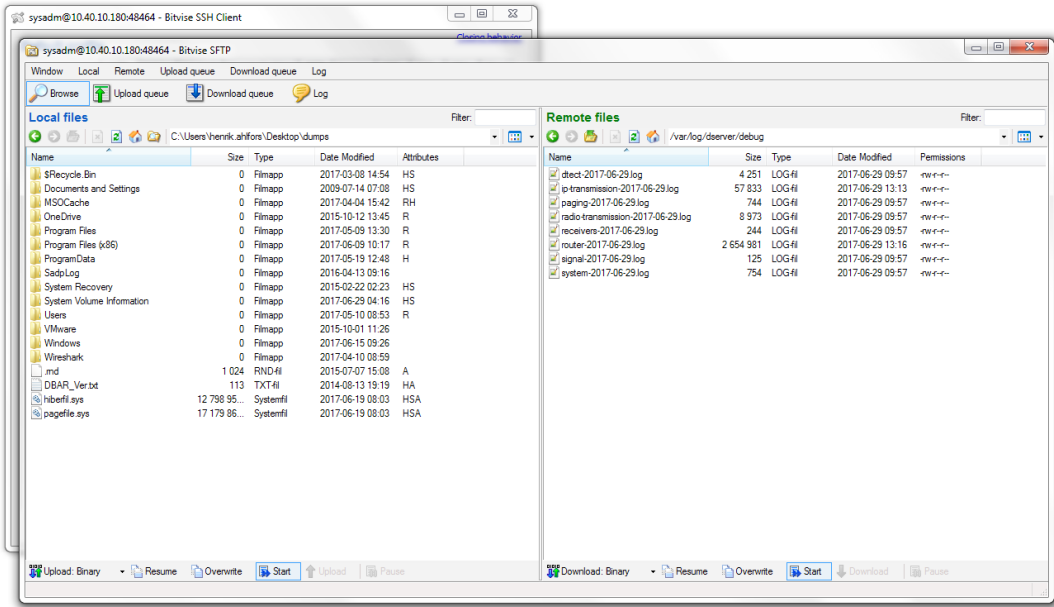
Picture 165. Various logs in D-SERVER



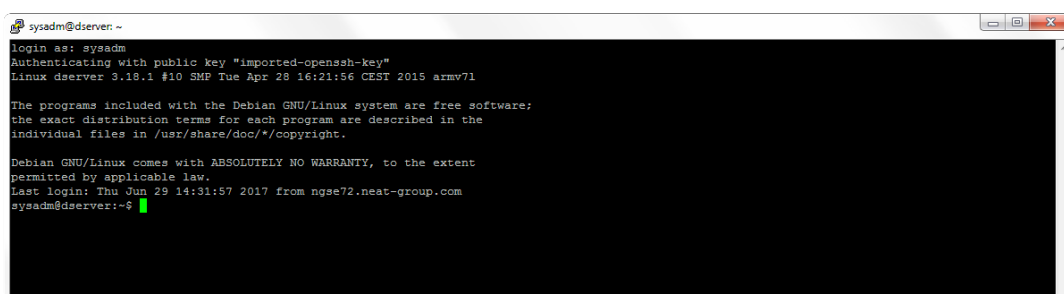
NEAT support will likely ask you to attach your logs if the technical issue is complex.

7.3 SSH clients

Among all SSH clients, Bitvise and Putty are the most popular. Bitvise has a graphical interface and is therefore quite popular among people with limited Linux knowledge. Note that Bitvise debugging is performed over IP and that the default D-SERVER SSH port is **48464**.



Picture 166. Bitvise SSH client (Tunnelier)



Picture 167. Putty SSH client window

The advantage of an SSH client compared to traditional D-SERVER debug logs is that you can perform real time debugging. Accessing to the D-server through SSH also allows users to access kern.log and syslog. These two files are useful for identifying memory card related issues.



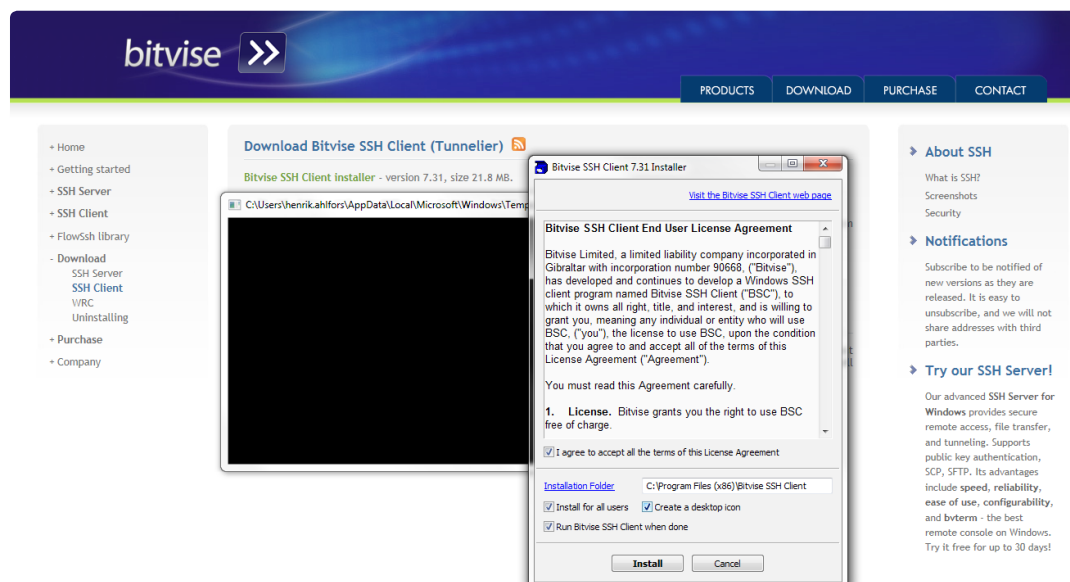
*In order to use SSH an **SSH Key must be requested** from NEAT support.*



*In addition to an SSH key a login name must be provided to log in. Use **sysadm** as login name.*

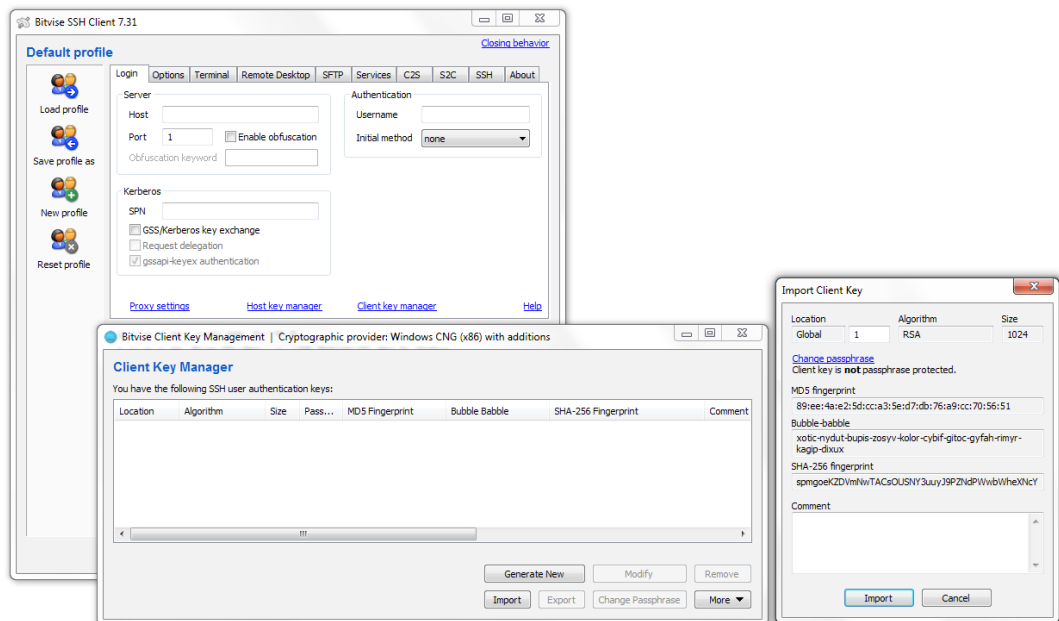
7.4 Bitvise configuration

This section will walkthrough how to setup and import a SSH Key. Go to Bitvise homepage (<https://www.bitvise.com/>) and download the latest installer and install the software. This walkthrough is valid for Bitvise version 7.31.



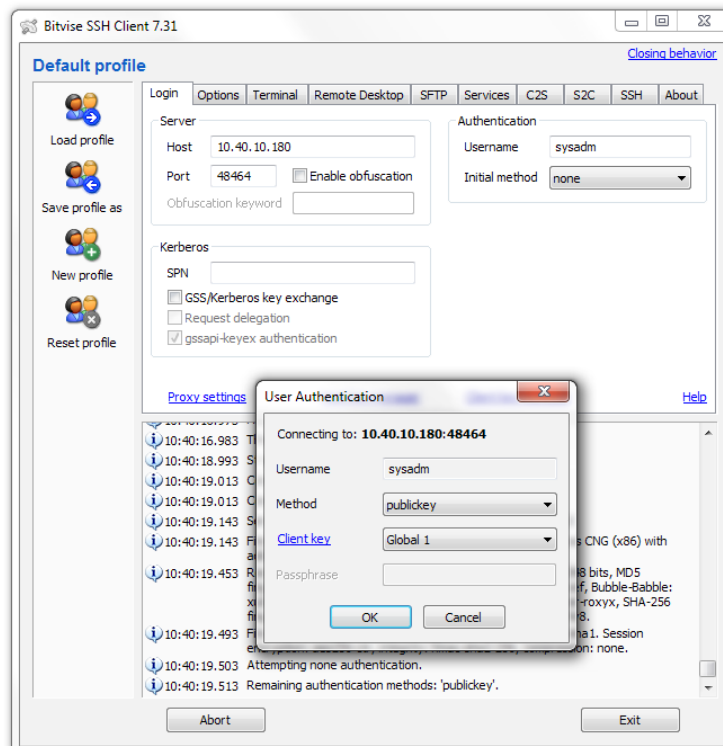
Picture 168. Bitvise Installer

Launch Bitvise when the installation is complete. Click **Client key manager** on the login tab and select **Import**. Browse to the path of your SSH Key and select **Import**.



Picture 169. Import an SSH key to Bitvise

The last step is to configure login settings. Fill in host (D-SERVER IP), port **48464** and username **sysadm** and when done, click the **Login** button to connect.

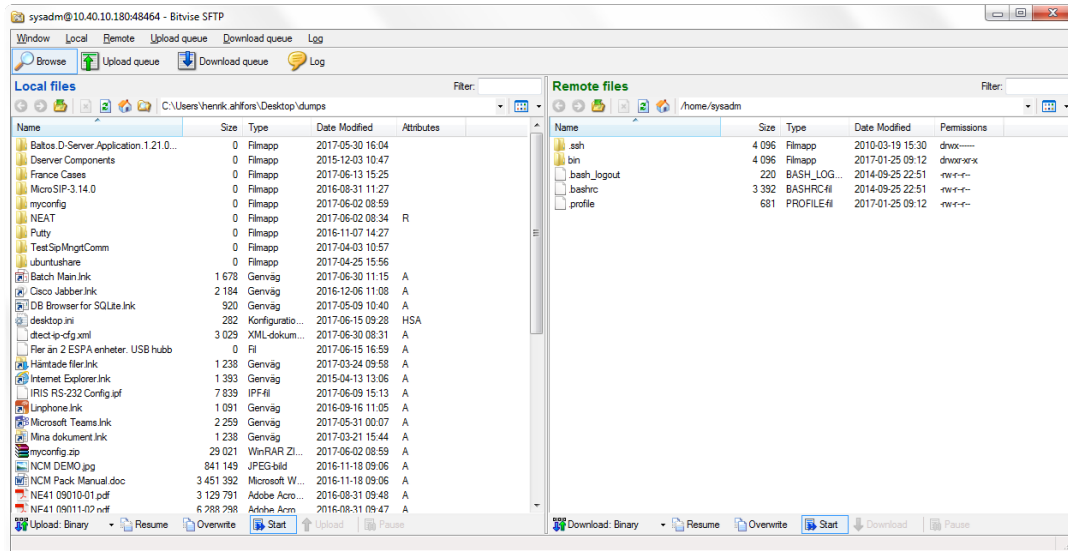


Picture 170. Connectin to a D-SERVER

You are now ready to use Bitvise.

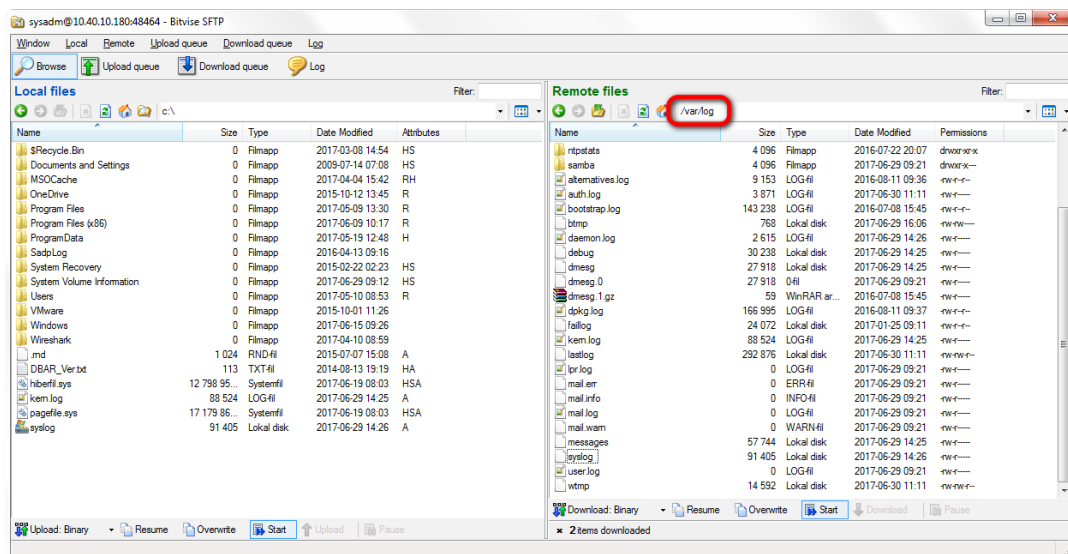
7.5 Bitvise SFTP

When connecting to a D-SERVER an SFTP and an xterm window opens. This section focuses on the SFTP window and how to download logs and configuration.



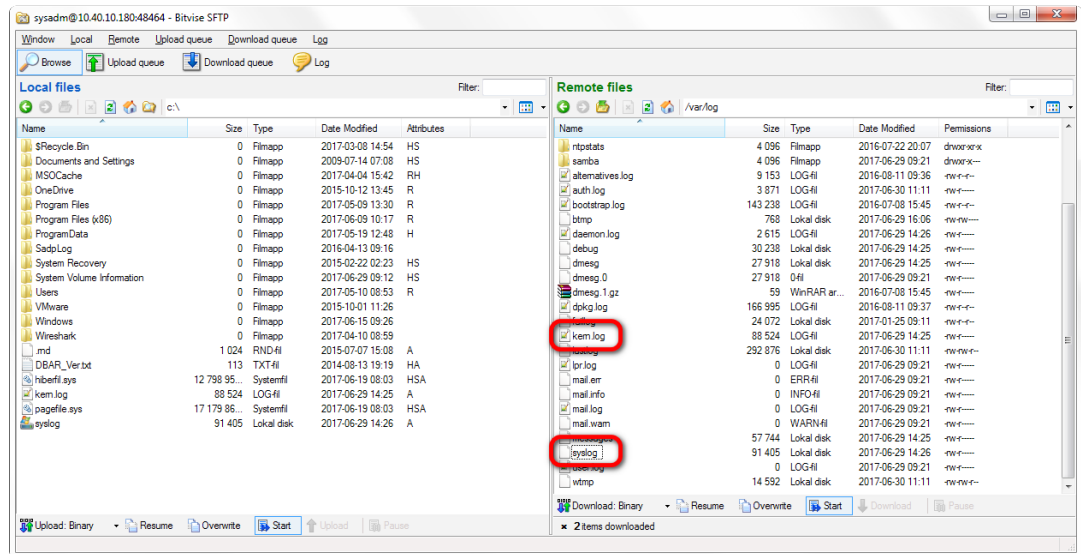
Picture 171. Bitvise SFTP windows

Changing path is required to view or download kern.log and syslog. Type the path **/var/log** in the address bar and press **Enter** to enter that path.



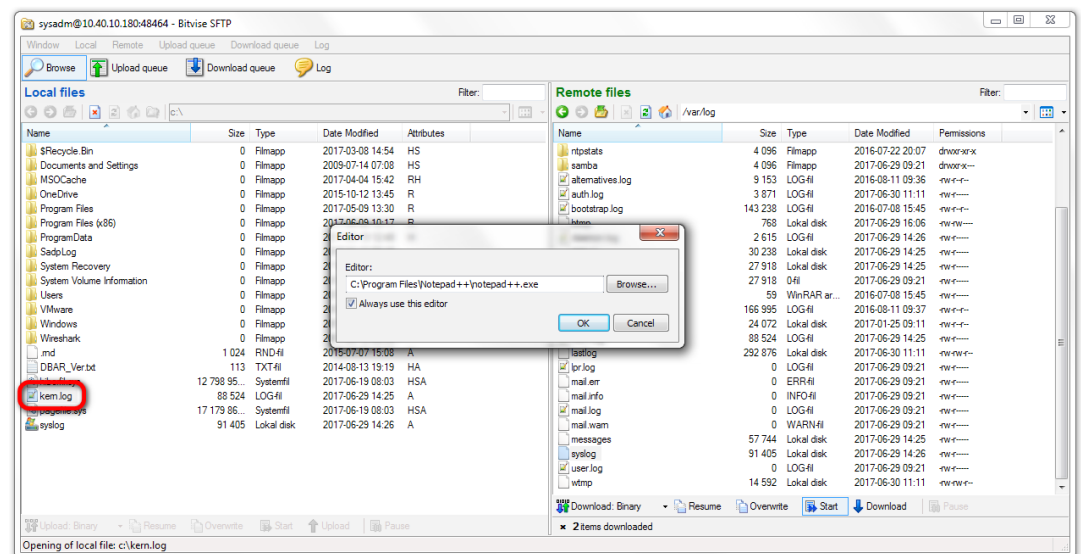
Picture 172. /var/log path

Download **kern.log** and **syslog** by right clicking the files and select **Download**.



Picture 173. Select files do download

Right click **kern.log** and select **Edit with...** to open the file in your favorite editor.

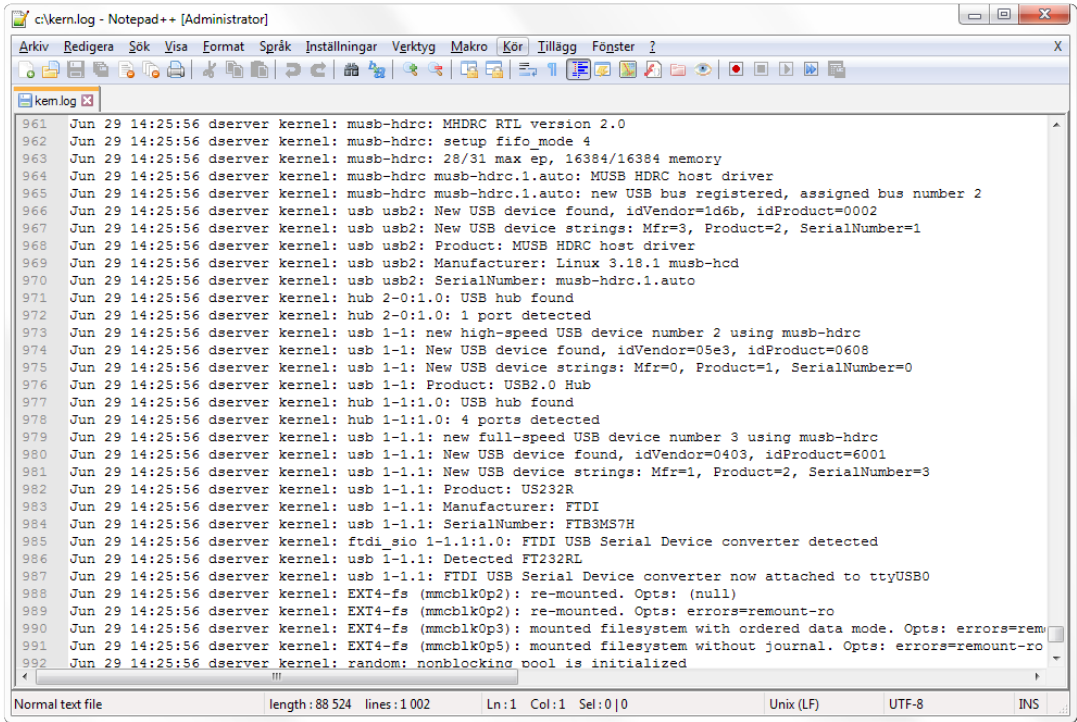


Picture 174. Select preferred text editor. Here Notepad++ is chosen



NEAT recommends Notepad++ as text editor. Notepad++ can be downloaded from <https://notepad-plus-plus.org/>.

Now `kern.log` is opened and can be examined for possible errors.



Picture 175. `kern.log` opened in texteditor Notepad++

Try on your own with `syslog`.

In addition to the path `/var/log`, the following paths may be of interest to explore.

<code>/var/log/dserver/debug</code>	Debug logs
<code>/var/log/dserver/errors</code>	Error logs
<code>/usr/local/etc/dserver</code>	D-SERVER configuration
<code>/usr/local/etc/license</code>	D-SERVER license
<code>/etc/network</code>	Network configuration

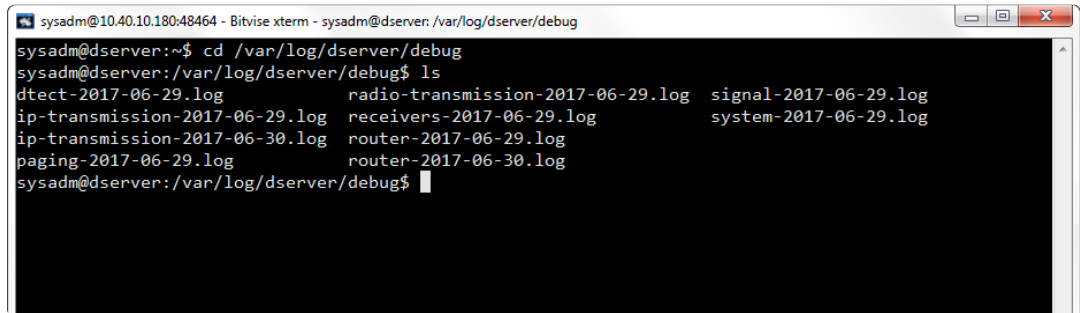
Table 48. Various log paths

7.6 Bitvise xterm

This section is a walkthrough how to perform real time debugging with xterm. To be able to perform real time debugging parameter **debug logging** in the D-SERVER System parameters (**System settings > System parameters**) must be enabled.

Start by browsing to the path `/var/log/dserver/debug` by typing:
`cd /var/log/dserver/debug.`

Thereafter press **Enter** and type `ls` to list all files in the debug folder.



```

sysadm@10.40.10.180:48464 - Bitvise xterm - sysadm@dserver: /var/log/dserver/debug
sysadm@dserver:~$ cd /var/log/dserver/debug
sysadm@dserver:/var/log/dserver/debug$ ls
dtect-2017-06-29.log          radio-transmission-2017-06-29.log  signal-2017-06-29.log
ip-transmission-2017-06-29.log receivers-2017-06-29.log          system-2017-06-29.log
ip-transmission-2017-06-30.log router-2017-06-29.log
paging-2017-06-29.log        router-2017-06-30.log
sysadm@dserver:/var/log/dserver/debug$

```

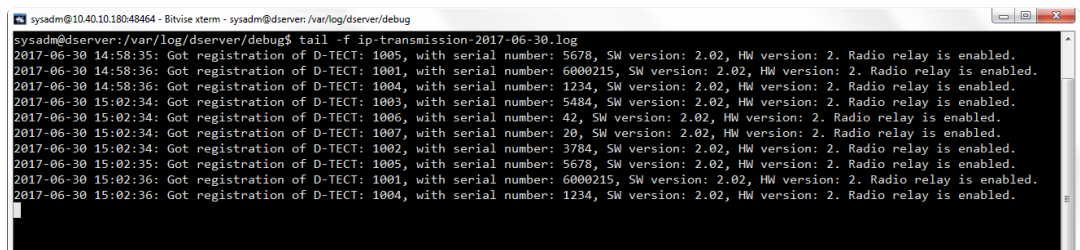
Picture 176. Files in debug folder

To start ip-transmission debug type:

`tail -f ip-transmission-2017-06.30.log.`



Replace the date in the command so it matches a today's date.



```

sysadm@10.40.10.180:48464 - Bitvise xterm - sysadm@dserver: /var/log/dserver/debug
sysadm@dserver:/var/log/dserver/debug$ tail -f ip-transmission-2017-06-30.log
2017-06-30 14:58:35: Got registration of D-TECT: 1005, with serial number: 5678, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 14:58:36: Got registration of D-TECT: 1001, with serial number: 6000215, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 14:58:36: Got registration of D-TECT: 1004, with serial number: 1234, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 15:02:34: Got registration of D-TECT: 1003, with serial number: 5484, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 15:02:34: Got registration of D-TECT: 1006, with serial number: 42, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 15:02:34: Got registration of D-TECT: 1007, with serial number: 20, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 15:02:34: Got registration of D-TECT: 1002, with serial number: 3784, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 15:02:35: Got registration of D-TECT: 1005, with serial number: 5678, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 15:02:36: Got registration of D-TECT: 1001, with serial number: 6000215, SW version: 2.02, HW version: 2. Radio relay is enabled.
2017-06-30 15:02:36: Got registration of D-TECT: 1004, with serial number: 1234, SW version: 2.02, HW version: 2. Radio relay is enabled.

```

Picture 177. Log file content

When something new happens, it appears in the xterm window. To stop real time debugging, press **Ctrl + Z**.

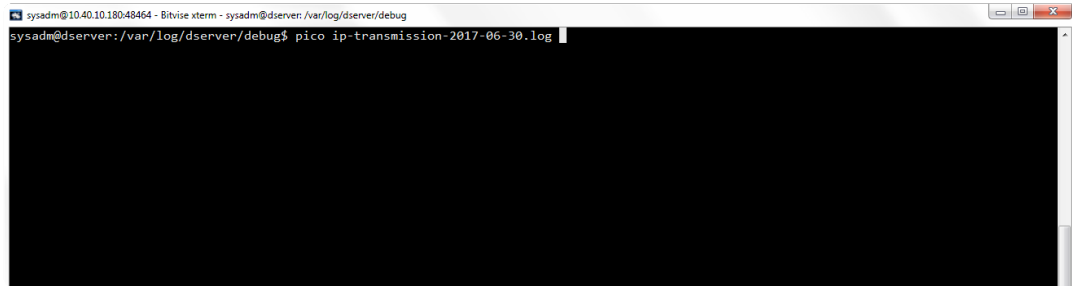
To open and scroll through the whole ip-transmission log, type the following command:

pico ip-transmission-2017-06.30.log

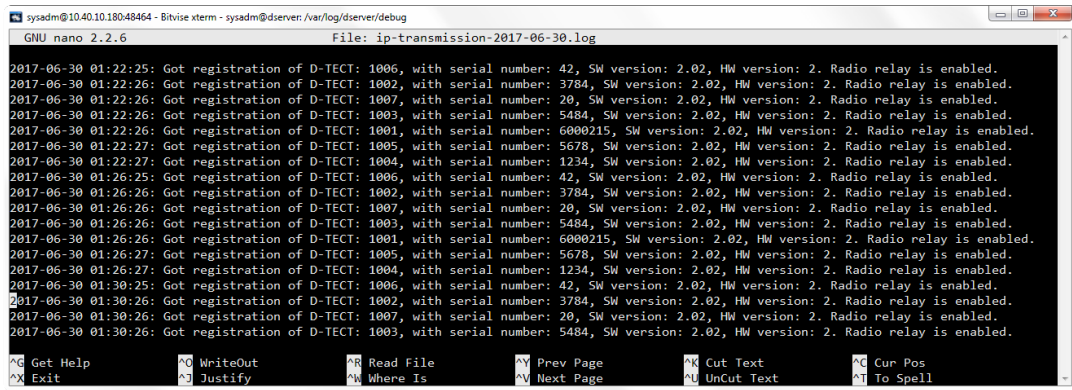
The log file will open in the built in text editor Pico:



Replace the date in the command so it matches a today's date.



Picture 178. Open a log file with the **pico** command



Picture 179. Content of the opened log file

To exit the log press **Ctrl + X**.

Besides **tail -f** and **pico**, the following commands can be useful:

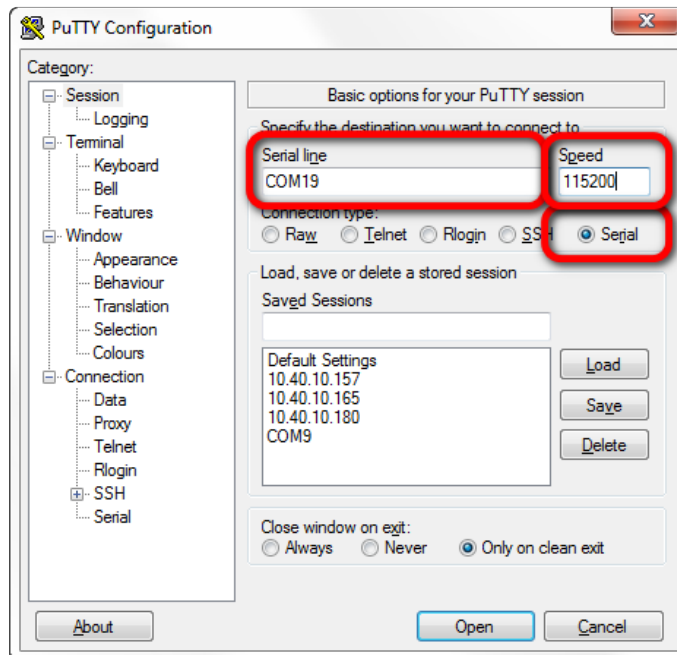
cd /home/sysadm/bin rwmount rw	File System: Disable read-only mode
lsusb	List connected USB devices
iconv --l	List known coded character sets
ntpq -nc peers	NTP: Servers currently used
cat /sys/block/mmcblk0/device/name	Memory card manufacturer installed

Table 49. Other useful commands in Bitvise xterm

7.7 Console cable

In addition to IP debug, the D-SERVER supports debugging over a serial connection. Debugging over a serial connection requires a special debug cable that is sold separately. Contact your local NEAT sales representative for more information about the debug cable.

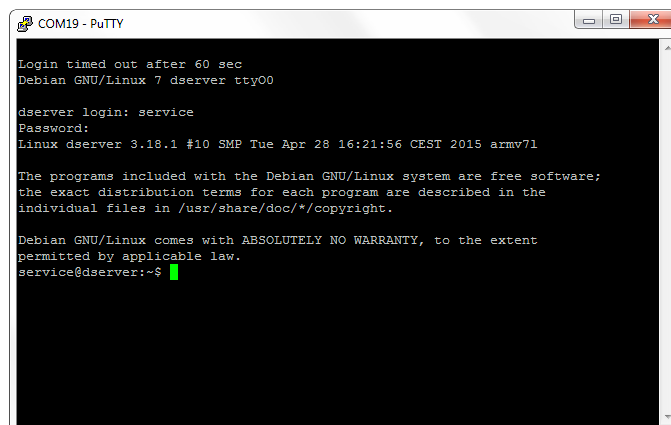
Below the SSH/Telnet client PuTTY is used. It can be downloaded from <http://www.putty.org/>



Picture 180. Select the appropriate COM port and set the speed and connection type in PuTTY.



*Serial speed in Putty **must** to be configured to baud rate 115200.*



Picture 181. Serial connection with Putty



Console cable debugging requires the following credentials: service/SwEg2Ruwa

Appendix A Technical reference

Appendix A.1 Technical specification

- The D-SERVER is a fanless industrial computer equipped with an ARM-processor and the operating system is Linux.
- The configuration is stored on a memory card. The type of card is Secure Digital (industrial grade, SLC NAND type).
- The alarm log can be stored either on the memory card or sent to another computer over the internet or sent by mail.
- The communication channel between the D-SERVER and D-TECT units is a RS-485 multi-drop serial bus.
- The power supply for the D-SERVER is 9-30 V_{DC}. When the power supply is 24 V_{DC}, the power consumption is maximum 0.75 A and typically 0.25 A.
- The power supply for the D-TECT units is 7-24 V_{DC}. They can be supplied through the network cable (serial bus). The power consumption is maximum 125 mA when the power supply is 24 V_{DC}.

Appendix A.2 Standard parts lists and spare parts

The complete parts lists for the D-SERVER system include articles for other language versions and other frequencies. The complete lists can be obtained from your local supplier.

The lists below only shows standard parts.

Article number	Description
NE10 09238-01	D-SERVER kit, standard (english) without license
NE10 10007-01	License for 60 alarm sources
NE10 10007-02	License for 135 alarm sources
NE10 10007-03	License for 180 alarm sources
NE10 10007-04	Unlimited alarm sources license
NE10 10006-01	D-Box kit
NE10 10007-09	D-Server license, SIP server including 20 SIP clients
NE10 07014-01	D-TECT kit, standard (869 MHz)
NE10 15008-01	D-TECT IP (869 MHz)
NE10 09237-01	D-TREX2G kit, standard (english, 869 MHz)
NE10 04006-01	NPU kit, standard
NE31 05001-08	TREX cable adapter
NE31 09011-01	Mini USB adaptor, D-TREX2G

Table 50. D-SERVER standard parts list

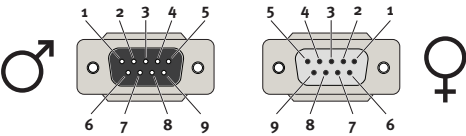
Article number	Description
NE12 09011-01	D-SERVER industrial computer without memory card
NE23 09006-01	D-SERVER pre-programmed memory card, standard configuration (english) without license
NE31 07010-01	AC/DC-adaptor for D-TECT

Table 51. D-SERVER standard spare parts list

Appendix B Connector tech specs

Appendix B.1 Pin configuration for the serial bus from the D-SERVER

Picture 183 shows the pin configuration for the DB9 serial port connector on the D-SERVER.



Picture 183. DB9 serial port pin configuration

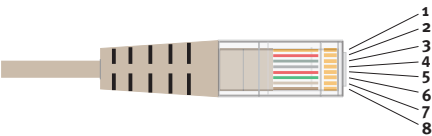
Pin configuration is when viewed from the front/outside.

Pin	Description	Pin	Description
1	RS-485 bus, ledare A (-)	6	Not used
2	RS-485 bus, ledare B (+)	7	Not used
3	Not used	8	Not used
4	Not used	9	Not used
5	Ground		

Table 52. Pin configuration when viewed from the outside

Appendix B.2 Pin configuration for the serial bus to D-TECT units

Picture 184 shows the pin configuration for a D-TECT unit network cable.



Picture 184. RJ45 pin configuration

Pin configuration when the pins (contact areas) are directed upwards.

Pin	Description	Pin	Description
1	RS-485 bus, ledare A (-)	5	Ground
2	RS-485 bus, ledare B (+)	6	Not used
3	Not used	7	DC +24 V _{DC} input power
4	DC +24 V _{DC} input power	8	Ground

Table 53. RJ45 pin denomination

Appendix C D-SERVER Alarm types

Number	Description
0	Alarm
1	Alarm from button
5	Door alarm
6	Bed alarm
7	Carpet alarm
8	Mains failure
9	Mains return
11	Battery low
12	Smoke alarm
13	Assault alarm
14	Presence
15	Ready
16	Auto ready
17	Action
19	Emergency alarm
20	Assistance alarm
28	Radio test alarm
35	Position info
73	Connection alarm
74	Connection ok

Table 54. Default alarm types in D-SERVER

Appendix D NEAT Standard Alarm types

Number	Description
Dec	Meaning
0	No alarm type
1	User alarm from trigger
2	User alarm from button
3	Reminder alarm
4	Passive alarm
5	Door alarm
6	Bed alarm
7	Carpet alarm
8	Mains failure alarm
9	Mains OK indication
10	Accumulator alarm
11	Battery alarm
12	Smoke detector alarm
13	Assault alarm
14	Presence indication
15	Ready indication
16	Automatic ready indication
17	Action indication
18	Test alarm
19	Emergency alarm
20	Assistance alarm
21	User defined
22	User alarm from trigger, battery low
23	Radio interference
24	Log call
25	Radio out of range
26	Radio within range
27	Pull cord alarm (used as Inactivity in Main and NEO Nurse call)
28	Radio test alarm
29	Tamper alarm
30	Inactivity
31	Accumulator fully charged
32	Home indication
33	Away indication
34	Burglar alarm
35	Position info
36	Manoeuvre
37	Measurement data

Number	Description
38	Reset alarm
39	Service call
40	Daily report / Event
41	Double press
42	Long press
43	Technical failure
44	Gas alarm
45	Water alarm
46	Fall alarm (man down)
47	Temperature alarm
48	Unit power on
49	Unit power off
50	Unit placed in charger
51	Unit removed from charger
52	User call 1
53	User call 2
54	Bogus call
55	Co Gas
56	Enuresis
57	Radio output module (ROM#1)
58	Medical dispenser
59	Tamper ok
60	Radio control
61	Open door lock
62	Update clock
63	GoToDuplex
64	SMS test
65	No network
66	Network return
67	Epilepsy alarm
68	Heartbeat
69	Slave receive
70	Slave transmit
71	Peripheral control during call
72	Peripheral control in idle mode
73	Unit disconnected / Heartbeat not received
74	Unit connected / Heartbeat restored
75	PSTN line failure
76	PSTN line return

Number	Description
77	GSM network failure
78	GSM network return
79	CMP report event
80	Area tracking alarm
81	Radio OK
82	CMP report alarm
83	NTP update
84	FTP download
85	Roaming
86	IP network failure
87	IP network return
88	User call 3
89	User call 4
90	User call 5
91	User call 6
92	Seat exit alarm
93	Pairing

Table 55. NEAT Standard alarm types

Appendix E Message format specifiers

Format specifiers that can be used in the text messages.

Format specifier	Explanation
\n	New line
%idx%	ID code (e.g. Radio code) of the alarm source
%nt%	Name of the user associated with the alarm transmitter
%pnt%	Name of the user from the previous alarm (see note Note 1)
%pct%	Paging name of the personnel who confirmed the alarm (see note Note 1)
%gt%	Name of the group that the person who sent the alarm belongs to (see note 3)
%lt%	Location associated with the alarm transmitter
%plt%	Location from the previous alarm (see note Note 2)
%rt%	Alarm reason (text) of the received alarm
%rd%	Alarm reason (decimal) of the received alarm
%rx%	Alarm reason (hexadecimal) of the received alarm
%eqt%	Equipment type (text)
%eqd%	Equipment type (decimal)
%eqx%	Equipment type (hexadecimal)
%pt%	D-POS position (text) from the received alarm
%pt2%	D-POS previous position (text) from the received alarm
%px%	D-POS position ID (hexadecimal) from the received alarm
%px2%	D-POS previous position ID (hexadecimal) from the received alarm
%prt%	Name of user where the staff member has indicated presence (see note Note 3)
%st%	Status of alarm, Answered, On way, Reminder, Presence or Ready (see note Note 4)
%ex%	The extension that took the alarm (see note Note 4)

All other text is used unchanged in the message.

Note 1: The format specifier %pct% can only be used in paging reply messages.

Note 2: The format specifiers %pnt% and %plt% will only translate to a text if the time since the previous alarm has not exceeded the time specified by system parameter `user-from-previous-alarm-timeout-sec`.

Note 3: The format specifier %gt% can only be used for alarms from D-TREX2G units (assistance alarms).

Note 4: The format specifiers %st% and %ex% can only be used for alarms to COBS units.

Format string example

- Paging name of user: "Hans"
- Location of user Hans: "room 102"
- Equipment type of the alarm transmitter: "Atom"
- Received alarm reason: Trigger alarm

The above configuration would then have the format string:

`"%rt% from %nt% (%eqt%) in %lt%"`

This would result in the display message: "Trigger alarm from Hans (Atom) in room 102"

Appendix F Equipment list

By default this equipment is loaded in the D-SERVER:

Equipment
3PUSH
3PUSH+PEAR
ATOM
COBS C-3110
COBS CMS
COBS TALK
D-ATOM
D-CALL
D-TECT
D-TECT-IP
D-TREX
D-TREX2G
DOOR
ESPA
FALL
FLOOD
GAS
INKA
IOR
KEY
PEAR
PIR
PULL
PULL1G
PUSH
PUSH+PEAR
PUSH+PULL
REPO
REPO+
ROOM
ROOM+PEAR
ROOM1G
SIP
SMILE-ID
SMILE-STD
SMOKE
WIOR

Table 56. Default loaded equipment

This page intentionally left blank

www.neat-group.com