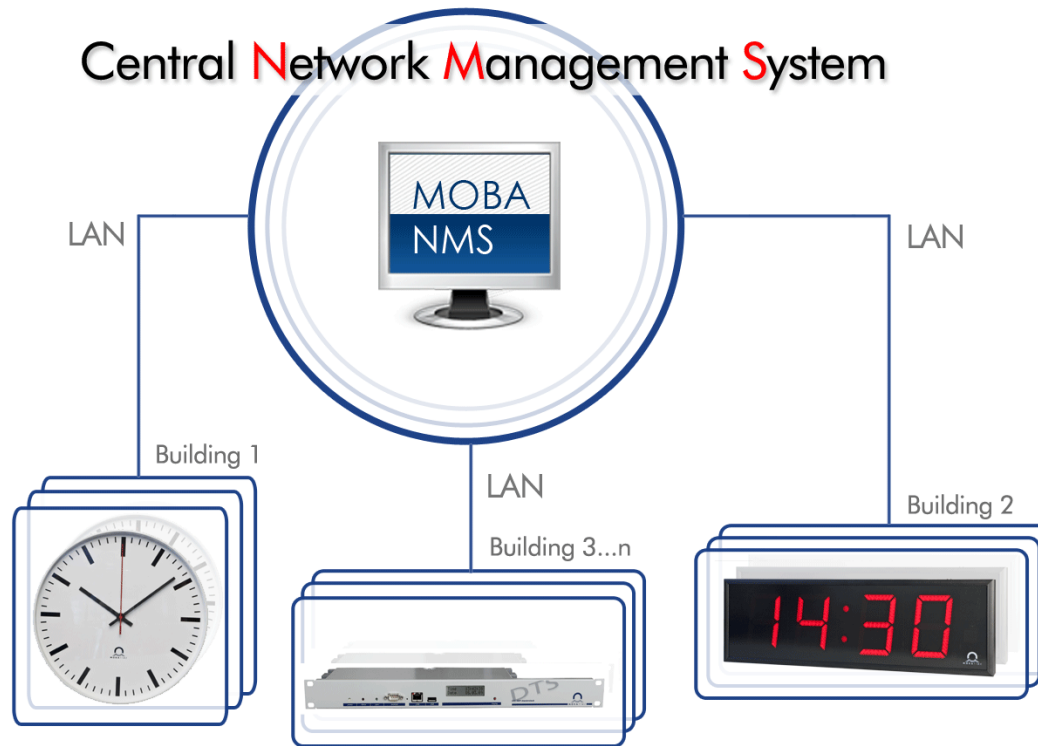


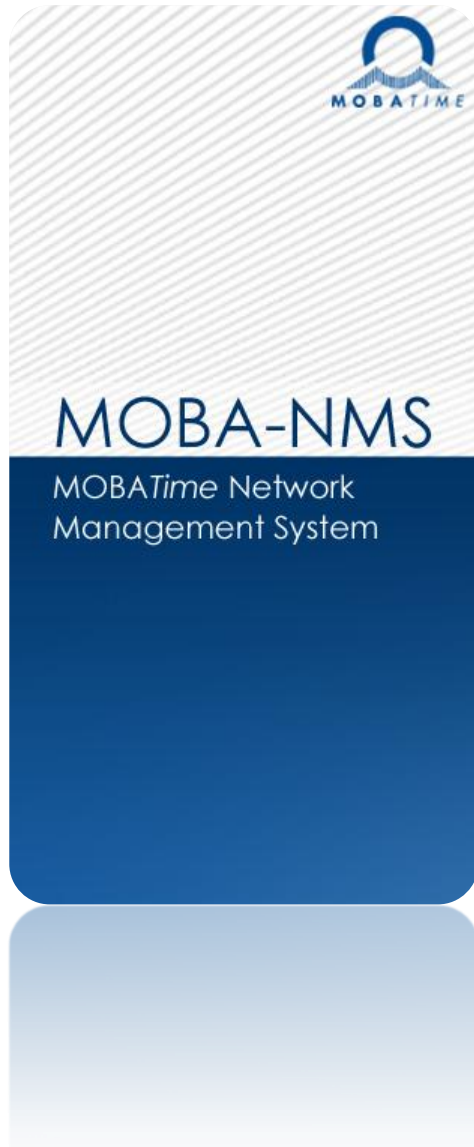
MOBA-NMS

Central Network Management System



- 1. Main Features**
- 2. Device Configuration and Management**
- 3. DTS Devices Support**
- 4. MOBA-NMS - Web-Interface Comparison**

1. Main Features

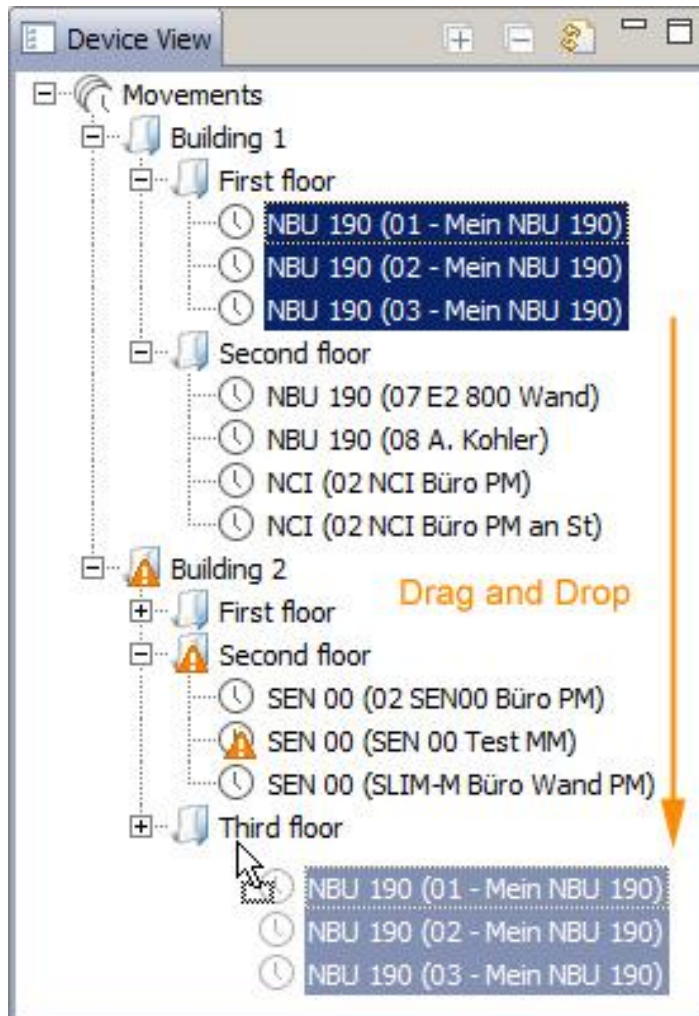


- device auto detection for multicast and unicast (IP range scan) communication
- read and change device configuration with a comfortable user interface
- display device status, time, error and alarm information of each device. Error and alarm information are additionally shown at group level
- create logical groups and move / sort devices per drag and drop for easier management and supervision
- save and load created configurations with all logical groups and devices
- multi-devices editor (change configuration values for multiple devices at the same time)
- CSV export for device view

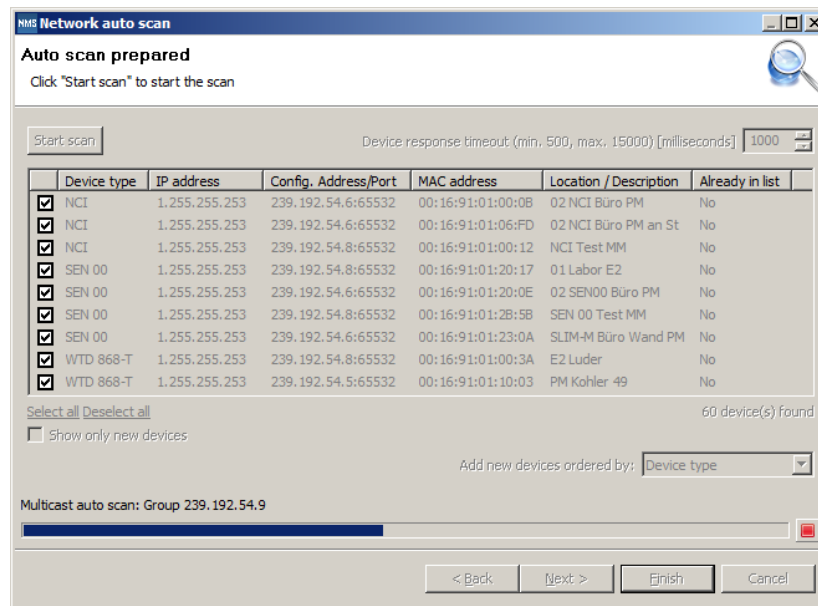
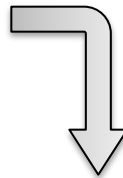
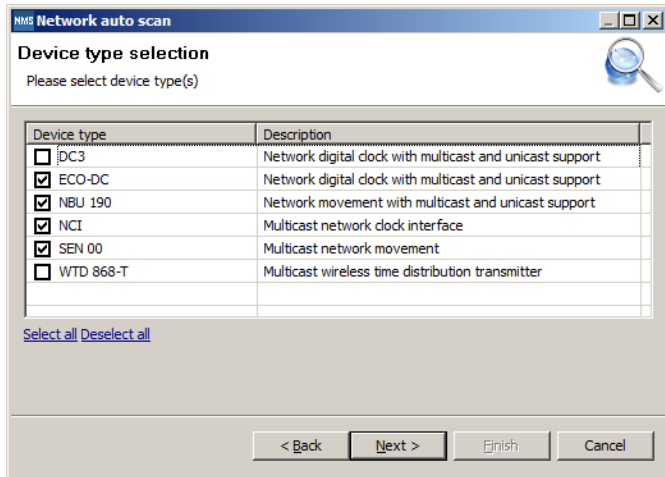


- display and change all configuration values like IP address, NTP server, SNMP settings
- send device commands (12:00 position for analog clocks) to one or more devices / logical groups for installation and maintenance purposes
- integrated TFTP server for a device firmware upgrade with only a few clicks
- MOBA-NMS provides a NTP and time zone packet monitor
- time zone file editor
- online-help
- automatic switching between unicast and multicast communication mode
- hostname resolution (DNS)

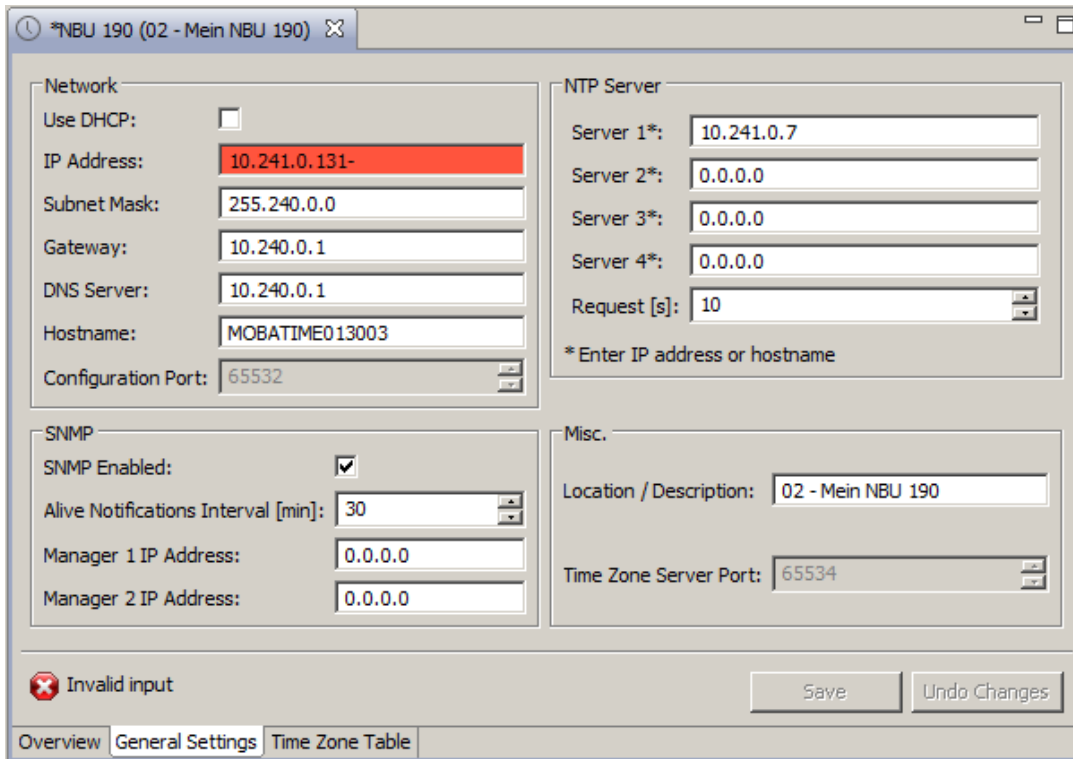
2. Device Configuration and Management



- user defined device management by means of logical device groups (see screenshot)
- devices and groups organization by drag and drop
- device status display (alarm / error) on device and group level
- support for group actions like sending the 12:00 position command or a software update to multiple devices
- configuration can be saved for future use



- auto scan for specific device types (e.g. scan for NBU 190 movements)
- unicast or multicast scan
- pre-configured multicast groups (based on selected device types)
- possibility to show only new devices
- screenshots: multicast auto scan for ECO-DC, NBU 190, NCI and SEN 00 devices at the same time!



*NBU 190 (02 - Mein NBU 190)

Network

Use DHCP:

IP Address: 10.241.0.131-

Subnet Mask: 255.240.0.0

Gateway: 10.240.0.1

DNS Server: 10.240.0.1

Hostname: MOBATIME013003

Configuration Port: 65532

NTP Server

Server 1*: 10.241.0.7

Server 2*: 0.0.0.0

Server 3*: 0.0.0.0

Server 4*: 0.0.0.0

Request [s]: 10

* Enter IP address or hostname

SNMP

SNMP Enabled:

Alive Notifications Interval [min]: 30

Manager 1 IP Address: 0.0.0.0

Manager 2 IP Address: 0.0.0.0

Misc.

Location / Description: 02 - Mein NBU 190

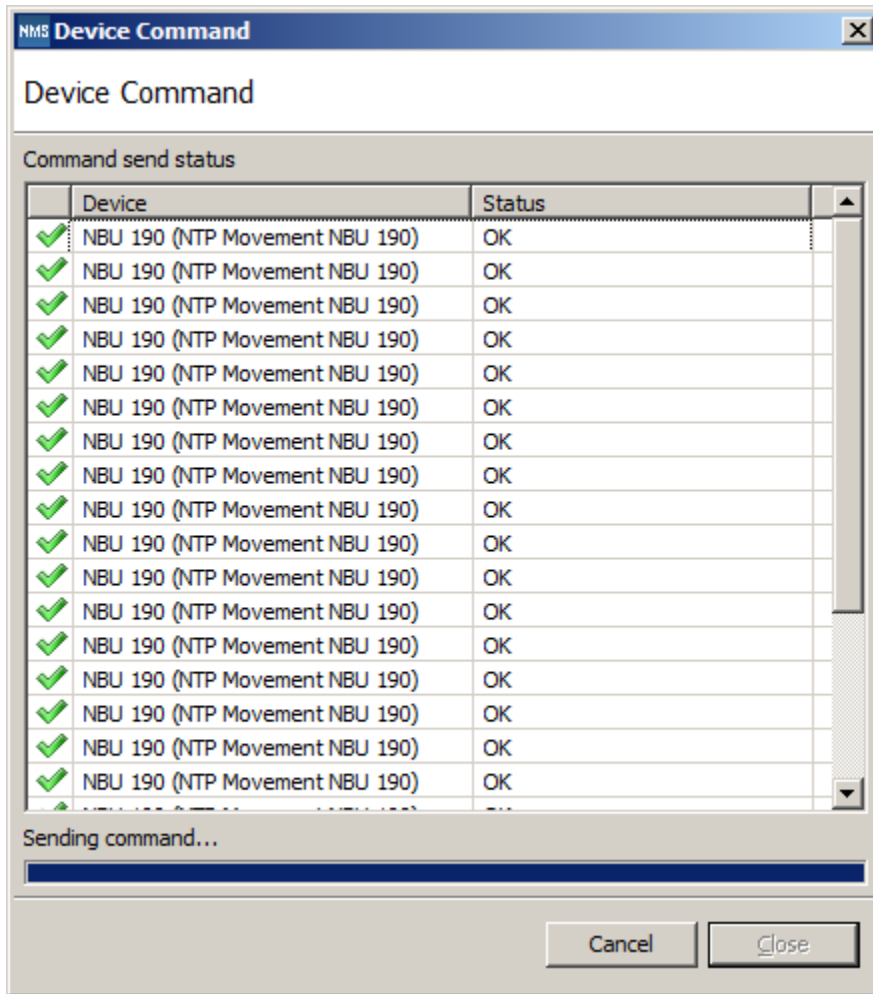
Time Zone Server Port: 65534

Invalid input

Save Undo Changes

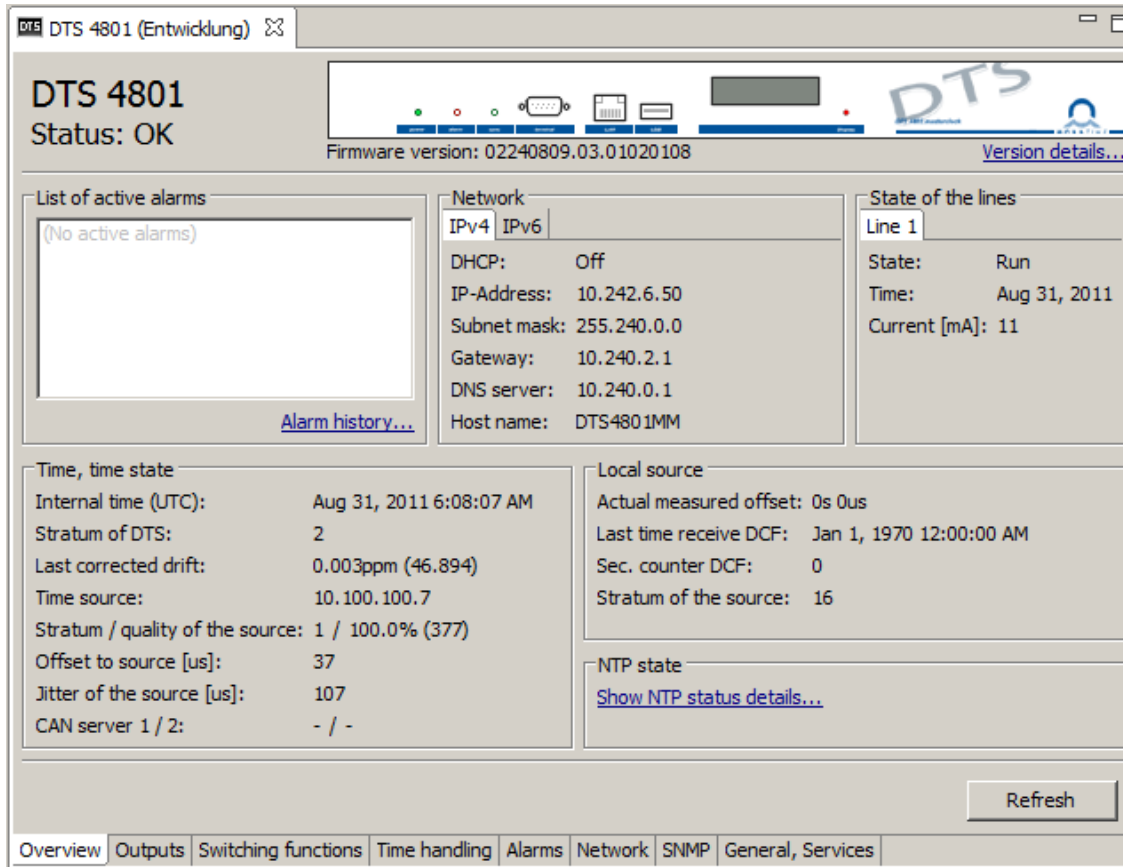
Overview General Settings Time Zone Table

- there is a corresponding editor for each device type to make changes to all device settings like IP address, hostname, NTP server address, SNMP, time zone, etc.
- live data input validation (screenshot: wrong IP address input)
- configuration over unicast or multicast



- send device commands like 12:00 position, restart, reset to one or multiple devices
- update the device firmware
- update the device firmware of multiple devices at the same time!
- support for more than 1000 devices!

3. DTS Devices Support

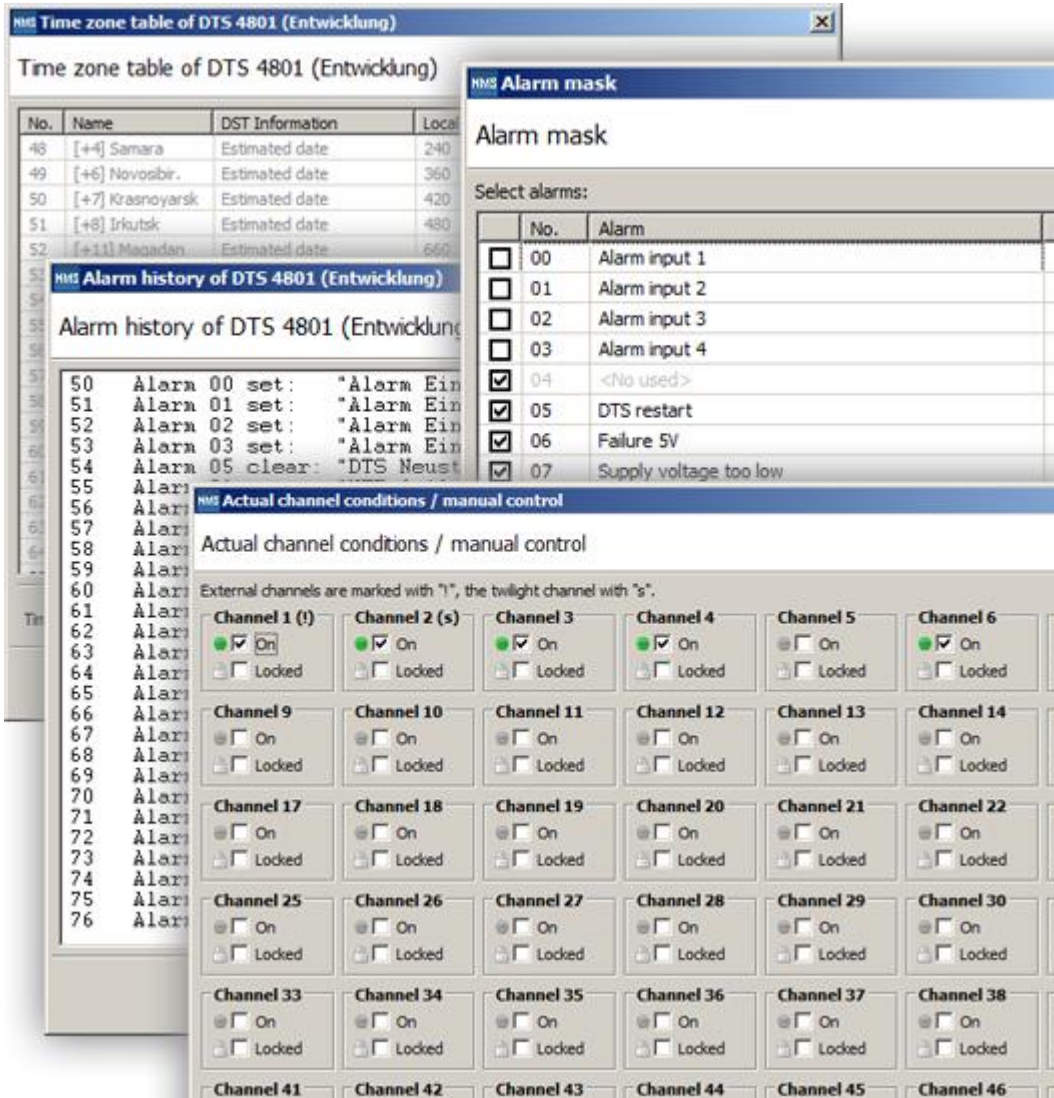


The screenshot shows the web interface for a DTS 4801 device. The status is 'OK' and the firmware version is 02240809.03.01020108. The interface is divided into several sections:

- List of active alarms:** (No active alarms)
- Network:**
 - IPv4: DHCP: Off, IP-Address: 10.242.6.50, Subnet mask: 255.240.0.0, Gateway: 10.240.2.1, DNS server: 10.240.0.1, Host name: DTS4801MM
 - IPv6: (empty)
- State of the lines:**
 - Line 1: State: Run, Time: Aug 31, 2011, Current [mA]: 11
- Time, time state:**
 - Internal time (UTC): Aug 31, 2011 6:08:07 AM
 - Stratum of DTS: 2
 - Last corrected drift: 0.003ppm (46.894)
 - Time source: 10.100.100.7
 - Stratum / quality of the source: 1 / 100.0% (377)
 - Offset to source [us]: 37
 - Jitter of the source [us]: 107
 - CAN server 1 / 2: - / -
- Local source:**
 - Actual measured offset: 0s 0us
 - Last time receive DCF: Jan 1, 1970 12:00:00 AM
 - Sec. counter DCF: 0
 - Stratum of the source: 16
- NTP state:**
 - [Show NTP status details...](#)

At the bottom, there is a 'Refresh' button and a navigation bar with tabs: Overview, Outputs, Switching functions, Time handling, Alarms, Network, SNMP, General, Services.

- full configuration support for the following devices:
 - DTS 4801
 - DTS 4802
 - DTS 4138
 - DTS 4135
 - DTS 4136
- comfortable user interface for all configuration and maintenance operations
- secure SNMPv3 / SFTP communication
- backup / restore
- configuration transfer between devices



The screenshot shows two overlapping windows from the MMS configuration software. The top window, titled 'Time zone table of DTS 4801 (Entwicklung)', displays a table with columns for 'No.', 'Name', 'DST Information', and 'Local'. The table lists time zones such as Samara, Novosibirsk, Krasnoyarsk, Irkutsk, and Macadan. The bottom window, titled 'Alarm mask', shows a 'Select alarms:' section with a table of alarm options. The 'Alarm mask' window also includes an 'Alarm history' section and a grid for 'Actual channel conditions / manual control' with 46 channels, each having 'On' and 'Locked' status indicators.

No.	Name	DST Information	Local
48	[+4] Samara	Estimated date	240
49	[+6] Novosibir.	Estimated date	360
50	[+7] Krasnoyarsk	Estimated date	420
51	[+8] Irkutsk	Estimated date	480
52	[+11] Macadan	Estimated date	660

No.	Alarm
<input type="checkbox"/> 00	Alarm input 1
<input type="checkbox"/> 01	Alarm input 2
<input type="checkbox"/> 02	Alarm input 3
<input type="checkbox"/> 03	Alarm input 4
<input checked="" type="checkbox"/> 04	<No used>
<input checked="" type="checkbox"/> 05	DTS restart
<input checked="" type="checkbox"/> 06	Failure 5V
<input checked="" type="checkbox"/> 07	Supply voltage too low

- detailed status and configuration display
- basic configuration of time source, time handling, outputs, alarms, SNMP, general and network settings
- alarm and alarm history display
- manual control of output channels
- comfortable time zone editor
- telegram and program file upload / download over SFTP
- backup and restore of the entire device configuration
- ... and much more!

4. MOBA-NMS – Web interface Comparison

- Web-based interfaces require a configuration of each device separately, by knowing and using each IP-address (in unicast mode).
- Compared to a web-based configuration on each device, MOBA-NMS has a range of advantages:
 - MOBA-NMS manages all devices centrally
 - The user doesn't need to know the device's IP address
 - All devices are configured the same way
 - Supervising (alarms / status) of all devices at the same time
 - Group devices to logical groups and much more...