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# HiMoNN BASIS 3.7

## RELEASE NOTES

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The HiMoNN Release Basis 3.7 enhances the features of HiMoNN Basis x.6 and incorporates the following modifications and new features.

### Improvements of USB stick-based administration

The USB based administration (using a USB flash memory for administrative tasks) has been extended by several functions. The following main issues have been made:

- **Encrypted configuration and log files at USB flash memory:**  
By using this default function, confidential information, contained in HiMoNN configuration and log files are encrypted and protected against unauthorized use by third parties.  
The administrator easily decrypts the protected archive again - by using the application "HiMoNN Sticker".  
As previously - the content of the USB stick is signed tamperproof per default.
- **Injection of configuration without specific HiMoNN device identification:**  
Whereas in the past the injection of configurations was only possible by specifying the HiMoNN node name – now it is possible to inject a configuration into any HiMoNN node – without knowing the name before. So, the flexibility of the use of prepared administration sticks increases significantly.
- **Injection of HiMoNN configurations across the organization:**  
After mutual exchange of security keys, configurations can be injected by using USB stick-based administration into HiMoNN nodes of other organizations. This function enables a quick configuration and adaption of HiMoNN devices for joint operations. The use of appropriate certificate structures allows a high degree of safety. Thus, a cross-organizational configuration is authorized only if both organizations allow this explicitly.
- **Selection of security level:**  
To follow customer needs, now the HiMoNN sticker function can operate in different security levels, beginning with a low level without data signature until a high security level by using certificates. So, a HiMoNN device in a secure environment can load any configuration, also from different organizations and without previously performed key exchange. However, a low security level has to be activated explicitly by the user and should only be used in protected environments.
- **Enhanced user interface:**  
To facilitate the handling with USB sticks - the application "HiMoNN Sticker" has been equipped with a new graphical user interface. The user can administer all basic functions of the USB stick-based administration intuitively and control the administration across organizations easily.

### HiMoNN-Web-Administration: Selection of security level

The administrator is able to select different levels of security effort for the HiMoNN web Administration as needed. Besides the bilateral authentication between HiMoNN node and the HiMoNN administrator (in both directions) with SSL

encryption, basing on according certificates, it is possible to have performed an authentication only by the HiMoNN node, together with SSL encryption, or, to allow a data traffic without encryption (using http).

Independent from the use of certificates, the HiMoNN Web Administration is always protected by a user password.

### Simplified IP configuration of interfaces for terminal devices

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When administering the IP configurations of interfaces for terminal devices at a HiMoNN node – the according information for the network association (HNA registrations) will be generated automatically - when desired by the user.

This information is necessary to inform the other nodes of the Ad-hoc network about the access to a specific subnet over the local HiMoNN node and to establish according communication routes at all others.

This point reduces the effort of administration because the 2 correspondent configuration steps are bundled now and become more user-friendly.

### Further enhancements of IPv6 use

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HiMoNN supports the new age internet protocol IPv6 for some time – besides the protocol IPv4. The new release brings the following extensions:

- The monitoring tool “HiMoNNitor” allows the supervision of “pure” IPv6 basing services. The periodic check of connection for available services is possible now by specifying an IPv6 address – alternatively to an IPv4 address.
- IP-Multicast is supported now also for IPv6. As before – the administration of IPv6 specific properties is provided exclusively by the HiMoNN Command Line Interface “HCLI”.

### Minor enhancements

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The new HiMoNN Release brings further minor enhancements and system improvements. The important points are:

- **DHCP server – definition of Lease Time:**  
The definition of the DHCP Lease Time (default and maximum) can be adjusted with the administration tools “HCLI” and “HiMoNN-Web-Administration”. The DHCP Lease Time is the time of validity of a provided IP address and other network information, given by the DHCP service, until they must be requested again.
- **DHCP server – IP address provision by MAC address:**  
The DHCP server of HiMoNN provides specified IP addresses to terminal devices according to their (physical) MAC addresses. The advantage is that a specific terminal device always gets reproducible the same IP address from a HiMoNN node, so that other network clients can access by using always the

same, well known IP address. The administration of MAC based IP address provision by DHCP can be performed with the administration tools "HCLI" and "HiMoNN-Web-Administration".

- **Integration of terminal devices –support of Proxy-ARP:**  
By using Proxy-ARP it becomes possible to connect for instance 2 terminal devices with IP addresses of the same subnet along the routed HiMoNN network. This may become necessary if the terminal devices only obtain a limited ability of network configuration, i.e. they only have a fixed IP address or cannot define any network route or default gateways. With Proxy-ARP the HiMoNN node receives all data packets of the client device as a proxy for other communication partners and forwards the data over network boundaries to the receiver – transparently to the client device. Please note that the transmission of broadcast data traffic over the routed HiMoNN network is not provided by this function.
- **Adjustment of maximum TCP segment size:**  
The maximum segment size of TCP packets (MSS) is adjustable now. This function supports the connection of HiMoNN to specific wide area networks or the link to other network components with restricted TCP MSS handling and which does not support the standardized control mechanisms for MSS limitation. The adjustment of MSS thus supports the correct data transmission over network boundaries.
- **Safe individualization of new HiMoNN devices:**  
After receiving new HiMoNN devices - the initial individualization is performed at the customer side now. To do so, the customer only has to copy an encrypted data package to a USB flash memory and inserts this to all new HiMoNN devices. After the individualization performed the HiMoNN nodes are configured specific for the customer and are ready for use.

### **New accessory: Extended Transport Case**

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For the operation of a HiMoNN node without external power supply – a new variant of transport case with integrated Lithium-Ion rechargeable battery has been developed – extended by several functions. This new transport case has the following properties - in comparison to the current solution:

The transport case is protected against dust and splashing water (protection degree IP54).

Cables for antennas and other connections are lead outside the case through a grommet which can be mounted without tools.

The batteries, integrated in the case, can be charged in parallel to the operation of the HiMoNN node. There is no special charger necessary, but a regular power supply for HiMoNN is used for charging.

An integrated indicator with 4 LEDs on the exterior of the case allows the monitoring of the current battery charge. The indicator can be activated and deactivated with a switch inside the case.

Additional electrical devices with low power consumption can operate in parallel to the HiMoNN node by using a 12V car jack in the case interior.

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