Unify OpenScape WLAN Phone WL4/WL4 Plus

Wireless Service Gateway WSG

Administrator Documentation
08/2024

Mitel

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Introduction

The Wireless Service Gateway (WSG) consists of a HW gateway running a web-based tool designed as an all-in-one solution for Centralized Management of devices, and messaging in your system.

It can be used independently, but also work in combination with other WSGs.

The WSG can have different levels of functionality dependent on license.

The Device Management application in WSG, is used for managing devices such as handsets, desktop chargers and charging racks, that is, handle settings and software for the devices. It makes it possible to change settings and update software in the devices. All devices are updated remotely from WSG, and parameters and software for the devices are saved in a database. Administration of handsets and chargers can be done via a remote connection to a customer site.

WSG also includes a central phonebook which can be accessed from the handsets. The number of entries in the phonebook depends on whether the internal database or an external database is used as phonebook source.

The software uses open-source components and the source code can be downloaded from the web site: oss.ascom-ws.com

How to use this Document

This document is used for installation and configuration, for administration, maintenance and troubleshooting. These activities require good knowledge about functionality and limitations, both on module and system level, and also knowledge about how systems, modules and parameters interact.

This sub chapter includes references to other chapters/documents with more detailed information regarding following activities:

- Installation and basic configuration
- Extended configuration
- Central Phonebook administration
- Daily operation

References for Installation and Basic Configuration

References for Extended Configuration

Central Phonebook administration

Included in the delivery

- WSG-HW including a 230 V power cable
- Safety and regulatory instructions

Technical Solution

The WSG consists of a server and a client part and is configured via a web interface. The Java based client runs on a computer connected to the Local Area Network (LAN) and is loaded from the server (Device Manager).
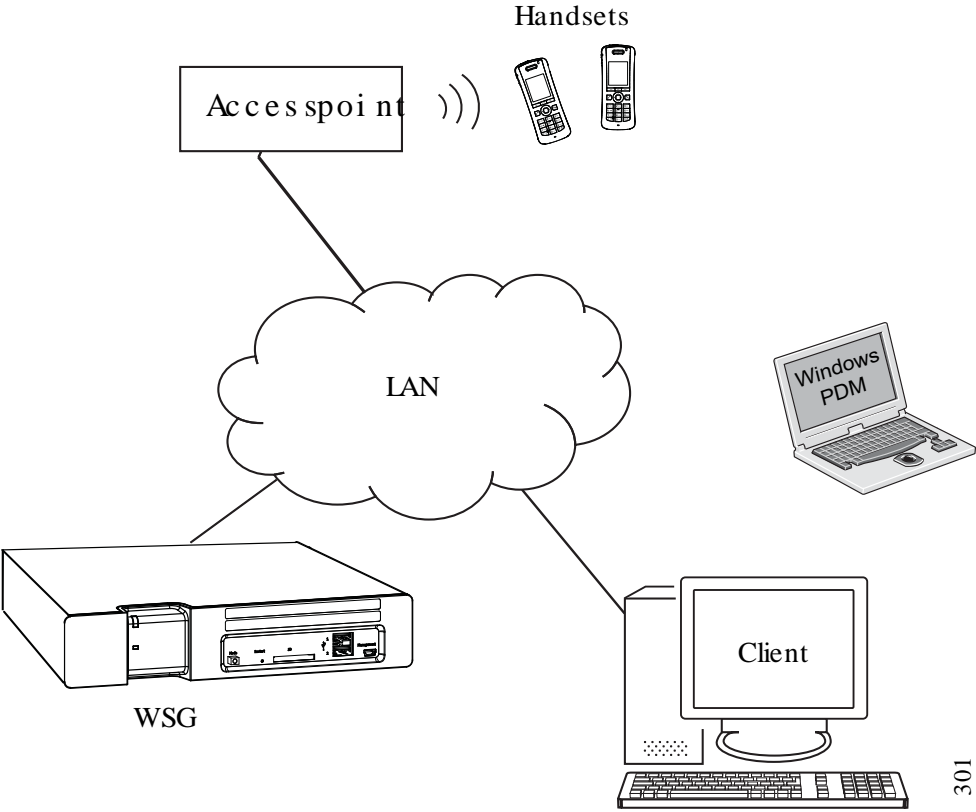
Figure 1: The WSG in a System

Installation and Configuration

The installation of the WSG-HW is described in the WSG Installation Guide.

After installing the hardware, the basic configuration is easily done with the help of a setup wizard. The setup wizard includes all basic settings needed to get the WSG up and running.

Information required for the Setup

Make sure the following information is available:

- MAC address – found on the license certificate
- IP address is needed, see WSG Installation Guide
- Network parameters – ask your network administrator
- License number – found on the license certificate
- Type of connected wireless phone system
- IP address to connected system (if connected via IP)
- Other messaging systems to send messages to (optional) TBD
- LDAP properties, if an LDAP server is used for Central Phonebook requests (optional).

Accessing the WSG

Getting Started

When accessing the module the first time, follow the instructions in the Getting Started and safety Leaflet.

The IP address must not change during operation because renew of IP address via DHCP is not handled. Other equipment connected to this product also expects a fixed IP address in some cases. If the IP plan is changed, this product must be restarted to update the IP address. Otherwise the system will not function properly.

Basic Configuration Steps

The first time and as long as the WSG is not configured, the setup wizard will start automatically when logging on from a web browser. It requires a login with an "admin" or "sysadmin" password, refer to Section , "Authentication Levels and Default Password".
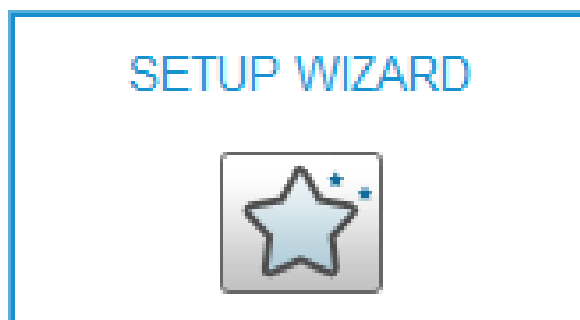
Figure 2: The Setup Wizard

1) Log on to the WSG.

The setup wizard will open and help you with the basic configuration. The setup wizard includes the following settings:

- Network setup – can be set manually or via DHCP
- License number – the type of license determines the functionality
- Date and time properties/settings – for time stamps on activities
- Central Phonebook properties – database to use when searching (local phonebook on the module, or LDAP server).
- LDAP properties – (only visible if LDAP is selected in the Central Phonebook properties)
- Digit Manipulation Properties – information on how to convert telephone numbers (only visible if LDAP is used as database
- Passwords – change from default to site specific passwords

2) Configure the Central phonebook (but only if an LDAP server is not used), see Configure the Central Phonebook on page 20.

3) Create a security backup.

4) We recommend you to create a security backup of all settings (to facilitate the configuration in case of a software upgrade). See Backup the Configuration on page 28.

Optional Settings

Some of the optional settings in the module are included in the basic license, other requires an additional license. See How to use this Document on page 7.

- Set Language – it is possible to translate the user interface language, refer to Customize the Language on page 76.
- Open Access Protocol (OAP) – makes it possible to communicate with other systems that is connected to the module. Refer to Open Access Protocol (OAP) on page 73.
- Digit Manipulation – makes it possible to set the way telephone numbers are converted in telephone number lists. See Digit Manipulation in Central Phonebook on page 33.

General

Graphical User Interfaces (GUI's)

Start Page
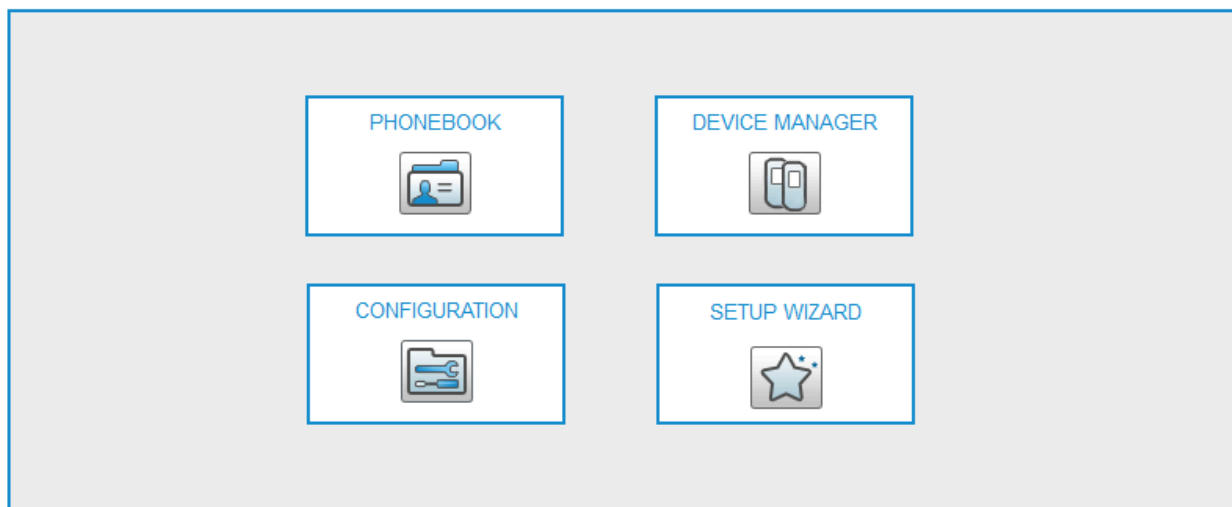
Figure 3: The Start Page

From the start page it is possible to select different functionality applications:

- Phonebook, see Configure the Central Phonebook on page 20.
- Describes how to handle phonebook entries.
- Device Manager, see Device Manager on page 36.
- Describes device management.
- Configuration, see Configuration Page on page 12.
- Setup page for the module settings.
- Setup Wizard, see Basic Configuration Steps on page 9.
- The first time and as long as the module is not configured, the setup wizard will start automatically.

Configuration Page

Figure 4: The Configuration Page

With system administrator or administrator rights you will be able to access the complete configuration page from the Configuration- and Phonebook buttons on the start page. Links to documentation are also found on the configuration page.

Use the ⌂ symbol if you want to return to the start page without logging out. Using the "Log out" link will also send you back to the start page but you will be logged out as well.

System information is shown on the Configuration top page, for example host name, IP address and MAC Address.

Advanced Configuration Page

The Advanced Configuration page is reached from the Configuration page (under Other Settings).

Normal Mode **WSG Advanced Configuration**

System Setup | Troubleshoot | Home

| System Setup | Logged in as: sysadmin Logout |

Device
Management

Phonebook

Remote
Management

OA-XML

**WLAN
Interface**

WLAN
System

Message
Distribution

System Setup

On this page you set all parameters regarding the systems function and behaviour. Select what to configure in the menu to the left.

In order for changes to take effect, you will sometimes be requested to reboot the system.

Figure 5: The Advanced Configuration Page

Authentication Levels and Default Password

The product has five different authentication levels:

- User rights are required for the administration of the phonebook. Default user name and password are "user" and "password".
- Administrator rights are required for the setup, the configuration and administration, simple troubleshooting and changing passwords (except for the sysadmin password). Default user name and password are "admin" and "changeme".
- System Administrator rights is used for advanced troubleshooting. It gives access to all administration pages and the permission to change all passwords. Default user name and password are "sysadmin" and "setmeup".
- Auditor rights gives basically the same access as Administrator rights, but without permission to alter values. There is no access to the setup wizard or the Device Manager. Default user name and password is "auditor" and "readonly".
- Different levels of password policy can be set in, see Set Password Policy on page 14.

Functionality matrix

The following matrix shows which functionality that can be used by the different authentication levels.

	anonymous	user	admin	sysadmin	auditor
Phonebook administration NetPage login	No	Yes	Yes	Yes	No
View configuration settings	No	No	Yes	Yes	Yes

	anonymous	user	admin	sysadmin	auditor
Configuration Access to the setup wizard	No	No	Yes	Yes	No
Access to the Device Manager.	No	Yes	Yes	Yes	No
Change passwords	No	No	Yes[1]	Yes	No

Password Settings

The default passwords for the different type of users; sysadmin, admin etc., can be changed and it is also possible to specify the password complexity, such as length and number of character types. Passwords can be changed in both the Setup Wizard and on the Advanced Configuration page, but the password complexity (password policy) can only be changed on the Advanced Configuration page.

Change Passwords

Different passwords can be set for different users.

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu in the on the Configuration page.
3) Under Security, click "Change Passwords" in the menu on the Advanced Configuration page.
4) Click the user to change password for.
5) Enter your user name and password. Enter the new password and confirm the password.
6) Click "Ch. Passwd".

Set Password Policy

The required password complexity can be set.

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu in the on the Configuration page.
3) Select "Password Policy" under Security in the menu on the Advanced Configuration Page.

---

[1] Admin cannot change password for sysadmin.

Figure 6: The Password Policy Page

4) Select password policy.

5) Click "Activate".

It is also possible to select previous or factory default settings.

System Security Settings

Security settings, such as not allowing HTTP and FTP access, disabling NETBIOS and increasing the security by using Certificates might be needed if required by the customer.

Web Access Security settings

When secure mode is enabled, only secure access via HTTPS and FTPES is allowed. HTTP is automatically redirected to HTTPS and FTP access is not allowed.

The web access security level can be set as follows:

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration in the menu in the on the Configuration page.

3) Select "Web Access" under Security in the menu on the Advanced Configuration page

Figure 7: The Web Access Security Page

4) Select if Secure Mode shall be enabled or not.

5) Click "Activate"

It is also possible to select previous or factory default settings.

Disable the NetBIOS Service

The NETBIOS Service makes it possible to access the module with the NetBIOS name "elise-XXXXXXXX", where XXXXXXXX is the module key number.

The NetBIOS port is default enabled but can be disabled if needed for security reasons.

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu on the Configuration page.
3) Select "IP Ports" under Security in the menu on the Advanced Configuration Page.

Figure 8: The Web Access Security Page

4) Select "Disabled" in the drop down list.
5) Click "Activate".

Allow Fragmented TCP Packets

Fragmenting is when the IP protocol allows an IP packet to be broken apart into several smaller packets, which then can be transmitted and reassembled at the final destination.

If the network has a MTU value lower than the default 1500 bytes, packets will be dropped if not fragmenting is allowed. If fragmentation is allowed in the network the parameter needs to be enabled in the module.

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu on the Configuration page.
3) Select "IP Ports" under Security in the menu on the Advanced Configuration page.
4) Select "Enabled" in the Fragmented TCP packets (Caution advised) drop down list.
5) Click "Activate".

Certificates

Certificates are used to increase security by encryption. A self-signed digital certificate is created during the first start-up. This certificate is issued for the module's MAC address. A certificate can also be imported or created in the module.
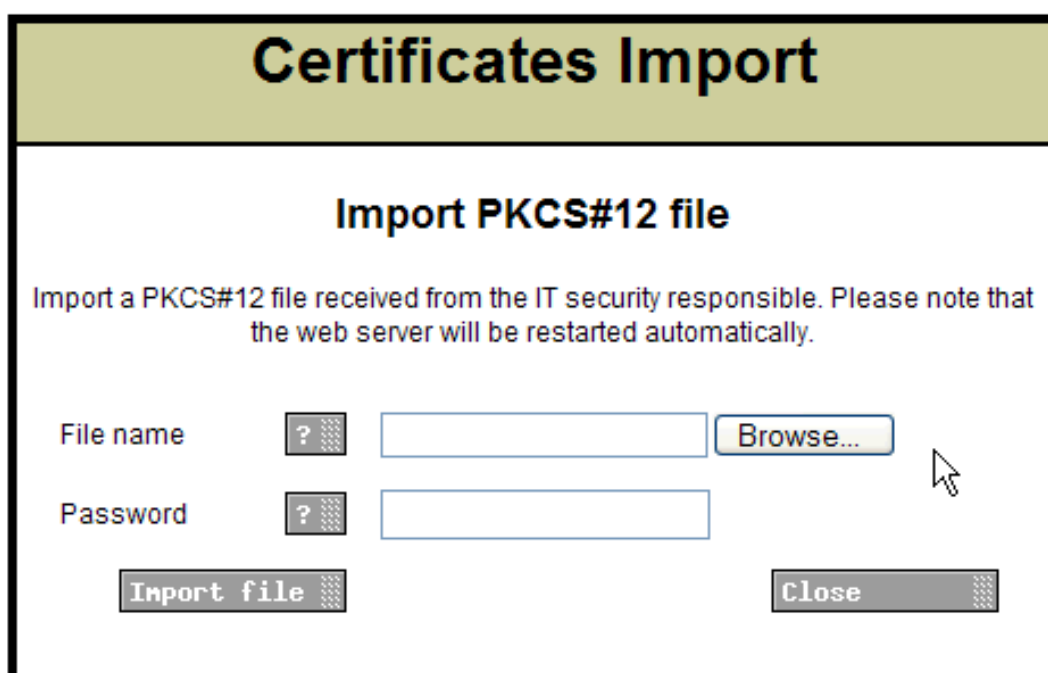
Import certificates

It is possible to import certificates to the module. These certificates may be created by a system administrator with IT security responsibility. The module uses PKCS#12 files, which include keys and certificates.

For instructions on how to import a PKCS#12 file, follow this instruction:

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu in the on the Configuration page.
3) Click "Import" under Certificates in the menu.

Figure 9: The Certificates Import Page

4) In the Certificates Import window, you can locate a certificate file. Enter file name and a valid password. The certificate is tied to a specific password which should be delivered with the file.
5) Click "Import file". The file is imported to the module.
6) Click "Close".

You may have to ask the network administrator for PKCS#12 files.

When starting, there may be a warning about the security certificate. This warning can be ignored.

Create certificate

It is possible to create certificates in the module. For instructions on how to create a PKCS#12 file, follow this instruction:

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu in the on the Configuration page.

3) Click "Create" under Certificates in the menu.

Create Self Signed Certificate

The operation may take a while. Existing certificate will be overwritten! [?]

Validity	10 [?]
Common Name	[?]
Organizational Unit	[?]
Organization	[?]
Locality	[?]
State or Province	[?]
Country	[?]

Create Certificate   Close

Figure 10: The Self Signed Certificates Page

4) Enter valid parameters for your certificate file in the Create Self Signed Certificate window. "Validity" and "Common name" are mandatory.

Due to security reasons, some characters in the ASCII-table are not allowed to use in the fields "Common Name", "Organization Unit", "Organization", "Locality", "State or Province" and "Country" when creating a certificate. Among these are: [,], (,), {, }, $, &, \, |, *, ", `, ', ?, ~, >, <, ^, \n, \r.

5) Click "Create Certificate". A certificate file is saved and the web server is restarted.

Demonstration Mode

Demonstration Mode makes it possible to run the product for two hours with almost full functionality of the application.

The Demonstration Mode can be set from the application's Configuration page or manually by using the Mode button. The module will automatically return to previous license and parameters (without restart) after 2 hours.

Demonstration Mode is indicated by the Status LED with yellow slow flashing light. If any application encounters problems during Demonstration Mode, the Status LED will however show red slow flashing light instead. The Mode button LED shows blue fixed light.

From the application's Configuration page:

1) Click "Configuration" on the start page.
2) Select Other Settings > Demonstration Mode in the menu on the **Configuration** page.
3) Click "Activate".

4) Exiting before the 2 hours have passed, is done by clicking "Deactivate".

Using the Mode button:

1) Press and hold the Mode button for 10 seconds.

Basic Configuration

The basic configuration requires system administrator or administrator rights. With user rights you will only be able to access and configure the Central Phonebook. Refer to Authentication Levels and Default Password on page 13.

Configure the Central Phonebook

The central phonebook makes it possible for users to search and find phonebook entries from a handset in the system. The entries can be added manually (Add Entries to the Central Phonebook on page 20) or by importing a file containing the entries (Import Entries to the Central Phonebook from a CSV File on page 21).
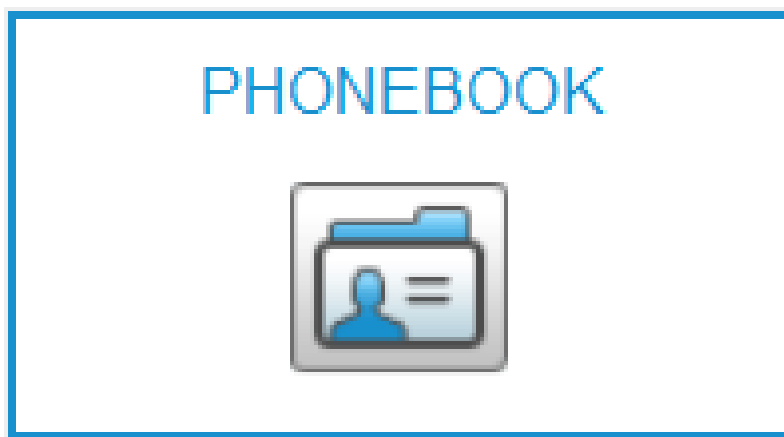
Figure 11: The Phonebook Page

Add Entries to the Central Phonebook

The entries in the central phonebook can be filled in manually.

1) Click "Phonebook" on the start page.
2) Select Phonebook > Edit on the Configuration page.
3) Click "Add" and enter the information needed in the text fields as described below.

Figure 12: The Edit Phonebook Page

4) Enter the following settings in the text fields:

  • Last Name: the family name
  • First Name: the first (given) name
  • Number: the telephone number

5) To add several rows click "Add" again.

6) Click "Save".

Sorting Entries in the Central Phonebook

The entries in the Central phonebook can be sorted on Last Name, First Name or Number by clicking the arrows in the list's title bar.

Delete Entries

1) Click "Phonebook" on the start page.
2) Select Phonebook > Edit in the menu on the Configuration page.

A) Delete a single Entry:

1)
Locate the entry to be deleted and click the ✕ button in the same row.
2) Click "Save". The entry is deleted.

B) Delete several Entries:

1) Click "Delete All".
2)
All entries in the list will be crossed over and the ↩ icon will be displayed to the right of each

entry. If you want to keep an entry just click the ↩ icon and the changes will be discarded for that entry.
3) Click "Save". All entries marked with a blue arrow are deleted.

Import Entries to the Central Phonebook from a CSV File

The CSV file to be imported to the Central phonebook shall have the following format:

First name;Last name 1;Telephone number

Different separators may be used, see below:

Warning: When importing a Central phonebook file in CSV format, existing entries are deleted.

1) Click "Phonebook" on the start page.

2) Select Phonebook > Import/Export in the menu on the Configuration page.

Import/Export Central Phonebook Entries

Export

Export phonebook   Export

Import

Separator character   ;   ▼

Import file   [   ]   Bläddra_   Import

Figure 13: The Import/Export Phonebook Page

3) Select separator for the CSV file.

Different separators may be used in a delimiter-separated file. Currently, the module supports import of files with the separators semicolon, comma or TAB.

4) Click "Browse" to locate the CSV file in the system.

5) Click "Import".

Export the Central Phonebook to a CSV File

The complete Central phonebook can be exported to a CSV file for backup reasons.

1) Click "Phonebook" on the start page.

2) Select Phonebook > Import/Export in the menu on the Configuration page.

3) Click "Export".

4) Click "Save" in the window that opens.

5) Enter a name of the file, and select in which folder the file should be saved.

6) Click "Save".

Status

On these pages, information on active faults or stored faults can be shown.

Active Faults

Active Faults page is where the last 100 received active persistent fault logs are listed. For more information about the fault log, refer to Fault Log on page 24.

1) Click "Configuration" on the Start page.

2) Select Status > Active Faults, in the menu on the Configuration page.

The following information is shown for each fault:

- Time when the fault occurred
- Level of the fault: - Critical error - Error - Warning
- Description of the fault, as defined in the module
- Type of module
- IP address and host name of the module that generated the fault

By expanding the fault in the list, additional information about the fault is shown containing:

- Fault ID
- This is used to reference a persistent fault when it later is reset
- Fault code
- Description of the fault code
- Extended address information showing the system, bus type and module address
- In the figure below the system is 00, the bus type is 1 and the module address is 0A.

Persistent faults will remain in the list until the module sends a status message confirming that the module is working properly again. It is also possible to delete the fault in the list by clicking the icon ✕ .

> If the IP address or license is changed in the module, the faults reported for the previous IP address/license will remain since no confirmation can be received. These faults must be manually deleted.

The active faults list page has to be manually updated by clicking the "Update Page" link up-permost on the page.

Reset the Error Relay

The error relay can be reset manually from the Active Faults page.

1) Click "Configuration" on the start page.
2) Select Status > Active Faults in the menu on the Configuration page.
3) Click "Reset" button.

Level of Seriousness for different Fault Types (Module Fault List)

A module fault list exists which shows codes and statuses etc. for each module in the system. The level of seriousness can be changed for different fault types in the logs.

1) Click "Configuration" on the Start page.
2) Select Other Settings > Advanced Configuration, in the menu on the Configuration page

3) Click the "Troubleshoot" button and select "Module Fault List" in the menu.

Figure 14: The Module Fault List

4) Select level of seriousness in the drop-down list for the code(s) for which you want to change level.

Fault Log

The fault log is a centralized log file and shows a complete log of the faults in the system. Every time a fault message is generated in the system, information about the fault is written to the log file. The maximum number of entries in the log file is 1050. When the log file is full, the 50 oldest entries are removed.

1) Click "Configuration" on the Start page.

2) Select Status > Fault Log in the menu on the Configuration page.

The first 25 log entries are shown. To get the following 25 log entries, click the "Next" link.

The following fault levels exist in the log:

- Information
- Individual reset
- All OK
- Critical error
- Error
- Warning

Fault Log

Entry 1 - 25 (41)

      1 .. 25 26 .. 41   Next

Expand all entries

Time	Level	Description	Module	Address
⊞ 2012-05-21 13:07:06	All OK	✕ Start of module/component	WSG	172.20.13.42
		Start of component		Elise
⊞ 2012-05-21 13:07:04	Information	Start of module/component	WSG	172.20.13.42
		Start of component		Elise

Figure 15: The Fault Log Page

Symbols used in the Fault Log

Symbol	Description
	Active persistent fault
	Persistent fault that has been handled
	Reset message, no fault exists

To get more detailed information about the events, the log entries can be expanded by clicking the "Expand all entries" link. Single log entries can be expanded by clicking the individual "+" icon.

Administer the Fault Log

The Fault log can be exported in a CSV (Comma Separated Values) file format. The log can be cleared from non-active faults and a timeout can also be set to block repeated faults, that is, the fault will be discarded and no actions will be executed.

1) Click "Configuration" on the Start page.
2) Select select Other Settings > Administer Fault Log, in the menu on the Configuration page.

Export the Fault Log in CSV format

1) Click "Export".
2) Click "Save" in the dialog window and enter the file name (default name statuslog.csv) and the file path.

Remove all non-active faults from the Fault Log

1) Click "Clear".
2) Click "Yes" in the dialog window to remove all non-active faults from the status log file.

Set a Timeout to block the Fault log from repeated faults

1) Enter the timeout in minutes (0-1000 minutes), the default value is 10 minutes.

   If no Status Logs should be blocked, set the timeout to 0.

2) Click "Set timeout" to save the setting.

An incoming fault will now be handled the first time it is received and then blocked during the set timeout.

WLAN Handsets
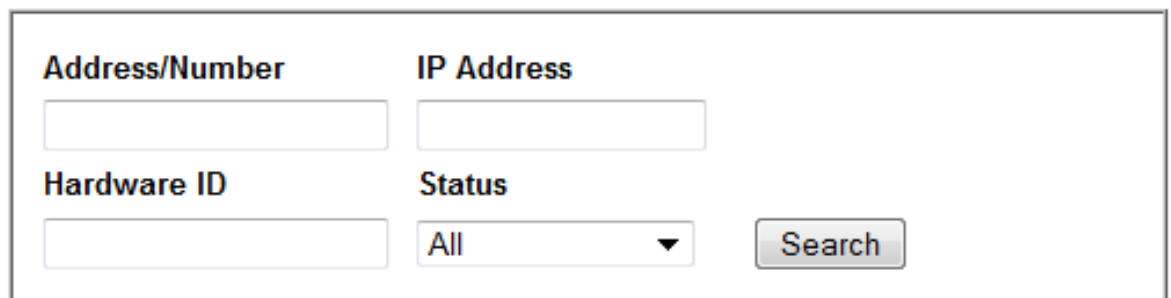
Handset Administration gives you the possibility to list all handsets that are registered in the system, search for a specific handset, or a range of handsets.This is intended to facilitate troubleshooting.

The pages can be customized by changing the number of handsets shown on the search result list.

Show all Registered VoWiFi Handsets

1) Select "Configuration" on the Start page.
2) Click "WLAN Portables" in the menu on the Configuration page.
3) Do one of the following:

- Click "Search" to search for registered VoWiFi handsets based on different search criterias. For example Address/Number, IP address, Hardware ID (often the MAC address) or the Status of the handset. The Search page opens.

Search

Address/Number	IP Address	
Hardware ID	Status	
	All ▼	Search

Figure 16: The Search Page

- Click "List all" to show all registered VoWiFi handsets.
4) The search result can be sorted by address/number, IP address, status or last login. Click the name of the column to be sorted.

List All

5 portables were found

| Remove IP | Force Relogin | Delete Selected | Export Result |

☐	**Address/Number**	**IP Address**	**Status**	**Last login**	
☐	2605	172.20.15.183	Available	2008-05-09 13:31:41	📝
☐	2606	Not logged in	Available	2008-05-08 13:26:37	📝
☐	2607	Not logged in	Available	2008-05-08 13:27:08	📝
☐	2619	Not logged in	Available	2008-05-08 13:30:50	📝
☐	6374	172.20.13.188	Available	2008-05-09 13:31:42	📝

Figure 17: The Search Page

Save a list with all Registered VoWiFi Handsets

The search result list can be exported to a comma separated file.

1) Click the "Export Result" button.
2) Select "Save". Enter a file name and the location where the file shall be stored, and click "Save".

Remove IP Address, Force a Relogin, or Delete a VoWiFi Handset

1) Select the handset(s) check box in the search result list.
2) Click "Remove IP Address", "Force Relogin" or "Delete Selected".

- Remove IP Address Used for refreshing the address of a handset.
- Force Relogin Used for checking the connection with a handset.
- Delete Selected Used for removing numbers not in use.

Show Handset Details

Click the icon 📝 in the search result list. All details of the chosen handset are viewed.

Details

| Remove IP | Force Relogin | Delete |

Address/Number	**IP Address**	**Current status**
2302	172.20.13.176	Available

Hardware ID	**Last login**	**Manual Absent**
00013E1103D0	2010-04-16 14:18:21	Off ▾ Save

Figure 18: The Handset Details Page

Change the Handset Absent Status

It is possible to change the Manual Absent status of the VoWiFi handsets.

1) View all handsets, refer to Show all Registered VoWiFi Handsets on page 26.
2) Click the icon to view handset details, see Show Handset Details on page 27 above.
3) In the Manual Absent drop-down list, select "On" or "Off".
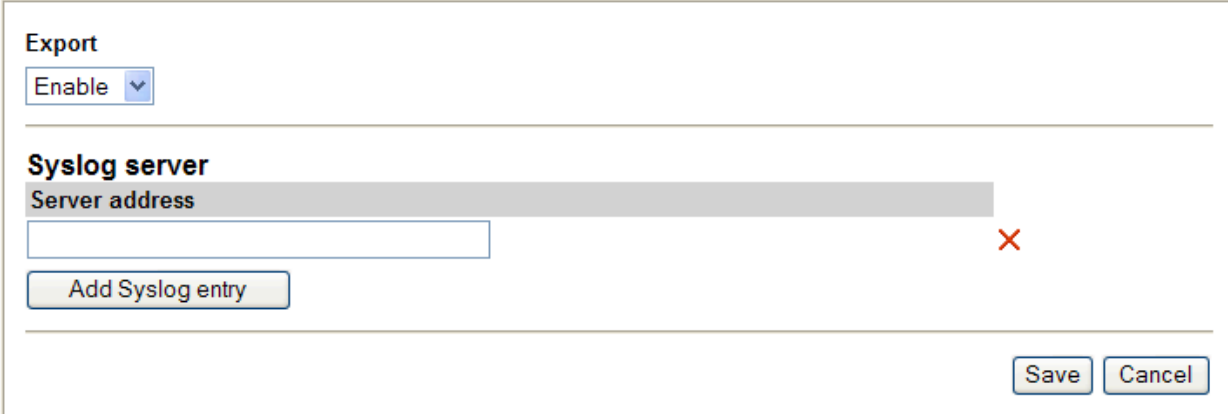
Export Activity Logs to a Syslog Server

Activities in the module are logged and can be exported to a Syslog Server where the logs can be managed and analyzed. Messages are sent to the syslog server every time an activity occur in the module. Example of activities are: An SMS has been sent to a handset, an alarm has been received from a handset, an error has occurred in the module etc. Syslog is a simple protocol (SYStem LOG protocol) for transmitting event messages and alerts text across an IP network. The activities are sent as text messages from the module to the Syslog Server. The IP address to the Syslog Server must be set in the module. The activities can be exported to 5 syslog servers in parallel.

1) Click "Configuration" on the Start page.
2) Select Activity Log > Log Export in the menu on the Configuration page.
3) Select "Enable" in the drop-down list.
4) Click the "Add Syslog entry" button.
5) Enter the Syslog Server's IP address in the text field.
6) Click "Save".

Figure 19: The Activity Log Page

Backup the Configuration

This instruction is used to backup the Device Manager database and the configuration of the WSG-HW. The backup file is saved in a proprietary file format and cannot be edited. Save it in a place where you can easily find it for a restore.

The backup does not include certificates.

1) Click "Configuration" on the start page.

2) Select Other Settings > Backup/Restore, on the Configuration page

Backup/Restore

Backup parameters   [Backup]

Restore parameters   [_____] [Browse...] [Restore]

Figure 20: The Backup/Restore Page

3) Click "Backup".

A backup of the current configuration is created and the File Download window opens.

4) Click "Save". The Save As window opens.

5) Select a location, enter a file name, and save the file.

Restore the Configuration

When the configuration is restored, all changes that have been made since the last backup will be discarded.

1) Click "Configuration" on the start page.

2) Select Other Settings > Backup/Restore, on the Configuration page.

3) Click "Browse" and select the backup file.

4) Click "Restore". The text "Backup successfully restored!" will be displayed and inform you when the restore is ready.

5) Click "Restart Now" to reboot, else click "Restart Later". If the IP address has been changed, the module needs to be restarted for the settings to take effect.

A restart will take a couple of minutes and during that time the module cannot be reached. When the restart is completed, the window will refresh to the Configuration page overview

Backup successfully restored!

It is recommended to restart the module after a restore.
If any passwords or language settings have been changed you must restart your browser for these changes to take effect.

[Restart Now]   [Restart Later]

Figure 21: The Backup Alert Page

Central Phonebook Configuration

The Central Phonebook makes it possible for users to search and find phonebook entries in a lo-cal database or in an LDAP server, from a handset in the system.

For information about entering phonebook entries, see Configure the Central Phonebook on page 20.

If an LDAP connection to a central phonebook is used, all settings needed are done in the setup wizard but can also be done from the Advanced Configuration page.

Technical Specification

The local database has defined limitations while most of the limitations for the LDAP server de-pends on the LDAP server used, see table below.

	Local Database	LDAP Server
Max. No. of phonebook entries:	500/2000	Server dependent
Max. No. of characters in family name:	20	Server dependent
Max. No. of characters in first name:	20	Server dependent
Max. No. of digits in telephone number:	20	Server dependent
Max. No. of returned entries / request:	25	25
Handsets that can access the phonebook:	Depends on handset type.	

Change the Phonebook Address

The default Call ID for accessing the phonebook is "999999".

When the Unite Name Server (UNS) is set to forwarding mode, the phonebook Call ID must exist in the module that the requests are sent to. Any change of the Call ID and/or IP address must be made in that module. If the default address is used, no changes are needed.

When the UNS is set to stand-alone mode, do as follows to change the address:

1) Click "Configuration" on the Start page.
2) Select Other Settings > Advanced Configuration in the menu on the Configuration page.
3) Select "Phonebook" in the menu on the Advanced Configuration page.
4) Click "Call ID Setting".
5) Enter the new Call ID for the phonebook, that is, the Call ID the handsets are using to access the Central phonebook. Check that the Call ID does not conflict with any of the handsets in the system.
6) If the phonebook is located on another module, enter the IP address to that module.

Customize the Search Result Text

When a request is sent to the Central phonebook, a text is included in the response sent to the handset. These texts can be customized, for example translated.

1) Click "Configuration" on the Start page.

2) Select Other Settings > Advanced Configuration in the menu on the Configuration page.

Select "Phonebook" in the menu on the Advanced Configuration page.

Figure 22: The Phonebook Page

3) Enter the texts that should be included in the search result, see table below for more information about the different texts and when they are used.

This setting does not affect all handset types.

Default text	Description
Search result	Included in a successful request before the entries that matched the request
Sorry, no match	Sent when there were no match for the sent request.

Select Central Phonebook Database

Select which database to use for telephone numbers; "Local - 500 Editable", "Local - 2000 View only", or "LDAP".

- If the default local database is selected the entries must be added, either manually or imported from a CSV file, see Import Entries to the Central Phonebook from a CSV File on page 21 or Export the Central Phonebook to a CSV File on page 22.
- If LDAP server is selected, continue in LDAP Parameter Setup on page 32.

To set database to use for the Central phonebook, do as follows:

1) Click "Configuration" on the Start page.

2) Select Other Settings > Advanced Configuration in the menu on the Configuration page.

3) Select "Phonebook" in the menu on the Advanced Configuration page.

4) In the Database for lookups field, choose between "Local - 500 Editable", "Local - 2000 View only", or "LDAP".

If "Local - 2000 View only" is chosen, the "Add" and "Delete all" buttons are not visible in the Edit Phonebook pages.

LDAP Parameter Setup

The Lightweight Directory Access Protocol (LDAP) is an application protocol for querying and modifying directory services running over TCP/IP. The WSG starts an LDAP session by connecting to an LDAP server. Then it sends operation requests to the server, and the server sends responses in return.

An LDAP directory is a tree of directory entries and follows the structure below:

* An entry consists of a set of attributes.
* An attribute has a name and one or more values.

Each entry has a unique name; the distinguished name (DN). DN consists of its relative distinguished name (RDN) constructed from some attribute(s) in the entry, followed by the parent entry's DN. Think of the DN as a full filename and the RDN as a relative filename in a folder.

An entry can look like this:

```
dn: cn=John Ericson,dc=company,dc=com
cn: John Ericson
givenName: John
sn: Ericson
telephoneNumber: +1 888 555 6789
mail: john@company.com
```

dn is the name of the entry; it is not an attribute nor part of the entry. "cn=John Ericson" is the entry's RDN, and "dc=company, dc=com" is the DN of the parent entry. The other lines show the attributes in the entry. Attribute names are typically mnemonic strings, like "cn" for common name, "dc" for domain component, "mail" for e-mail address and "sn" for surname. .

1) Click the **LDAP settings** link.

2) In the **LDAP Server or Proxy Address** field, enter the IP address or DNS address to the LDAP server.

3) In the **Port Number** field, enter the port number used by the LDAP server.

4) In the **Authentication Method** drop down list, select how to authenticate to the LDAP server.

> If the authentication method SASL/DIGEST-MD5 is selected, the IP address for primary DNS server must be entered in the DNS server field on the Network setup page. Otherwise it is not possible to authenticate with the LDAP directory Microsoft Active Directory 2003.

5) In the **User name** field, enter the user name used for logging on to the LDAP server. It is a good idea to create a new user in the domain with access for the LDAP server.

6) In the **Password** field, enter the password used for logging on to the LDAP server.

7) In the **Search Base DN** field, enter the user entries' parent DN. (The distinguished name for all users common entry.)

8) In the **Number attribute** field, enter the name of the attribute that holds the telephone numbers.

9) In the **Type of Name Attribute(s)** drop down list, select the appropriate option.

The option depends on if the name is stored in a single attribute or if it is split into two different attributes.

10) In the **Name Attribute(s)** field, enter name(s) of the attribute(s) containing first name and family name. If two attributes are used, enter the first name on the first line and the family name on the second line.

Digit Manipulation in Central Phonebook

When importing telephone numbers it is sometimes necessary to automatically change the way a number is written according to preset conditions.

Depending on where a number is situated, the module can alter the number that is returned in a phonebook query. If, for example, the queried number is situated within the same local exchange, the telephone number is considered to be an internal number and the number is stripped from superfluous international prefixes, etc.

Telephone number standards

There are several standardized ways of writing telephone numbers.

The following formats are currently supported:

Format	Comment
+4631559300	E.164 international standard, and E.123
(031)-559300	E.123 local number
+46(031)559300	National prefix + national destination code in parentheses
+46(0)31559300	National prefix in parentheses
+46(31)559300	Canonical address format
4631551234	Digits only. Conversion is controlled by setting maximum lengths of internal and national numbers.

Examples

The following figure shows the elements of a telephone number, +46(31)551234 (in canonical format), used in the parameter descriptions below.¨
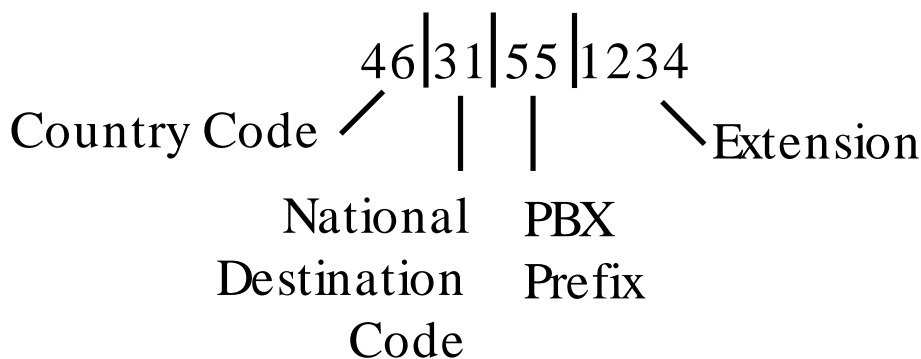
Figure 23: The Canonical Format

Example of how a telephone number is built up from different prefixes and extensions.

Figure 24: Example of Digit Manipulation Settings

The following examples illustrate how digit manipulation works in different queries. The queries are considered to be done from within +463155xxxx (local exchange), see also figure above.

- Example 1: The query is within the same local exchange. Queried number: 551234 Digit manipulation identifies 55 as the local exchange prefix and strips 55 from the number. Resulting number: 1234

- Example 2: The query is within the same city (area code), but outside the local exchange. Queried number: 031612500 Digit manipulation identifies 0 as National Prefix and 31 as National Destination Code, strips 031 from the number and adds 00 for external line. Resulting number: 00612500

- Example 3: The query is within the same country, but not in the same city. Queried number: 035158115 Digit manipulation identifies 0 as National Prefix and 35 as National Destination Code and adds 00 for external line. Resulting number: 00035158115

- Example 4: The query is within another country. Queried number: +4781530555 Digit manipulation identifies "+47" as an international call, skips the "+", and adds 00 for external line prefix and 00 for international prefix. Resulting number: 00004781530555

- Example 5: Size of internal number. Queried number: 1234 Digit manipulation identifies that the number of digits in the telephone number is equal to the number of digits entered as "maximum size of internal phone numbers". Resulting number: 1234

- Example 6: Size of global number. Queried number: 47815305555 Digit manipulation identifies that the number of digits in the telephone number is equal to the number of digits entered as "minimum size of global phone numbers", then adds 00 for external line prefix and 00 for international prefix. Resulting number: 000047815305555

Digit Manipulation Settings

The parameters for digit manipulation can be set via the Configuration page.

1) Click "Configuration" on the Start page.
2) Select Other Settings > Advanced Configuration in the menu on the Configuration page.
3) Select "Phonebook" in the menu on the Advanced Configuration page.
4) Click "Digit Manipulation Settings".

The following parameters can be configured for digit manipulation:

- Digit Manipulation Enabled The digit manipulation function can be enabled and disabled. If the function is enabled, the parameters below apply, otherwise they do not apply.
- Country Code The Country Code is the prefix to be used when dialling to a particular country from another country. The country code is what follows after the + in a telephone number. The value is used to identify the country code in the number and remove it when it is not needed.
- National Destination Code The National Destination Code (NDC) is what follows after the country code in a telephone number. The value is used to identify the NDC in the telephone number and remove it when it is not needed.
- International Prefix The International Prefix is used to dial a call from a particular country to another country. This is followed by the country code for the destination country. This value is used to replace the + character when an international call is made.
- National Prefix National Prefix is used to make a call within a country from one city to another. The national prefix is followed by the national destination code for the destination of the call. This value is used for two purposes:

  – To identify the national prefix in the number and remove it when it is not needed.
  – To change a number when the destination is another city.
- External Line Prefix External Line Prefix is what needs to be dialled before the number to reach the public network. The value is used to change the telephone number if it is identified as an external number.
- PBX First Prefix PBX First Prefix is what precedes an internal number to create an external number. This value is used to compare with the phonebook number to decide whether the number is internal or external.
- PBX Second Prefix Points out an additional prefix to be handled in the same way as "PBX First prefix".
- Maximum size of internal telephone numbers Used for numbers that starts with a digit instead of "+" or "(". If the number is longer than this value, it is considered to be an external number.
- Minimum size of global telephone numbers Used for numbers that starts with a digit instead of "+" or "(". If the number is equal to or longer than this value, it is considered to be a global number.

Device Manager

The Device Manager can manage large sets of devices and contains a solution for:

- Centralized software upgrade on a set of devices and configuration of devices
- Central database storage for all device settings
- Upgrade of license for handset

In the Device Manager, much of the work is done with Devices, Numbers and Templates.

The WSG server must always be switched on.

Figure 25: The Device Manager

Description

This section gives a description of the Device Manager application in the WSG and how it is intended to be used.

Device Manager terminology

This section gives a brief description of the basic terminology in the Device Manager.

Device	Can be a charger or a handset that can be connected to the module.
Number	The complete settings for a single device. Also chargers have a Number.
Template	General settings for a specific device type. A template can be applied to several Numbers of the same device type.
License	Licensed functionality for a device.
Tabs	In the Device Manager there are different views, or tabs. In these tabs, the information for devices, Numbers, templates are shown.
Parameter definition file	A file including all possible settings for a certain device type. Templates are created from parameter definition files.
Software	The software used in devices. The device software can be updated via the module.
Version	Parameter definition files and device software are indicated by versions.

Package file	A file that can contain other files, such as parameter definition files, software files and template files.
Importing	Different types of files can be imported. Note that if a software file should be imported, it may have been delivered in a package file.
Associate	Before being able to synchronize parameters between the WSG and devices, it is necessary to associate a Number with the device. Association includes all parameters. If it exists on that device type, it also includes Contacts.
Assign	It is possible to assign a Number to a device that has not yet been assigned a Number in the Device Manager. Assign includes only the parameters defining the Number.

How to use the Device Manager

The following list is a short description to give a basic understanding on how to use the Device Manager with devices. It is not intended to be used as a work flow description.

- Import a parameter definition file of the corresponding device type to Device Manager.
- Create a template from the parameter definition file.
- Add a device to the Device Manager.
- Create a new Number for the corresponding device type.
- Associate the Number with the device.

Refer to applicable handset configuration manual for a description of the work flow.

Device Manager GUI

The Device Manager window has a menu bar, a toolbar and a work area. The toolbar has different tabs and when a tab is selected the available device types will be shown in the left hand pane of the work area. The right pane shows devices, numbers, templates, or licenses already configured.

The upper part of the work area has search fields with different search criterias for each tab.

Sort and Filter the Lists

By default, the lists are sorted as follows:

- Devices tab – sorted by Device ID
- Numbers tab – sorted by Number
- Templates tab – sorted by Name
- Licenses tab – sorted by Device ID

To sort the list by any other column, click the appropriate column heading. To reverse the sort order, click the column heading again. The sorting order is indicated by an up or down arrow in the column heading.

By default, the list in each tab shows all available Devices, Numbers or Templates, but it is possible to filter the list by selecting the desired device type in the left hand pane of the work area.

Color coded Information

Color coding for lists in tabs

- If the version number is shown in red, the Device Manager has found no parameter definition files supporting that device type.
- If the version number is shown in dark red, the parameter definition file is compatible, but does not have exactly the same version as the device.

Color coding for parameter and template editing

In the parameter and template editing windows, the following color coding is used:

color	Context	Description
Black	General	Normal
Dark blue	For templates and parameter editing	Parameter has been edited during the current session
Purple	For templates	The parameter is included in the template (checked)
Red	For templates and parameter editing	Value not valid
Turqoise	For templates and parameter editing	The value differs from the default value

Navigation

For keyboard short-cuts, see

Tabs

The Device manager has different views, or tabs:

- Devices tab
- Numbers tab
- Templates tab
- Licenses tab

Each tab shows information about devices, Numbers, templates, or licenses. Some information overlaps, for example Device ID, which is tied to both a specific device and to a specific Number. Different menus are accessible in the different tabs.

Devices Tab

The **Devices** tab shows all devices configured at the site in a detailed list. The following columns are displayed:

- Description – .optional information of a Number that can be added by the user. For example, the location of the device.
- Device ID – the unique identifier of the device.
- Device type – the device model.
- Software version – shows the version of the software in the device.
- Parameter version – shows the version of the parameters in the Number.
- Upgrade status – might show one of the symbols shown in table below.

- Online – shows if the device is connected to the Device Manager. The symbol ✔ indicates a connected device.
- Latest Number – shows the latest known Number for a device. The columns order can be changed and the application will keep the changes.

Upgrade status symbols

🔄	– software upgrade in progress. It is also possible to see a progress bar when the device is being upgraded.
⬆	– software upgrade Pending, Request sent, or Accepted (a green arrow).
🕐	– software upgrade Scheduled or Retrying.
⬆	– the last upgrade Failed or Aborted (a red broken arrow).
	– "Completed", no symbol is shown

> A software upgrade should be done on one device to start with. If successful, the remaining devices can be updated in one operation.

Numbers Tab

The Numbers tab shows all Numbers configured at the site in a detailed list. Following columns are displayed:

- Description – optional information of a Number that can be added by the PDM user. For example, the location of the device.
- Number – the unique identifier of the Number. The identifier is unique for that device type.
- Device type – the device model the Number is intended for
- Parameter version – shows the version of the parameters in the Number
- Device ID – the unique identifier of the device that the Number is associated to
- Online – shows if the device the Number is associated to is online. The ✔ symbol indicates an online device
- Status – shows the parameter synchronization status. A Number can also be queued for synchronization. Several different indications are used, for example Synchronizing, Sync queued, Save queued, Synchronized, etc. When the Number is offline, the database status is shown; Synchronized or Not synched.
- Saved – shows if the Number's parameters have been stored in the database. The ✔ symbol indicates that the parameters have been stored
- Last login – shows the date and time the device was last online in the Device Manager/logged in to Device Manager.
- Last run template – indicates which template that was last run for that Number The columns order can be changed and the application will keep the changes.

The Numbers tab showing a list of Numbers in a system.

Templates Tab

The Templates tab shows all templates in a detailed list. The following columns are displayed:

- Name – the name of the template
- Device type – the device model the template is intended for
- Parameter Version – shows the parameter version

Licenses Tab

The Licenses tab shows all devices configured at the site in a detailed list (see figure below). The following columns are displayed:

- Device ID – the unique identifier of the device.
- Device type – the device model.
-
  Online – shows if the device is connected to the Device Manager. The ✓ symbol indicates that the device is online
- Serial number – the number identifying the device hardware
- Number – The Number associated with the device.
- Software version – shows the version of the software in the device
- Status – shows the license synchronization status for the devices.

  Examples of status that can be shown are:

  "Sending" means that WSG is sending license information to the device.

  "Server failure" means that there is some kind of error with the communication between the WSG and the license server.

  "License too old" – The device has a newer license than WSG. A refresh has to be done.

  "Needs update" – An attempt to move a license from one handset to another has been made, but the latest license does not exist in the handset.

Logging On to the Device Manager

When an attempt is made to start the Device Manager, a dialog window is displayed with a warning that the program's digital signature cannot be verified. The text is displayed in the language used in the computer's operating system. Click "Run" (or the equivalent term in the operating system language).

Ten clients can be logged in at the same time, but to avoid conflicts make sure that only one at a time is updating Numbers.

1) Log on to the module.
2) Enter User name and Password and click "OK".
3) Click "Device Manager" on the start page.

Closing the Device Manager

In the **File** menu, click "Exit". The Device Manager shuts down.

Templates

By using a template, the same configuration can easily be applied to many handsets simultaneously. Templates are also an efficient way to give good control over which changes that are applied to each handset.

Templates enable configuration of all aspects of a handset from sound volume to keypad shortcuts.

Your supplier can provide example templates for different PBXs. The handset will have full functionality towards the PBX even without such a template. By using such a template, though, the

handset will be customized for that PBX with menu options for PBX specific functions such as Callback.

Create a Parameter Template

It is usually desirable to create a customized parameter template that can be applied to all devices of a certain device type.

1) Select the "Templates" tab and click "New". The **Create template** dialog opens.

2) Select device type and parameter version, type in a name for the template, and click "OK". The view switches to the **Edit Template** parameter view.

> If you cannot find your device type and/or parameter version in the list, the Device Manager needs to be updated with new parameter definition files, see Import Parameter Definition Files on page 54.

3) Select the parameters you want to be saved in the template by selecting the check box to the left of each parameter.

4) Change the parameters to the desired values.

5) Click "OK".

Save a Device Configuration as a Template

It is possible to use an already configured device and save it as a template. The template will contain configuration data and will not include contacts and other personal data if it is a handset.

This template can be used as a backup if you later want to restore the configuration of the device, or as a template to be applied on a number of devices.

1) Some parameters are user specific. If it is decided to apply this type of template to several handsets, it is recommended to exclude the following parameters:

- Owner ID - A text string specified in standby mode. The parameter is located directly under "Settings".
- Phone lock PIN code - The security code used to unlock the keypad. The parameter is located under Settings > Locks.

2) Open the Device Manager.

3) Select the Numbers tab and select the handset you want to save as a template.

4) Right-click and select "Use as a template...". Enter a descriptive name for the template.

5) The **Edit template** window is opened. By default, all parameters are selected and are saved when clicking "OK". If one or more parameters should be excluded, remove them by clearing the check box next to the parameter.

6) Click "OK".

> When the Edit template window is opened from the "Use as template" command, an extra drop-down list is shown in the bottom left corner. This setting decides which parameters that shall be copied from the Number. If "All parameters" is selected, the synchronization time will be longer.

It is also possible to create a template from a handset that is online but not stored in the database. The template will contain all parameters for the device except for those that are Number specific.

Rename a template

1) Select the "Templates" tab.

2) Select the template you want to rename. The selected row is highlighted.

3) In the Template menu, select "Rename..." or right-click and select "Rename...". The **Rename template** dialog opens.

4) In the Rename template dialog, enter a new name in the **New name** text field.

5) Click "OK". The dialog window closes and the new name appears in the list.

Copy a template

1) Select the "Templates" tab.

2) Select the template you want to copy. The selected row is highlighted.

3) In the Template menu, select "Copy..." or right-click and select "Copy...". The **Copy template** dialog opens.

4) In the dialog window, enter a new name in the **New name** text field.

5) Click "OK". The dialog window closes and the new template appears in the list.

Edit a template

1) Select the "Templates" tab.

2) Select the template you want to edit. The selected row is highlighted.

3) In the Template menu, select "Edit..." or right-click and select "Edit...". The Edit template window opens.

4) In the **Edit template** window, edit the parameters that shall be edited.

5) Click "OK".

Delete a template

1) Select the "Templates" tab.

2) Select the template you want to delete. The selected row is highlighted.

3) In the Template menu, select "Delete", or right-click and select "Delete", or press the Delete button. The **Delete template** dialog opens.

4) Click "Yes". The dialog window closes and the template is deleted.

Upgrade a template

In order to upgrade a template, the new parameter version must have the same major version as the old parameter version. For example, upgrading from 25.8 to 25.9 works, but not upgrading from 25.8 to 26.x.

1) Select the "Templates" tab.

2) Select the template you want to upgrade. The selected row is highlighted.

3) In the Template menu, select "Upgrade..." or right-click and select "Upgrade...". The **Upgrade template** dialog opens.

4) Select the parameter version to upgrade to.

5) Click "OK". The template is upgraded and the dialog window closes

Apply a template

1) Select the "Templates" tab.

2) Select the template you want to use. The selected row is highlighted.

3) In the Template menu, select "Apply to..." or right-click and select "Apply to...". The Apply template window opens.

4) If needed, select search parameters or click "Show all".

5) Select Number(s) to apply the template on.

6) Click "OK". The template is applied and the dialog window closes.

Numbers

Create New Numbers

1) Select the "Numbers" tab.

2) In the Number menu, select "New...". Alternatively, right-click in the **Numbers** list and select "New...".

3) In the **Device type** drop-down list, select device type.

4) In the **Parameter version** drop-down list, select the parameter version.

5) In the **Template** drop-down list, select template to run on the Number. This is optional and therefore "None" can be selected.

6) In the **Prefix** field, enter the Number's prefix (if needed).

7) Select one of the following options:

- To create a single Number, select the **Single** option and enter the call number. Click "OK".
- To create a range of Numbers, select the **Range** option. Enter the start call number, end call number, and click "OK".

> The maximum range that can be added at a time is 100 Numbers.

Save a Number to Database

An online device can be saved to the database.

1) Select the "Numbers" tab.

2) Select the Number.

3) In the Number menu, select "Save". Alternatively, right-click the Number and select "Save"

> An online device can automatically be enabled and saved (default).

Enter/Edit Description of a Number

It is possible to enter information about a Number. For example, the user of the number or the location of the device.

1) Select the "Numbers" tab.

2) Select the Number.

3) In the Number menu, select "Enter description". Alternatively, right-click the Number and select "Enter description".

4) Enter an appropriate description and click "OK" to save the setting.

Manage Certificate for a VoWiFi Handset

> This function is applicable for some VoWiFi handsets only. In addition, the handset must be online in the Device Manager.

Certificate(s) is used for authorizing a VoWiFi handset to access a WLAN system using Extensible Authentication Protocol (EAP).

There are two types of certificates: Root certificate and client certificate.

The VoWiFi handset using the root certificate to control if the WLAN system is trusted. If the system is trusted, the handset send its client certificate to show that it is authorized to access and log on the system.

The root certificate contains a public key and can be downloaded to the handset via Device Manager or via WinPDM. The client certificate contains both a public key and a private key and can only be downloaded to the handset via the WinPDM.

The following must be done to be able to use certificates:

- Import certificates to handset, see Edit Certificate on page 44 below.
- Select which client certificate to use by setting a EAP client certificate parameter, see the Configuration Manual for the VoWiFi handset.

Edit Certificate

1) Select the "Numbers" tab.
2) In the Number menu, select "Edit certificates". Alternatively, right-click in the **Numbers** list and select "Edit certificates"

   The following information is displayed:

   - Number of the device
   - Device type
   - Parameter version
   - The online status of the device
   - Imported certificates (if any)

3) Click the corresponding "Edit" button to edit the certificate.
4) Locate the certificate file and click "Open".
5) If the certificate is passport protected, an Enter Password dialog opens. Enter the password and then click "OK".

   A Confirm Certificate windows opens and the following information is displayed:

   - Algorithm of the certificate
   - Validity status of the certificate
   - Validity period of the certificate
   - Issuer of the certificate
   - Authorized users of certificate (issued to).

6) Import the certificate to the device by clicking "Yes".

If needed, repeat step 3 - 5 for editing additional Root-certificates.

View Certificate Details

1) Select the "Numbers" tab.
2) In the Number menu, select "Edit certificates". Alternatively, right-click in the **Numbers** list and select "Edit certificates".

3) Select the certificate to view by clicking the corresponding "Details" button.

A Certificate details window opens, see below, and following information is displayed:

- Algorithm of the certificate
- Validity status of the certificate
- Validity period of the certificate
- Issuer of the certificate
- Authorized users of certificate (issued to)

Remove Certificate

1) Select the "Numbers" tab.

2) In the Number menu, select "Edit certificates". Alternatively, right-click in the **Numbers** list and select "Edit certificates".

3) Select the certificate to remove by clicking the corresponding "Remove" button.

4) A Remove certificate window opens. Click "Yes" to remove the selected certificate.

The certificate is now removed from the handset.

Parameter Transfer between a Device and the Device Manager

When a device is connected, it is synchronized with the associated Number in the Device Manager, see Synchronize a Device on page 48.

> When parameters have been edited and the device is synchronized, only the edited parameters will be sent to the device.

Edit Parameters

The **Edit parameters** window shows the set of parameters relevant to the Number that is being edited. The parameter groups are organized in a tree structure in the left pane, with the parameters in the current node in the right pane. The parameter list has one column with the parameter name, and another column shows the parameter value. This can be for example a numerical value, a boolean value, or text. Clicking the 🔵 icon will give a short description of the selected parameter.

1) Select the "Numbers" tab. The **Number** view opens.

2) Select the Number. The selected row is highlighted.

3) Click "Edit" in the **Number** menu. Alternatively, right-click and choose "Edit", or double-click the Number.

The **Edit Parameters for <Number>** window opens, where <Number> is the ID of the current Number.

4) In the left pane, select parameter.

5) On the **Value** row, make the changes.

When a parameter has been edited, the name of the node to which the parameter belongs changes to a blue color. (Click "Cancel" if you want to undo all parameters edited since your last save and return to the main window.)

6) Click "OK" to save the changes.

> When you save the parameters, they are automatically sent to the device if it is online.

Run a Template to set Parameter Values

If a template has been created for a device type, it can be used to set the parameter values for a range of devices, or a single device. The command to use is Run template.

1) Select the "Numbers" tab. The **Number** view opens.
2) Select the Number(s) you wish to run the template on.
3) In the Number menu, click "Run template...". Alternatively, right-click the Number in the **Number** list and select "Run template..." from the menu that opens. The **Run template** window opens.
4) Select a template from the **Template** list.
5) Click "OK".

   If the parameters in the database have been edited but not yet sent to the device it is indicated with "Not synched" or "Update queued".

If the Number has not been associated with a device, it is now possible to do so. Connect a device and associate it with a Number in the database. The parameters will automatically be sent from the Device Manager to the device. See Associate a Number with a Device on page 46.

Associate a Number with a Device

Before being able to synchronize parameters between the Device Manager and a device, it is necessary to associate a Number with the device. It is possible to enter several Device IDs in advance and to associate them with a Number at a later moment.

See also Assign a Number to a device on page 49 and Add a new Device on page 49.

1) Select the "Numbers" tab.
2) In the Number menu, select "Associate with device...". The Associate Number dialog opens.
3) Select the device you want to associate with in the list.
4) Click "OK".

If the selected device is online, it will immediately be updated with the selected Number. If the selected device is not online, it will be updated the next time it is online.

It is possible to associate several Numbers with several devices simultaneously.

Delete a Number in the Site Database

1) Select the "Numbers" tab.
2) Select the Number you want to delete. The selected row is highlighted.
3) In the Number menu, select "Delete" or right-click and select "Delete".
4) Click "Yes" in the **Delete Number** dialog.

The dialog window closes and the Number is deleted from the list.

Rename a Number

1) Select the "Numbers" tab.
2) Select the Number you want to rename. The selected row is highlighted.
3) In the Number menu, select "Rename..." or right-click and select "Rename...". The Rename number dialog opens.
4) In the "New prefix" field, enter a new prefix (if needed)
5) In the "New number" field, enter a new Number.
6) Click "OK". The dialog window closes and the new Number appears in the list in the Numbers tab.

Copy a Number

When a Number is copied, the parameter settings and device type for that Number will be copied to a new specified Number.

1) Select the "Numbers" tab.

2) Select the Number you want to copy. The selected row is highlighted.

3) In the Number menu, select "Copy...", or right-click and select "Copy...". The Copy Number dialog opens.

4) In the "New prefix" field, enter a new prefix (if needed).

5) In the "New number" field, enter a new Number.

6) Click "OK". The dialog window closes and the new Number appears in the list in the Numbers tab.

Import Contacts

> The number for the handset must be saved, see Save a Number to Database on page 43.

Import Contacts From File

> A file containing contacts can be imported to Device Manager and synchronized with handsets. When importing a contacts file, the contact entries (if any) in the handset will be replaced by the entries in the file.

1) In the Device Manager, select the Numbers tab.

2) Select a number.

3) In the **Number** menu, select Import contacts > From file. Alternatively, right-click the device and select Import contacts > From file from the menu that opens.

4) Find and select a file containing contacts (.txt or .csv. Click "Open".

The contacts in the imported file are synchronized with the handsets.

Import Contacts From Number

This feature enables transfer of contacts from one handset to another handset that has been saved in the Device Manager.

> When importing number, the contact entries (if any) in the handset will be replaced by the imported numbers.

> Company phonebook contacts included in the Call contact list are not transferred to the other handset using this feature. To upload the Company phonebook, see Upload Company Phonebook on page 56.

1) In Device Manager, select the Numbers tab.

2) Select a number.

3) In the Number menu, select "Import contacts" > "From number". Alternatively, right-click the Number in the Number list and select "Import contacts"> "From number" from the menu that opens.

4) Select a number.

5) Click "OK". The contacts are now imported to the handset.

Export Contacts to a File

Contacts can be exported from a handset to a csv-file. The contacts can then be transferred to another handset by importing the file, as described in Import Contacts on page 47.

1) In the Numbers tab, select the handset whose contacts you want to export.
2) In the Number menu, select "Export contacts". Alternatively, right-click the handset and select "Export contacts" from the menu that appears. An **Export contacts** window opens.
3) Enter a descriptive file name and click "Save".

Devices

A device can be a handset or charger developed to work together with the Device Manager. See the user manual for respective device.

All work with devices is performed from the **Devices** view.

• Devices can be added by connecting the device to the system, or use the "Add device" function.
• The information for a Number from one device can be transferred to a new device.
• Devices can be reset to factory settings.
• Devices can be updated with new software.

Add Devices

> Before connecting a device to the Device Manager, make sure the connection is set up according to the instructions in the device´s User Manual.

If a range of new devices are to be added, the easiest way is to:

1) Create a template with all common parameter settings. See Create a Parameter Template on page 41.
2) Add a range of Numbers and run the template. See Create New Numbers on page 43 and Run a Template to set Parameter Values on page 46.
3) Edit the parameters and change individual settings. See Edit Parameters on page 45.
4) Connect the devices and associate them with the Numbers in the database. See Associate a Number with a Device on page 46.

A single device can be added in the same way.

Synchronize a Device

When parameters have been changed in a device, the device is synchronized with the Number saved in the database. During the synchronization, changed parameters in the device are uploaded to the Device Manager, and parameters changed in the Device Manager are sent to the device.

If a parameter has been changed in both the device and the Device Manager, the setting made in the Device Manager will take precedence.

1) When a device is connected to the system running the Device Manager, and if the Number is saved, and it has a parameter definition, the device is automatically synchronized.

While synchronizing, a progress bar and a text is shown in the Numbers view.

Delete a Device

1) Select the "Devices" tab.

2) Select the device you want to delete. The selected row is highlighted.

3) In the Devices menu, select "Delete" or right-click and select "Delete".

4) Click "Yes" in the **Delete Device** dialog.

The dialog closes and the device is deleted from the list.

> A device that is online cannot be deleted.

Replace a Device

If a device shall be replaced with a new device, it is possible to transfer its associated Number including settings to the new device. The new device must be of the same device type as the old one.

1) If the device to be replaced is still working, make sure that it is synchronized.

2) Shut off the old device or make a factory reset.

3) Connect the new device to the Device Manager.

4) Associate the new device to the Number associated to the old device according to the instructions in Associate a Number with a Device on page 46. The Number will no longer be associated with the old device.

Add a new Device

It is possible to enter several new Device IDs in advance into the Device Manager for later association.

In order to simplify input when handling many devices a bar code reader can be used. The bar code reader should send a carriage return after each item, but it is not necessary. If carriage return is not sent, it is necessary to click "Create" after each read item.

1) Select the "Devices" tab.

2) In the Device menu, select "Add device". The **Create devices** dialog opens.

3) Select Device type and Parameter Version.

4) Enter a Device ID for the device, manually or by using a bar code reader.

5) The "Continuous registration" box can be used to select whether the "Create devices" dialog shall close after clicking "Create" or if it shall still be open.

6) If the bar code reader does not send carriage return, click "Create".

7) Repeat 4 to 6 if more devices are to be created, otherwise click "Close".

Assign a Number to a device

It is possible to assign a Number to a device that has not yet been assigned a Number in the Device Manager. This feature can be used if parameters have been changed on the device prior to connection to the Device Manager.

> Assign shall not be done on a device that already has a Number.

1) Select the "Devices" tab.

2) Select the device you want to assign a Number for.

3) Select Device >Assign number in the menu. A new window opens.

4) Enter a new number in the New number field. New prefix is optional. Click "OK".

The new Number appears in the list in the Numbers tab.

> Some devices need to be restarted for the new numbers to be shown.

Enter/Edit Description of a Device

It is possible to enter information of a device. For example, the description can be used to describe a location of a device.

1) Select the "Device" tab.
2) Select the device.
3) In the Device menu, select "Enter description". Alternatively, right-click the device and select "Enter description".
4) Enter an appropriate description and click "OK" to save the setting.

Factory Reset

Factory reset means that the device parameters will be reset to factory settings. The Number in the database that is associated with the device will not be affected.

> The device must be online.

1) Select the "Devices" tab.
2) Select the device(s) to be reset.
3) Click "Factory reset" in the **Device** menu. Alternatively, right-click on the device and select "Factory reset".
4) A message saying "Do you want to reset the selected device(s) to factory defaults?" will appear.
5) Click "Yes".

Licenses

Device licensing offers a possibility to view, manage and upgrade licenses of devices. In the Licenses tab, devices are listed. If a device is selected in the list, the status of the license options for the selected device is displayed.

Note that some tasks include using the license web and the details of how to work with the license web are not described here.

The following features are described:

- Upgrade licenses, "Import" and "Export"
- Manual synchronization of licensing information, "Refresh"
- Move license from one device to another
- View license options

The following licensing features are not done with the Device Manager and are therefore not described in this document:

- How to work with the license web
- How to purchase licenses
- Manual license upgrade in the handset

License Upgrade alternatives

License upgrade includes using the license web.

These are the alternatives for upgrading licenses on devices:

- Automatic license upgrade Used when the WSG has an Internet connection to the license server, see Automatic License upgrade on page 51.
- License upgrade using export/import Used when the WSG does not have an Internet connection, see Export and Import Licensing information on page 51.
- Manual license upgrade Used to enter the license key manually in the handset, see the configuration manual for the corresponding handset. In this case, the WSG is not used.

Automatic License upgrade

> This feature requires an Internet connection. The communication is done via HTTPS and normally via port 443.

The first time a device logs in to the Device Manager, the WSG asks the license server for the latest license for the device. When the device logs in at a later time, there is no automatic check for licenses. If changes have been made, a manual upgrade must be done by selecting Refresh, see Refresh License on page 53.

In order to get a purchased license for a device, a connection with the license server is made. The WSG automatically receives the serial number from the device, sends it to the license server which returns a license key that the WSG sends to the device. The device upgrades and the correct license information is shown in the WSG and the device.

Export and Import Licensing information

In order to upgrade licenses on devices when the WSG does not have an internet connection to the license server, the following is done:

- The information needed for licensing of a device is exported from the Device Manager to a file, see Export Licensing information on page 51.
- The file is used to purchase license upgrades on the license web.
- From the license web, a license file containing the license keys for the device is generated
- The license file is imported to the Device Manager, see Import Licenses on page 51
- The Device Manager communicates the license key (included in the license file) to the device
- The device upgrades according to the license options

Export Licensing information

The information needed for licensing of a device can be exported to a file. This file can be used to generate licenses for the device.

1) Select the licenses tab.
2) Select the device(s) that shall be licensed.
3) In the License menu, select "Export". The Export devices for licensing window opens. Select a proper name for the file and click "Save" to save the file.

Import Licenses

After a license has been purchased, a file containing the license information can be generated from the license web. This license file can be imported to the Device Manager.

1) In the File menu, select Import > "Licenses...". A File Browser window opens.
2) Select the license file(s) to be imported (*.xml).

3) Click "Open".

The license file(s) are imported.

View License options

It is possible to view which license options that exist on a device.

1) Select the License tab.
2) Select a device.

In the bottom of the work area, the available license options of the device are listed and whether the options are enabled or not.

Filter License options

It is possible to search and select devices which have same license options. The selected devices can be upgraded with additional licenses by exporting a product information file to the License Web (see Export Licensing information on page 51). The advantage to select devices with same license options is that additional licenses can be applied for the devices simultaneously.

1) Select the License tab.
2) Click "Advanced find". A dialog window opens.
3) Under Device types, select device(s).
4) Under Option filters, select the status of the license option(s) that shall be common for the selected devices.

- Ignore - show all devices independent of license options.
- Enabled - show devices with a certain license option enabled.
- Disabled - show devices with a certain license option disabled.

The search result is updated directly when selecting devices and license options. In addition, the ![icon] icon is also displayed next to the Advanced find button to indicate that the search result is filtered.

5) When clicking Close, the filtered search result will still be displayed. When clicking Reset, the filter is removed and all devices are displayed.

Move License

This feature requires a license that supports the move license feature, and it also requires a connection to the license server.

It is possible to move a license from one device to another if the devices are of the same type. A move license command can only be done to an unlicensed handset of a device type supporting licensing.

Tip: See also the handset's Configuration Manual for more information on which handsets that support this feature.

An example of when to use the Move license command is when you have a handset with a broken display and another spare handset. Use the Move license command to move the license from the broken one to the other handset. The broken handset can now be sent for service.

1) Select the "Licenses" tab.
2) Select the device whose license shall be moved. The selected row is highlighted.

3) In the License menu, select "Move license..." or right-click and select "Move license...". The Move license window opens.

4) Select the device that shall receive the license. Click "OK".

If no devices are shown in the Move license window, there are no devices that are selectable to move the license to.

The device type of the handset that received the license, is still unchanged in the Device Manager. Select this handset and do the following:

5) In the Licenses menu, select "Refresh" to complete the transfer of the license. The device type of the handset is now updated in Device Manager.

Refresh License

If a device is already registered in the Device Manager and new license has been purchased from the license web, the information needs to be updated. By doing a Refresh, the device license information in WSG is synchronized with the information in the license server and transferred to the device.

> This feature requires a connection to the license server.

1) Select the License tab.

2) Select device(s).

3) In the License menu, select "Refresh". The correct license is fetched from the license server, sent to the device and displayed in the Device Manager.

Remove Devices from the License View

This command removes devices from the Licenses tab view.

1) Select the "Licenses" tab.

2) Select the device(s) that shall be removed from the list. The selected row(s) are highlighted.

3) In the License menu, select "Delete" or right-click and select "Delete".

4) Click "Yes" in the **Remove device** dialog. The dialog closes and the device is removed from the list.

File management

This chapter covers file management for parameter definition files, software files, language files and company phonebook files.

Import and export of templates and Numbers is described in Import/Export Numbers and Templates on page 58. Import of translation files is described in Administration of Language and User Interfaces on page 76.

The parameter definition file holds the definitions of all parameters for a specific version of a Number's parameter set. Updated software and new parameter definition files for devices and Numbers can be added to the Device Manager, see Import Parameter Definition Files on page 54 and Import new Software for Devices on page 55.

If there is a naming conflict when importing, a warning message is displayed.

Definition File Version – Parameter Version

Both definition files and device software include parameters and are indicated by a version number.

> The version of the definition file matches the version of the device software.

If a device is updated with a new parameter version it does not always demand a new definition file. An old definition file can often be used but if new parameters have been added in the new parameter version, these parameters will not be editable. The release note will tell you if a new definition file is needed to match the new parameters.

Example

If a parameter version for a Number is 2.5, then a parameter definition file with a version between 2.0 and 2.5 is required.

Import a Package File

A package file may include different types of files, such as software files, parameter definition files and/or template files. If the package does not include a certain file, it can be imported separately. See Import Parameter Definition Files on page 54, Import new Software for Devices on page 55, and/or Import Templates on page 58.

1) In the File menu, select "File management".
2) Select the Parameter definition tab or Software tab and click "Add".
3) Select the package file (.pkg) to be imported and click "Open".

   The files included in the package are now imported. If needed, select the Parameter definition tab or Software tab to view the corresponding imported files (if any).

   If template(s) has been imported, it can be viewed by clicking "Close" and then selecting the Template tab.
4) Click "Close".

Import Parameter Definition Files

Updated parameter definition files are distributed by your supplier.

> Parameter definition files (.def) are mainly included in package files (.pkg) distributed by your supplier, see Import a Package File on page 54.

1) In the File menu, click "File management". The File management window opens.
2) Click the Parameter definition tab.
3) Click "Add". The Import files window opens.
4) Select the definition files to be imported. Only files with a corresponding extension are shown, such as .def and .pkg.
5) Click "Open".
6) Check that the newly imported definition files appear in the list.
7) Click "Close".

If a definition file for a certain device type already exists in the database and an attempt is made to import a definition file with the same parameter version but with a lower revision, the file will not be imported. But if a new definition file with the same parameter version with a higher revision is imported, the old file will be replaced with the new imported file.

For each update of a parameter definition file, the revision is increased. An update does not necessarily affect the parameter version.

The following columns are displayed:

- Device type – the device model.
- Revision – the revision number of the definition file. Used to determine which definition file is the most recent.
- Parameter version – shows the version of the parameters in the definition file. Used to determine compatibility with device software.
- File – the name of the imported definition file.

Import new Software for Devices

Updated software files are distributed by your supplier.

> Software files (.bin) are mainly included in package files (.pkg) distributed by your supplier, see Import a Package File on page 54.

1) In the File menu, click "File management". The File management window opens.
2) Click the "Software" tab.
3) Click "Add". The Import files window opens.
4) Select the software files to be imported. Only files with a corresponding extension are shown, such as .bin and .pkg.
5) Click "Open".
6) Check that the newly imported software files appear in the list.
7) Click "Close".

Import Language files for Devices

For adding a new language to a device, a language file (.lng) distributed by your supplier must be imported to the Device Manager and then uploaded to the device.

1) In the File menu, click "File management". The File management window opens.
2) Click the "Language" tab.
3) Click "Add". The Import files dialog opens.
4) Select the language files to be imported.
5) Click "Open".
6) Check that the newly imported language files appear in the list.
7) Click "Close".

To apply the language for a device, see Upload a Language to a Device on page 56.

Import Company Phonebook files

It is possible to import a phonebook file for later use.

1) Select File > File management, in the menu. A new window opens.
2) Click the "Company Phonebook" tab.
3) Click "Add". The Import files dialog opens.
4) Select the company phonebook files to be imported.
5) Click "Open".
6) Check that the newly imported company phonebook files appear in the list.
7) Click "Close".

Upload a Language to a Device

A language can be uploaded to portable devices that support Language Upload. Note that upload of languages is not available in demonstration mode.

1) Select the "Devices" tab.
2) Select the device(s) to upload a language to. It is possible to select several devices, but only devices of the same Device Type can be selected.
3) Select Device > Upload Language, in the menu. A new window opens.
4) Do one of the following:

   • If needed; import the language file (.lng) to be used by clicking "Import...", locate the file, and click "OK". In the Available files: drop-down list, select which language to upload.
   • Enter the URL where the language file is located.
5) Click "OK". The language is uploaded to the device.

Upload Company Phonebook

It is possible to upload a company phonebook to portable devices that support Company Phonebook Upload.

Upload of Company Phonebook is not available in Demonstration mode.

1) Select the "Devices" tab.
2) Select the handsets to upload a company phonebook to. It is possible to select several devices, but only devices of the same Device Type can be selected.
3) Select Device > Upload company phonebook, in the menu. A new window opens.
4) Select which company phonebook to upload.
5) Click "OK". The company phonebook is uploaded to the device.

Upgrade a Device with new Software

Devices can be upgraded with new software. Note that upgrade of device software is not available in demonstration mode.

1) Connect a device to the system.
2) Select the "Devices" tab.
3) Select device(s) to upgrade in the list. A selected row is highlighted. It is possible to select several devices, but only devices of the same Device Type can be selected.

> A software upgrade should be done on one device to start with. If successful, the remaining devices can be updated in one operation.

> By using Ctrl and/or Shift several devices can be selected simultaneously.

4) Select Device > Upgrade software, in the menu. Alternatively, right-click and choose "Upgrade", double-click the desired device, or click the "Upgrade" button in the toolbar. The **Upgrade software** window opens.

5) In the Upgrade software window the following fields are shown:

- Device type – shows the model of your device.
- Imported area:

    – **Available files** contains previously imported software files (see Import new Software for Devices on page 55); the latest used software file is selected by default.
    – **Enter URL** text field gives you a possibility to enter a path to a URL.
    – **Import...** is used to import new software.
- Upgrade area:

    – **Immediately** will start upgrade immediately
    – **Later** will start a scheduled upgrade on the specified date and time
- Activate new software area:

    – different selections depending on when the new software shall be activated (Immediately, When idle, When idle in charger or After manual restart).

6) If the software to be used for software upgrade is not available, it needs to be imported. If so, click "Import...". The Import software dialog opens. Locate the file and click "Open". The file is imported to the Device Manager. It is recommended to use Enter URL:[2] if the software is stored on an external server and should not be imported to the Device Manager.

7) Select software to be used in the upgrade in the **Available files** text box.

8) Click "OK". The **Upgrade software** window closes.

The software will be downloaded to the device. For some device types, a progress bar in the Status column for the device shows the progress of the download.

To cancel the upgrade, click "Cancel upgrade" in the **Device** menu. Alternatively, right-click the device in the device list and select "Cancel upgrade".

The device will restart automatically after a successful download.

A switched off device is upgraded when restarted.

Delete Parameter Definition Files

1) In the File menu, click "File management". The **File management** window opens.
2) Click the Parameter definition tab.
3) Select the definition files to be deleted.
4) Click "Delete".
5) In the Delete files dialog, click "Yes".
6) Click "Close".

Delete Software

1) In the File menu, click "File management". The **File management** window opens.
2) Click the Software tab.
3) Select the software to be deleted.
4) Click "Delete".
5) In the Delete files dialog, click "Yes".
6) Click "Close".

---

2 It is recommended to open a web browser and enter the URL (for example http://myserver/kathy_v1.5.7.bin). Make sure that the web browser asks you to save or open the correct file. Copy the URL and paste it in the Upgrade software dialog.

Delete Language File for Devices

1) In the File menu, click "File management". The **File management** window opens.

2) Click the Language tab.

3) Select the language to be deleted.

4) Click "Delete".

5) In the Delete files dialog, click "Yes".

6) Click "Close".

Delete Company Phonebook File

1) In the File menu, click "File management". The **File management** window opens.

2) Click the Company Phonebook tab.

3) Select the company phonebook to be deleted.

4) Click "Delete".

5) In the Delete files dialog, click "Yes".

6) Click "Close".

Import/Export Numbers and Templates

This section describes import and export of Numbers and templates.

The purpose of importing and exporting Numbers and Templates is to be able to move Numbers and Templates to another site or to use at a later time. It is also possible to move between PDM Windows Version and Device Manager.

The parameter configuration in Numbers can be exported to a file. This file can be used by the supplier to pre-program devices before delivery to the customer.

If there is a naming conflict when importing a template, the new template is imported and the old template is deleted. If there is a Number conflict when importing Numbers, an error message is displayed.

Import Numbers

1) In the File menu, click "Import > Numbers...". An Import numbers window opens.

2) Select the Number files (*.xcp) to be imported.

3) Click "Open".

4) The number(s) will be imported.

Import Templates

A template may be imported from another system. Updated Template files may be distributed by your supplier.

1) In the File menu, click "Import > Templates...". An Import templates window opens.

2) Select the Template files (*.tpl) to be imported.

3) Click "Open".

4) The template(s) will be imported.

Export Numbers to a File

It is possible to configure Numbers for a site and export the settings to a file. One or several Numbers can be selected.

The exported file can then be used when producing new devices for the customer.

1) Select the "Numbers" tab. The **Numbers** view opens.

2) Select the Number(s) to be exported.

3) In the Number menu, click "Export". The "Export Numbers" window opens. By default the file will be saved in the **My documents** folder with the name EliseSite.xcp. You can select another name and folder.

4) Click "Save".

Export Templates to a File

It is possible to export templates to a file. One or several templates can be selected.

1) Select the "Templates" tab. The **Templates** view opens.

2) Select the template(s) to be exported.

3) In the Template menu, click "Export". The Export templates window opens. By default the file will be saved in the **My documents** folder with the name Templates.tpl. You can select another name and folder.

4) Click "Save".

Device Configuration

Device Management Setup

Device management is used for setting addresses to interfaces that the devices are connected to. The specified interfaces will then inform the Device Manager about all logged in devices.

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration, on the **Configuration** page.

3) Click "Device Management".

Figure 26: The Device Management Page

4) Enter WSG address to the interfaces that the devices are connected to.

5) Click "Activate".

Service Discovery

Service Discovery allows automatic detection of WSG, devices and services on a network without prior configuration. WSG, services and devices that shall belong to a certain WSG must be set to the same domain ID.

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration on the Configuration page.

**3)** Under Other, click "Service Discovery" in the menu on the Advanced Configuration page.

4) In the Domain ID field, enter the Service Discovery Domain ID.

5) Click "Activate"

Parameter setup

Domain ID   [?]   [_____]   [Previous]

                                                 [Factory]

[Activate]   [Cancel]

Figure 27: The Module Settings Page

Additional System Settings

Unite Name Server (UNS)

The UNS in the WSG is used to resolve addresses into complete destinations. The module can be configured to send all requests to the local UNS (stand-alone mode) or to forward all requests to a centralized UNS (forwarding mode). In forwarding mode, the local UNS will only be used if the centralized UNS cannot resolve the address.

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration on the Configuration page.

3) Under Other, click "UNS" in the menu on the Advanced Configuration page

UNS

Operating Mode

Default Category

Alias / Call ID
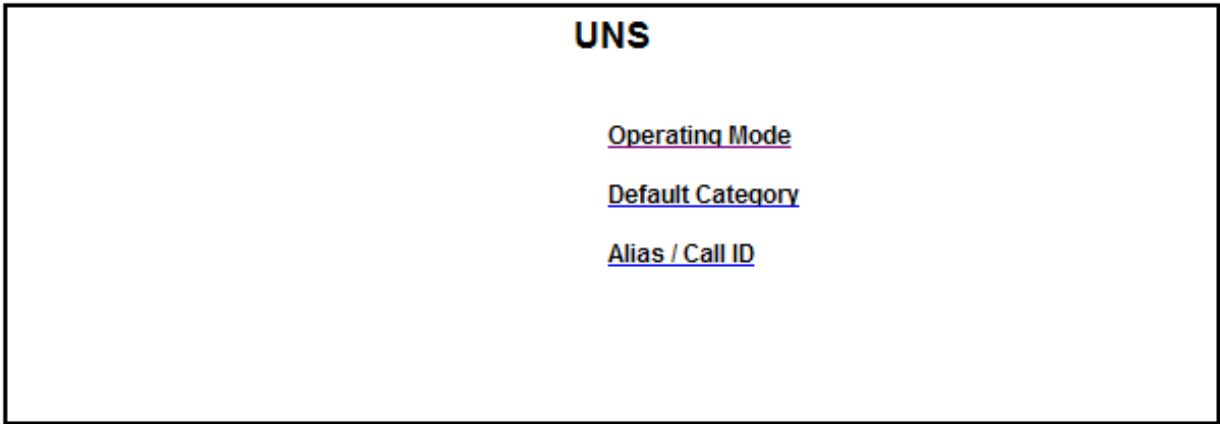
Figure 28: The UNS Page

Operating Mode

Operating mode is changed in systems with a Unite CM only.

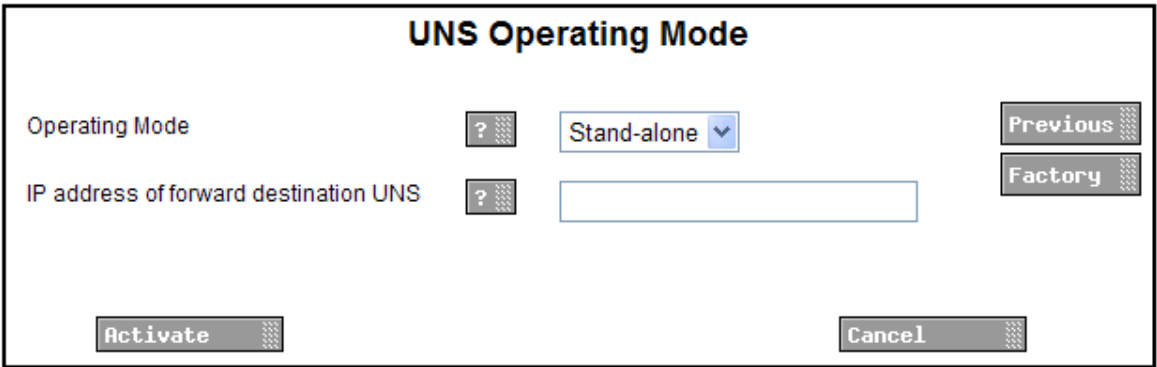**1)** To set Operating mode, click "Operating mode"

UNS Operating Mode

Operating Mode   [?] Stand-alone ▾   Previous

IP address of forward destination UNS   [?] [   ]   Factory

Activate   Cancel

Figure 29: The UNS Operation Mode Page

2) In a system with a Unite CM, set operating mode to Forwarding and enter the Unite CM IP address.

3) Click "Activate".

Default Category

The UNS Default Category is used to decide where messages from the WSG shall be sent. The messaging handler is default set to localhost (127.0.0.1) which is the internal message group handler in the module. This can be changed if you want to use a messaging handler in another module. This parameter is changed for example if your system is connected to another WSG.

1) To set Default Category, click "Default Category"

Figure 30: The UNS Default Category Page

2) Enter values for Messaging handler IP address and Messaging handler service name. (Default service name is DGH which is the internal message group handler.) If you, for example, want to send messages to a WSG connected to a WLAN system, enter the IP address of the module and set messaging handler to WLAN.

3) Click "Activate".

Alias / Call ID

Alias can be used when there are numbers that do not belong to the default category.

1) To set Alias, click "Alias / Call ID"

Figure 31: The UNS Alias/Call ID Page

2) Click one of the link.

UNS Alias / Call ID configuration

Alias / Call ID   [?]   MyAlias   [Previous]

UNITE Address   [?]   1234@192.168.0.1/WLAN   [Factory]

[Activate]   [Cancel]

Figure 32: The UNS Alias/Call ID Configuration Page

3) Enter settings for UNS Alias / Call ID. In this example, a message that is addressed to "MyAlias" will be sent to the handset with extension 1234 in the WLAN system that is connected to the WSG with the address 192.168.0.1.

4) Click "Activate".

Logging

Status information can be stored locally, but can also be sent to a central log. The System Activity Log can store "activities" such as messages, alarms, faults etc. Activity logging is useful for troubleshooting. Default the Status- and System Activity logs are stored locally but they can also be sent to another WSG.

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration on the **Configuration** page.

3) Under Other, click "Logging" in the menu on the Advanced Configuration page.

Log settings

[?]   Status Log
       System Activity Log
       View advanced parameters

Figure 33: The Log Settings Page

4) Click "Status Log", "System Activity Log" or "View Advanced parameters".

5) In the selected log page, enter settings. Click "Activate".

Time Settings

It is possible to select where to fetch the time from, such as a web browser or a time server.

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration on the Configuration page.

3) Under Time, click "Settings" in the menu on the Advanced Configuration page.

Time settings

Time source	[?]	Web browser ▼
Time server address (*)	[?]	0.0.0.0
Fault log (*)	[?]	Yes ▼
Time zone	[?]	(GMT+01:00) Amsterdam, Berlin, Rome, Stockholm ▼
Auto DST adjust	[?]	Yes ▼
Date format	[?]	YYYY MM DD ▼
Date separator	[?]	- ▼
Time Format	[?]	HH:MM:SS ▼
Time push time (HH:MM)	[?]	00:00
* = Only valid when 'Time server' is selected	[?]	

Previous

Factory

Activate   Cancel

Figure 34: The Time Settings Page

4) The following parameters can be set (some of these parameters can also be set in the setup wizard):

- Time source – Where to fetch the time; A-bus, web browser or NTP server
- Time server address – IP address to NTP server
- Fault log – Create fault log for time server faults
- Time zone – Current time zone
- Auto DST adjust – Automatic adjustment for daylight saving time
- Date format – Which date format to use
- Date separator – Which character to use to separate the date fields
- Time Format – Which time format to use
- Time push time – When to update all interfaces within the module

5) Click "Activate".

Manual Time Setting (if Web browser is Time Source)

If Web browser has been selected as time source, the time must be set manually. Otherwise this setting shall not be done. The setting can also be done in the setup wizard.

1) Under Time, click "Set time"

Figure 35: The Log Settings Page

2) Enter date and time.

3) Click "Submit time".

Date and time can also be set in the setup wizard.

Network Settings

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration on the Configuration page.

3) Under Common, click "Network" in the menu on the Advanced Configuration page

Figure 36: The Network Page

4) The following parameters can be set (some of these parameters can also be set in the setup wizard):

- Require network connection – Controls if the module needs a connection to the network to start up. This can be useful if you want configure the module before connecting it to a network.
- DHCP – Controls whether static or dynamic IP address shall be assigned to this Elise module. If DHCP is enabled, only the host name below is applicable.
- IP address – Sets the IP address for the module
- Default gateway – Sets the IP address to a Gateway on the LAN
- Subnet mask – sets the network mask that is to be used. If this parameter is set to 0.0.0.0 it means that the Gateway never will be used.
- Host name
- Domain name – Sets the desired domain name for the module
- DNS Server – Sets the IP address to a DNS if one exists. If no DNS Server is present on the network, set this parameter to 0.0.0.0.
- WINS Server – sets the IP address to a Primary WINS Server if one exists.
- If no WINS Server is present on the network, set this parameter to 0.0.0.0.

5) Click "Activate".

Setting the License Number

The license number is normally set in the setup wizard but it can also be set on the Advanced Configuration page.

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration on the Configuration page.

3) Under Common, click "License" in the menu on the Advanced Configuration page

4) Enter the license number and click "Activate".

Reboot

The module can be rebooted on the Advanced Configuration page.

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration on the **Configuration** page.

3) Under Common, click "Reboot" in the menu on the Advanced Configuration page

4) Click the "Reboot" button.

> If the Reboot page is reloaded, this will trigger another reboot.

Remote Management

A remote connection to a customer site can be established through the WSG. This makes it possible to configure and maintain sites, independent of distance.

To be able to connect remotely, the remote management server in the module has to be configured. The help text buttons in the GUI will give more information about each parameter settings.

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration on the Configuration page.
3) Click "Remote Management" in the menu on the Advanced Configuration page.
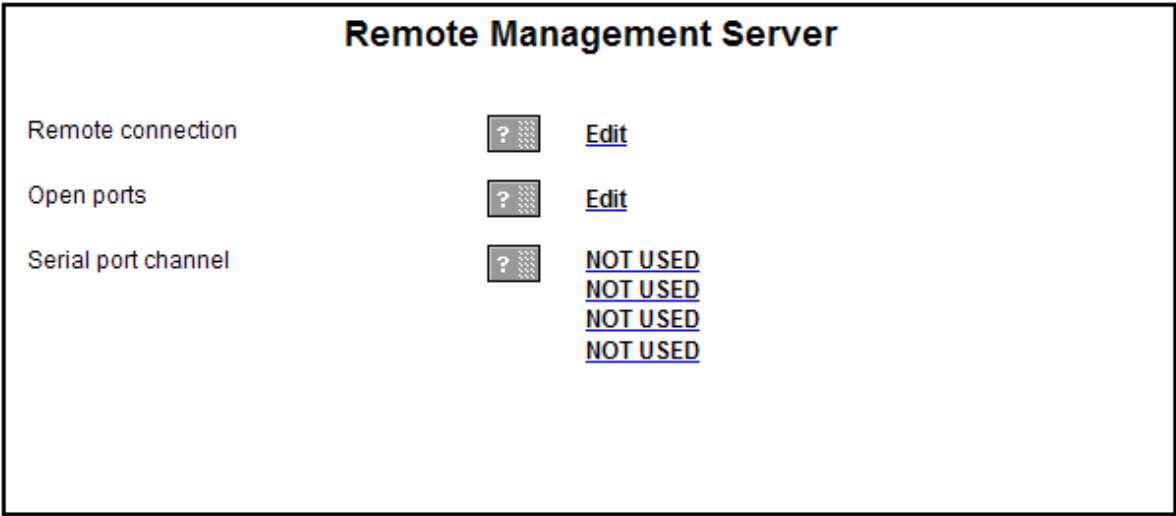
Figure 37: Remote Management Server

Remote connection

1) Click "Edit" for Remote Connection, to set up the connection parameters.
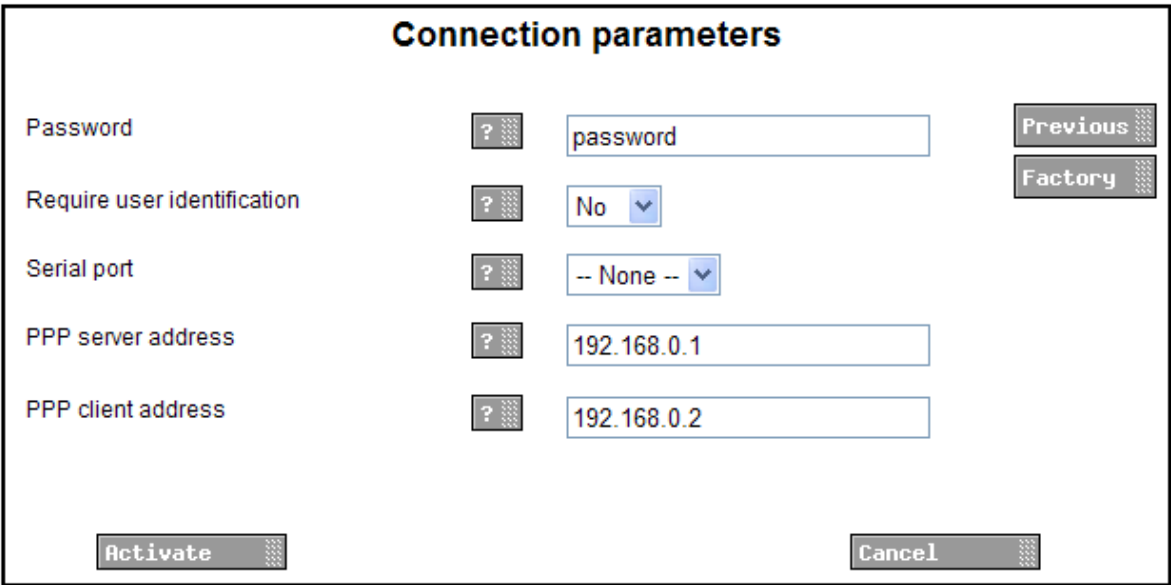
Figure 38: Connection Parameters

2) Set up the connection parameters.

3) Click "Activate".

Open ports

1) Click "Edit" for Open Ports to open any additional ports that are needed for configuration tools. This is a secured setting and before it can be activated it must manually be confirmed by pressing the mode button on the module.

Figure 39: Open Ports

For TCP, port 10101 has to be open.

2) Set up the port parameters.

3) Click "Activate".

4) You will be prompt to confirm the change by pressing the mode button.

5) Press the mode button on the module.

6) Click "Activate" to save the changes.

7) Click the mode button to return to normal mode immediately or wait 10 minutes for the module to return automatically. Any secured setting can be activated within the 10 minutes period.

The module needs to be restarted for the changes to take effect.

Serial port channel

1) Click one of the "NOT USED" links for Serial port channel to set up a new channel.

Figure 40: Serial Port Channel

One serial port channel for each tool has to be set up. Web based configuration tools do not require serial port channels.

2) Set up the channel and click "Activate".

Absence Handling

Absence Handling in the VoWiFi System

See also WLAN Handsets on page 26.

Sort on Handset Status

A list with all handsets can be created.

1) Click "Configuration" on the start page.
2) Select WLAN Portables > List All on the Configuration page.
3) Click the name of the column (in this case, "Status") to sort the list on handset status.

Search on Handset Status

It is possible to search for handsets with selected status.

1) Click "Configuration" on the start page.
2) Select WLAN Portables > Search in the menu on the Configuration page.
3) Enter the optional search parameters Address/Number, IP Address, Hardware ID and Status. To view absent portables, select "All absent" or "Manual Absent".

Open Access Protocol (OAP)

This function makes it possible for customer applications to communicate with other connected systems, for example the Cordless Telephone System. The protocol that is used for communication is called Open Access Protocol (OAP).

Refer to the Function Description for Open Access Protocol (OAP) for more information about the protocol and when it can be used.

Configuration

The Message Distribution lists for the different interfaces have to be configured to send the information to the OAP Server, in order to give the client access to the information. The address of the OAP Server is xxx.xxx.xxx.xxx/OAP.

Configuration Example

The WLAN Interface should be configured to send User Data to the OAP Server.

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu on the **Configuration** page.
3) Under WLAN Interface, click "Message Distribution" in the menu on the **Advanced Configuration** page.
4) Select "Alarm".

WLAN Message Distribution

Alarm
Mobile Data
Availability Info
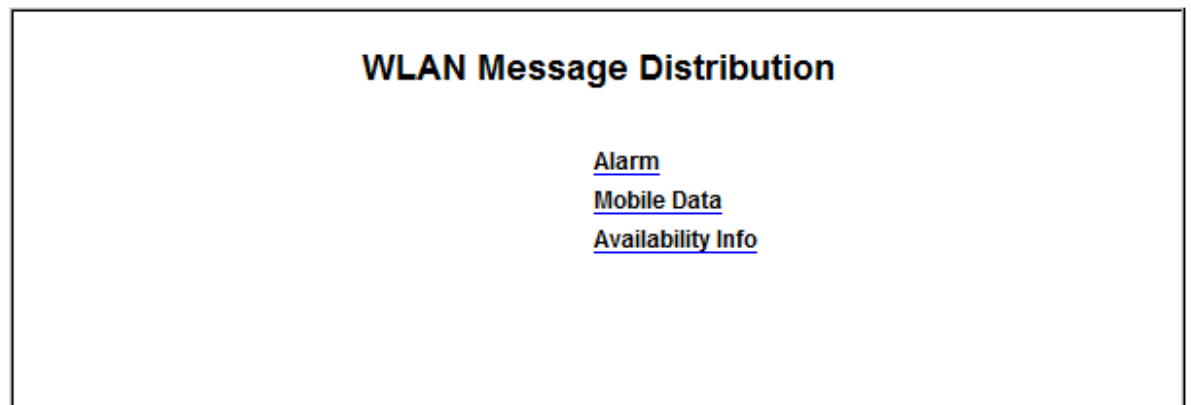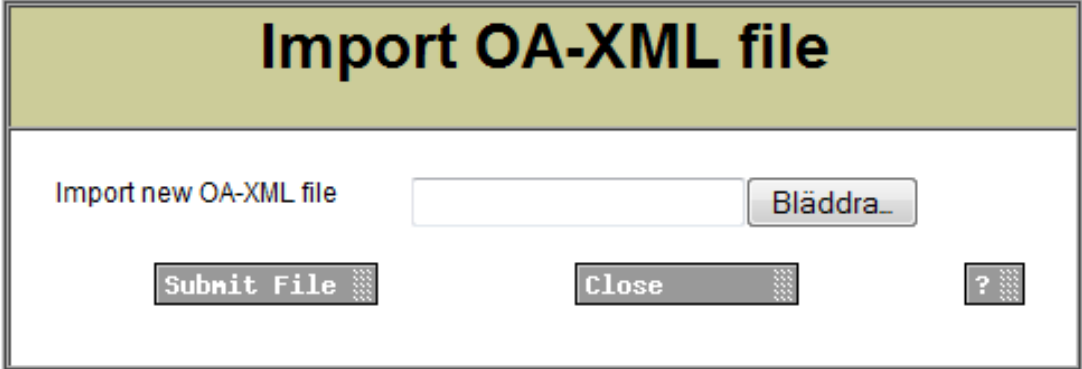
Figure 41: WLAN Message Distribution

5) Enter the address xxx.xxx.xxx.xxx/OAP in one of the address fields.
6) Click "Activate".

Importing a new OA-XML file

It is possible to import new services, and update existing services, by importing a new OA-XML file to the module. The OA-XML description and OA-XML schema documents will also be updated when a new file is imported.

1) Select "OA-XML" in the menu on the System Setup page. The Import OA-XML file opens.

Import OA-XML file

Import new OA-XML file   [_____] Bläddra_

Submit File   Close   ?

Figure 42: WLAN Message Distribution

2) Click "Browse" and locate the file.

3) Click "Submit File".

New services are added to the OAP list on the System Information page. The Protocol version in the list shows the currently installed OA-XML version.

> The new service will only be shown in System Information if there is a valid license for the service.

WLAN Interface

Handset Registration

To be able to register, each VoWiFi handset must be programmed with the IP address of the WSG used, refer to the Configuration Manual for respective VoWiFi handset.

WLAN System

WLAN system handles the VoWiFi handset relogin time and authentication. A handset is considered to be logged out if it has not made a relogin within a certain time. Call diversion display text, Extended activity logging are also enabled in this view.

To find settings for WLAN System, do as follows:

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu in the on the Configuration page.
3) Select "WLAN System" under WLAN Interface in the menu in the on the Advanced Configuration page.

- Handset relogin time The time before a handset must relogin is set in minutes and when this time is exceeded the handset will be considered unreachable. This is the maximum time it takes for a handset to reconnect after installing a new or updating the WSG. Note that a short relogin time implies a higher service/security but it also loads the system.

- Call Diversion Display Text Text specified in the "Call Diversion Display Text" text field is, if enabled, added to the display text when a call diversion takes place. By entering the character "%", the original call ID will be included in the display text on the place where the character is entered. Note that some characters are special characters that are not visible.

- Enable Extended Activity Log Enable Extended Activity Log for intermediate logs.

- Authentication Method The very first time a VoWiFi handset logs in, it must authenticate itself with a password. The password is then stored in the handset for future authentication. The WSG has three authentication alternatives; "Common password", "User server" and "Number as password".

- Common Password A common password can be specified in the WSG, and this password is then used for all VoWiFi handsets in the system. If the common password field is left empty, the handset must send an empty password for authentication.

- Allow Force Login

> The function is only valid when the authentication method is set to "Common password" or to "Number as password". The very first time a VoWiFi handset logs in, it must authenticate itself with a password. The password is then stored in the handset for future authentication. The WSG has three authentication alternatives; "Common password", "User server" and "Number as password".

Forced login allows a user to login with a call number that already is in use. The handset that already is logged in will then be unregistered.

Administration of Language and User Interfaces

All text shown in the user interface is default in English, but a copy of the language can be translated and imported to the module. Several languages can be added. The default English language is not possible to edit or remove. The supplied user interface can also be modified to suit the individual customer requirements concerning functionality.

Basic changes that can be made are:

*   Translate or adapt text (refer to Translate/Edit the Language on page 77)
*   Modify the user interface to suit the customer's image (refer to Customize the User Interface (GUI) on page 81)

    – Limit the number of characters included in the message text.
    – Add company logo and/or modify the GUI to suit the customer's image

The user interface only supports the Latin-1 character set.

For the best screen appearance

Windows standard screen settings, using normal font size, are recommended. The recommended screen resolution is 1024 x 768.

How to edit

The code is thoroughly commented to make it easy to understand, and can be edited with a simple text or HTML editor. Basic HTML, Java Script, and CSS knowledge is recommended.

Do not use an intelligent html editor like Frontpage or Dreamweaver, as it might corrupt the html code.

Customize the Language

Export a Language for Translation/Editing

1) Click "Configuration" on the start page.
2) Select Other Settings > Set language in the menu in the on the Configuration page.

3) Click the "Import/Export Language" button. The Translation page opens.

Translation

Existing languages:

[English](#)

Each language can be exported as an XML file. To create a new language or update an existing, click a language link above to download the file. If a new language should be created, change the language indication in the "language" tag. Translate/Update the text within "translation" and "helptext" tags and save the file. Import the XML file.

Import language file: [_____] [Browse...] [Import]

Enable translation mode: ☐ [Apply]

In "Translation mode" all text will be exchanged with the identification in the language file. This can be used to identify where a text is displayed in the GUI.

Figure 43: The Translation Page

4) Click an existing language link to create or update languages. An XML file is generated and the **File Download** window opens.

5) Save the file for translation or editing purposes. The file can be saved in any name during the translation.

Translate/Edit the Language

In the downloaded language file, there are numerous tags but only the translation of two tags and one attribute are mandatory:

• <language id="English"> The "id" attribute is the text that appears in the drop-down list. Change "English" to the name of your translated language here.
• <translation> Text displayed in menus, on buttons, tabs etc. Translated text can be added inside the tags.
• <helptext> On-line help text. Translated text can be added inside the tags.

Below is an example of a language file (just showing two buttons with help text, for simplicity).

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<translations>
 <language id="English" type="complete">
  <app id="Alarm Manager">
   <text id="ACTION_TYPE_SELECTOR">
    <translation>Action Type</translation>
    <helptext>Select which type of action to take.</helptext>
   </text>
   <text id="ACTIVATE_EHCONF_OK">
    <translation>Activation of configuration OK.</translation>
   </text>
   <text id="ALARM_TYPE_SELECTOR">
    <translation>Alarm Type</translation>
    <helptext>The alarm type that should be triggered. </helptext>
   </text
  </app>
 </language>
</translations>
```

Figure 44: Example of a language file (XML)

Show Pages in Translation Mode

All texts, buttons, menus etc. are identified with labels (for example TEXT_TRANSLATION_TI-TLE). With the translation mode function it is possible to view the label for each button, menu etc. This can be helpful when translating the language file. For not losing one´s bearings during the translation it is a help to open two windows and view one of them in translation mode and the other in normal mode.

1) Select the "Enable translation mode" check box in the Import/Export Language page, and click "Apply".

Translation

Existing languages:

English

Each language can be exported as an XML file. To create a new language or update an existing, click a language link above to download the file. If a new language should be created, change the language indication in the "language" tag. Translate/Update the text within "translation" and "helptext" tags and save the file. Import the XML file.

Import language file: [   ] [Browse...] [Import]

Enable translation mode: ☑ [Apply]

In "Translation mode" all text will be exchanged with the identification in the language file. This can be used to identify where a text is displayed in the GUI.

Figure 45: Translation Page

Translation page in normal view

All the labels on the pages are shown, see example below.

TEXT_TRANSLATION_TITLE

TEXT_TRANSLATION_LANGUAGE_TEXT

<u>English</u>

TEXT_TRANSLATION_EXPORT_TEXT

TEXT_IMPORT_LANGUAGE [   ] [Browse...]
[BUTTON_IMPORT_LANGUAGE]

TEXT_TRANSLATION_CHECKBOX_CAPTION
☑ OPTION_DESIGN_MODE   [BUTTON_SAVE]

TEXT_TRANSLATION_SAVE_TEXT

Figure 46: Translation Page in Translation Mode

To return to standard view:

1) Clear the OPTION_DESIGN_MODE box.
2) Click "BUTTON_SAVE".

Import Language File

When the file is translated, it must be imported to the module.

1) Click "Configuration" on the start page.
2) Select Other Settings > Set language in the menu in the on the **Configuration** page.
3) Click the "Import/Export Language" button. The Translation page opens
4) Click "Browse" to locate the translated file, and then click the "Import" button.

The name of the translated language (the language "id" attribute) will appear as a link in the Existing Language list and can be downloaded for editing purposes.

Delete Language File

On the Translation page, click the ✕ icon to the right of the language you want to remove. Note that it is not possible to remove the default language

Swedish ✕

English

Figure 47: Delete Language File

Select Language

Translated languages (the language "id" attribute) are shown together with the default language "English" in the language drop-down list in the **Language** page.

1) Click "Configuration" on the start page.
2) Select Other Settings > Set language in the menu in the on the Configuration page.

Set language

English ▾ | Temporary | Permanent

Import/Export Language

Figure 48: Set Language

3) Select language in the drop-down list and click "Permanent".

To change language for this session only, that is, for this browser window until closed, click "Temporary".

Customize the User Interface (GUI)

The module has an FTP area with default 50 MB disk space. The disk space can be set in the interval 5 MB up to 150 MB.

The free space can be used for storing files and folders, for example, a customized user interface for sending messages.

Change the Size of the FTP Area

This is a secured setting and before it can be activated it must manually be confirmed by pressing the mode button on the module.

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu on the Configuration page.

3) Under Common, click "FTP area" in the menu on the Advanced Configuration page.

4) Fill in required size between 5 – 150 MB and click "Activate". You will be prompt to confirm the change by pressing the mode button.

5) Press the mode button on the module.

6) Click "Activate" to save the changes.

7) Click the mode button to return to normal mode immediately or wait 10 minutes for the module to return automatically. Any secured setting can be activated within the 10 minutes period.

The module needs to be restarted for the changes to take effect.

Files for Translation/Editing

1) Log on to the module via an FTP client. Note that how to log on can differ between different FTP clients.[3]

Default username is "ftpuser" and default password is "changemetoo". xxx.xxx.xxx.xxx is the host name.

Examples:

- Windows Explorer: fill in "ftp://username:password@xxx.xxx.xxx.xxx" in the address field.
- Firefox: fill in "ftp://xxx.xxx.xxx.xxx" in the address field and log on with "username" and "password".

> When secure mode is enabled, only secure access via HTTPS and FTPES are allowed. HTTP is automatically redirected to HTTPS, and FTP access is not allowed. The FileZilla Client freeware (not included) supports FTPES. See Web Access Security settings on page 15.

The files located in the Start page and Netpage folders, including GIFs and CSS, can be downloaded/copied to a folder on your hard disc.
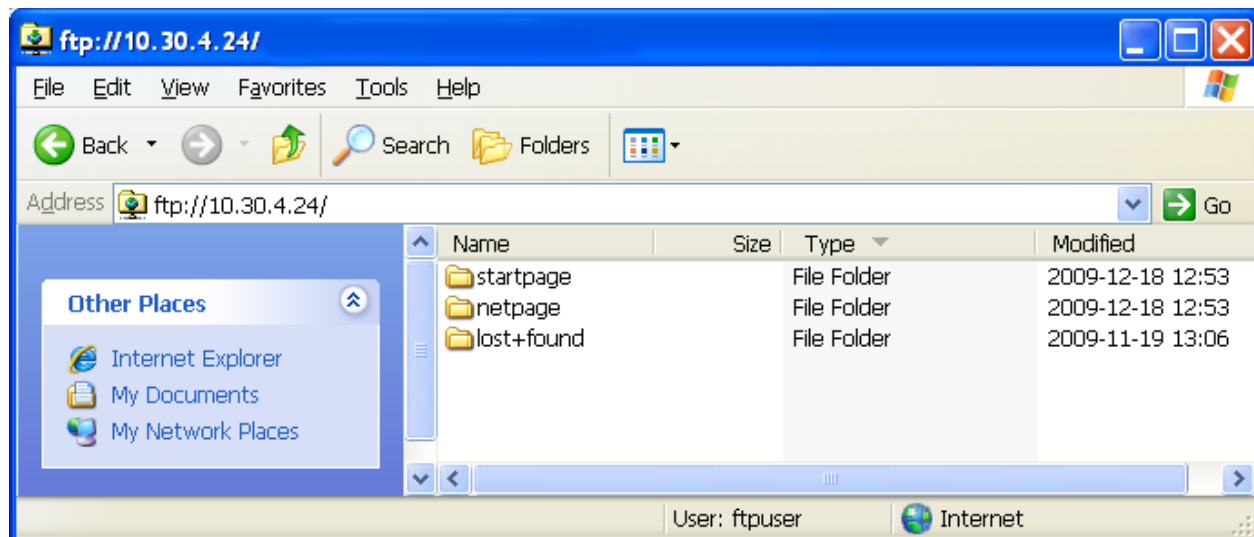
Figure 49: Set Language

---

[3] Internet Explorer is not an FTP client. It can be used for viewing but not for transferring files.
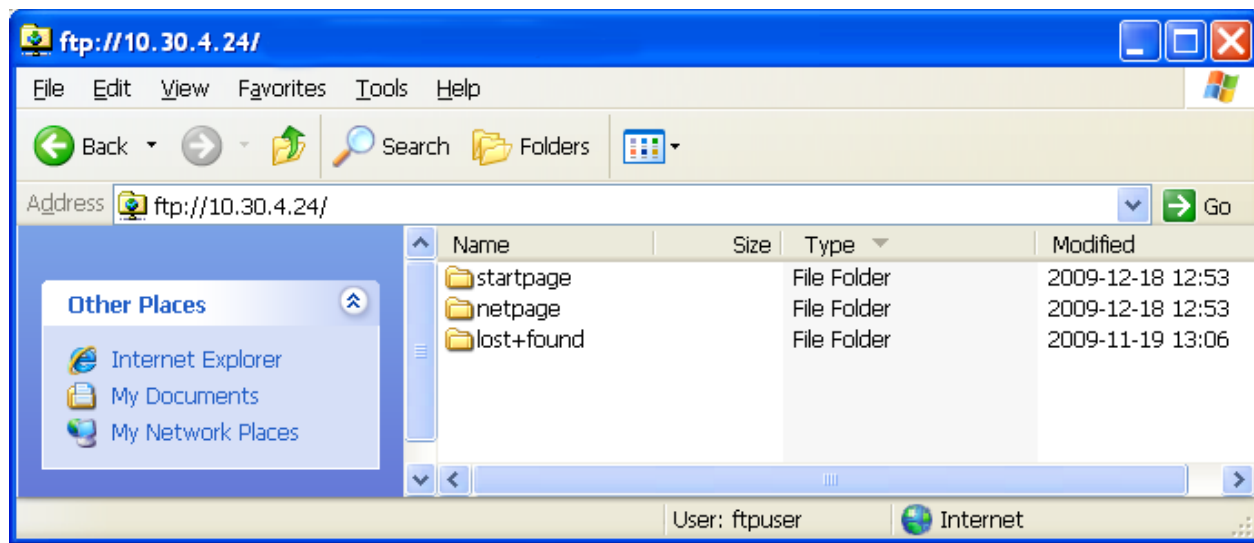
Figure 50: downloaded/copied to a folder on your hard disc.

When restoring NetPage files, the files shall be placed in the same folder.

Default Start Page GUI

A copy of the default Start page is stored in the start page folder on the module's FTP area. The start page copy **index_template,** is an html file that can be copied and edited. The start page can also be replaced with a completely new user interface.
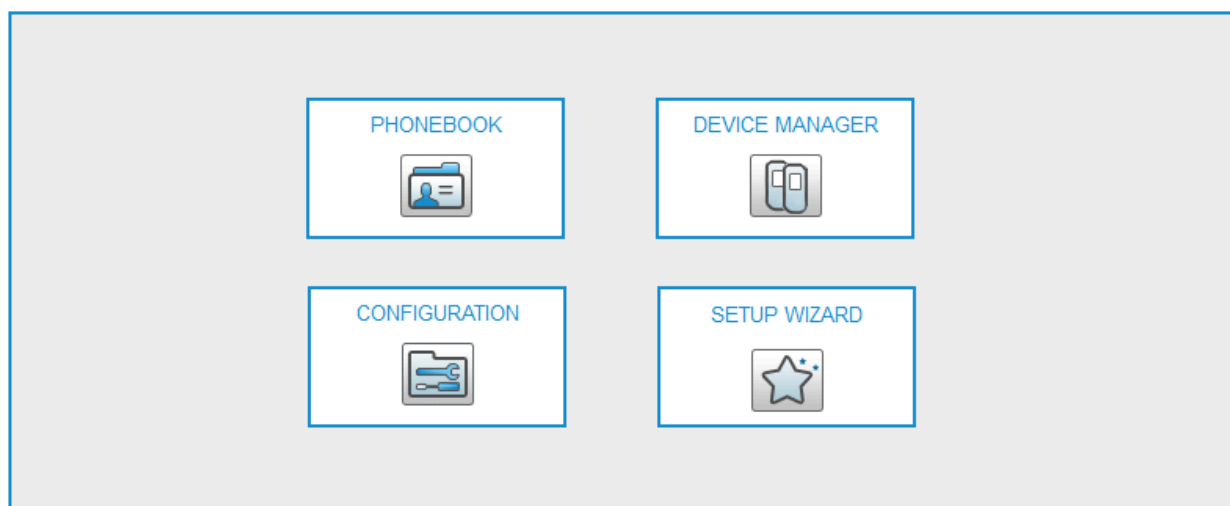
Figure 51: Start page default user interface (index_template)

When the edited or new html file is saved as **index.html** and placed in the Start page folder on the module's FTP area, it will replace the default start page.

Upload the Files to the module's FTP Area

Upload/paste all updated files (including GIFs and CSS) to the FTP area.

> When secure mode is enabled, see Web Access Security settings on page 15, only secure access via HTTPS and FTPES are allowed. HTTP is automatically redirected to HTTPS, and FTP access is not allowed. The FileZilla Client freeware (not included) supports FTPES.

1) Log on with an FTP client. Note that how to log on can differ between different FTP clients.[4]

   Default username is "ftpuser" and default password is "changemetoo". xxx.xxx.xxx.xxx is the host name.

   Examples:

   • Windows Explorer: fill in "ftp://username:password@xxx.xxx.xxx.xxx" in the address field.
   • Firefox: fill in "ftp://xxx.xxx.xxx.xxx" in the address field and log on with "username" and "password".

2) Copy the files and paste them into the FTP area.

Test the New User Interface

It is recommended to test the customized user interface as follows, for example:

• If a company logotype is added, check that it looks all right and that the module opens quickly. If it opens slowly, minimize the picture file size and save it as "interlaced" to decrease wait time for the image.
• Check that all text is correctly translated.
• Check that the phonebook opens and that the entries are correct.
• Send a message.
• Check that the "message history status" is received and displayed.

Update the User Interface after a new Release

When a new version of the module's software is released, there might be changes in the user interface that need to be translated.

1) Import your old translated file to the module that has been updated with new software. New text and buttons in the user interface are shown in English.
2) Click the language file link and save it.
3) Open the file. All tags that are not translated are marked with the comment:

```
<!-- The text identifier below couldn't be translated -->
```
4) Translate the new text and import the translated file again.

---

4 Internet Explorer is not an FTP client. It can be used for viewing but not for transferring files.

Software Administration

Besides the software administration via the module's **Configuration** page, it is also possible to administer the software via the module's Boot Mode GUI. The Boot Mode GUI is typically used if no software is installed on the module or if it is not possible to access the software.

Adding software for devices is done from the Device Manager application.

Upgrade the Boot Software

For instruction on how to upgrade the WSG-HW with new Boot software (autoupdate.bin).

Software Information

All information about the installed software is shown in this view. Two software versions can be installed on the module.

1) Click "Configuration" on the start page.
2) Select Software > Information in the menu on the Configuration page.

   The software name, versions, the date they were installed and also which version that currently is running are shown.

Switch Software

If two software versions are installed on the module you can switch between them.

1) Click "Configuration" on the start page.
2) Select Software > Switch in the menu on the Configuration page.
3) Under Select settings, select one of the following:

   • Keep previous settings — means that the settings last used for the software is activated again after the switch. This option is only available if the software has been used at least one time before.
   • Copy Current settings — means that you copy the configuration from the software you are currently using and is only available if both software are of the same type.
   • Use factory default settings — means that you apply the default settings that were delivered from the factory.

   > The active software's current network settings will be kept and will also be applied to the software you want to switch to.

4) Click "Switch".

Install New Software

It is recommended to always perform a backup before installing new software, see Create a Software Backup on page 86. After the software installation see also Update the User Interface after a new Release on page 84.

Make sure that no Device Manager client is open and it is also important that no ftp client is logged in to the module.

The information stored in the database will not be overwritten when new software is installed. Files in the netpage folder in the ftp area that are new or changed are kept when updating.

> It is not recommended to use the module's Management port when installing software.

1) Click "Configuration" on the start page.
2) Select Software > Installation in the menu on the Configuration page.
3) Select software (.pkg) to upload. The software will replace the not running software.
4) Select "Switch immediately" if you want to run the new software.
5) Select "Copy current settings" if you want the new software to inherit the settings currently used. This selection will have no effect if the software type is different than the currently used software. The module will always start up using factory settings if the software type differs.
6) Click the "Start Installation" button.

Create a Software Backup

It is recommended to now and then create a backup of the software configuration.

1) Click "Configuration" on the start page.
2) Select Software > Installation in the menu on the Configuration page.
3) Click the "Backup" button.

> Note that the backup will contain configuration for the running software only.

Troubleshooting

General Troubleshooting

Log files

When troubleshooting it is always a good idea to examine the log files, since they provide additional information that may prove useful. The first log to examine is the Fault log found under Status on the **Configuration** page, but when reporting an error to your supplier more advanced logs might be needed. Always include the appropriate log file.

To find Info log and Error log:

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu on the **Configuration** page.
3) Click the "Troubleshoot" button on the **Advanced Configuration** page.
4) Click "View Info Log" or "View Error Log".

The module does not Start

To use the module's GUI, the computer must confirm to the requirements. If you do not have the correct software versions installed, contact your system administrator.

Firewall Issues, or No Indication of Connected Device

If there is a firewall between the module and any devices, the firewall may need some configuration to allow communication. See Used IP Ports on page 96 for a description of used ports.

Unable to Access FTP Area

Make sure the client is set in active mode.

Example for Internet Explorer: In the menu, select Tools -> Internet Options... -> Advanced. Under "Browsing", uncheck the "Use Passive FTP (for firewall and DSL modem compatibility)" check box.

When secure mode is enabled, see Web Access Security settings on page 15, only secure access via HTTPS and FTPES is allowed. HTTP is automatically redirected to HTTPS and FTP access is not allowed. The FileZilla Client freeware (not included) supports FTPES.

Device Manager Troubleshooting

Device does not Show Up in the module

If a connected device does not show up as connected in the Devices view, check the status of the interface. Starting up mode is indicated during start of applications. If an application has lost connection to a required resource it is indicated as application problem mode. An Application problem is always shown as a persistent fault in the Status log.

If the information on the Configuration page shows Normal mode, it is not necessary to check the System information.

1) Click "Configuration" on the start page.
2) Select Other Settings > Advanced Configuration in the menu on the **Configuration** page.
3) Click "Troubleshoot" button on the **Advanced Configuration** page.
4) Select "System information" in the menu.

Software in Device Not Recognized/Synchronization Fails

1) In the Devices view, check the parameter version for the device.
2) If the parameter version is highlighted with red, a package file (.pkg) including the software file and definition file with that parameter version, must be imported to the module. See Import a Package File on page 54.

Software Download Fails

Possible causes:

• Device is out of range, turned off or is not connected to the system.
• The LAN is badly configured and looses packages.
• The LAN is overloaded and looses packages.
• The web server containing the image file is overloaded.
• Erroneous image file.
• Erroneous path to the image file.
• The web server containing the image file is incompatible with the portable.

Troubleshooting Guide

This section lists a number of possible faults, probable causes and suggested actions.

Troubleshooting for the Device Manager

Fault	Probable cause	Action or comment
• It is not possible to edit any parameters after logging on to the system.	The user is logged on as auditor.	Close the browser session and re-log on as admin or sysadmin.
• The system does not have the correct time.	– Configuration error, no time server configured.	Configure the system to connect to a time server.
	– The time server is configured but is offline.	Restore connection to time server.
	– The web browser is selected as time source but the time has not been set by the user.	Set the time via the advanced configuration.

Fault	Probable cause	Action or comment
• An advanced charger does not come online in the Device Manager in a system with "Service discovery" enabled.	– The charger parameters for Service Discovery are not set. – The service discovery parameter "Domain Name" is not unique in the IP network domain. – The advanced charger and the Device Manager are located in two separate IP networks that prevents the service discovery request.	Use PDM to set the parameter in the charger and in the Device Manager so that they match. Use PDM to reconfigure the advanced charger. Make sure that there is only one Device Manager with the used "Domain Name". Use PDM to disable service discovery in the advanced charger and to set the IP Address to the Device Manager.
• An advanced charger does not come online in Device Manager in a system with "Service discovery" disabled.	The charger is configured to connect to a Device Manager with a "Domain ID" that is not used.	Use WinPDM to disable service discovery in the advanced charger and to set the IP Address to the Device Manager.
• The charger logs out immediately after login and does not come online again. The charger is configured in another Device Manager or in PDM.	The charger is already saved in the Device Manager that the administrator wants it to use. The Advanced Charger parameter in the desired Device Manager is pointing to another Device Manager (service discovery or IP address) which causes the charger to log out and connect to another Device Manager after completed synchronisation.	– Before connecting the advanced charger to the LAN, make sure that if the advanced charger is saved in the desired Device Manager it has parameters that points to the correct Device Manager. – Delete the saved charger from the Device Manager before connecting the charger to the LAN.
• The charger logs out immediately after login and comes online again after a while just to logout again.	The charger exists in two Device Managers and is saved in both. The parameters for the charger in Device Manager 1 causes the charger to login to Device Manager 2. The parameter for the charger in Device Manager 2 causes the charger to login to Device Manager 1. The charger jumps back and forth between the Device Managers.	Delete the charger from the Device Manager where the charger should be. The charger now logs in after a short while. Save the charger again. Delete the charger from the other Device Manager.
• Some devices report device busy in the Device Manager when the user is trying to change device parameters.	The device is occupied with some action that the device cannot combine with parameter synchronisation.	No action needed. The Device Manager will synchronise the changes when possible.

Fault	Probable cause	Action or comment
• Software download is stuck in pending.	– The device is not online. Software download will start when device gets online. – Multiple devices are currently being updated.	Connect the handset to the Device Manager either via a advanced charger or via a DECT system supporting OTA. There is a limitation in the Device Manager on the number of simultaneous software downloads. All devices are placed in a queue and will be upgraded in time. No action needed. Download will start in time.
• File downloads retrying.	The device is currently unavailable (device out of range, network problem)	No action needed. The download will start when the device comes in range again.
• Software downloads rejected.	The device is already updated with a new software but not yet restarted on the new software. This is due to selected activation time in previous software update i.e. "When idle in charger" or "After manual restart".	Restart the device manually and restart the download.
• Software downloads are aborted.	Wrong file selected for download to devices (External web server).	– Make sure that the URL to the desired software is correct and retry. – Make sure that the file is intended for that device.
• Low software download performance to handset inserted in charger.	The charger is not connected to the Device Manager (not online in the Device Manager). The handset is online only via OTA.	Configure the advanced charger so that it connects and logs on to the correct Device Manager.
• Communication failure to device.	The device did not respond in an expected way. The reason could be temporary communication problems caused by coverage problems or network problems.	Repeat the action after a while to see if it is possible to communicate with the device.

Fault	Probable cause	Action or comment
• No connection available for the Device Manager GUI.	– Max number of Device Manager GUI's has been reached. – The Device Manager server side is restarted due to reconfiguration. – The Device Manager is temporarily unavailable due to restore of database. – The network is preventing the GUI from connecting to the server.	Close the other Device Manager GUI to open new. A maximum of three Device Manager GUIs can be connected. No Action, the server will be up within a few minutes. No Action, the server will be up soon. No action.
• All devices log out after restore of a backup.	The backup is older than the device "online status report timeout."	No action. All devices will re-login within "online status report timeout." (See device handling).
• The parameter version is displayed in bright red in the Device Manager GUI.	There are no compatible .pkg files imported to the system.	Import a .pkg file suitable for the device. The .pkg file is provided by the supplier.
• The parameter version is displayed in dark red in the Device Manager GUI.	The version of the imported .pkg files are not 100% compatible with the device.	Import a .pkg file suitable for the device. The .pkg file is provided by the supplier.
• The parameter version of the Number in the Numbers tab is higher than in the parameter version of the device in the Devices tab.	The device has been downgraded to a previous software version with lower parameter version.	No action needed. This is not an error. The parameter version will be the same after a software upgrade has been performed on device.
• No numbers are visible of the selected device type in the Number tab.	The search field is red. Current search returns no hit.	Alter search or use "show all" to reset search to default.
• "Go to device" is dimmed out for a device in the device view.	The selected device has no number associated to it.	– Assign a new number to the device. – Associate a new or existing number to the current device.

Fault	Probable cause	Action or comment
• The handset is not visible in the Number tab.	– The handset has no number associated.	Assign or associate a number to the device.
	– The device is offline and not saved as number.	Bring the device online. Save the number in order to make it possible to edit the number when it is offline.
• Number creation of desired device type is not possible.	The .pkg file for the desired device type is not imported to the PDM.	Import the .pkg file for the desired device type. The file is provided by the supplier.
• It is not possible to apply a template at creation of new number.	No compatible template for the desired device exists.	Create a new template or upgrade an existing template and retry.
• A handset logs out when placed in an advanced charger	The device manager configurations in the IPBS and the advanced charger are not the same.	Delete the saved instance of the advanced charger in the Device Manager. Use WinPDM to reconfigure the advanced charger so that it will log on to the correct device manager. Connect the advanced charger to the LAN.
• The handset does not log on to the device manager OTA.	– The Domain ID is not set correctly in the IPBS.	Reconfigure it to match the device manager Service Discovery parameter Domain ID.
	– The system does not support service discovery.	Erase the Domain ID in the IPBS and set the IP address to the Device Manager under Advanced Settings > Device Management.

General Troubleshooting for the WSG
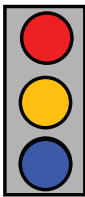
This part of the Troubleshooting Guide lists possible faults that are not connected to the Device Manager

Fault	Probable cause	Action or comment
• It is not possible to send SMS to a specific device.	– The device does not support SMS.	—
	– The module's license does not support SMS.	Upgrade the license to support SMS.
	– The IPBS UNITE SMS parameter is misconfigured.	Set the parameter so that it points out the module containing the DECT Interface.

Fault	Probable cause	Action or comment
• It is not possible to edit the Central Phonebook.	– The phonebook is configured to be read-only. – The phonebook is configured to use a LDAP server	Edit the external phonebook file and re-import it to the Central Phonebook. Access the LDAP server and alter the desired entry. After "commit", the new data will be available for the Central Phonebook.
• Import of language to the configuration GUI fails.	The language file has the wrong format.	Export the default language to set the format and edit the language file.
• Set language fails.	– The language file might be faulty.	Export the language files and compare hem. Make sure that the <language id= tag is unique for each file
• The log files are flooded with log entries.	The log settings are set to a detailed level.	Change the log settings in Advanced configuration > Troubleshoot > System information.
• Several functions of the system does not start.	– There is not a valid license.	Enter a valid license and restart the module.
• Some IP-DECT Base Stations have no contact with the system after a migration from a multiple system to a single system.	– The IP address to has not been set in all base stations.	Enter the correct IP address in the base stations.

Built-in tools

The hardware has different LEDs to indicate the status and besides that the possibility to show active faults and logging the faults via the GUI.

Tools	Description

LEDs	The LEDs show different colors to determine type of information and have different flashing frequency for showing the priority	
	colors	
	Red	Fault indication
	Yellow	Mode indication
	Blue	Normal operation (OK)
	Flashing frequency	

Fixed light	indicates normal state
Slow flashing light	indicates medium attention
Quick flashing light	indicates high attention

Flashing Pattern

Figure 52: Flashing Pattern

The table describes the flashing patterns for Status LED, Mode LED, Secured settings, and Power LED:

		Status LED	Mode LED
Status OK	Blue		
Starting up/ shutting down	Blue		
Feedback *(1 second)*	Blue		
Error/fault	Red		
Warning	Red		
Boot mode	Yellow		Blue
Demonstration mode	Yellow		Blue
Waiting for automatic startup *(1 minute)*	Yellow		
Troubleshoot mode and during firmware upgrade	Yellow		
Mass storage mode			Blue

Secured settings — Status LED — Mode LED

		Status LED	Mode LED
Indicates that manual confirmation is required			Blue
Confirmation is done and setting can be activated	Yellow		Blue

Power — Power LED

		Power LED
Power OK	Blue	
Closing down caused by low voltage	Red	
Low voltage*	Red	

* also used if the Power parameter conflicts with the actual setup.

Demonstration Mode:	Demonstration Mode is activated by pressing the Mode button for 10 seconds. The module will then run with full functionality for 2 hours, it then returns to the configured license! If it works in Demonstration Mode and not in normal operation you probably have a license problem.
Active faults:	Refer to Active Faults on page 22.
Fault logging:	Refer to Fault Log on page 24 and Administer the Fault Log on page 25.
System Information:	See Advanced Troubleshooting on page 95 below.

Advanced Troubleshooting

The Advanced Configuration page (requires system administrator rights) includes advanced troubleshooting. Snapshots of selected logs or a complete log can be viewed.

1) Click "Configuration" on the start page.

2) Select Other Settings > Advanced Configuration in the menu on the Configuration page.

3) Click the "Troubleshoot" button on the Advanced Configuration page.

4) In the left menu on the Troubleshoot page you can view logs and find detailed information about the system.

- Specify Information to Log

Standard debug is set by default but this can be extended and show more details.

1) Click "System Information" in the left menu.

2) Enable desired logs and click "Activate".

- Send Test Message

The Troubleshoot page also includes the possibility to send test messages.

1) Click "Send Test Message" in the left menu.

2) Enter Call ID and click "Send Message".

What to consider when replacing a module

- IP Address
- License
- Module key
- Remember where cables were connected

Technical Support

For technical support please contact your local representative.

Used IP Ports

If additional equipment (for example firewall) is used between the module and the application/unit, the corresponding ports might also be opened in the equipment.

Port	Application or unit	Transport protocol
20–21	FTP	TCP
53	Domain Name Server (DNS)	UDP
68	DHCP	UDP
80	Web traffic (HTTP)	TCP
113	Authentication	TCP
123	Network Time Protocol (NTP)	UDP
443	HTTPS	TCP
514	Syslog Syslog messages	UDP
1321–1322	OAP Server	TCP
5891	NetPage	TCP
8080	HTTP	TCP
10147	DECT Charger Communication	TCP
10153	Device Manager Communication	TCP

Device Manager Keyboard Short-cuts

The following tables show the short-cuts that can be used in the Device Manager.

General

Shortcut	Description
Ctrl + H	Open the File management window
Ctrl + Tab	Switch tab
Alt + F4	Close the application

Devices

Shortcut	Description
Ctrl + N	Add a new device
Enter	Upgrade the selected device(s)
Delete	Delete the selected device(s)
Ctrl + F	Find a device
Ctrl + Enter	Open the Properties window for the selected device

Numbers

Shortcut	Description
Ctrl + N	Add a new Number
Enter	Edit the selected Number
Ctrl + C	Copy the selected Number
F2	Rename the selected Number
Ctrl + S	Save the selected Number to the database
Delete	Delete the selected Number from the database
Ctrl + F	Find a Number

Templates

Shortcut	Description
Ctrl + N	Add a new template
Enter	Edit the selected template

Ctrl + C	Copy the selected template
F2	Rename the selected template
Delete	Delete the selected template
Ctrl + F	Find a template

Licenses

Shortcut	Description
Delete	Remove the selected device(s) from the license view
Ctrl + F	Find a device

File Types

In this appendix, the different file extensions that are used in the module are explained. System files are not described.

File type	Extension	Description
Software file ()	bin	Software for
Company Phonebook file	cpb	Company Phonebook file for .
Parameter Definition file	def	Including all possible settings for a certain type for a certain version.
Language file	lng, or xml	Language file for or the module. Language file for the module uses XML (eXtensible Markup Language.).
Package file	pkg	Archive that can include different file types such as parameter definition files (.def), software files (.bin) and template files (.tpl).
Template file	tpl	Contains one or more exported templates.
Number file	xcp	Exported Numbers.

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