
UNMS Network Management System

Quick Start Guide

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Before you start

- Do not forget to document your configurations

UNMS II is a flexible system that can be individually adapted to your requirements. Some functions depend on preparatory work that must be carried out to enable the desired function.

- Think about the task the UNMS II shall do before starting any configuration

With the number of devices, screens and configured functions, function groups, users, etc., it is becoming increasingly difficult to make fundamental changes. It is difficult to determine where exactly the point is at which a realignment of the UNMS is associated with an extreme configuration effort. Good planning and structuring of the tasks and subtasks in advance can save a lot of time afterwards

- Make 1 - 2 test installations

The basic structure of UNMS II is very logical, but especially when you have to work with IIS, strange results occur again and again, the cause of which can be traced back to a misconfiguration in IIS. In some cases, you have to know which configuration menu in IIS is responsible for this and document it accordingly.

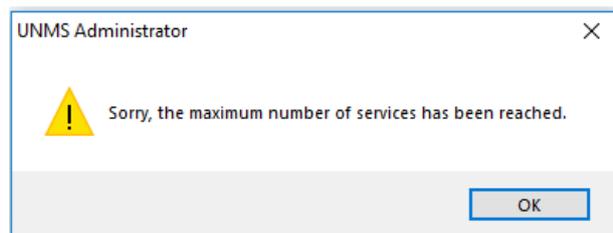
- Regular performed backups will save time and nerves

Especially if you are planning a major change, you should create a backup in order to be able to return to the original state at any time. Otherwise, you could run the risk of a major data loss when running system changes.

- Check whether your version of UNMS II supports the desired function.

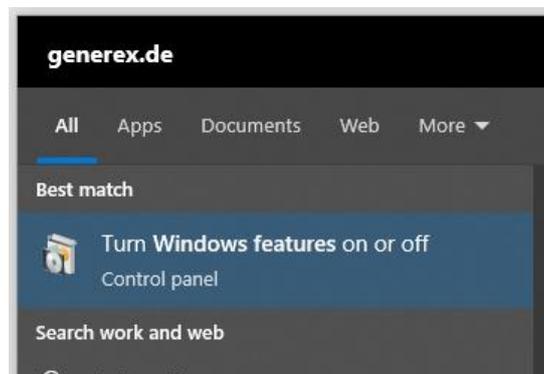
The scope of functions and possibilities of UNMS depends on the version. If a function cannot be carried out, there may be two reasons for this:

1. your version of UNMS II cannot perform this function due to the software licensing.
2. the framework condition for this function is not fulfilled.



Quick Install

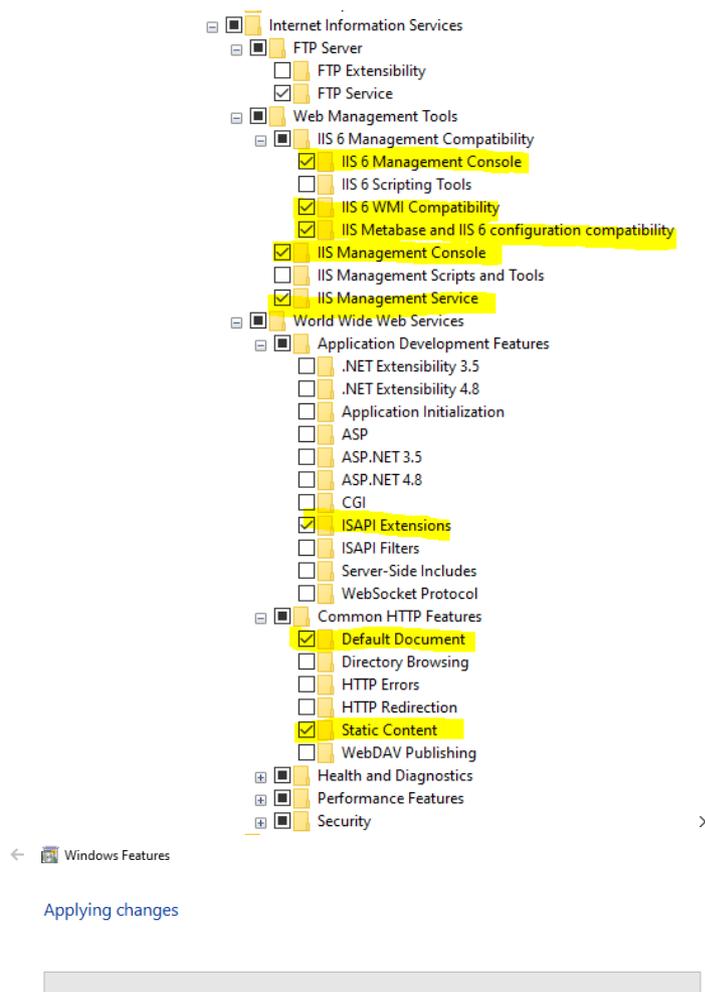
Preparation Windows Features – Add the IIS



A UNMS II uses Microsoft's Internet Information Service (IIS) to deliver all configured information via a http in a format a standard web browser can handle. Due to this fact the UNMS 2 installer takes care for this and checks if the IIS is available on the machine the installation shall be carried out. If the required services and modules are not available, the installation fails.

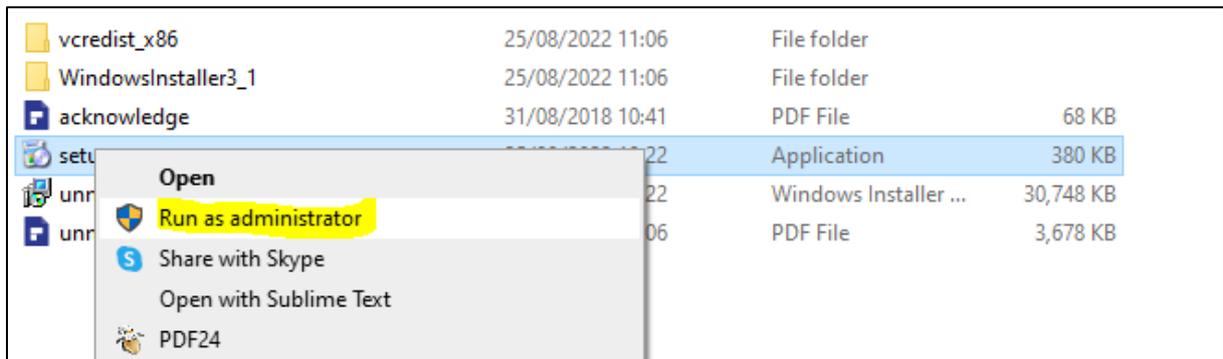
Please note: the quick start guide uses Windows 10 Professional, in which the IIS and the necessary components can be installed via the program features. For other operating systems, please refer to the official UNMS 2 documentation.

The following Windows features are necessary for the operation of the UNMS II:

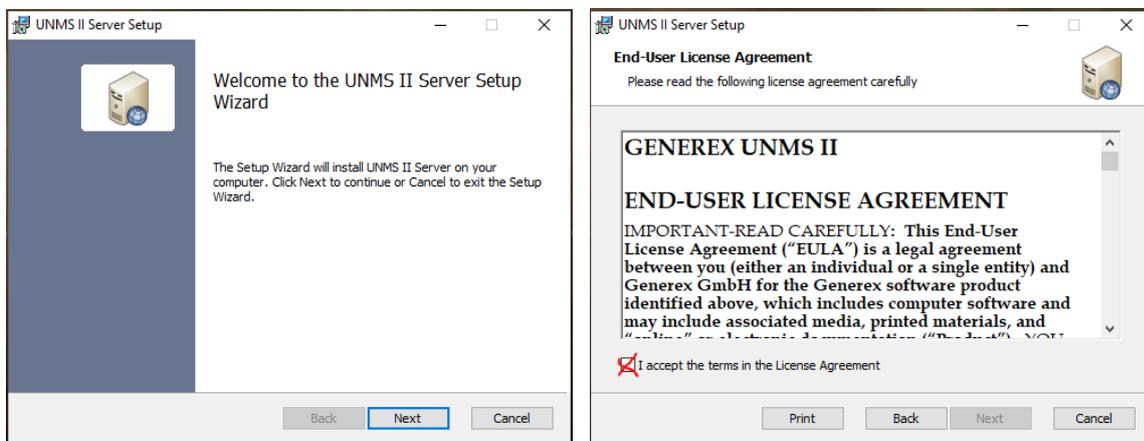


Furthermore, the installation of UNMS II needs increased system rights, since, among other things, services running in the background are also installed, which must be available independently of a user or administrator console.

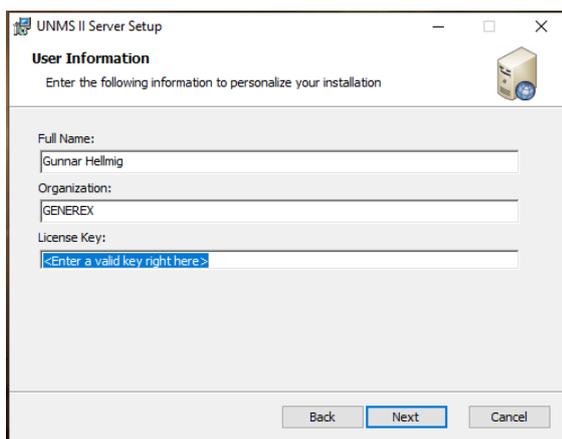
Therefore, the installation can only be initiated if executed from the Windows context menu "As administrator".:



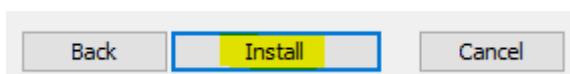
The installation dialogue guides through the installation process:



Click next ...

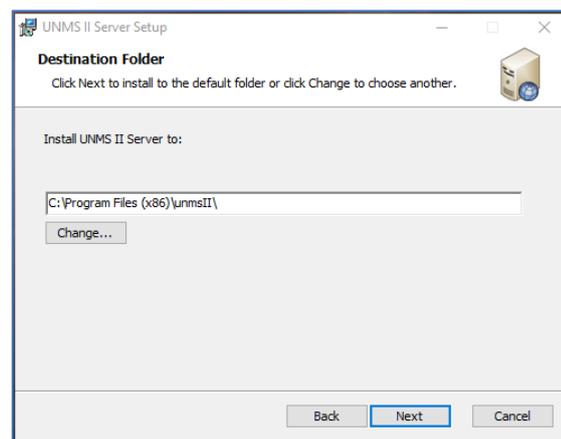


... Enter the license key...



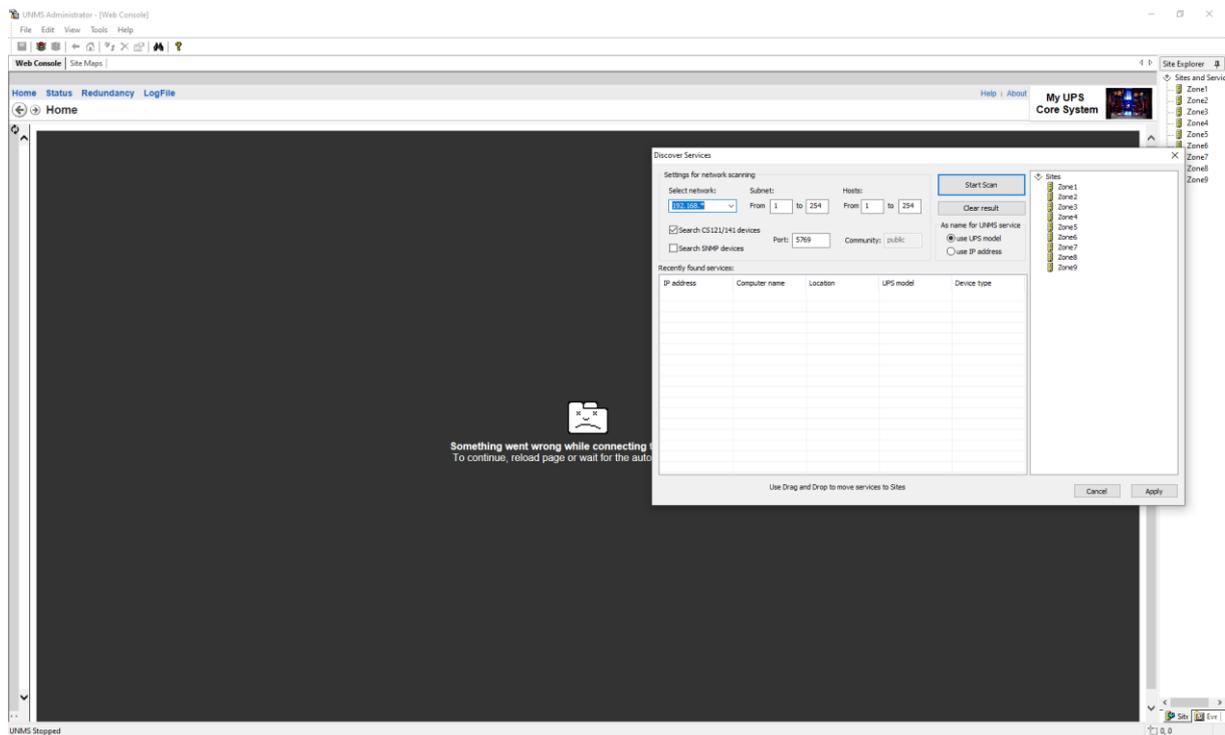
...And click "Install" to finish

... Accept End-User License agreement ...

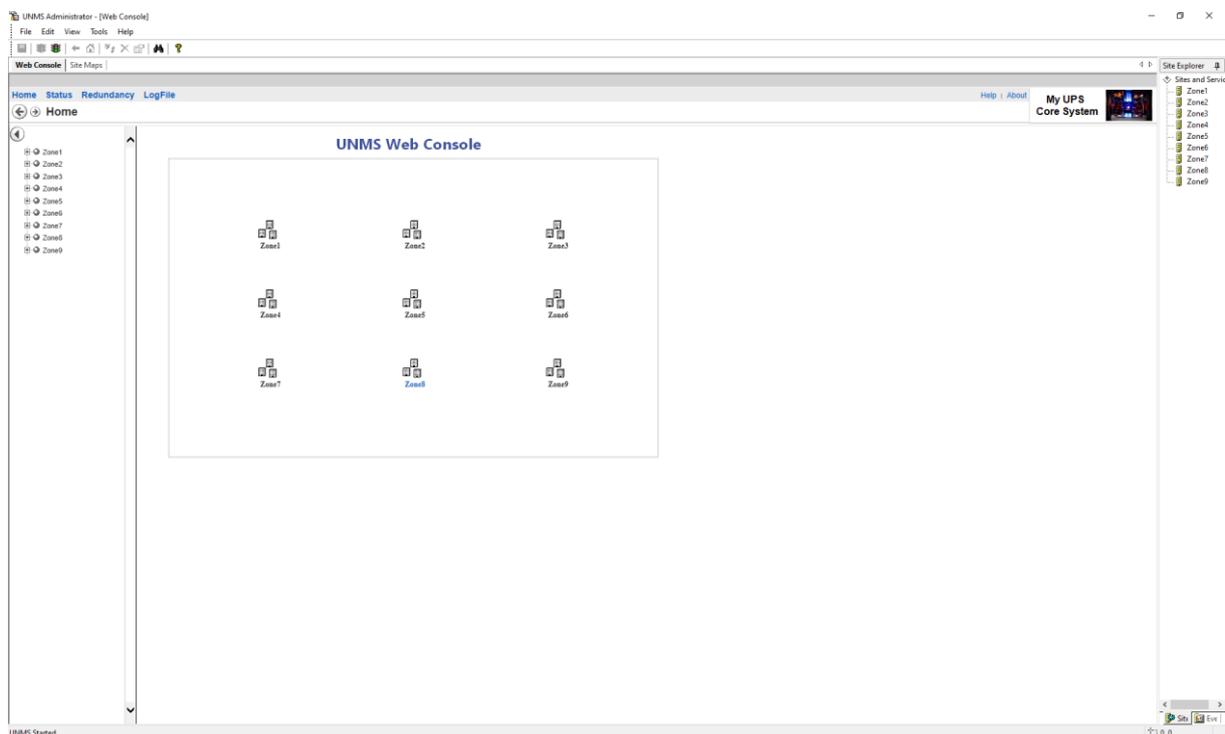


... Choose destination path ...

When you start UNMS II for the first time, you will be greeted with the following screen:



To check whether the UNMS II has been installed correctly and the IIS service is also running as requested, first press Cancel on Discover services and then press the small red traffic light in the top left-hand corner to start the UNMS regularly.



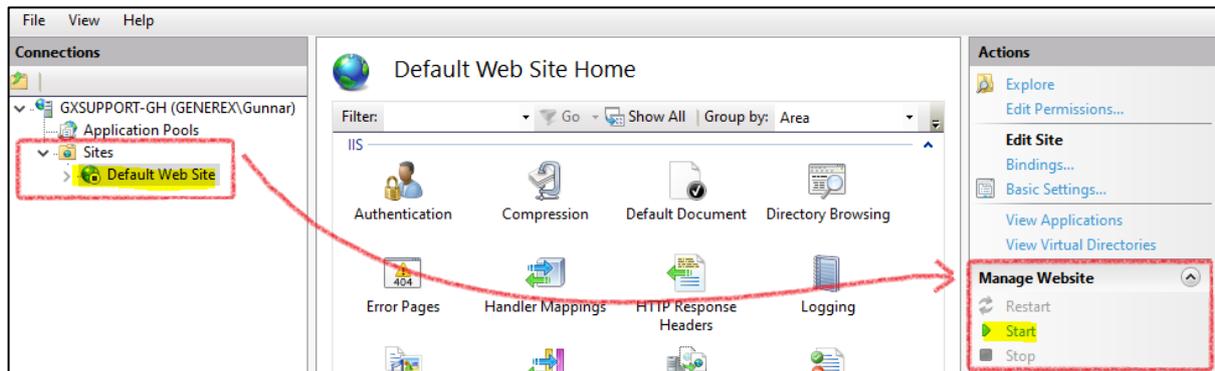
If you see the following screen, the UNMS is set up correctly and you can start with the configuration work:

The web interface shows an unconfigured standard layout with 9 predefined zones. Since no devices are stored yet

Note: If the UNMS does not display a web interface at start-up: Check the IIS

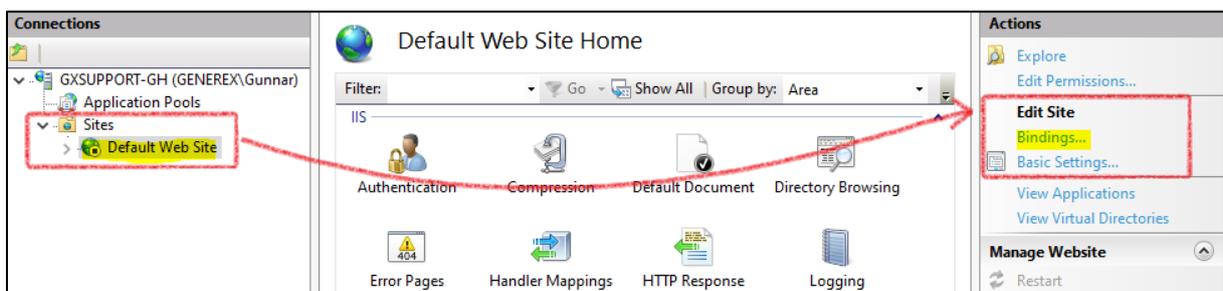
The Internet Information Service is a highly sensitive tool within a Windows installation..

1. Check whether the web page management is active:



Opposite Default Web Site is the item Manage Web Page. This service must be started, otherwise the IIS will not deliver any web pages to a web browser.

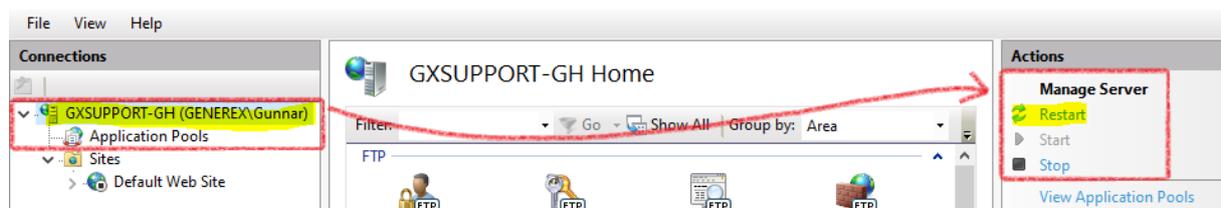
2. Check the bindings



When you open this window, you will find port bindings. Here you must find at least http port 80 with the IP address *, if you want to use https, correspondingly also port 443:

Type	Host Name	Port	IP Address	Binding Informa...
http		80	*	
https		443	*	

3. Restart the IIS service



After each change in the IIS itself, you should restart the IIS service so that all your changes are read in and initialised correctly. Make sure to check again if point 1 has been fulfilled in case of a restart, otherwise you will run into the same error again.

To find devices, the Discovery Service needs to know where to search for devices within your network.

Enter the network segment that shall be scanned for devices. This is the third number within your IP address. If you enter 15 - 27, the UNMS II will scan:

192.168.15.1 - 192.168.15.254
192.168.16.1 - 192.168.16.254
[...]

Narrow the IP address range. If you enter 100 - 150, at 15-27 in the subnet, UNMS would scan as follows:

192.168.15.100 - 192.168.15.150
192.168.16.100 - 192.168.16.150
[...]

Enter the first 2 numbers of your current IP network. In this case: 192.168.

Specify whether you want to search only for CS121/CS141 devices or also for any SNMP-capable devices.

Enter the port your devices are configured to.

If SNMP devices are in use, it can be necessary to enter the SNMP community the UNMS II shall use for queries. If the wrong community is used, SNMP devices will not answer to a request.

Define if you want to see the UPS model name or the direct IP address. you may rename the search result entries later.

Step 1: Setting up the network scan

Select network

With the first two octets, define the basic network that is to be scanned. As the number of existing IP addresses can become very large, the input option is limited. Please enter the first two numbers of your network:

192.168.
17.15.
158.75.

Subnet

Enter the range to be scanned here. This value defines the third octet within the IP address. Unlike Select network, you enter an address range here. For example, if you want to scan from network segment 100 - 103, enter these two values. The UNMS will then check the following network segments:

192.168.100.xxx
192.168.101.xxx
192.168.102.xxx
192.168.103.xxx

If you just want to scan the 102, you may enter 102 - 102.

Hosts

In large networks, IP address ranges are traditionally divided to avoid uncontrolled proliferation. The type of division varies greatly. For example, the host range 1-30 is often used for routers and switches, 31-50 for servers, 51-60 for printers, ...

If you do not know the exact IP address, but you know that it can only be within a certain range, enter the start address and the corresponding end address here. For example, if you define from IP 100- 150, the UNMS will scan the network afterwards as follows:

192.168.100.100
192.168.100.101
192.168.100.102
[...]
192.168.100.150
192.168.101.100
192.168.101.101
192.168.101.102
[...]

The last scanned IP address will be 192.168.103.150.

Note:

When specifying the address ranges, be sure to use the correct default settings, otherwise UNMS may take a very long time, as each IP address specified is checked exclusively.

As name for UNMS service

As name for UNMS service

use UPS model

use IP address

With this setting, you define whether the UNMS will use the UPS or the IP address for displaying scan results. This setting has a subordinate role for the scanning process itself, but it may help you to identify the devices you are looking for.

In this manual we use the setting "use IP address" - however, the name displayed within the UNMS is freely configurable and can be changed at any time.

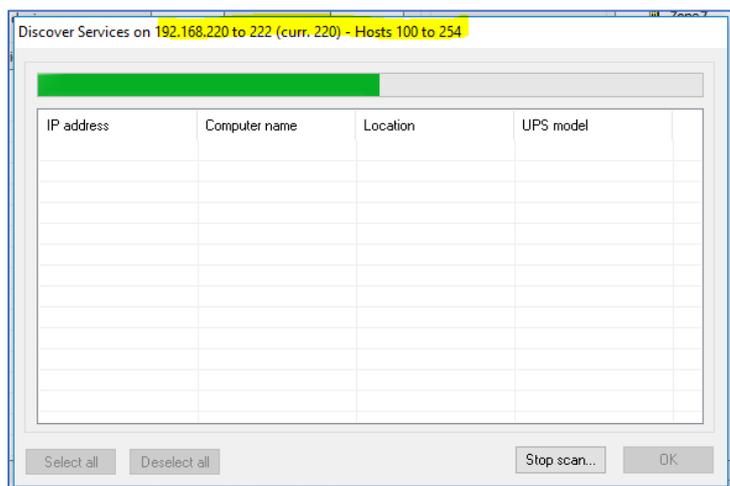
Monitor scan progress

As soon as you press Start, UNMS starts the network scan. In the scan progress will show

- The network segment the scan is currently in progress
- Which IP address range is specifically scanned.

This screenshot, eg, shows the following information:

- The network from 192.168.220.XXX to 192.168.222.XXX is scanned.
- The IP addresses 100 - 254 are checked.
- With (curr.220) the network scan is in the network 192.168.220.XXX



The green indicator bar shows the scanning progress of the current network segment (curr. 220). The green indicator bar shows the progress over already scanned IP addresses.

The results of the scan are displayed in the list below:

IP address	Computer name	Location	UPS model
<input type="checkbox"/> 192.168.222.107		Generex Hamburg	AR COMFORT
<input type="checkbox"/> 192.168.222.110			Centiel UPS
<input type="checkbox"/> 192.168.222.111			TP110-1000
<input type="checkbox"/> 192.168.222.112		Generex HH	SNMP UPS-RFC 1628...
<input type="checkbox"/> 192.168.222.113			BACS
<input type="checkbox"/> 192.168.222.103			BCM11A

Importing scan results to the UNMS

With the next step, the devices found must be transferred to UNMS. To do this, simply select the desired units by ticking the corresponding checkbox.

When you have selected all the devices, press OK.

IP address	Computer name	Location	UPS model
<input checked="" type="checkbox"/>	192.168.222.107	Generex Hamburg	AR COMFORT
<input type="checkbox"/>	192.168.222.110		Centiel UPS
<input checked="" type="checkbox"/>	192.168.222.111		TP110-1000
<input checked="" type="checkbox"/>	192.168.222.112	Generex HH	SNMP UPS-RFC 1628...
<input type="checkbox"/>	192.168.222.113		BACS
<input checked="" type="checkbox"/>	192.168.222.103		BCMU-A
<input type="checkbox"/>	192.168.222.105		No UPS model defined
<input type="checkbox"/>	192.168.222.115		SNMP UPS-RFC 1628...
<input type="checkbox"/>	192.168.222.118	Testfeld Holzfeld	Powerpack Plus 1 kV...
<input checked="" type="checkbox"/>	192.168.222.119		CE+T TSI Media
<input type="checkbox"/>	192.168.222.121		NEXTYS DCW20
<input type="checkbox"/>	192.168.222.126	XANTO-RT-1000 / ID ...	XANTO RT 1000
<input type="checkbox"/>	192.168.222.131	Hamburg	SNMP UPS-RFC 1628...
<input type="checkbox"/>	192.168.222.132	MULTI-ATC Switch, T...	MULTI-ATC Switch, T...

The selected devices are then displayed in the main window of the Discovery Service under Recently found services:

Recently found services:				
IP address	Computer name	Location	UPS model	Device type
192.168.222.103			BCMU-A	CS121 compatible
192.168.222.107		Generex Hamburg	AR COMFORT	CS121 compatible
192.168.222.111			TP110-1000	CS121 compatible
192.168.222.112		Generex HH	SNMP UPS-RFC 16...	CS121 compatible
192.168.222.119			CE+T TSI Media	CS121 compatible

From now, it is possible to perform a new scan with a different IP address range to search for other devices.

Note:

You do not have to rescan every time you close the Discovery Service. All devices that you have placed in Recently found services will remain there in the list until you either remove them with Clear Result or distribute them to the appropriate UNMS services.

Adding found devices to the UNMS monitoring

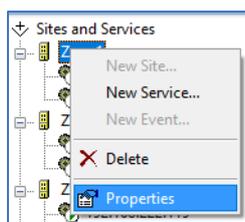
During installation, UNMS offers 9 so-called "zones" as basic settings. Found devices, the "services" can be moved there via drag'n'drop.

Simply hold down the desired device with the left mouse button and drag it to the corresponding zone.

This action removes the device from the Recently found Services list and adds it to the corresponding zone.

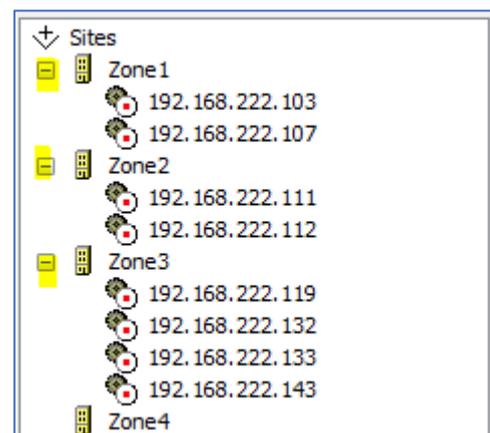
When all devices have been distributed, press Apply to confirm your setup.

Customizing „the Zone“



The word "Zone 1" sounds like some kind of black high tech voodoo, but is, unfortunately only meaningful to a limited extent. Due to this fact, the UNMS offers the option of adapting the name accordingly for the context and usage.

To do this, right-click on the zone and then select the option "Properties" in the context menu.



A new tab opens which displays the properties of this zone. Change the name of Zone 1 to an appropriately adapted term:

The screenshot shows a 'Site Properties' dialog box with the following fields and options:

- General** (selected) and **Info** tabs.
- Site name:** Hauptgebäude
- Site icon coordinates:**
 - Left (x): 191
 - Top (y): 148
- Background image file** (with a 'Browse...' button)
- Background images are only possible when the site contains no services!
- Security settings:** Not available with this license.
- Buttons: OK, Abbrechen

When you have completed your adjustments, tap the heels of your feet together twice , say OZ or click OK - although clicking OK is more likely to have the desired effect within the UNMS II, Dorothy...

Saving and first UNMS II start

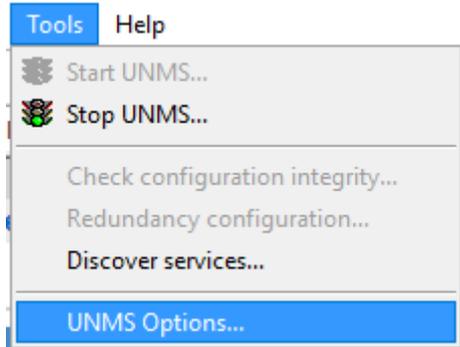


As soon as you have unnamed all zones, press the disk symbol at the top left to save and then the red light to end the current state - UNMS is stopped. UNMS will then permanently import the new data and restart the necessary services.

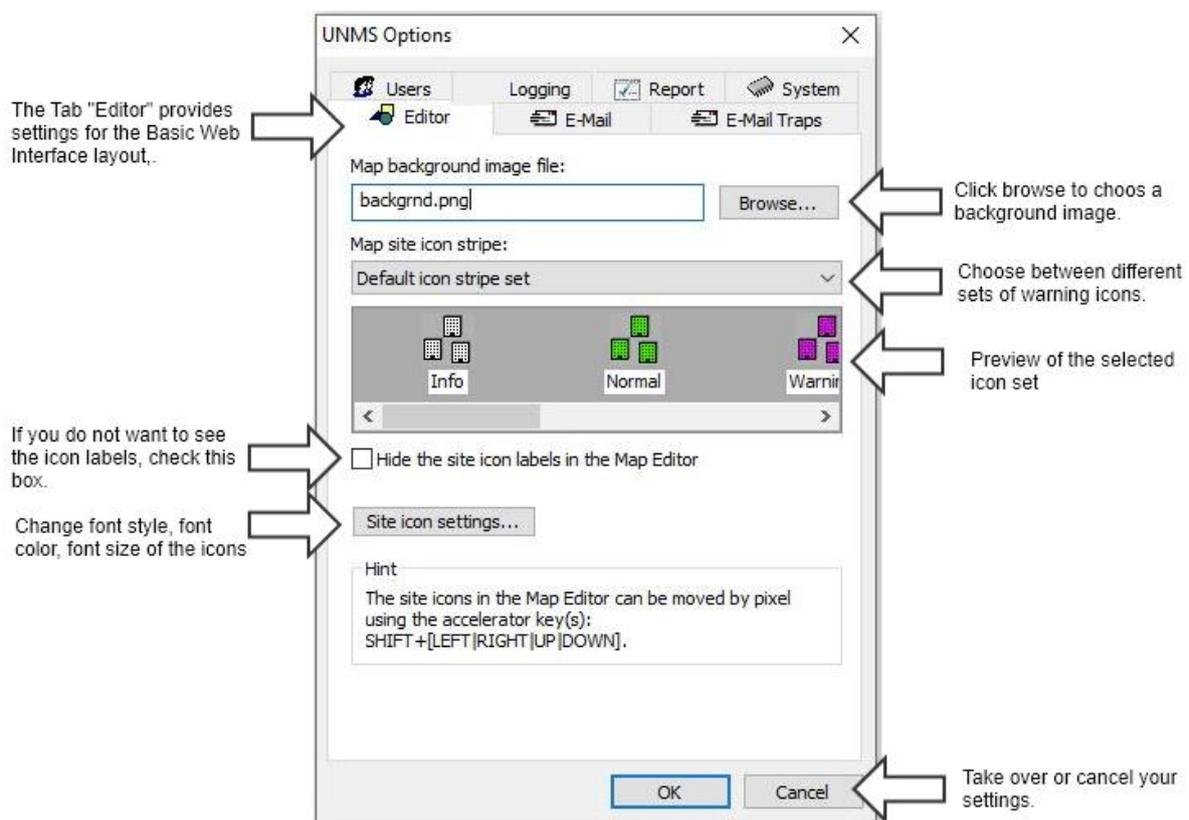
UNMS II – changing the UNMS II Screens

Anyway, Dorothy, ... the UNMS II provides many options for sorting the monitored devices and organize them in well-structured groups and subgroups. In addition, in addition, it is also possible to use any background image for the monitored services, and position all icons freely.

This will not only help to organize your services, this function can also be used to to clarify the function of a monitored system accordingly.



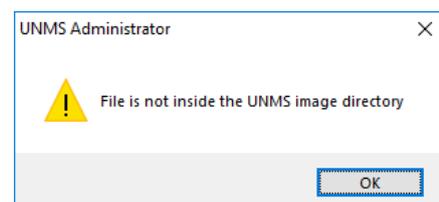
First open the UNMS Options under Tools. In this collection of tabs, numerous basic settings can be carried out, including adjusting the image. Click on the Editor tab to adapt the general basic layout to your ideas:



Changing the Start Screen

Select one of the images already included or create your own image that fits the application scenario.

Please note that the image must be stored in the corresponding image directory of the UNMS II in terms of system rights, otherwise the image can be selected but ultimately cannot be used..



The UNMS II does not create copies of image files from other directories, pictures must be copied manually in PNG format into the UNMS directory. The default directory is:

C:\UPS\unmsII\www\image

Changing the icon set

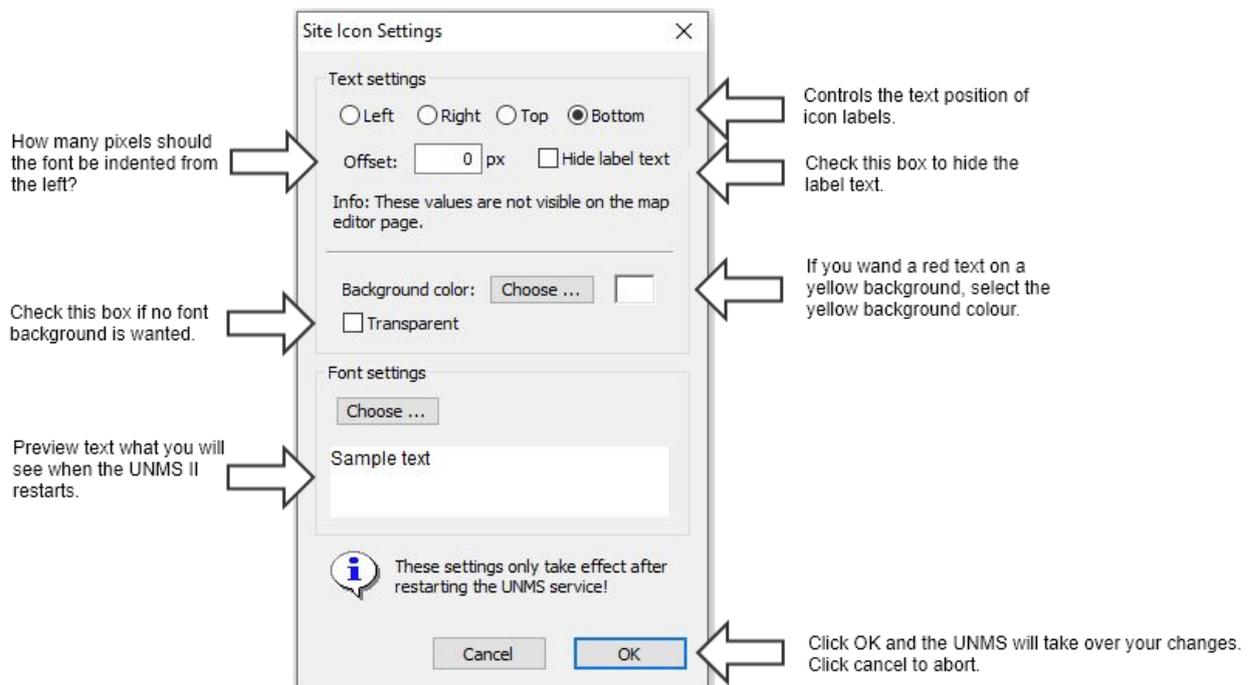
In the same directory (C:\UPS\unmsII\www\image) you will also find all pre-defined sets of icons the UNMS II comes with:



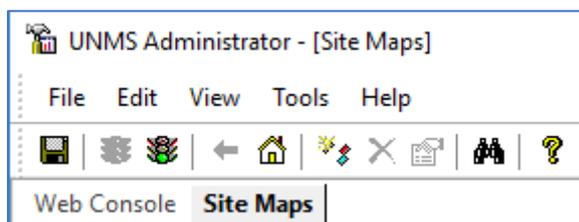
It is possible to customise the icons as you wish by creating new icons and renaming the file names accordingly. Since these are standard gif files, administrators may also use any animated icons to meet internal corporate design guide lines.

Customizing the icon labels

Neben dem Ikon-Set an sich können Sie zahlreiche Anpassungen an der Beschriftung der Ikonen und dem Hintergrund des Schriftbildes durchführen, um die Lesbarkeit der Beschriftung anzupassen:



Moving and Replacing the icons on the main screens



Below the command line you will find the tabs "Web Console" and "Site Maps".

The Web Console is the preview of the UNMS' web-based interface for testing functions. All configured changes will be carried out after saving / restarting the UNMS.

By default, the web console is active. Switch to the Site Maps and move the icons, rename labels, etc:

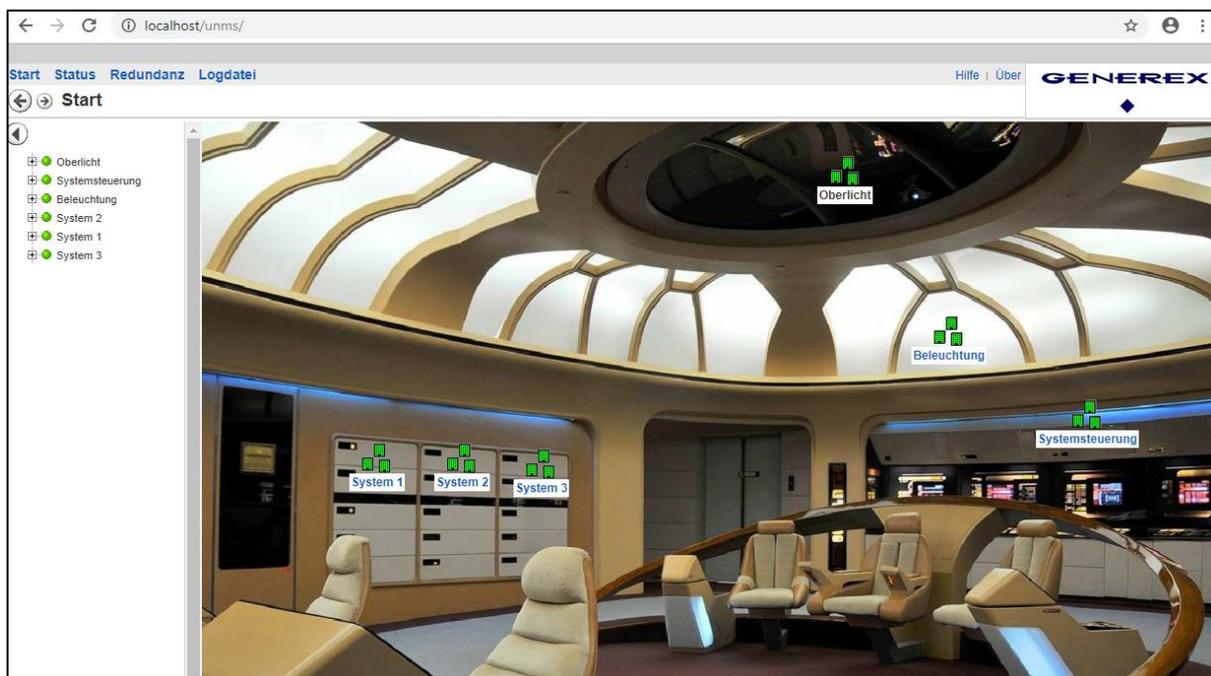


Note:

In the site maps you can move the icons as you wish, the UNMS will only apply the settings when you restart the UNMS service after saving. You can therefore configure the UNMS accordingly while it is working regularly from outside via the Web Console.

Save, exit and restart will permanently apply your settings to the system accordingly and restart the UNMS service.

You can view the success in the administration area of the UNMS II via the Web Console or via a web browser by calling up the UNMS II web view:



Advanced graphics adjustments: Setting up sub-screens

For technical reasons, it is not possible to display a zone and services - i.e. monitored devices - together.

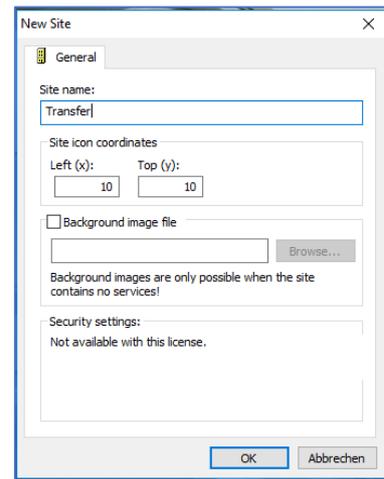
Either you have set up further subordinate zones in a major zone, in which the services are then located, or you have set up a zone at the top level, in which the monitored devices are located directly.

In order to add a sub-screen to the control panel in this case (services are already moved to the site you want to add a sub-screen), you have to do a little preparatory work:

1. Temporarily move all services to another zone

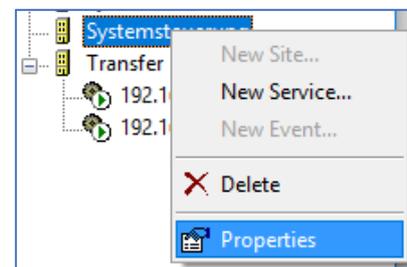
To avoid accidentally losing a device, create your own zone and give it a unique name, e.g. "Transfer" or "Temporary".

Since the zone is deleted afterwards before saving and restarting the UNMS, this site will never appear in the current web view of the UNMS II.



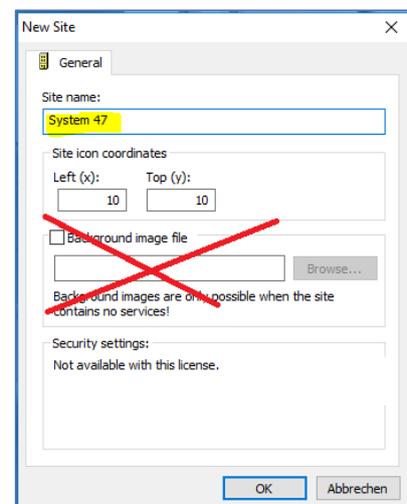
2. After cleaning up the major site, click on Properties in the Site Explorer control panel on the right side of the screen to open the object properties. Since this zone no longer contains any services, you can now assign your own background image and thus change the character of this zone:

As soon as you have assigned an image accordingly, you can create subordinate zones, but not move services into this site.



3. Create subordinated zones

Now create a new zone in the control panel, but do not assign a background image! This way, you can later drag the temporarily parked services into this new subzone and display them accordingly.

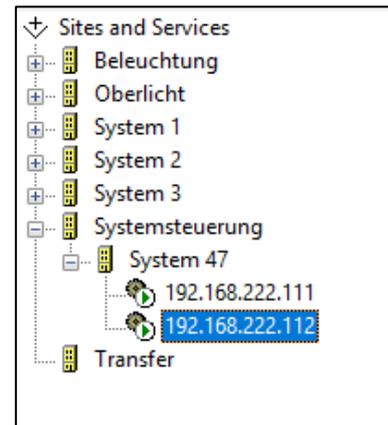


4. Use drag and drop to pull the services into the new sub-zones

Move the temporarily parked services to the subordinate zone. You can then delete the transfer zone that is no longer needed, as it no longer fulfills any function.

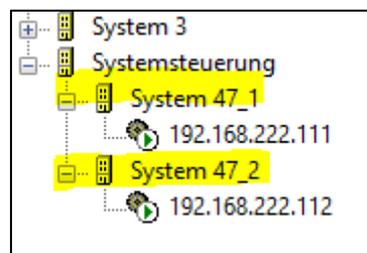
Note:

Please note that this option is only available, if you did not define a background image in step 3.

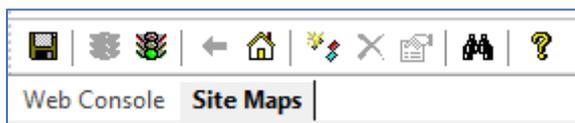


If you do not want to have the two devices in one mask...

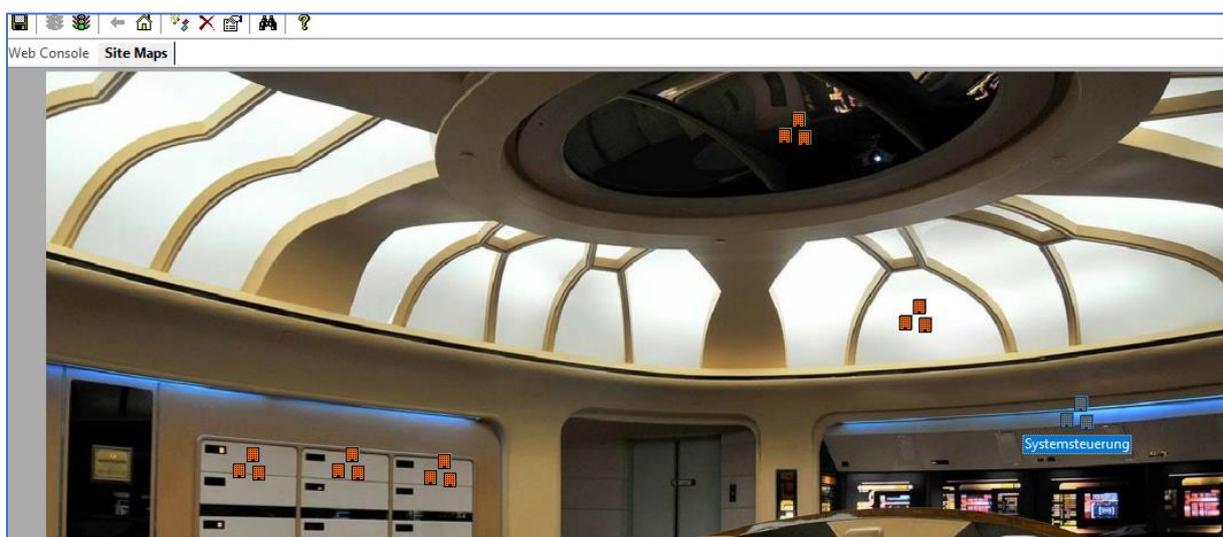
Well, In this case, you simply create two separate subordinated zones and move the services into their own zones accordingly:



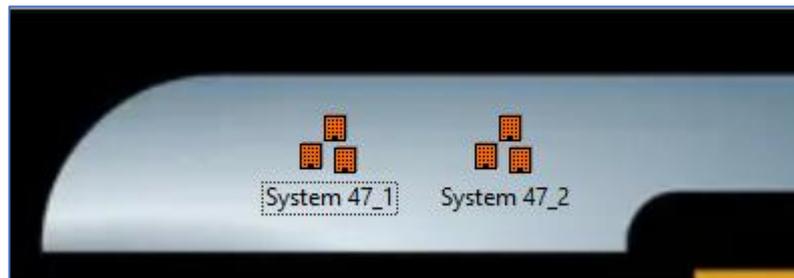
Adjusting the Icon position within the Sub-Screen



To do this, click on Site Maps tab in the top left-hand corner to be able to move icons. You will first see the start screen:

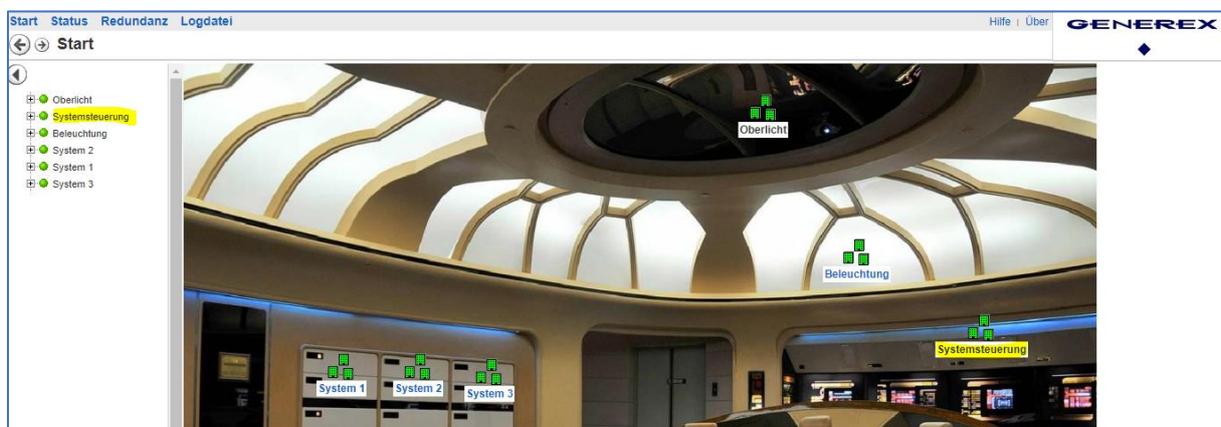


Now double-click on the "Control Panel" icon - in the screenshot called "Systemsteuerung" - to open the corresponding subordinate screen. You will notice the two icons - in this case System 47_1 and System 47_2:



Grab them with the left mouse button to move them to where you want. After this, click on Save, Exit and Restart.

Access SubScreen via the web console by opening the control panel. The positions of the icons have been adjusted to the position you want.



Adapt fonts in the subscreen

This function becomes interesting if, for example, you have a building plan where different UPS systems are distributed and you want a division between emergency systems and less important systems. On a cruise ship, for example, this would be different systems or hierarchically structured sub-distributors.

- The overview holds all available UPS systems and devices to be monitored
- In the system-related page, there are only the systems assigned to a special purpose.

Within a complex power distribution network, it is possible to maintain an overview in this way, as the font size and font background can be freely defined for the respective subscreen.

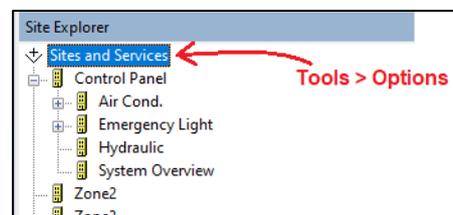
How to adapt the sub screen fonts

It is important to understand the schematics behind this function: Any font change within a zone always affects exclusively the sub-ordinated sites below this zone.

This results in the following display logic:

At Tools >Options, you can globally set the typeface, colour, size, etc.. Logically, this is hung up in the Site Explorer under SITES AND SERVICES. This means, that everything that can be seen underneath takes over the corresponding settings as a kind of global font setup..

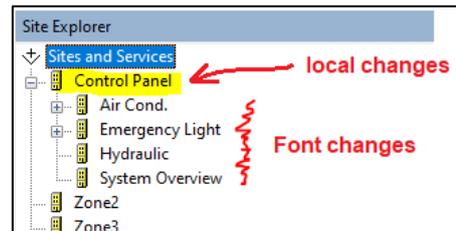
Now, the UNMS offers to overwrite fonts locally for individual zones, but the changes always take effect for the subordinate zones.



So, if you click on "Properties" in the Site Explorer for the Control Panel site, and adjust the font, size, etc., this will affect all subordinated zones, but not the "Control Panel" site - the superordinate setting coming from "Sites and Services" will stay valid.

You can now nest this as much as you like and change it "downstairs", as long as you bear in mind that the respective sub-zone that is to accommodate the icons has a background image stored and thus cannot hold any services.

Adding additional information



System 47_1: 192.168.222.111

TP110-1000

Status

Ext. Information

Device Temp.: 25.3 °C

Battery

Voltage: 41.60 V

Time: 999 Min

Capacity: 100 %

50% 100% 150%

L1 0 %

Status

Normal

Connected Devices

Device Link

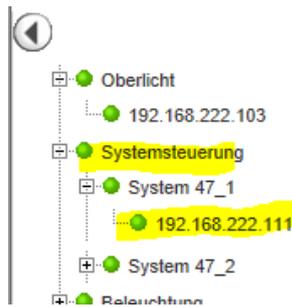
Log

Logdatei	Messdaten
Info	

Update: 10.10.2019 15:32:22

If you now take a look at the UPS screen within UNMS, an Info button is offered just below "Log". Each device integrated via the Discovery Service first provides the UPS model (if used) and its own IP address as basic data. The UNMS II provides an option to add as many information as wanted or needed

Finding a device in the Site Explorer

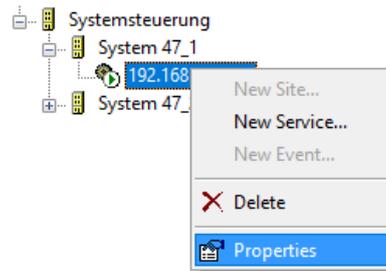


The directory tree of the web interface provides you with the information where you can find the device in Site Explorer.

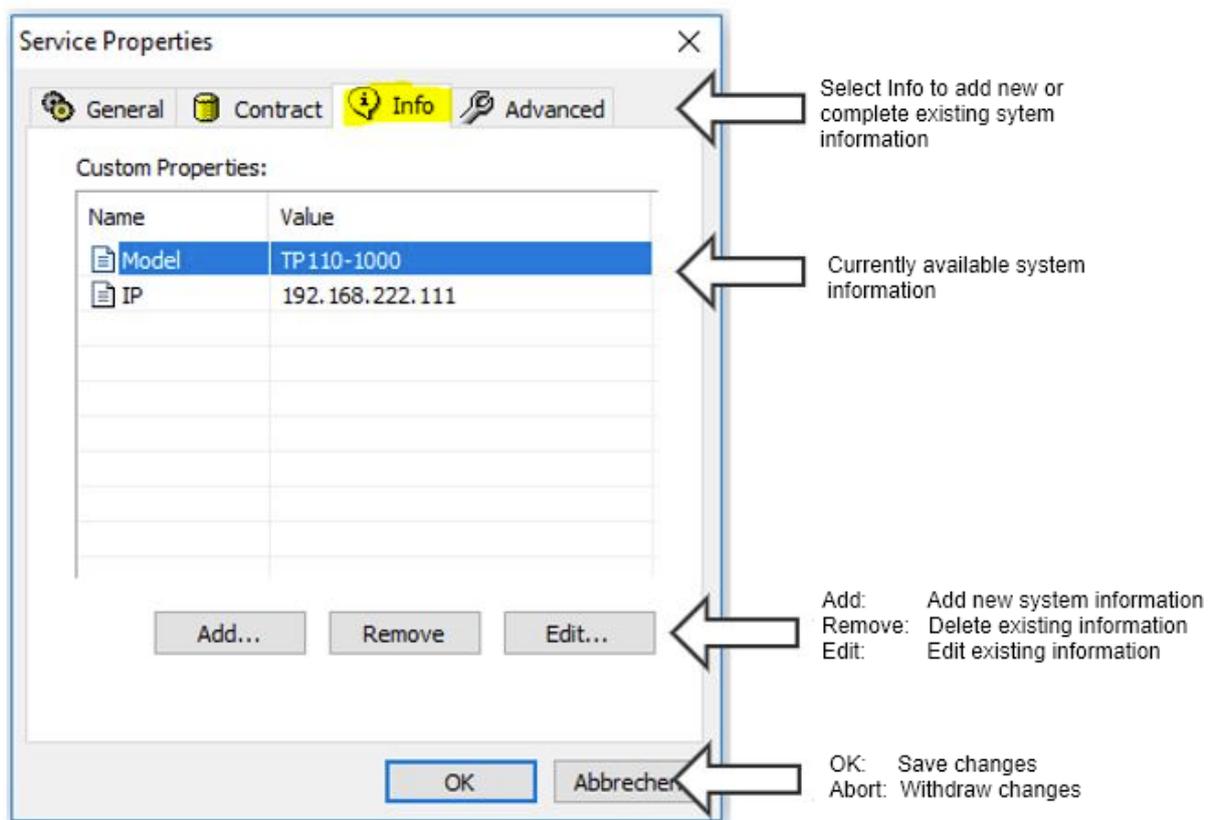
In this example, the device you are looking for would be found in the control panel, exactly under System 47_1.

Now open the Site Explorer in the Admin Console on the right-hand side and navigate to the corresponding IP address.

Then select the IP address with the right mouse button and select Properties in the context menu to open the object properties:



At Service Properties, select the „INFO” – tab:



Add / Edit information

Click Add to insert new information:

Property type:

The UNMS II supports two different options for storing information.

Plain Text

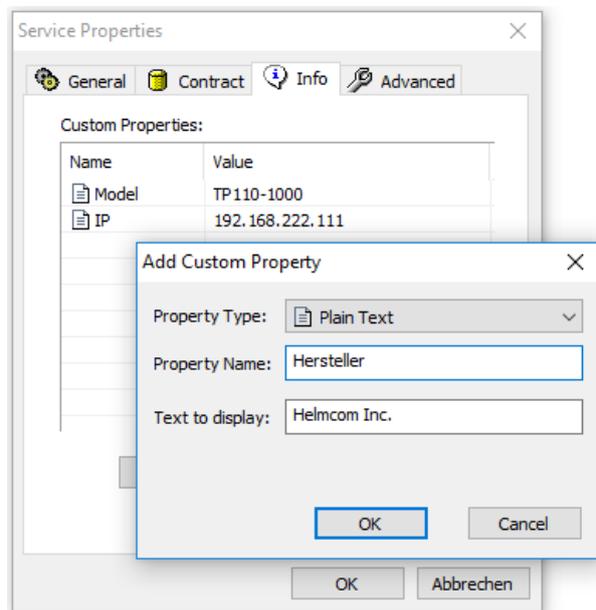
The information is displayed as text.
You can store any information:

- Service telephone numbers
- Mail addresses
- Responsible departments
- Invoice numbers

Hyperlink

An http-link is displayed, which is clickable. For example

- links to sellers' pages
- service forms
- online manuals
- download sources



When you have made the settings, press OK to add the new entry to the list.

Note:

Wenn Sie Bestandsdaten ändern möchten wählen Sie einfach den entsprechend Listeneintrag und aus und klicken auf „Edit...“.

Entfernen von Einträgen

Wählen Sie den Eintrag aus und drücken Sie auf „Remove“. Der Eintrag wird aus der Liste entfernt.

Write changes to the active configuration

UNMS has saved all changes, but not yet transferred it to the active configuration. The changes are displayed as soon as you have clicked Save, Stop and Start in the administration area at the top left icon row.

The configured list at service properties...

Name	Value
Model	TP110-1000
IP	192.168.222.111
Hersteller	Helmcom Inc.
Link	www.generex.de

Info

Model	TP110-1000
IP	192.168.222.111
Hersteller	Helmcom Inc.
Link	Generex

.... As seen when clicking Info button

System 47_1: 192.168.222.111

- Oberlicht
- Systemsteuerung
- System 47_1
 - 192.168.222.111
- System 47_2
- Beleuchtung
- System 2
- System 1
- System 3

TP110-1000

Status

Input

L1: 229 V 49.90 Hz

Ext. Information

Device Temp.: 25.3 °C

Battery

Voltage: 41.60 V

Time: 999 Min

Capacity: 100 %

Output

L1: 230 V

L1 0 %

Status

Normal

Connected Devices

Device Link

Log

Logdatei
Messdaten

Info

Update: 10.10.2019 15:32:22

Note

Entered information are not transferred to the corresponding web manager, they are exclusively stored in the UNMS.

Deposit contract data and service level

The UNMS can be used for many tasks. One of the more interesting functions is the automatic validity check of service levels as contracts in case of the emergency power supply maintenance and repair work. In case of a detected system failure, the UNMS provides information about a customer's service contracts, which contractual partner has to be called, the current response time to solve the problem at latest, etc.

The screenshot shows the 'Service Properties' dialog box with the following fields and annotations:

- Contract Tab:** An arrow points to the 'Contract' tab, with the text: "To add additional contract and service level data, select 'Contract'".
- Edit Button:** An arrow points to the 'Edit...' button, with the text: "Click 'edit' to define service number, service level and set the status / exoiring date".
- UPS Model:** An arrow points to the 'Model' field containing 'Ultramax 17 Baytech 4', with the text: "Enter UPS model, a contract registration number or serial number for this device".
- Address Selection:** An arrow points to the 'Address...' button, with the text: "Click 'Address' to define customer data or address data of the device.".
- Notes Field:** An arrow points to the 'More customer data...' button, with the text: "Add som additional information, Notes, internal information about the location. access control. etc.".

After saving and restarting the UNMS, entered informations are accessible via web console for this UPS:

The screenshot shows the web console interface with the following sections:

- Status:** Shows a green bar and the text 'Normal'.
- Connected Devices:** Shows a 'Device Link' button.
- Log:** Shows 'Logdatei' and 'Messdaten' buttons. The 'Info' button is highlighted with a red arrow. Below it, the text 'Update: 10.10.2019 15:32:22' is visible.

Contract	
Contract ID	Contract: 12947
Contract Status	Active
UPS Model	Ultramax 17 Baytech 4
UPS Serial No.	829347394skdfh832479
Customer Company	Helmcom Inc
Customer Address	Helms Klamm 3 RO_MI ROHAN MIDDLE EARTH
Contact Person	John Doe
Contact Phone	123 / 456789
Contact Fax	123 / 456798
Contact E-Mail	john.doe@helmsklamm.com
Notes	This customer is a little nervous and tends to interprete a small problem as a giant male function like exploded walls...
Contract Level	4
Contract Start	19.10.2022
Contract End	15.12.2023

Altering General Device setup

It is always possible that changing general device settings is required. In some cases it is just the IP address, in other cases the entire query method changes with the SNMP card used.

To carry out these device changes, open the properties of the device and select the tab General..

The screenshot shows the 'Service Properties' dialog box with the following fields and annotations:

- General Tab:** An arrow points to the 'General' tab, with the text: "Select 'General' to change basic settings for this device".
- Service:** A checkbox labeled 'Service' is checked. An arrow points to it with the text: "Enable / Disable monitoring for this device".
- Name:** A text box containing 'No UPS model defined'. An arrow points to it with the text: "Customize the display name and define the redundancy group".
- Group:** A dropdown menu showing 'STANDARD'. An arrow points to it with the text: "Customize the Request method to fit to the according device / infrastructure".
- Connection type:** A dropdown menu showing 'CS121/141 compatible (UPSTCP)'. An arrow points to it with the text: "Change the IP address or hostname of the device. Also define port or SNMP community".
- DNS name or IP address:** A text box containing '192.168.222.115'. An arrow points to it with the text: "Change the IP address or hostname of the device. Also define port or SNMP community".
- UPSTCP Port:** A text box containing '5769'. An arrow points to it with the text: "Change the IP address or hostname of the device. Also define port or SNMP community".

Note: Different tabs have different functions

Basically, each tab can be seen separated (although the entered data are shown together). You should therefore keep an eye on what shall be shown after all within the web interface ...

Site Name

This item is non-negotiable - it changes when you use the Site Explorer to drag and drop a device into another zone.

Service (On/Off)

If temporarily monitoring is unwanted for a single device, simply remove the tick. The device will then be listed in the UNMS but displayed as "Disabled" and excluded from the real-time monitoring. Remember, as long as monitoring is disabled, there, no alarm job will be triggered: It may also harm the character of redundancy based alarm jobs...

The image shows three panels:

- Status:** A panel with a 'Disabled' indicator.
- Connected Devices:** A panel with a 'Device Link' button.
- Log:** A panel with 'LogFile', 'DataChart', and 'Info' buttons.

Name / Group

"Name" defines the display name that will be shown when using the UNMS II Web interface. The name can be freely customized to allow a quick location overview, function of this device, etc.

"Group" allows to define special redundancy groups within the UNMS, which can then be equipped with a separate configuration if necessary. Find out more in the chapter "Setting redundancy groups".

Connection type

This setting only needs to be changed if you change the target card completely, e.g. if you replace the UPS and use a card that is not compatible with the CS141:
Although there are general standards a communication should take place, there are no standards that may force manufacturers to really stick to use them.

Furthermore, many manufacturers also provide their own products and monitoring solutions on the market, and are naturally keen to sell their own solution the best possible. UNMS II is designed to deal as openly as possible with other systems, devices and SNMP card solutions, but it may be necessary to carry out manufacturer-specific configurations on the target card itself so that communication can be established.

If in doubt, contact the GENEREX support team:

support@generex.de

DNS name or IP-Adresse / UPSTCP Port (Community)

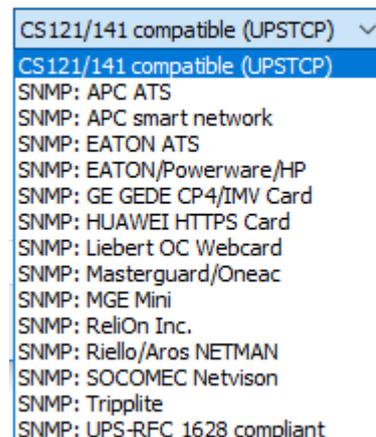
IP address and DNS

The UNMS II supports both DNS resolution of host names and direct entry of IP addresses. The difference between these two options has far-reaching consequences for the configuration of your network:

- When using a host name, the network must provide a DNS server that can resolve a DNS name to an IP address. If this DNS server is offline, you will no longer be able to reach the target device via host name. The advantage is that a DHCP server may update IP address changes automatically.
- When specifying a direct IP address, on the other hand, you must assume that the IP address at the target device has been statically assigned - if it is dynamically assigned by a DHCP server, it can also change sporadically and, as a consequence, you need to search for the new one.

For the best setup, please refer to your local system administrator.

Connection type:



Note - Where to store information in case of a lost IP address

Open the tab Info and store any information locally within the UNMS II. In case of a "communication loss issue", the Info-Button is still available and alive because these button will be feeded by the UNMS locally and not by the target device.

UPSTCP Port (Community)

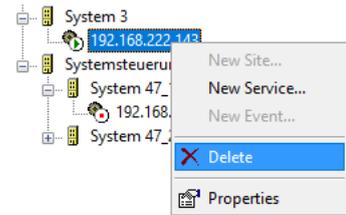
The default port to query a CS141 device, is 5769 unless you have changed this manually to suit up the device for your network policies. Customizing this port must therefore be carried out on both sites: the UNMS 2 and the destined CS141.

The default port to query a CS141 device, is 5769 unless you have changed this manually to suit up the device for your network policies. Customizing this port must therefore be carried out on both sites: the UNMS 2 and the destined CS141. Some settings will also change the "TCP Port" by the SNMP community option. According to your CS141 setup, ensure that you will use the same community on both sites to prevent communication loss on startup.

Delete obsolete devices

At the tab Site Explorer, look to the right-handed site of the screen: Simply open with the secondary mouse button the context menu and click "Delete". The UNMS will remove the device and asks you to decide whether all log files shall be kept or not.

Since this is an administrative process, the changes will take effect after pressing Save, Stop and Restart the UNMS.



Add UNMS functions

In general, the download server provides a UNMS Free license for use with a maximum number of 9 devices featuring 2 external devices. There are some other limitations like "Email traps", but for up to 4 or 5 UPS systems within a local network the UNMS is perfectly suited for monitoring and automated network monitoring and management. Additional modules and functions are also available, but you need the according registration key to unlock them:

1. Make a backup.

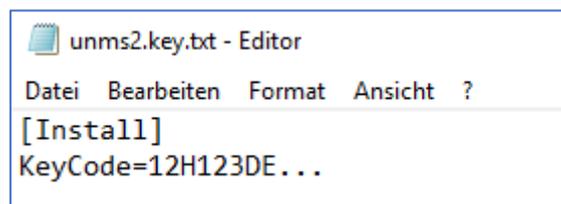
If, contrary to expectations, there are problems with the key file (typing errors, format errors, etc.), you can revert to the last status at any time and, if necessary, reinstall the UNMS system manually and restore the original system state within some minor mouse clicks.

2. Vorbereiten der Key-Datei

Now, it is time to generate a key file that can easily imported by the UNMS:: Create a simple txt file and name it *unms2key.txt*

Within the text file, just write

```
[Install]
KeyCode=12H1234DE...
```

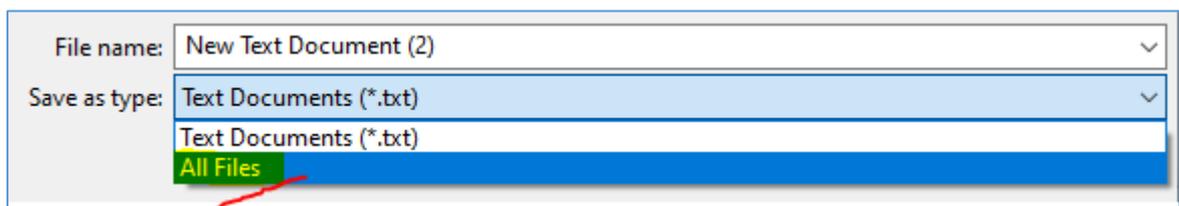


Keep in mind to use the exact text format and layout, or the key fill will not work after upload. When finished with typing, select File and click on "save as":

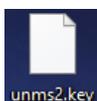
By default, the text editor saves everything as a text file with the Text editor's extension choice [filename].txt. One can not simply rename the file name into unms2.key, the text editor would add ".txt" to your file name:

unms2.key.txt

If you want to change the file character itself, you need to choose "save as..." and select "all data *.*"



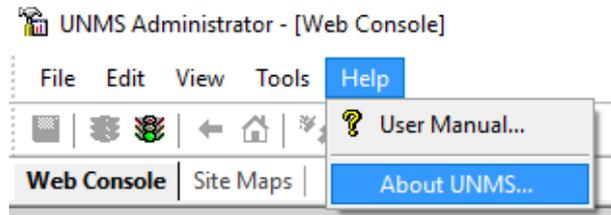
And THAN type the file name: unms2.key



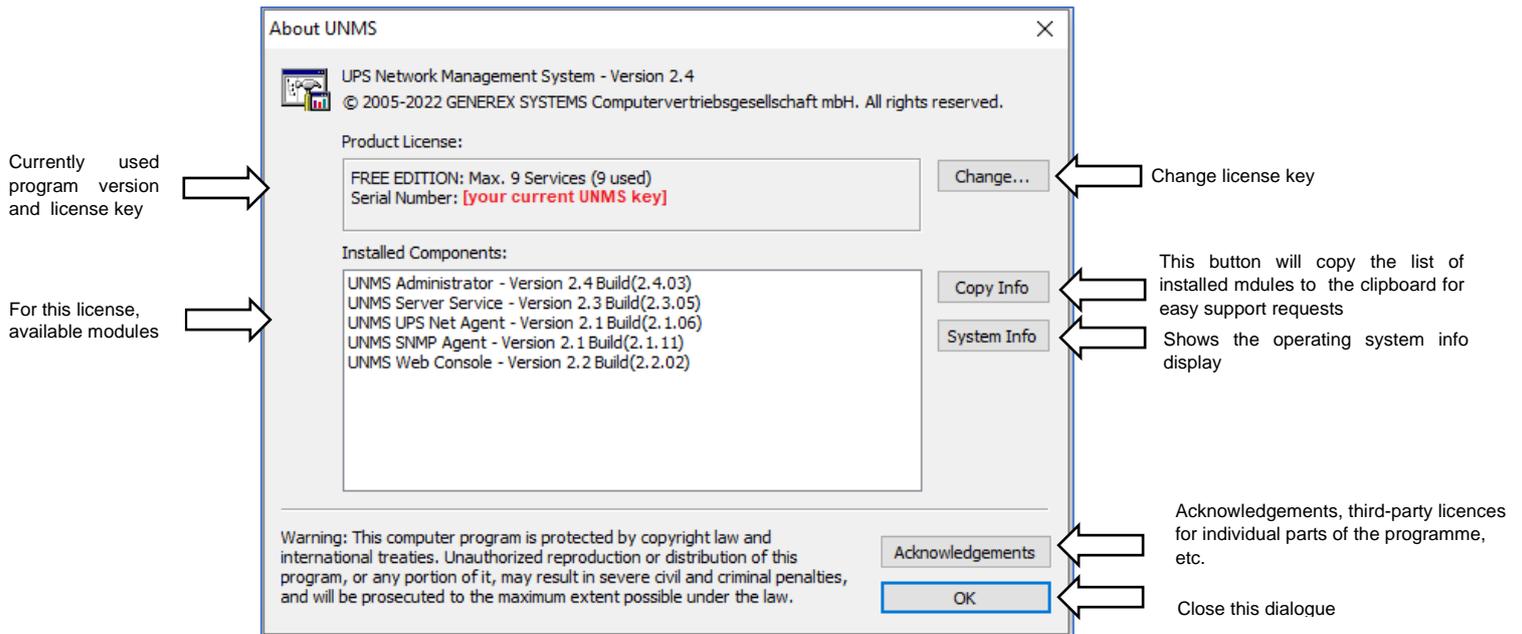
Due to the fact, the text editor does not know what a *.key file is, the text editor symbol should not appear as long as you choos „open with” and tell windows, that the text editor is the editor of your choice. Anyway, your key file is now ready to use with the UNMS.

3. Call up the About Screen:

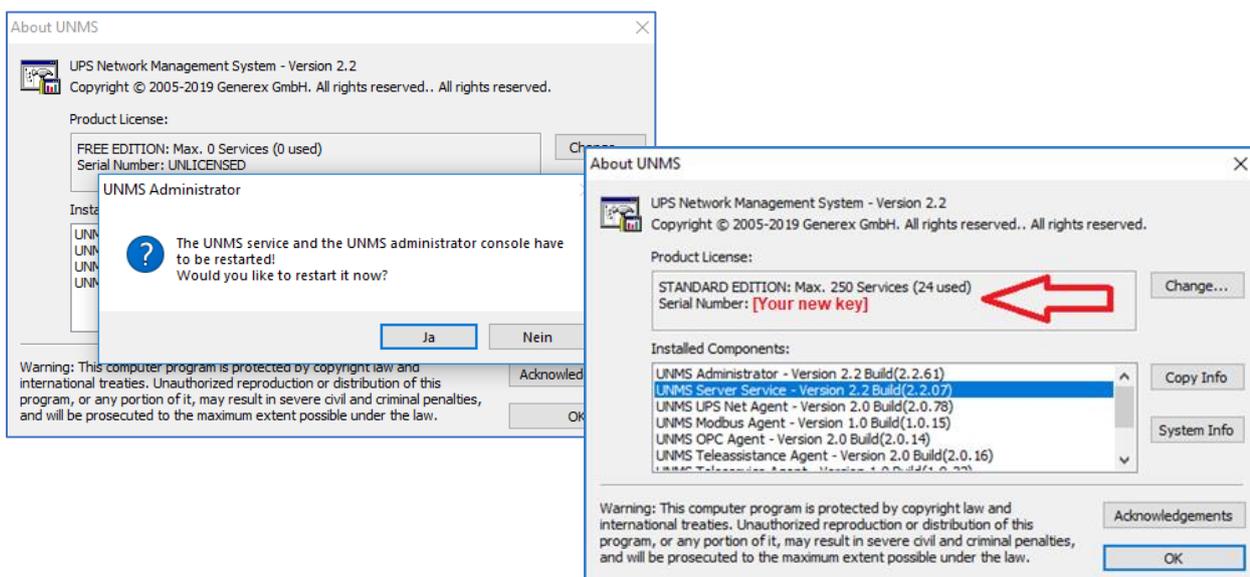
At the UNMS administration tool, select „Help“ and click on „About UNMS“.



You should see a main window that provides all important information about your copy of the UNMS 2 – software:



Click change and upload your new key. The new key should appear at serial number.



Restart the UNMS to enable the new functions provided by the UNMS About screen.

Tutorial: Add a job with different mail receivers to an event

For this function, there are some preparations necessary to unlock the corresponding configuration menu

A various number of UNMS 2 menus depend on basic settings like a mail server and aan will only appear if the configuration allows a usage. This special e-mail job therefore can only be configured if the UNMS 2 has previously been allowed to use a mail server to run mail jobs. If the UNMS mail option is not configured accordingly, the configuration menu for this job is not accessible.

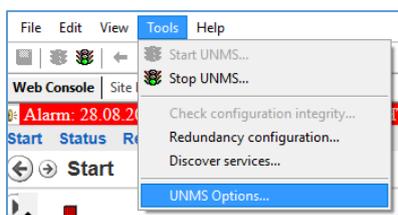
Due to this fact, first check whether the mail server is configured:

Note:

The UNMS 2 generally uses a persistent configuration to allow making changes to the UNMS without disturbing productive operation.

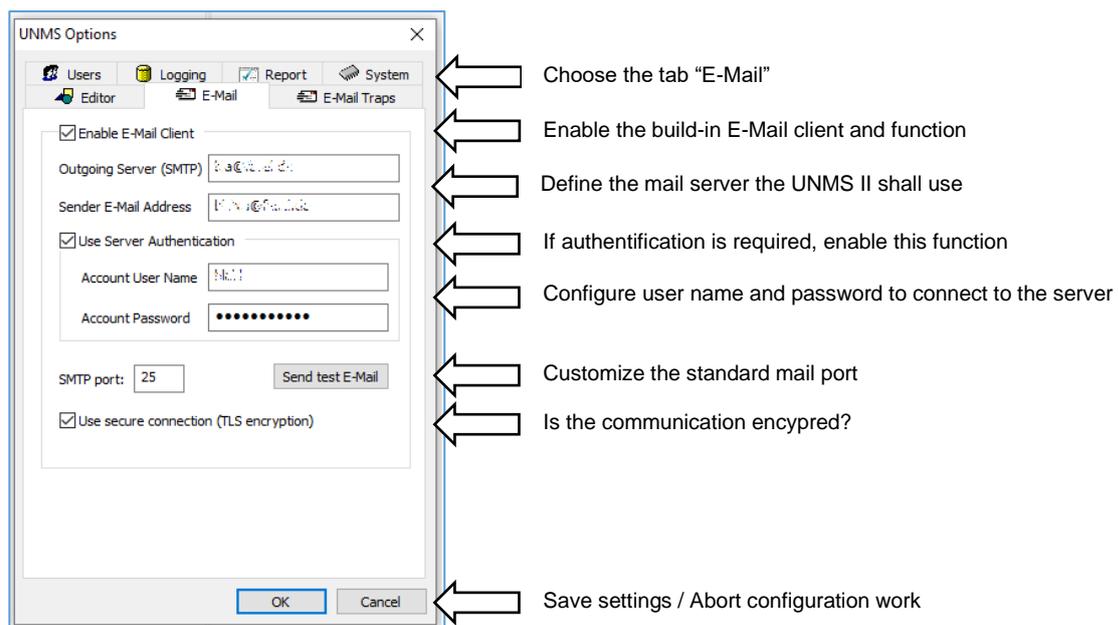
However, in order to activate changes, the UNMS must be deliberately stopped and restarted after saving. If your UNMS version does not support a special function by configuration or version design, you will not find the corresponding menu.

Check / Configure the general mail setup



First open UNMS Options menu to access the basic configuration dialogue.

To set up a valid mail server, select the "E-mail" tab in the configuration dialogue:



After the mail test passed successful, click OK to apply the settings and unlock the corresponding configuration menus and configure the mail job

Note:

If the access data change and are incorrect, the e-mail server will simply refuse a mail send request. The UNMS, on the other hand, needs at least even wrong server setup data to display the according configuration menus for this tutorial job. In short, if the UNMS does not send as desired after configuration work, you need to check both settings, the mail server setup at "Options" and the mail job itself.

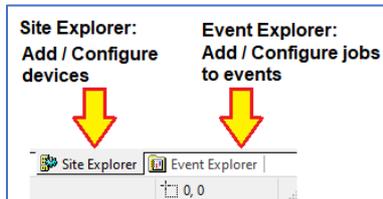
Remember: These jobs are only executed if you have clicked Save, Exit and Start to write the active configuration!

Setting up different mail receiver in case of a power fail

After the mail server has been configured, it is possible to start configuring the mail job itself.

For this configuration, you need to access the "Event Explorer" that can be found on the right-hand side of the administrator console - Either at the bottom right, where you can choose between Site Explorer (lists all integrated devices) and the Event Explorer, where the possible executable jobs are located:

When the taskbar is anchored bottom-right:



The dynamic site bar at the upper-right:

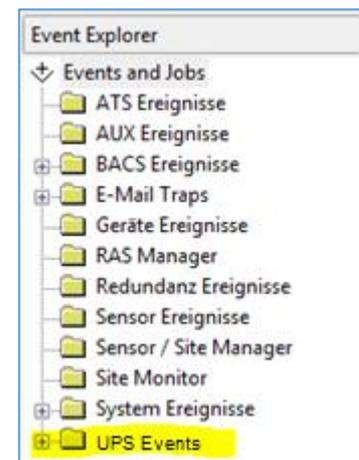
The Event-Explorer

The Event Explorer provides an overview of all available events as well as pre-configured standard jobs that are executed accordingly when one of these events occurs.

If there are jobs in subfolders, these can be directly expanded and viewed or edited by clicking on the +.

What this tutorial is talking about:

At the UPS Events, there is a list of Events a UPS offers – it is possible to add a custom job that will allow to do various tasks. In this case, a customized mail group shall be informed in case of a power fail.



This task was transferred to the technical department:

There have simply been too many power cuts lately that have caused problems. The company's board of directors, in its boundless wisdom, has therefore unanimously decided to immediately gather information when this happens again.

The quickest way to do this is to use UNMS 2, as it offers functions such as automatic mail dispatch.

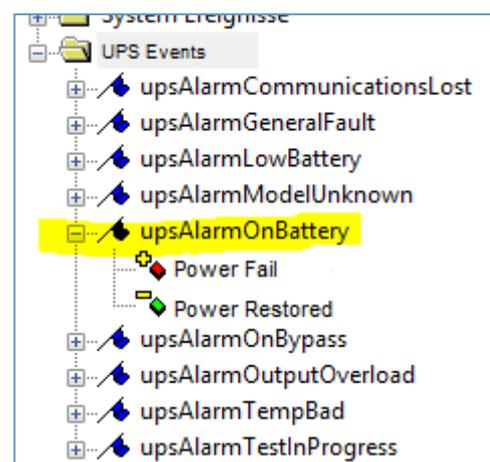
Identify the correct UPS event

The predefined names are mostly self-explaining: UPS Alarm On Battery (The UPS reports a Problem and is currently running on battery).

Click + to unfold the and take a look at the alarm events stored right there:

- Power Fail
- Power Restored.

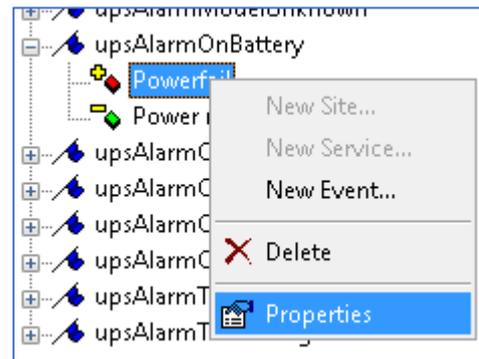
These two events are the alarm events you are looking for.



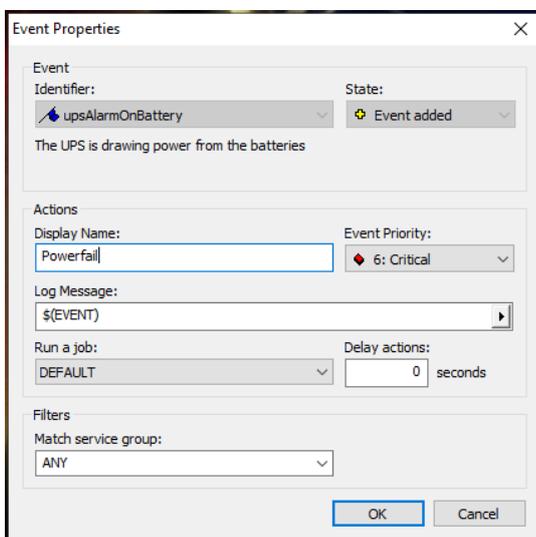
The next step is to create your own email addresses and set up an according job that will send an E-Mail to these recipients – Keep in mind that email jobs are only available if the email server has been defined in advance.

How to add a customized mail job

First, use the right mouse button to open the context menu to this event, and select "Properties".

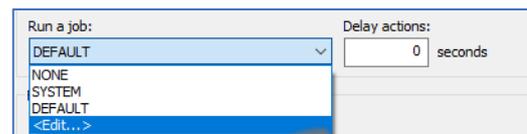


In the Event Properties, configure what exactly shall be done in case of this event is pending. Currently, the "DEFAULT" job is executed. This must be changed...:



- ➔ ... describes the event and the current event status
- ➔ ... Display Name and Priority of this event.
- ➔ ... What shall be written to the log file if this event arise?
- ➔ ... The job that shall be executed, and is there a time delay for it?
- ➔ ... Filters: Are there other job execute conditions, too?
- ➔ ... Confirm your settings / Withdraw your entries.

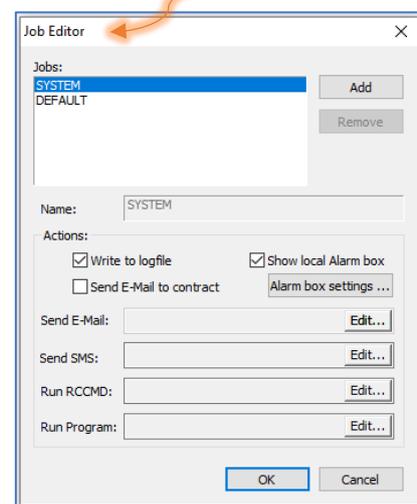
UNMS distinguishes between a list of existing jobs and the assignment of any system events. In short, the job does not have to be created each time, but can be dynamically assigned to any number of events afterwards. Since this job with the mail addresses does not yet exist, select the <Edit...> input dialogue for "Run a job":



The Job Editor

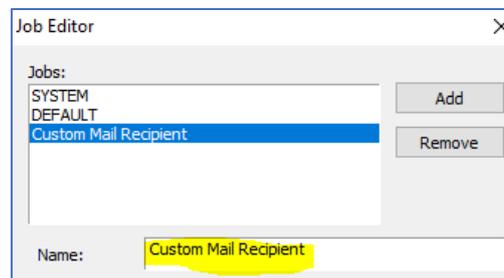
This will start the job editor module that helps to define jobs.

At jobs, there is a list of all the jobs that have been created so far, whereby DEFAULT and SYSTEM represent the preset jobs. Click edit to run the job editor.

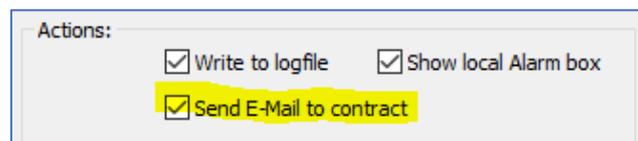


Creating the email job

First, click "Add", to add a new job. Remember to choose a clear and unequivocal name for this job – if a various number of jobs are available, it will become a little difficult and uncomfortable to find the correct job.

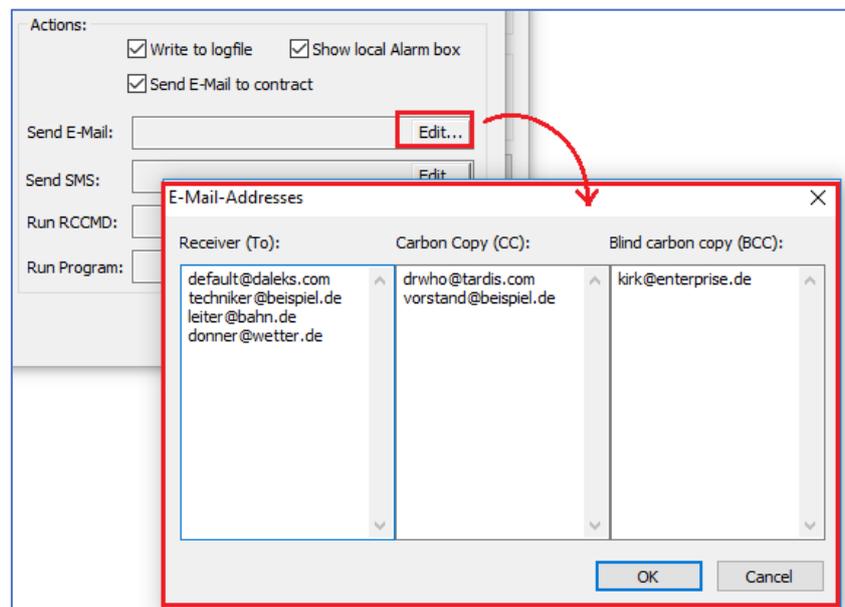


The function "Send E-Mail to contract" enables the mail send function for to a pre-defined mail recipient.



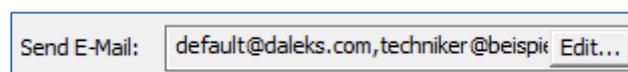
Now it is time to add some recipients that shall get an email. To do this, click „Edit..“ at "Send E-Mail"

The UNMS will offer three different methods to send an email:



1. Receiver – The classic Mail recipient – Each recipient in this list will get an email.
2. Carbon Copy (CC) – The UNMS will also send a Copy, but the Receiver will see that this email is written
3. Blind Carbon Copy (BCC) – In general, the same function like CC, but the copy information is hidden to the Receiver.

Add as many mail receiver as wanted and click OK when finished. The Send E-Mail should now look like this:



Assign the the mail job to an event

Finally, you only have to ensure that the job has been selected accordingly - otherwise you would have created the job correctly, but UNMS would not know that it shall be executed in this context. As already described, UNMS differs between the job and the events so that you do not have to create each job individually all the time. It longs out that this event should run a specific job.

By default, the "Default" job is selected at "Run a Job". The job you created is configured and saved, but you must now select it so that it is activated for the Powerfail event.

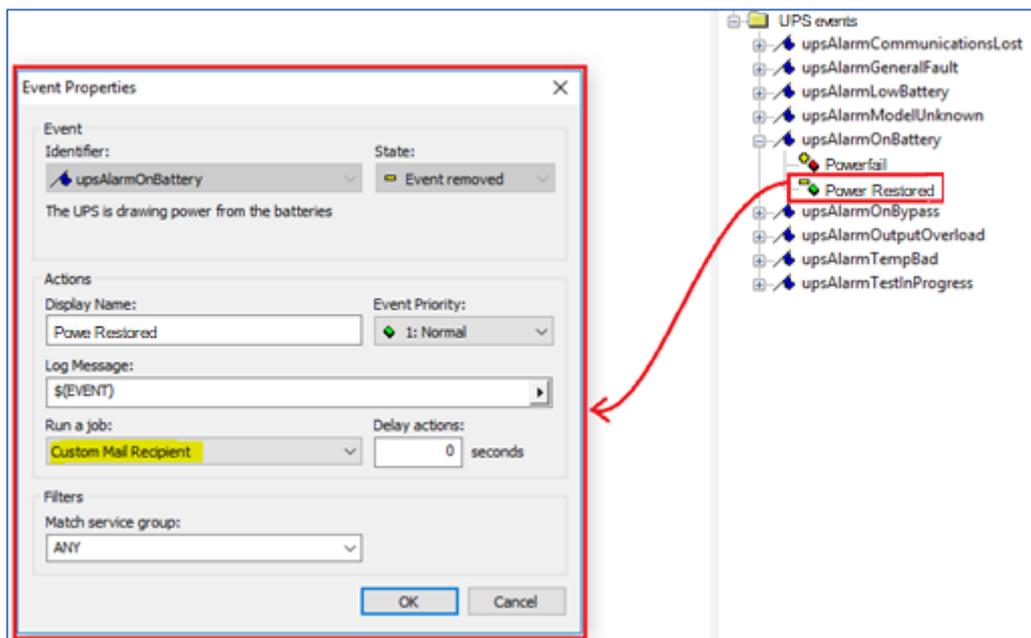
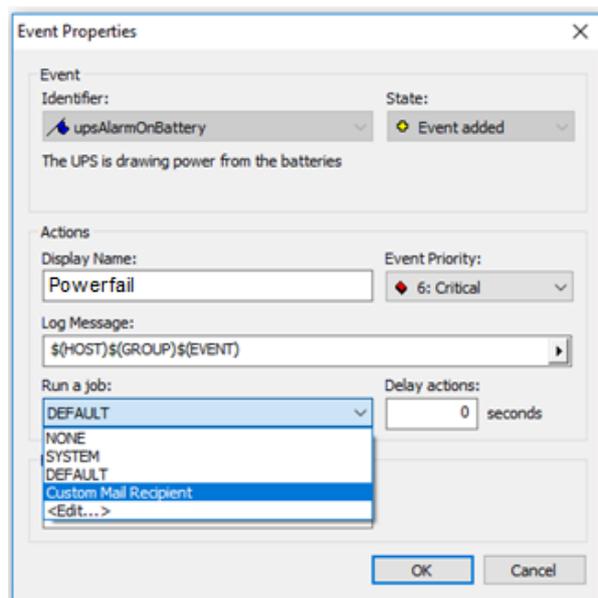
To do this, simply select the job from the drop-down menu and click OK to save the setting.

To complete your configuration ...

Currently, all registered mail recipients are designed to be informed in the event of a power failure.

Conversely, there is also an event that indicates the end of the power failure - Power Restored.

To avoid having to re-enter all the mails, simply select the mail job you created again in Power Restored:

*Never forget to save, stop and start:*

The UNMS must read in the new configuration data to make it active. This is done by pressing Save, Stop and Start again. The UNMS then loads the changes into the active configuration.

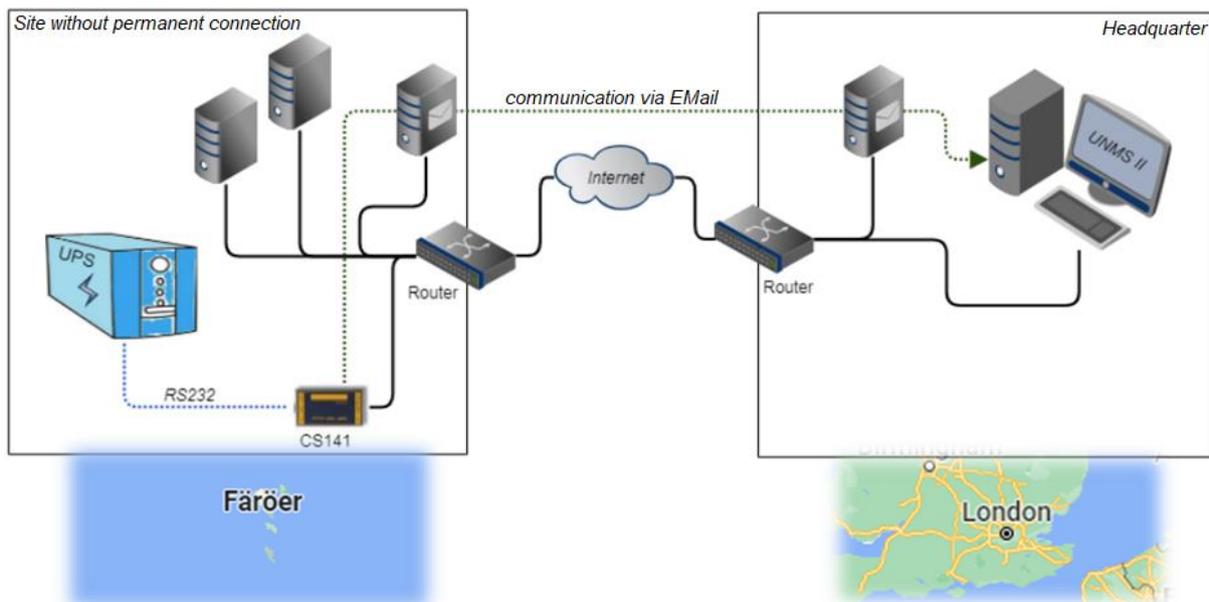
Tutorial: Mail-Traps: Informationen per Mails anzeigen lassen

(This function is not included with UNMS free.)

This function should be of interest to any user who is faced with the problem of needing status information from UPS devices that do not have direct network access. A typical example of this would be if the UNMS is located on a server in London and UPS systems are monitored from all over England. The likelihood of the Faroe Islands getting a solid dedicated line is quite low - or unlikely to be considered for cost reasons.

The devices of the CS141 product family with the "Mailtrap" function offer an interesting solution here.

Using mailtraps, a CS141 can send life signs and status information to the UNMS relatively easily on a regular basis and in the event of a fault:



This function can therefore be used for relative monitoring and also provides information about the general system status - when the emails arrive depends on the quality of the network, the sending and receiving processes, etc. The UNMS will automatically evaluate incoming emails and assign them to the correspondingly configured services. Die Einrichtung erfolgt dabei in mehreren Schritten:

1. The CS141 needs a valid Mailserver to send Mails.
2. The Mailtrap-Funktion must be enabled and configured.
3. The UNMS 2 must provide this vundtion as well as a mail account for incoming mails.

Configuration of the UNMS

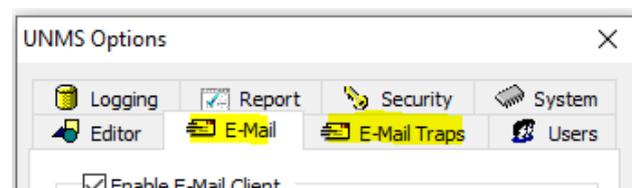
The UNMS 2 differs between default E-Mail and Mail Trap functionality

E-Mail

This function is used for SENDIN Mails, i.e. if the UNMS is configured to send a mail automatically based on pending events

E-Mail Trap

The mailbox for incoming: UNMS will automatically search the inbox for incoming mail trap messages (specially configured e-mails with a data packet), collect them and then delete them from the mailbox.



Part 2 Setting up devices to be monitored via mail traps

With part 1 of this tutorial, we told UNMS, how to receive the email data. Now, we need to tell UNMS that it also expects incoming mail trap services and actively looks for them. In order for this service to start running, it requires a service to be created once for the basic configuration.

To do this, select a site in the Site Explorer and create a new device via the context menu with "New Service".

- As Connection type, select Email-Traps
- If known, you can also enter the MAC address of the expected device. You can find the MAC address in the CS141 under System>About.

If you do not have the MAC address of the target device to hand, simply leave the preset dummy address and end the dialog with OK:

As soon as the service is running, every device that reports to UNMS by mail trap in this way is automatically filed under "Lost & Found", from where you can carry out a distribution to the respective sites in the Site Explorer.

➔ Click Save, Stop and Start to restart the UNMS service..

Part 3: Setting up the CS141 / BACS

In the last step, you must inform the CS141 / BACS that it should contact UNMS by e-mail. This configuration is done on the web manager.

Enable Email Traps

Log into the Webmanager, and select Services>Email-Traps. Check Enable UNMS Email-Traps to enable the function, and define a valid mail account for outgoing mails.

Enter Target Mail address

At Advanced, enter the target mail address, a subject as well as the timing for the mail traps.

In this example, a CS141/ BACS would normally send after 6 hours a status mail that contains a data package with all relevant UPS data. In case of an incident, the Webmanager will send a status mail each 5 minutes as long as the incident is pending. Configure these values according to your information policy.

Check UPS events

If you now look under UPS>Events, you will notice that jobs for the most important UPS events are already stored in the basic configuration. As soon as the mail traps have been set up, these jobs are executed automatically, regardless of the time window set up: you will receive a message with a time stamp for every event where an email trap is stored.

Customize the events to your requirements by adding or removing the Email Trap job.

Event	Jobs...	Log	Email	E-Mail Trap
contains...	conf			
Powerfail	3	1	0	1

Job Type	When	Parameter
Log	Periodic all 100s, immediately	{ "text": "Powe
RCCMD Trap	Once, immediately	{ "text": "Powe
E-Mail Trap	Once, immediately	{ }

Tutorial: APC PDU Outlets schalten, wenn eine APC USV einen Powerfail meldet.

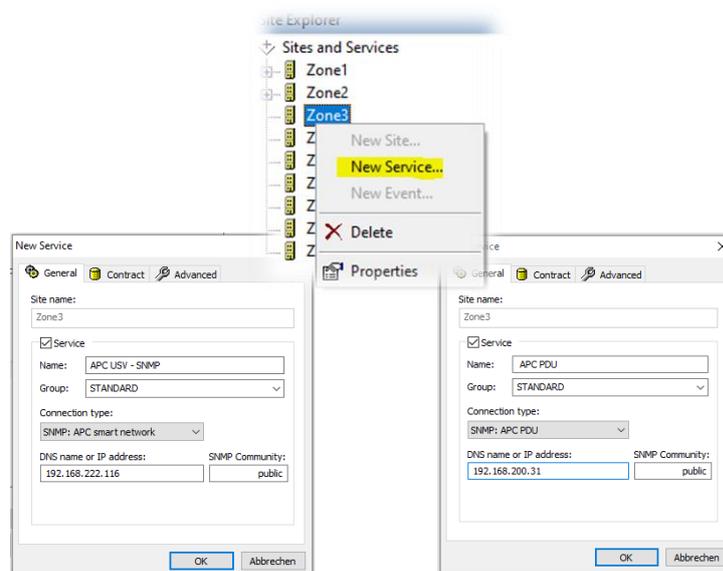
Battery-backed emergency power is a highly critical and limited resource - depending on the network and function, it may be advisable to disconnect unimportant network devices from the power supply - this can greatly extend the valuable time window for an appropriate response. APC, for example, also relies on a PDU that can be switched via the network:

Outlets can be switched on and off directly via the network. In a simple case, this can be used to automatically switch off unimportant WLAN hotspots and associated switches, for example. The task for the UNMS 2 is therefore clear: it should switch the outlets on the PDU depending on the operating status of a particular UPS so that the specialists on site do not have to worry about this.

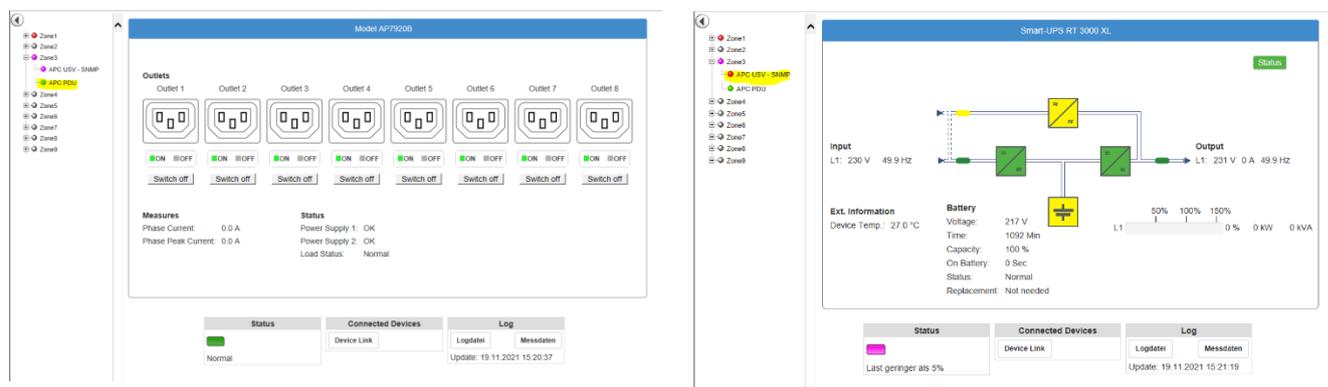
The basic problem is that the UNMS 2 first queries one device and then triggers an action on another device. In this case, it is an APC UPS and an associated PDU, which can be queried via LAN, but otherwise are completely different devices.

Step 1: Add a new device

First, you need to configure the UNMS to query both devices. In Site Explorer, right-click on the relevant zone and select "New Service" from the context menu:



With Save, Stop and Start, both devices come into active monitoring and will be queried by the UNMS via SNMP:



The PDU shows all switchable power ports and measuring data,

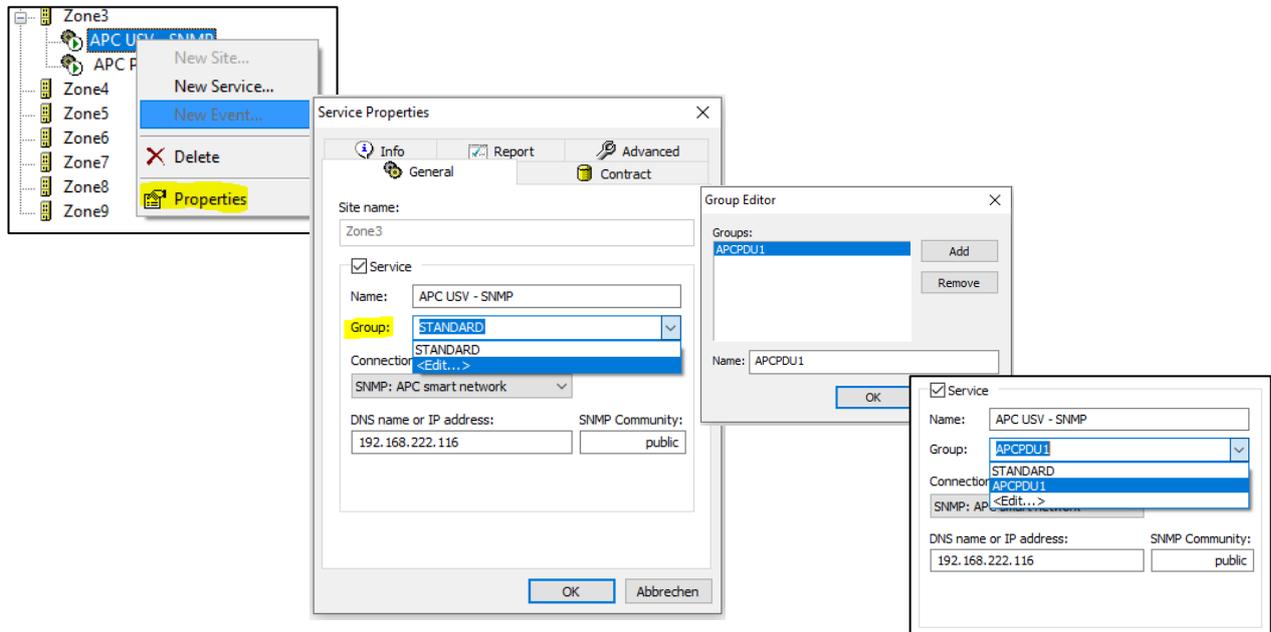
The UPS is represented by a block diagram

Step 2: Grouping the devices inside the UNMS

Über das Gruppieren können beide Geräte über eine zusammengefasst werden, der dann entsprechend Ereignisse und Jobs zugeordnet werden können. Für beide Geräte müssen Sie daher Site Explorer über die jeweiligen Properties die Geräteeigenschaften aufrufen:

Im Reiter „General“ finden Sie den Eintrag „Group“:

Um einen neuen Eintrag hinzuzufügen, wählen Sie hier über das Drop-Down – Menü „Edit“ aus.



Click Add to create a new group, adjust the name and confirm with OK. Then you can select the newly created group under Group accordingly. After both devices have been grouped, press Save..

Why is this step interesting?

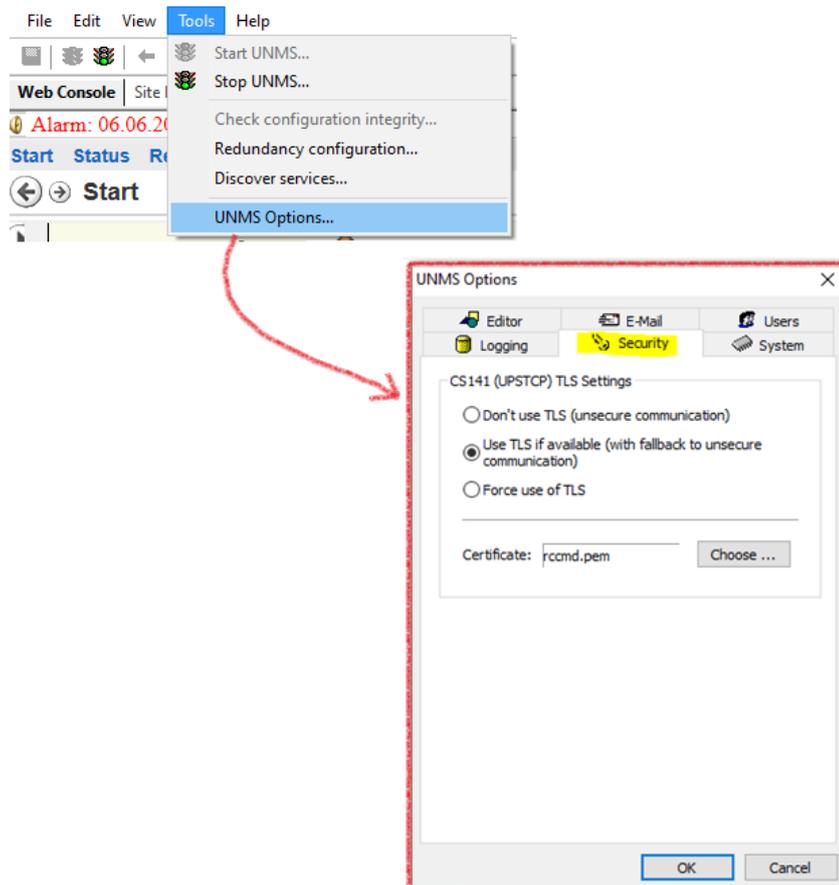
If you have exactly one UPS and one PDU, this step is difficult to understand. With a growing number of PDU's and UPS' devices, it is useful to group similar devices and re-use the same job according to the respective device group. By doing so, the number of jobs can be minimized.

Step 3: Job definition

From now on, all events that are valid for the UPS are also valid for the PDU. The jobs can be defined as already described. The advantage is that jobs are now only defined once and are executed only for the devices in this group by assigning them to a group.

Tutorial: Using TLS encryption

Since 2020, the constantly increasing need for security has gradually made fully encrypted communication between individual network devices the standard for secure infrastructure networks as well. The UNMS 2 can communicate fully encrypted, offers an automatic fallback mode for non-encrypted devices, especially for existing systems. To activate this function, first open the UNMS options under Tools and select the "Security" tab.



Requirements:

1. The target device must be compatible with PEM files

How to load a PEM file directly or whether the certificate is split into different files (this is the case with Huawei, for example), please refer to the respective user manual.

Note: PEM File Tutorial available
 For all devices of the CS141 product family, please refer to the CS141 user manual for detailed instructions on how to create a PEM file.
 Of course, you can also use this PEM file for UNMS 2 <-> CS141 / BACS / SITEMANAGER / SITEMONITOR communication.

1. *Both, UNMS and target device need to use the same PEM file*

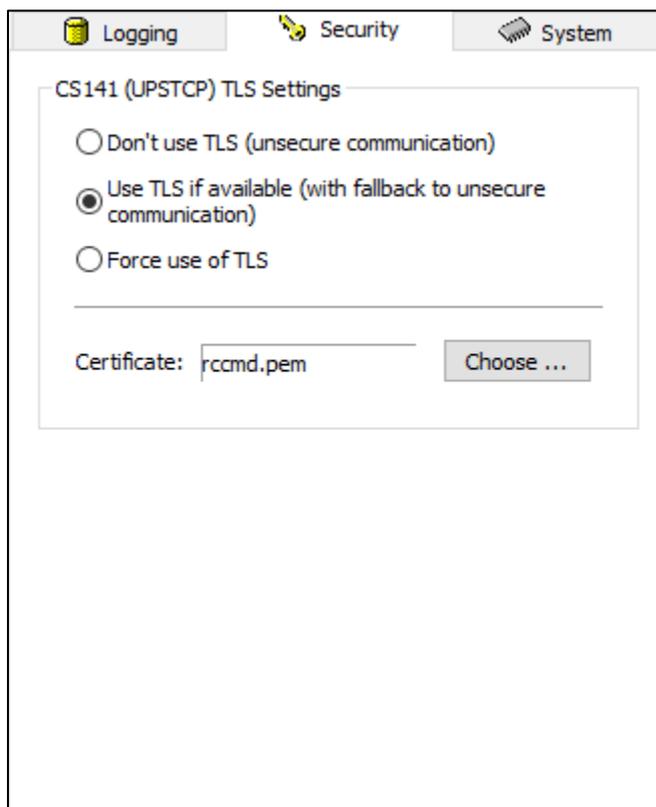
Please ensure that the same PEM file is stored on the CS141 or the same certificate on the respective end device, otherwise the communication will not start.

2. *Important: If possible, use your own company certificates, and not the default certificates*

Firstly, yes, the default certificates are harmonized with each other and will work as expected. Due to this fact, extensive testing of TLS functions with these certificates is possible. For productive use, however, we recommend creating the own company certificates..

TLS Security Options

Keep in mind, this is a GLOBAL stting: It is not possible to enable Force TLS on one device and configure another with "Don't use TLS". The UNMS offers you the following options:



Don't use TLS (unsecure communication)

This option completely dispenses with TLS. However, this requires that the target device has explicitly switched off the corresponding TLS options, or at least enables communication without TLS.

Use TLS if available

In case of a heterogeneous device landscape that uses both, encrypted and not encrypted devices, this option provides the best compatibility:

The UNMS will first try to establish an encrypted connection. If this is not possible, however, encryption is automatically dispensed with for this individual device.

Force use of TLS

The UNMS insists exclusively on encrypted communication. If this is not possible, a connection error is displayed. The UNMS also rejects incoming connections unless they are encrypted.

The Quickstart Tutorial is finished. For more information, please refer to the official UNMS 2 manual, available for download at www.generex.de