4G Systems Data Card

User Manual

VERSION 1.2

4G SYSTEMS

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Table of Contents

Chapter 1	**Introduction**	**5**
	About this Manual	5
	System Requirements	6
	Typographical Conventions	7
Chapter 2	**Installing the Data Suite**	**9**
Chapter 3	**First Steps**	**15**
	User Interface of the Data Suite	15
	The Info Sub-menu	21
	Options and Preferences	22
Chapter 4	**Installing Devices**	**31**
	General Procedure	31
	Installing a Bluetooth Phone	35
	Installing Multiple Devices	37
	Device Lists	38
Chapter 5	**Connections**	**41**
	Default Connection Settings	41
	Automatic Connections	44
	Manual Connections	53
	Roaming	55
Chapter 6	**Extending the Data Suite**	**59**
	Working with Modules	60
	SMS Manager Module	64
	Phonebook Manager Module	69

Usage Manager Module 73
RSS Feed Module 78
Hotspots Module 81

Index **83**

CHAPTER 1

Introduction

Welcome to the 4G Systems Data Suite (Data Suite for short). In this manual, we explain the functionality and usage of the Data Suite.

About this Manual

The contents of this manual are organized as follows:

- Chapter 2 *Installing the Data Suite* explains the procedure of installing a new Data Suite.
- Chapter 3 *First Steps* introduces the user interface of the Data Suite and shows. This chapter also explains how to tailor the Data Suite to your needs.
- Chapter 4 *Installing Devices* shows you how to install a mobile or WLAN device.
- Chapter 5 *Connections* describes the way the Data Suite handles connections. Both, automatic and manual connections are recognized by the Data Suite. The differences between these two connection types are explained here. You will also learn how to create a new automatic connection.
- In Chapter 6 *Extending the Data Suite* you will learn how to increase the functionality of the Data Suite by using modules.

The information contained in this manual is also available via the ? help icon of the Data Suite.

System Requirements

Minimum hardware requirements

- 100 MB free hard disk space
- 32 MB RAM
- screen resolution 800 x 600 or higher
- color quality 16 bits or higher

Operating system

- Microsoft Windows 2000 or Microsoft Windows XP
- administrator rights on your PC to install and use the Data Suite

Connectivity

- for mobile or WLAN datacard: free PC card slot (PCMCIA Type II)
- for HSDPA, UMTS, EDGE, GPRS, CSD or any other mobile operator service:
  - mobile datacard or mobile phone
  - mobile data connection enabled SIM card
- for WLAN: WLAN datacard or laptop with WLAN built in

Typographical Conventions

The following conventions are used in the text to draw attention to program elements, etc.:

Element	Font or symbol
Program interface such as menu commands, windows, dialog boxes, field and button names	**Menu** > **Entry**
Paths to directories, file and directory names	`Drive:\Directory\File name`
Quotations from program code or configuration files	`Code quotations`
Variables, i.e. placeholders for specific elements	{variable}

Important **information** and **warnings** are enclosed in gray boxes. Make sure to read such information to avoid losing data or making errors when using and managing WCM systems.

Safety instructions.

To avoid hurting yourself or doing damage to the electronic device, please keep the following tips in mind when installing and using the data card.

- The 4G Systems data card is a mobile electronic device, and is only intended for use in heated, dry, and dustfree spaces. The device may not be mounted or placed in a location subject to direct sunlight or the effects of heat. The air slots and openings in the device are for

ventilation purposes. These openings must not be covered or obstructed.

- The device must not come into contact with any liquids, as this can lead to electric shock or short circuit, and can cause irreparable damage to the device.
- Do not open the case of your data card. If the case is opened by unauthorized persons, or inexpert repairs are attempted, all warranty agreements become null and void. Furthermore, such actions are dangerous for users and can lead to damage to the device.
- The device should not be exposed to fi re or other heat sources, and it should not be used in locations with a potentially explosive atmosphere.
- The device should not be installed during a thunderstorm, and should remain unplugged during installation procedures.
- The electronic interference produced by the device may affect the electronic systems and navigational systems in airplanes, and for this reason, the use of this device on board aircraft is prohibited by law in most countries.
- Do not operate the device near medical equipment without prior permission.
- The PCMCIA card has to be supplied by a Limited Power Source in accordance with EN 60950-1:2001*.

*Note: The environment temperature must not exceed 30°C.

CHAPTER 2

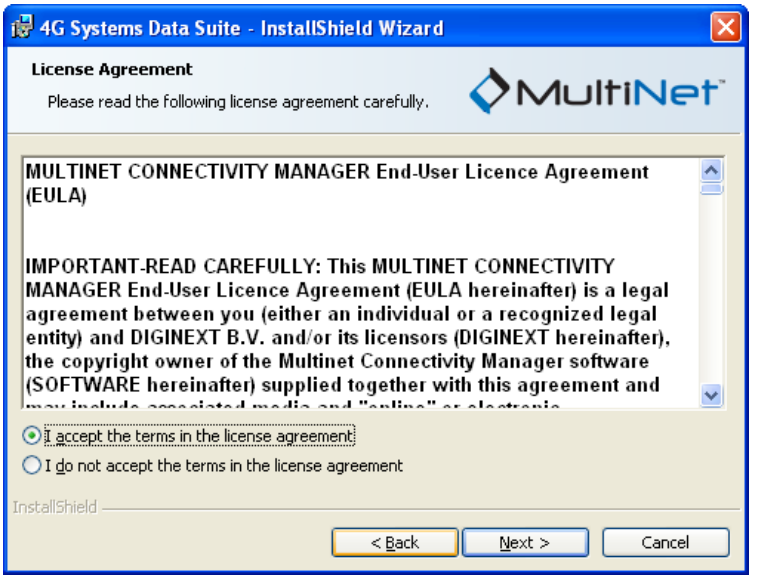
Installing the Data Suite

To install the Data Suite

1. Insert the Data Suite installation CD. If the installation wizard is not starting automatically, run the `setup.exe` program from the CD.

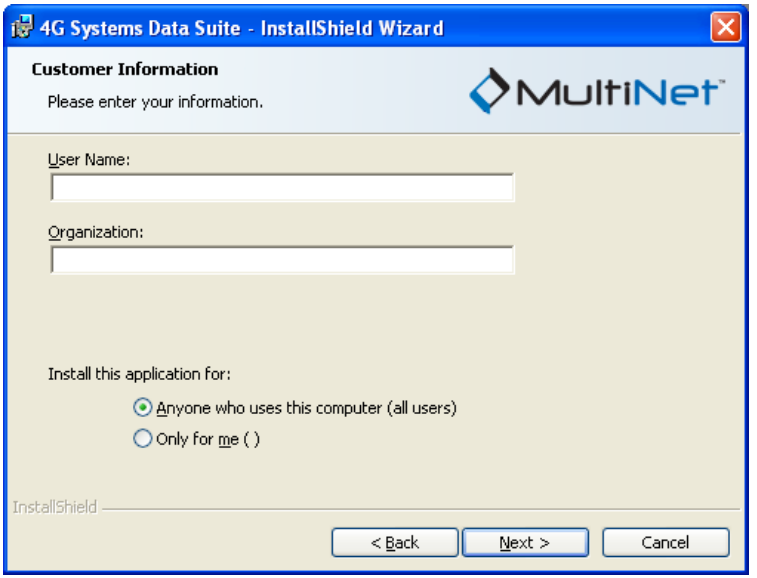
   The InstallShield wizard starts. This wizard will guide you through the installation.

2. Click the **Next** button.

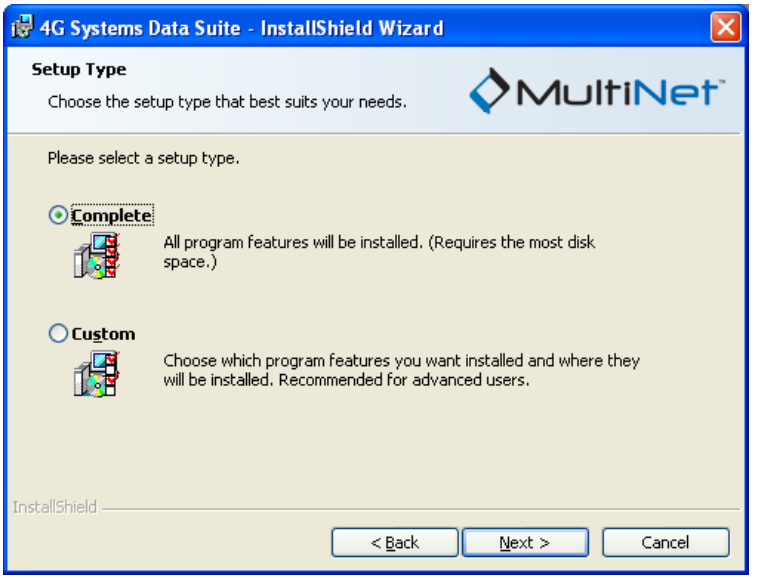


3. Read the license agreement carefully. To continue with the installation, click the **I accept the terms in the license agreement** radio button.

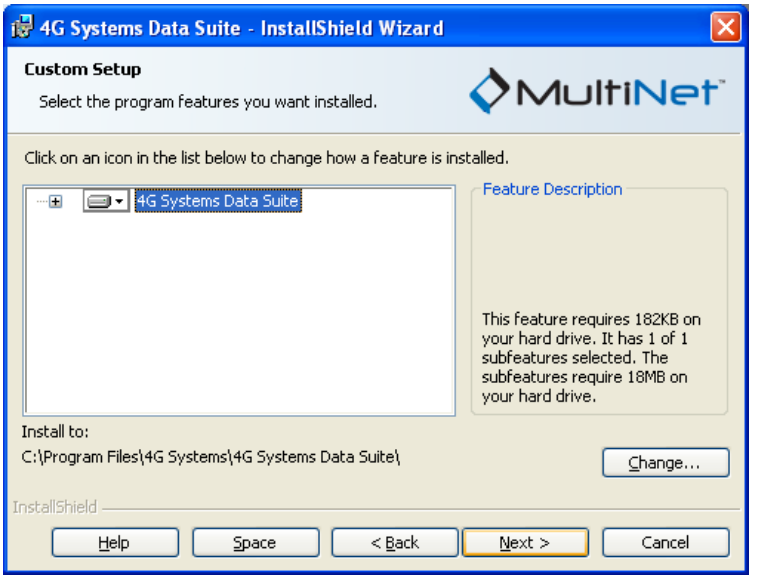
4. Click the **Next** button.



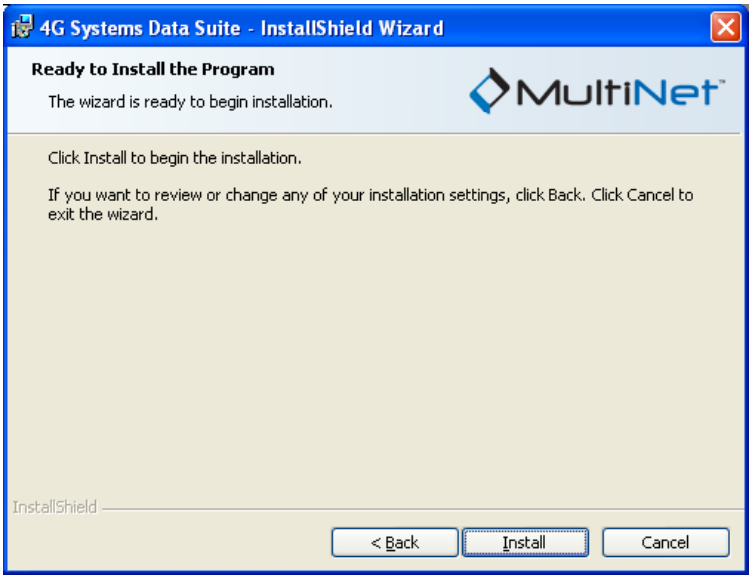
5. Enter your **User Name** and **Organization** and click the **Next** button.



6. Click the radio button of the setup type that suits your needs. If you do not want to install the program to its default directory, click the **Custom** radio button.
7. Click the **Next** button.



8. To choose the installation directory, click the **Change** button and navigate to the desired directory.
9. Click the **Next** button.



10. To start the installation process, click the **Install** button.

    The installation will continue automatically. Once the installation is finished, you are asked to restart your computer. It is recommended to do so before you use the Data Suite.

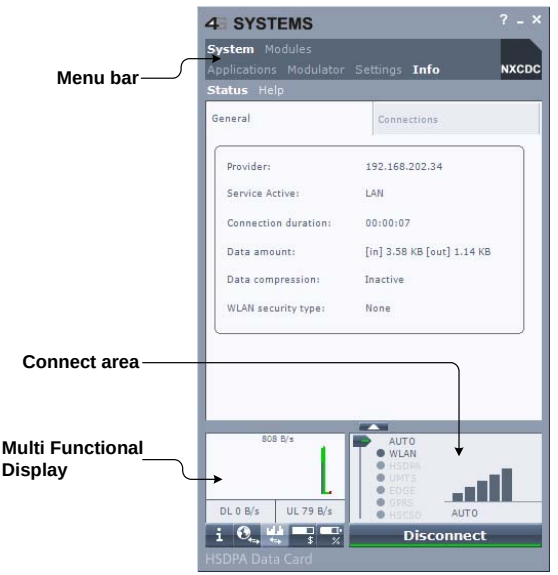
CHAPTER 3

First Steps

This chapter introduces you to the user interface and the Info sub-menu of the Data Suite. You also learn, how to install devices.

User Interface of the Data Suite

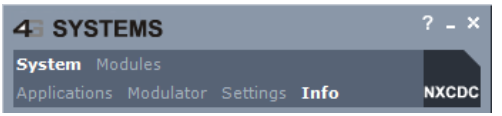
Once you have started the Data Suite, the user interface appears. The window is divided into different areas:



Menu Bar

The various functions of the Data Suite are grouped logically and can be accessed via the menu bar. The menu bar is divided into two main menus: **System** and **Modules**.

System Menu



The **System** menu contains the following sub-menus:

- **Applications**: Here you can launch your favorite browser, e-mail program or Virtual Private Network client.
- **Modulator**: Here you can extend the standard Data Suite with various modules ranging from an SMS Manager to extended WLAN functionality.
- **Settings**: Here you can set your preferences as well as manage your connections and installed mobile devices.
- **Info**: Here you can find status and help information.

Modules Menu

The **Modules** menu is filled with the modules from **System** > **Modulator** > **Modules**. To add a module to this menu, right-click the icon of the module and choose **Add as favorite** on the context menu.

The menu becomes active only after you have added the first module to the Data Suite.

> **Note:** Please note that in the **Modules** menu, only four modules can be displayed at the same time.

The following modules can be added to the **Modules** menu:

- Corporate WLAN
- SMS Manager
- Phonebook Manager
- SwitchBlade
- Usage Manager
- Hotspots
- RSS Feed Manager

Please note that in the **Modules** menu, only four modules can be displayed at the same time.

Connect Area

Clicking the **Connect** button will start a connection. By default, the Data Suite connects automatically with the best network found. You can also connect manually to the network type of your choice by dragging the slider in the **Connection** area to any of the positions on the scale.

The **Connect** area is always present.

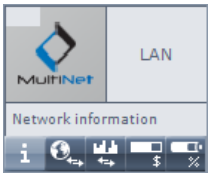
Multi Functional Display

The Multi Functional Display provides a quick overview of information on your connections, networks, data traffic, usage, and battery status. The Data Suite also uses the Multi Functional Display to show status messages keeping you up to date on the status of your connections and devices.

The Multi Functional Display is always present.

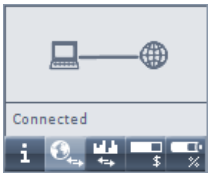
Network Information

To see the network you are connected with, click the **Network Information** icon.



Status

To see whether you are connected, disconnected, connecting, or disconnecting, click the **Status** icon.

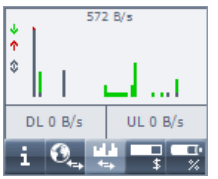


Bandwidth meter

The **Bandwidth meter** icon is only active if an active connection is set up and you are online. It shows both up and download data. On the left-hand side, there are three arrows:

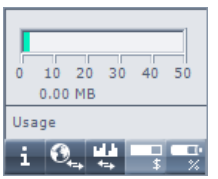
- upper arrow: sets the view to show only download traffic
- middle arrow: sets the view to show only upload traffic
- bottom arrow: sets the view to show both (default setting)

On the right-hand side, the top speed of the current connection is shown and below the graph you see the current down and upload speed.



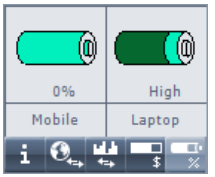
Data Limit Counter

To get a rough count of how much megabyte of data has been transferred during the active connection and how close you are to your data limit, click the **Data Limit Counter** icon. When disconnecting, the counter is reset.



Battery Status

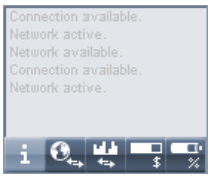
To see the battery status of your laptop and active mobile (if present), click the **Battery** icon.



Status Messages

Status messages are sent in the following cases:

- device is added
- device is available or active
- device becomes inactive or unavailable
- device has malfunctioned
- connection becomes available or active
- connection becomes inactive or unavailable
- text message is sent or received.
- text message could not be sent



The Info Sub-menu

To open the sub-menu, choose **System** > **Info**. The **Info** sub-menu is divided into two windows: **Status** and **Help**.

Status window

The **Status** window consists of the following tabs:

- **General**: On this tab you find general information on the status of the Data Suite client. This includes the current provider and service, the duration of the active connection, the amount of data uploaded and downloaded, the availability of the Intranet or VPN, data compression, the WLAN security type.
- **Connections**: This tab contains information on your WLAN connections and your mobile connections. For WLAN, the connection, the network name, the connection type, the WEP security type, the data encryption, the access point authentication, and the WEP key entry methods are specified. For mobile connections, the connection and provider are shown, as well as whether you are on your home network or roaming.

Help window

The **Help** window consists of the following tabs:

- **Helpdesk**: On this tab you find the number for the support hotline. You can also start the online help by clicking the **Topics** button.
- **Diagnostics**: On this tab you find all sorts of information on your mobile device and computer. There are also buttons to quickly open various Windows settings.
- **About**: On this tab you find the version information of the Data Suite as well as the end user license agreement and copyright information.

Options and Preferences

You have the following options to customize the Data Suite to your needs:

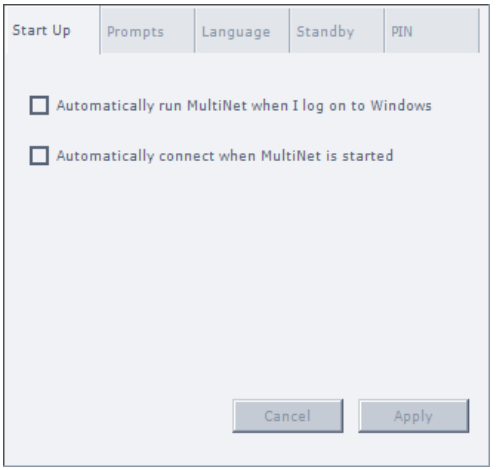
- **General** window: Here you enter your preferences for the Data Suite
- **Applications** window: Here you specify the settings for your preferred e-mail client, web browser and VPN client.

General Window

To open the **General** window choose **System** > **Settings** > **General**.

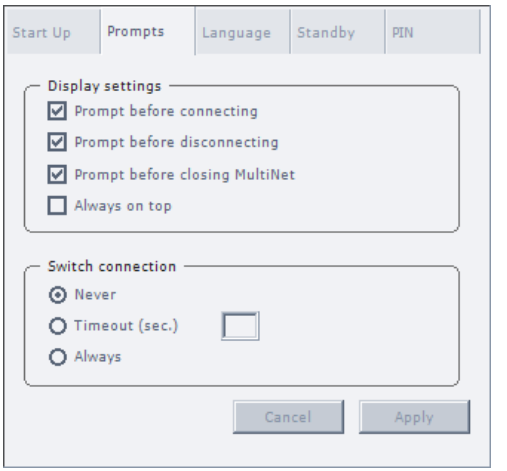
The **General** window contains the following tabs.

Start Up tab



On this tab you specify whether you want the Data Suite to automatically start up each time Windows starts up and whether you want to automatically connect when the Data Suite is started. By default, both options are deactivated.

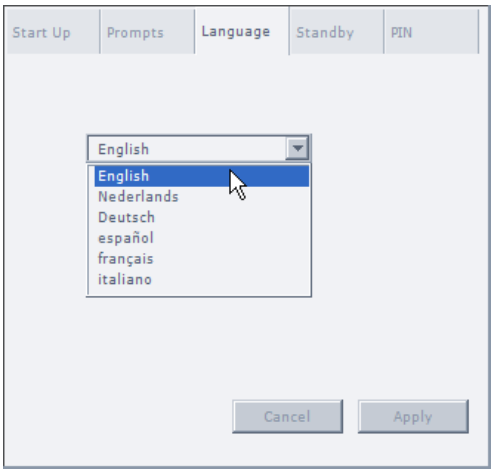
Prompts tab



In the **Display settings** area of this tab you determine the actions you want to get a confirmation dialog for. You can also specify the position of the Data Suite.

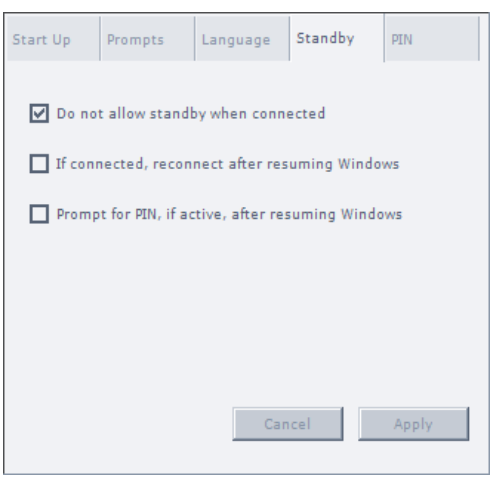
In the **Switch connection** area on this tab you determine the behavior of Data Suite when you have an automatic connection running and a better network type becomes available.

Language tab



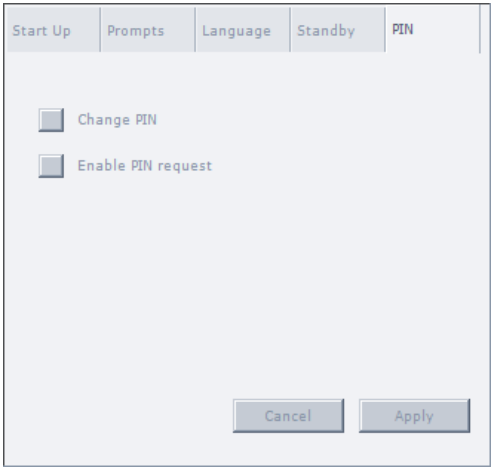
The default language of the Data Suite is English. On this tab you can switch to another language.

Standby tab



On this tab you determine the behavior of the Data Suite when Windows wants to go into standby mode.

PIN tab



On this tab you change your PIN code (if supported by your device) as well as disable the PIN code request.

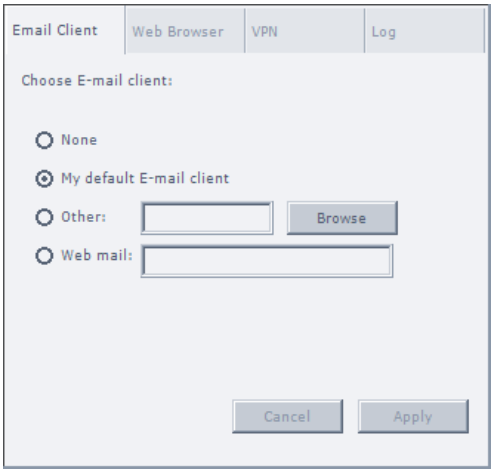
Applications Window

To open the **Applications** window choose **System** > **Settings** > **Applications**.

The following applications can be launched automatically by the Data Suite:

- e-mail client
- web browser
- VPN (Virtual Private Network) client

Email Client tab



You can either choose to use

- no e-mail client
- the default e-mail client installed on your PC

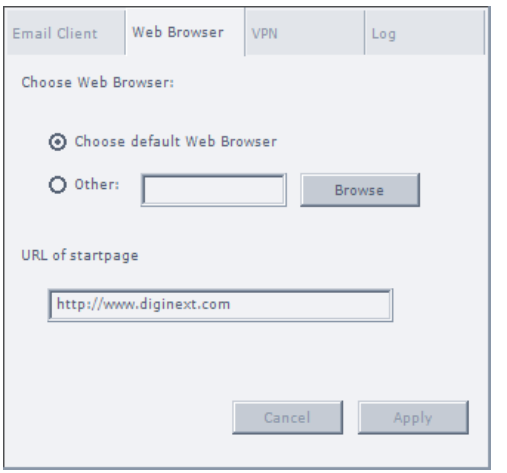
  This is the default setting.
- another e-mail program

Enter the name of the e-mail program or click the **Browse** button to search for it.

- web mail

  You have to enter a URL for using web mail. The Data Suite will automatically launch a browser with the URL specified when you start e-mailing.

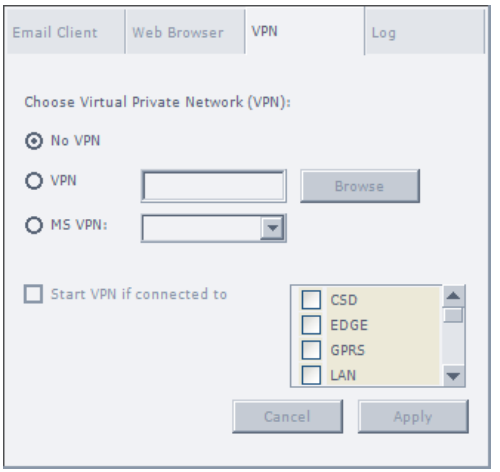
Web Browser tab



You can either use the default web browser installed on your PC, or specify a different browser by entering the name of the program or browsing for it. The default setting is your default web browser.

You can also specify the URL of your start page.

VPN tab



You can either choose to use

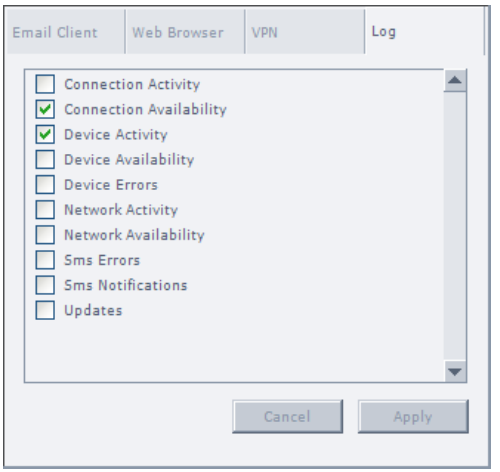
- no VPN
- VPN

  Enter the name of the VPN client or click the **Browse** button to search for it.
- MS VPN

  Choose any of the VPN connections you have made through Windows from a drop-down list.

You can also specify for which automatic connections you want your VPN program to start automatically when connected. Select the **Start VPN if connected to** check box and choose the desired connection type.

Log tab



On this tab you specify the logging settings of the Data Suite. By default, all logging options are cleared. To activate the logging, select the appropriate check box(es). The logging information is then shown on the Multi Functional Display.

CHAPTER 4

Installing Devices

When starting the Data Suite for the first time, you will be asked to install a device. A device can either be one of the supported mobile or WLAN PC cards or a mobile phone connected via infrared, Bluetooth, USB, or serial cable.

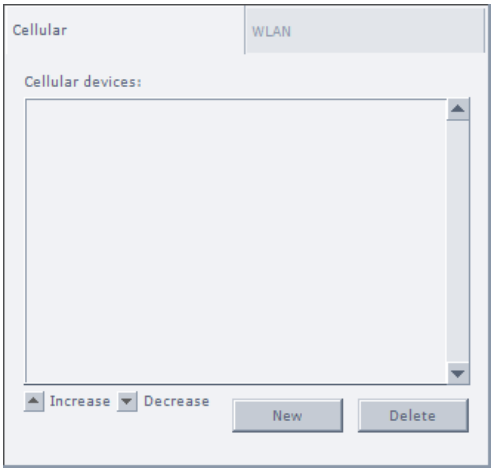
General Procedure

To install a device

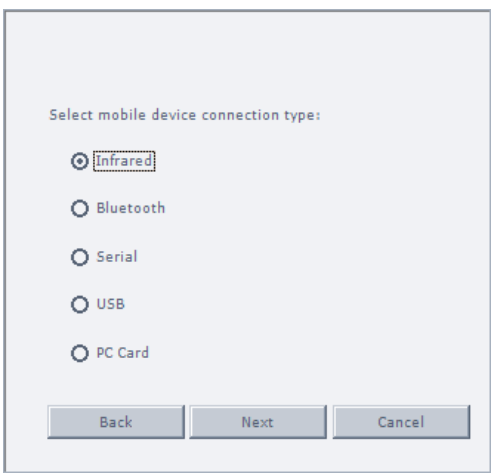
1. Make sure your device is ready.

   If you want to install a mobile device, make sure that a SIM card is inserted. If you want to install a WLAN-only card, a SIM card is not required.

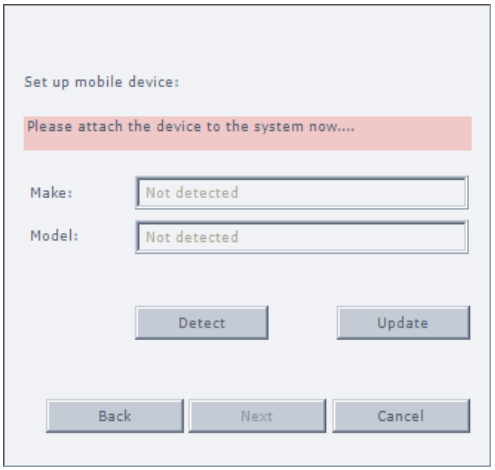
2. Choose **System** > **Settings** > **Device**.



3. Click the **New** button.



4. Click the radio button of the desired connection type and then click the **Next** button.



Notes

- If you use a mobile phone connected via **USB** or a **serial cable**, wait to connect the phone to your computer until the Data Suite asks you to.
- With **USB**, the Data Suite asks you to choose your phone from a drop-down list. Once you have done this, you are asked to connect the device and the installation will start. The Windows hardware wizard may start up and ask you for drivers. Please follow the on-screen instructions.
- If you use a phone connected with **infrared**, make sure infrared is activated, both on the phone and on the computer. When the Data Suite asks for it, put the phone in line with the infrared port of the computer.
- If you use a phone connected with **Bluetooth**, make sure that Bluetooth is activated on your phone and that your computer has Bluetooth hardware installed and enabled. For more detailed instructions, please refer to section *Installing a Bluetooth Phone* on page 35.

- If you use a **PC card**, insert the card when the Data Suite asks for it.

5. Connect the device to your computer and click the **Next** button.

   Windows will automatically recognize and install the device.

   Notes

   - During the detection phase it is best to wait until Windows shows the message that your hardware was installed successfully.
   - The Data Suite pre-installs the drivers for its supported devices during the installation process. Usually the device installation does not require the Windows hardware wizard to start up. With some devices however, this may occur. If it happens, follow the on-screen instructions.
   - Windows XP may warn you about unsigned drivers of some devices, especially phones connected with Bluetooth. This is not a problem, simply click the **OK** button on the warning dialog to continue with the installation.

6. Once the device has been installed, you can finish the installation.

   The Data Suite will now make the installed device available and active. Your device will be shown in the device list (see section *Device Lists* on page 38).

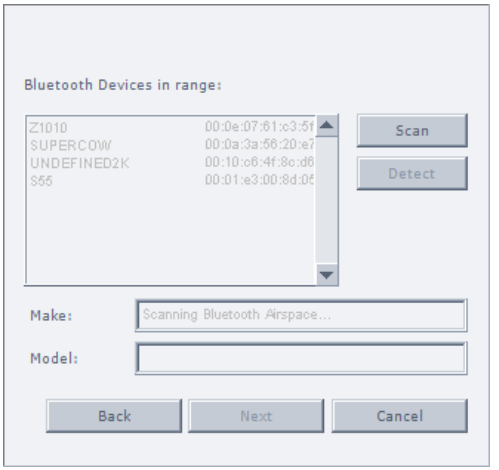
   If you have installed a PC card, you will now be asked for the PIN code of your SIM card. If you have installed a phone, this was asked already when you switched on your phone.

Installing a Bluetooth Phone

If you want to use Bluetooth to connect your mobile phone with your PC, make sure your PC has Bluetooth built in or use a Bluetooth add-on. The Data Suite supports most WIDCOMM Bluetooth devices.

To install a Bluetooth phone

1. To make the Data Suite discover your phone, activate Bluetooth on your phone and make sure that your phone is set to “Discoverable” or “Visible”.
2. For easy identification during the installation process give your phone a unique name.
3. Start the Data Suite.
4. Choose **System** > **Settings** > **Device** > **Cellular** tab.
5. Click the **New** button.
6. Click the **Bluetooth** radio button.
7. Click the **Next** button.
8. To start the Data Suite searching for Bluetooth devices within range, click the **Scan** button.



Please wait until this process is finished and the **Scan** button is available again.

9. Select your phone in the list and click the **Detect** button.

   Now the Data Suite attempts to pair with your phone and installs the drivers for it.

   During this process, the Data Suite asks you to type in a password or PIN code, which your phone will ask you for when the pairing attempt is made. You have a free choice, but the code must be the same in the Data Suite and on your phone.

   Once the pairing attempt was successful, Windows installs the drivers for your phone. This may take a few minutes. After finishing the **Make** and **Model** fields are filled with the details of your phone.

10. Click the **Next** button.

    Microsoft does not certify Bluetooth drivers, you may get several warnings about unsigned drivers being installed. Confirm the warnings by clicking the **OK** button.

11. Once the progress bar has reached “ready” click the **Finish** button to complete the installation.

    Your phone is listed as available and becomes active after a few minutes.

Note: Some phones, especially Nokia phones, ask you to confirm any connection attempt when you are connected via Bluetooth. This is for your own security. If desired, you can disable this in the settings of the phone.

Installing Multiple Devices

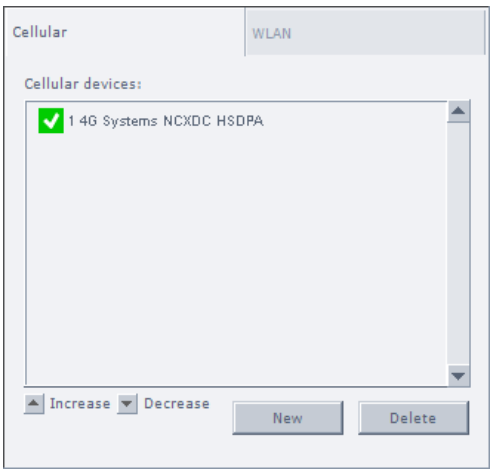
The Data Suite is capable of using multiple devices, though only one mobile device and one WLAN device can be active at the same time.

Any time you add a new device this will become the active device at the top of the list.

When you have more than one mobile device installed, the networks you can connect to depend on the capabilities of the active device. For example, if the active device is a mobile phone which can only connect to a GPRS network and you also have a mobile datacard available which can connect to UMTS networks, you will be able to use GPRS networks only, until you make the datacard the active device.

Device Lists

Any device you have successfully installed, will be added to one or both of the device lists. To open the device lists, choose **System** > **Settings** > **Device**. Mobile devices will be listed on the **Cellular** tab; WLAN devices will be listed on the **WLAN** tab.



The list shows the status of the installed devices:

- white check on green background: The device is active.
- white check on dark background: The device is available.
- white cross on dark background: The device is unavailable. This is the status of devices that worked correctly but have been removed.
- red cross on dark background: The device is malfunctioning. This is the status of devices that are present but do not respond to the Data Suite.

The device lists are ordered by priority: The top listed device is also the first device that will be activated when the Data Suite starts. If this device

is not available for any reason, the second listed device will be tried and so on.

Any newly installed device will be added to the top of the device list. You can increase or decrease the rank of a device by clicking the **Increase** or **Decrease** icon. This is done independently for both lists. Thus it is possible that a device is inactive for GSM connections but active for WLAN, or the other way round.

The possible connections are determined by the active device. For example, if you have a GPRS-only phone active but also have a UMTS capable PC card installed, you will only be able to connect using GPRS not UMTS until the PC card is activated.

CHAPTER 5
Connections

Default Connection Settings

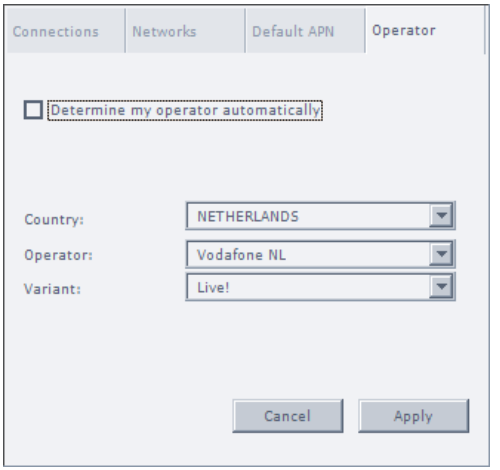
Depending on your installed device, the Data Suite can connect to HSDPA, UMTS, EDGE, GPRS, (HS)CSD, or WLAN networks. Once a device is installed and its SIM card has become active, the Data Suite will automatically determine the SIM card's operator. Afterwards, the Data Suite knows which settings to use for connecting to the networks supported by your operator and your device.

Changing the operator setting

If the Data Suite is not able to determine your operator, you will be prompted to supply your operator by selecting it from a drop-down list. For some operators, like Vodafone NL, you can also choose which variant to use. If you are unsure which variant you need, leave it on **Default**.

You might wish to change the operator manually after installation. To do so, proceed as follows.

1. Choose **System** > **Settings** > **Connection** > **Operator** tab.



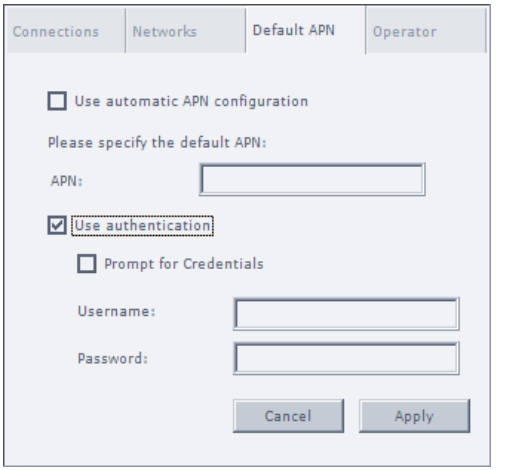
2. Clear the **Determine my operator automatically** check box.
3. Choose from the drop-down lists **Country**, **Operator**, and **Variant** the desired entries.
4. To save your settings, click the **Apply** button. Otherwise, your settings will be lost when you change to another tab or window.

Changing the APN setting

To make a GPRS, EDGE, UMTS or HSDPA connection, you need your Access Point Name (APN). The Data Suite usually determines the APN automatically, based on your operator.

However, if you wish to change your APN, proceed as follows:

1. Choose **System** > **Settings** > **Connection** > **Default APN** tab.

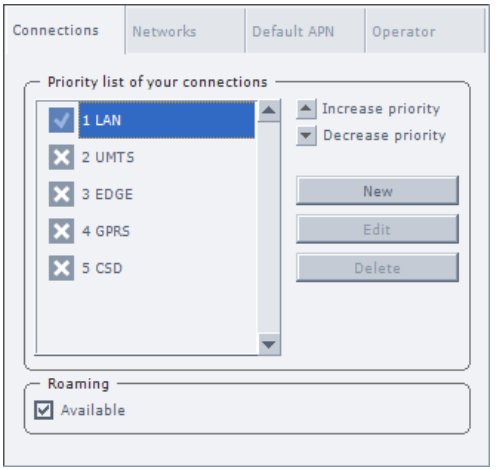


2. Clear the **Use automatic APN configuration** check box
3. Enter an APN of your choice in the **APN** field.
4. If you need to use authentication, select the **Use authentication** check box.
5. Enter the **Username** and **Password** supplied by your provider.
6. To save your settings, click the **Apply** button. Otherwise, your settings will be lost when you change to another tab or window.

Once your connection settings are set correctly, the Data Suite searches for the networks belonging to your operator and which your active device can handle. A GPRS-only capable device will therefore not find any UMTS or EDGE networks.

Automatic Connections

The connection mode is set to **AUTO** by default. In this mode, there are several pre-defined connection options, which you can see under **System** > **Settings** > **Connection** > **Connections** tab.



The connection status is indicated with icons:

- white check on a dark background: The connection is active.
- dark check on a white background: The connection is available.
- dark cross on a white background: The connection is unavailable.

When you connect in automatic mode, connections are tried in the order they appear under **System** > **Settings** > **Connection** > **Connections** tab. To change the order, select the appropriate connection and click either the **Increase Priority** icon or the **Decrease Priority** icon.

Note: It is not possible to prioritize on an HSDPA network.

If roaming is available and you have the SwitchBlade module installed, the **Roaming** area on the **Connections** tab becomes available.

Creating a Mobile Connection

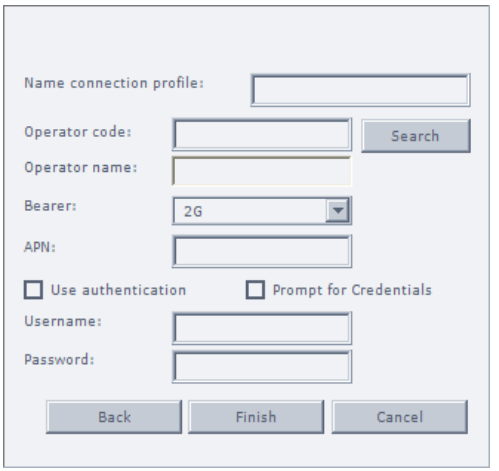
You cannot edit or delete the pre-defined connection options but add new connections to them.

When you create a new connection, this will be added at the top of the list and will therefore be the first connection that is attempted.

To create a connection, proceed as follows:

1. Choose **System** > **Settings** > **Connection** > **Connections** tab.
2. Click the **New** button.
3. Click one of the following radio buttons:
   - **GPRS** (for HSDPA, UMTS, EDGE, or GPRS connections)
   - **WLAN**
   - **HSCSD** (for CSD or HSCSD connections)
   - **RAS** (for Windows dialup connections)

Creating a GPRS Connection



You have to fill out at least the **Name** of the **connection profile**, the **APN** and which **Bearer** you want to use: 2G (GPRS), 3G (UMTS) or EDGE.

To enter the **Operator code** and **Operator name**, click the **Search** button and select the network you want to use. If this network is not listed, you can either let the Data Suite show the entire list of known networks or let it search for the networks currently present at your location.

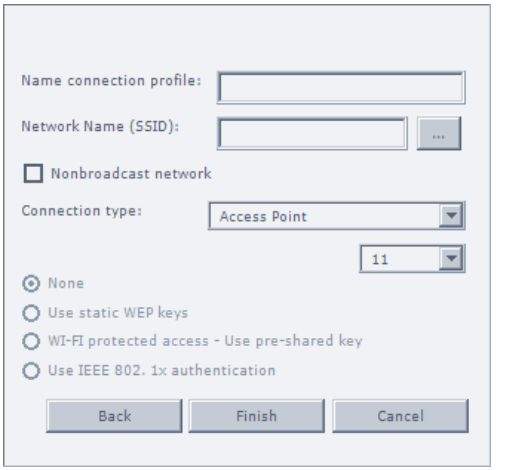
If you need to use authentication, select the **Use authentication** check box and enter the **Username** and **Password**. You can also select the **Prompt for Credentials** check box which will make the Data Suite ask for your user name and password each time you use the connection.

Once you have entered the connection settings click the **Finish** button to create the connection.

Creating a WLAN Connection

You may have noticed that there is no pre-defined automatic WLAN connection option. This has been done deliberately. Unlike a GPRS/ UMTS or CSD connection, there are no nationwide WLAN networks and there is no standard for WLAN connections.

However, it is possible to create your own automatic WLAN connection if, for example, you want to be able to automatically connect to your own home or work WLAN network. Make sure that the settings you specify here correspond to the settings of the WLAN network you would like to use.



With the basic Data Suite, you are only able to specify open, unsecured WLAN networks, for which you have to specify at least the **Name** of the **connection profile** and the **Network Name (SSID)**. You can also search for available networks by clicking the ... button.

If the network is a no broadcast network, select the **Nonbroadcast network** check box.

The **Connection type** can either be **Access Point** or **Adhoc**. In the drop-down list below you can specify the WLAN channel the connection needs to use. The default is 11.

> **Note:** The security settings are only available if the Corporate WLAN module is installed. In this case, you can use static WEP keys, Wi-Fi protected access with a pre-shared key, or use IEEE 802.1x authentication.

Static WEP keys

WEP keys can be either 64 or 128 bits, with the network authentication being either open or shared. You have to enter four WEP keys. To save the keys, click the **Finish** button.

Wi-Fi protected access

With this option, you have to create and confirm a password. For encryption you can use either TKIP or AES.

IEEE 802.1x authentication

The following encryption is supported:

- None
- WEP
- TKIP
- AES

The prime EAP-type can be:

- EAP-TTLS
- EAP-TLS
- EAP-SIM
- PEAP
- MD5 Challenge
- Token Card
- LEAP

Secondary authentication is only available with EAP-TTLS as prime EAP-type and can consist of:

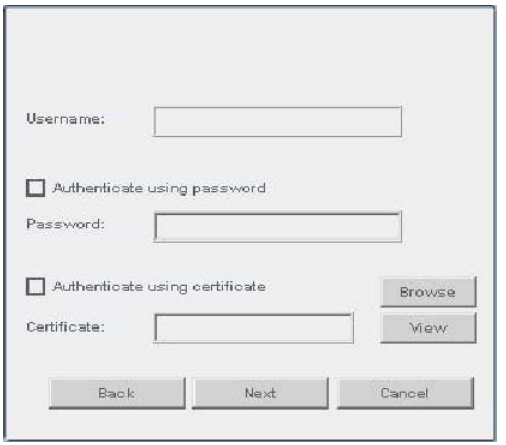
- PAP
- CHAP
- MS-CHAP
- MS-CHAPv2
- EAP
- Certificate
- PAP Token

Secondary EAP is only available when you have EAP-TTLS as prime EAP-type and EAP as secondary authentication. This can be either a MD5 Challenge or a Token Card.

When you chose PEAP as prime EAP-type, you can select the following as PEAP Inner EAP:

- MD5 Challenge
- Token Card
- MS-CHAPv2

To confirm your authentication settings, click the **Next** button.



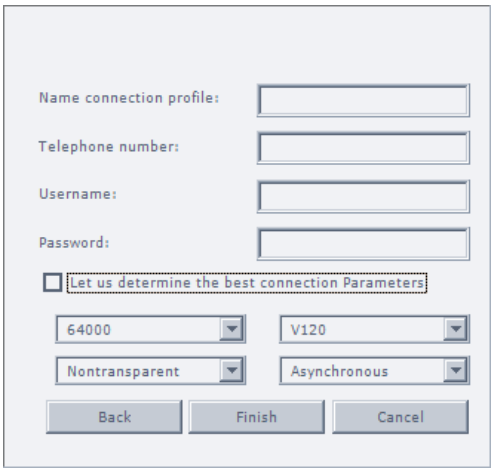
Enter your **Username** and choose whether to authenticate with a password or a certificate. If you choose a certificate, enter the certificate manually in the **Certificate** field, or click the **Browse** button to search for it.

To examine the certificate, click the **View** button.

> **Note:** In theory, you can use both a password and a certificate. Usually you only have to use one.

To save your setting and create the WLAN connection, click the **Next** button.

Creating an HSCSD Connection



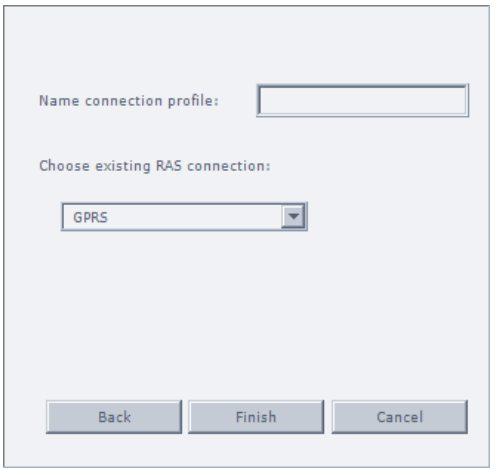
You have to fill out the **Name** of the **connection profile** as well as the **Telephone number** you need to use before you can create a connection. If required, you can enter a **Username** and **Password**.

The other (HS)CSD settings can either be determined automatically by the Data Suite or be set manually.

In the top left drop-down list you can set the connection speed, in the top right drop-down list you can set the connection protocol. In the bottom left drop-down list you can select whether the connection needs transparent or nontransparent coding. Finally, in the bottom right drop-down list you can select whether the bearer services are asynchronous or synchronous.

Once you have entered the connection settings click the **Finish** button to create the connection.

Creating an RAS Connection



If you have Windows dialup connections, for example, to your own Internet service provider, you can use them with the Data Suite as well.

Enter the **Name** of the **connection profile** and from the drop-down list choose the RAS connection you want to use.

Manual Connections

You can connect manually by dragging the slider in the **Connect** area from the default **AUTO** position to the network type you would like to connect with.

The available network types are emphasized in bold type and show the signal strength. Network types that are not available are suppressed because your mobile device cannot handle them.

There are six different network types

- WLAN
- HSDPA
- UMTS
- EDGE
- GPRS
- HSCSD

In the example above, you should be able to connect to WLAN networks.

WLAN

Manual WLAN connections can only be established when you are connecting to an open WLAN network. You cannot connect to protected WLAN networks.

To manually connect to WLAN hotspots, drag the slider to **WLAN** and click the **Connect** button. If there are multiple WLAN networks or hotspots available, you will be asked to select the network to be used. For some hotspots you will be asked for a user name and password when connected.

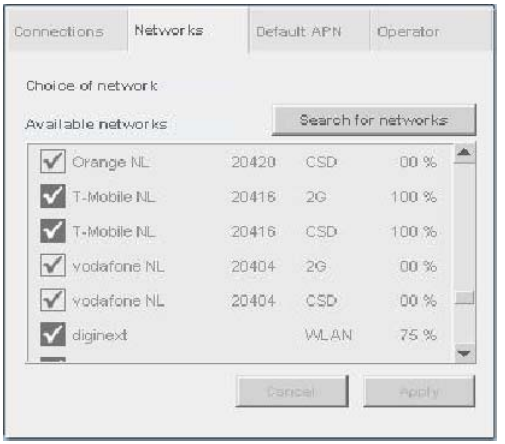
Network search

If you have set the slider to a manual network type, you can perform a network search. Network searches cannot be performed in **AUTO** mode.

To start a network search, choose **System** > **Settings** > **Connection** > **Networks** tab and click the **Search for networks** button.

The Data Suite will find all networks your installed device can detect. If you have a GPRS-only phone installed, it will therefore find only GPRS networks, no UMTS networks. If you have a WLAN capable device, WLAN networks will also be found.

Once the search is finished, all networks found will be listed on the tab. For each network, the name, operator code, network type, and signal strength is listed.



Available networks are listed with a black check on a white background. Active networks are listed with a white check on a black background.

If you are able to connect to other (mobile) networks than those of your operator, every time you attempt a manual connection after a network search, you will be asked to which network you would like to connect. This keeps on happening until you have restarted the Data Suite.

Roaming

With the basic Data Suite client it is only possible to connect to the networks of your own operator. You have to install the SwitchBlade module to roam and use networks other than those of your own operator.

If the SwitchBlade module is not installed and you are in a roaming situation (for example, you are abroad), you will not be able to see mobile (UMTS, EDGE, GPRS, and HSCSD) networks.

Once SwitchBlade is installed, you will immediately be able to roam. Keep in mind that with most operators, you will only be able to connect to third-party networks when your operator's networks are not available.

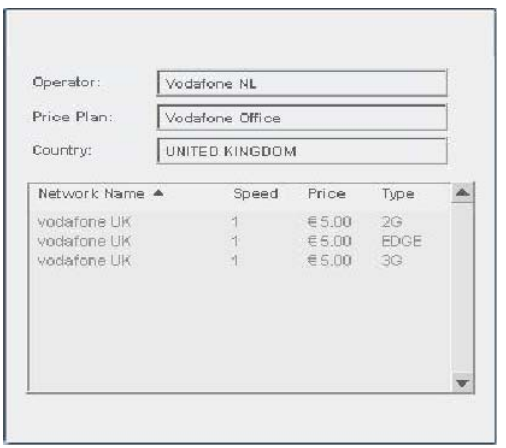
Roaming Manager

The SwitchBlade module not only enables roaming via the Data Suite. With the SwitchBlade module you also get a proper roaming manager to choose the network that suits your needs best. The roaming manager is only available in the **AUTO** connection mode.

The SwitchBlade roaming manager consists of two windows: **Info** and **Settings**.

Info Window

On the **Info** window you can look through the roaming database SwitchBlade uses and see which networks are available to you.

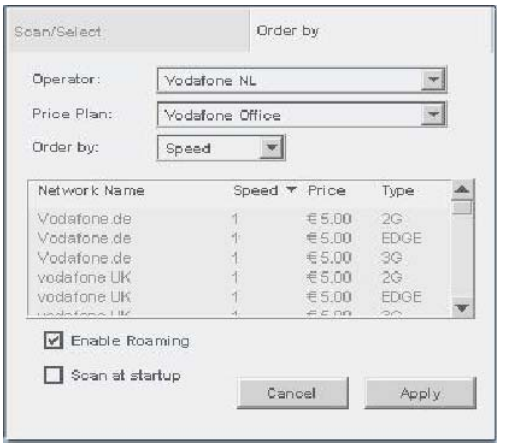


First select your **Operator** and then select the **Price Plan** you use from that operator. For example, with Vodafone NL, there are the following price plans: Vodafone Office, Vodafone Blackberry, and Vodafone Live!.

By default, all roaming networks you can use with your chosen operator and price plan are shown. You can also limit the search by selecting the country you want information for.

Settings Window

The **Settings** window is divided into two tabs: **Scan/Select** and **Order by**.



To automatically select a roaming network

1. Choose **System** > **Settings** > **Roaming** > **Order by** tab.
2. To activate roaming, select the **Enable Roaming** check box.
3. To allow the Data Suite to choose the best network for you, select the **Scan at startup** check box.
4. To specify which network to use, define the **Operator** and **Price Plan** you use as your home network and whether to order the found networks by price, speed or brand.

   The Data Suite will automatically select the best network according to your criteria. The selected network is shown on the **Scan/Select** tab.

To manually select a roaming network

1. Choose **System** > **Settings** > **Roaming** > **Order by** tab.
2. Clear the **Scan at startup** check box.
3. On the **Scan/Select** tab click the **Scan** button to perform a network search for available roaming networks.

   If you want to cancel the scan process, click the **Abort** button.
4. Select the network you want to use and click the **Select** button.

   Selected networks are shown with a white check on a dark background, available networks with a dark check on a white background.

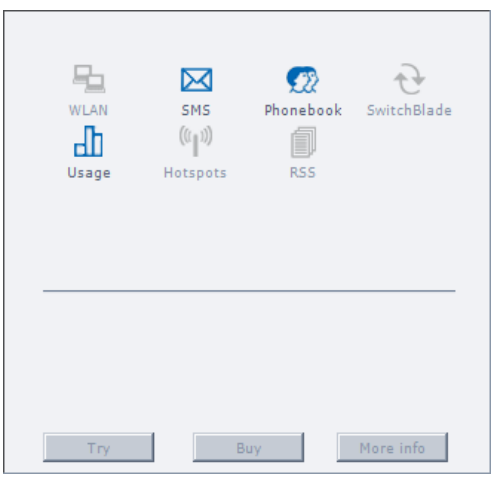
CHAPTER 6

Extending the Data Suite

The basic Data Suite can be extended with various modules. These modules are offered in the Data Suite itself, via **System** > **Modulator**.

The **Modulator** sub-menu is divided into the following windows:

- **Account**: Here you enter the details of your Data Suite user account. This information is required to test or buy modules.
- **Status**: Here you find the status of the installed and available modules.
- **Updates**: Here you can check for updates for the Data Suite
- **Modules**: Here you get an overview of the available modules.



Modules that have been tested or bought are shown in blue. Modules that have not yet been tested or bought or are unavailable for any reason are grayed out.

To get a short description of a module, click the appropriate icon. If you need more information, click the **More info** button to.

Working with Modules

Purchasing Modules

To make use of a module, you have to perform the following steps:

1. Create a Data Suite user account. Creating an account is free of charge.
2. Test the module. This step is optional. You can test every module once and for a limited period of time. After this period has expired, you have to by the module if you want to continue using it.
3. Buy the module. You can either pay with credit card or via PayPal.

To create a Data Suite user account

1. Choose **System** > **Modulator** > **Account**.
2. Click the **Account** button.

   A web page opens.
3. On this web page, enter and submit your personal information.
4. Return to the **Account** window and enter your **Username** and **Password**.
5. If you want to use PayPal for your transactions, select the **Use PayPal** check box and enter your PayPal **Username** and **Password**.

To test a module

1. Choose **System** > **Modulator** > **Modules**.
2. Click the icon of the module you want to test.
3. Click the **Try** button.

   The Data Suite connects to the update server and downloads the selected module. Each module has been kept as small as possible to guarantee a smooth download process.
4. To use the module, restart the Data Suite.

   You can either access the module from within the **Modulator** sub-menu, or you can add it to the **Modules** menu. To do so, right-click the icon of the module and choose **Add as favorite** on the context menu.

   To delete the module from the **Modules** menu, right-click the icon of the module and choose **Remove from favorites** on the context menu.

To buy a module

1. Choose **System** > **Modulator** > **Modules**.
2. Click the icon of the module you want to buy.
3. Click the **Buy** button.

   This leads you to a PayPal web page. You can choose between paying via credit card or PayPal account.
4. Follow the on-screen instructions.

   You get a confirmation message about the transaction and a confirmation e-mail from PayPal.

   Once the transaction is finished successfully, the Data Suite will download and install the selected module.

> **Note:** If you are on a slow connection, it could happen that the transaction in the Data Suite times out before the buying process is finished. This is not a problem. Once you have bought a module, it will be downloaded and installed even when your transaction times out.

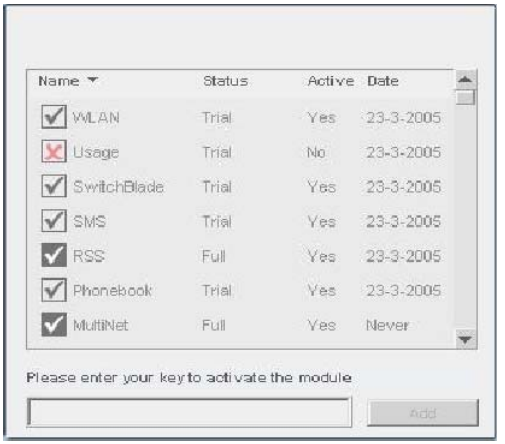
5. To use the module bought, restart the Data Suite.

   You can either access the module from within the **Modulator** sub-menu, or you can add it to the **Modules** menu. To do so, right-click the icon of the module and choose **Add as favorite** on the context menu.

   To delete the module from **Modules** menu, right-click the icon of the module and choose **Remove from favorites** on the context menu.

Status Window

To open the **Status** window, choose **System** > **Modulator** > **Status**. This window gives you an overview of installed and available modules and their status.



After installing the Data Suite, all modules – except for the Data Suite itself – are labeled **Not Present**. If you then test or buy a module its status changes to **Inactive**. Once you have restarted the Data Suite, the status changes to **Trial** or **Full**. For any module on trial the expiration date is listed. The modules bought will never expire – except for the **Hotspots** module which is a subscription service.

Those users who have bought a 4G Systems Data Suite CD can also enter a serial key to unlock the various modules. Each module has its own serial key, the Data Suite recognizes automatically which module to unlock. When you buy modules over the Internet your license will be granted automatically.

Updates Window

To open the **Updates** window, choose **System** > **Modulator** > **Updates**.

The updates are divided into the following categories:

- **Driver updates** enable the Data Suite to make use of more mobile phones or datacards, or it upgrades drivers already in use.

- **Program updates** improve the general stability of the Data Suite or add new functionality.
- **WLAN updates** are available if the Hotspot module is enabled. These updates provide additions and upgrades to the Hotspot database.
- **Other updates** contains any update not covered by the other categories.

You can either **Check for updates** from the Data Suite, or **Browse for updates** yourself. The first option finds and installs updates automatically, without you having to care about it. If you like to do it on your own, the second option launches a web browser and connects to the Data Suite update site. On this site you can review the available updates before downloading them. For both options, you have to be connected to the Internet.

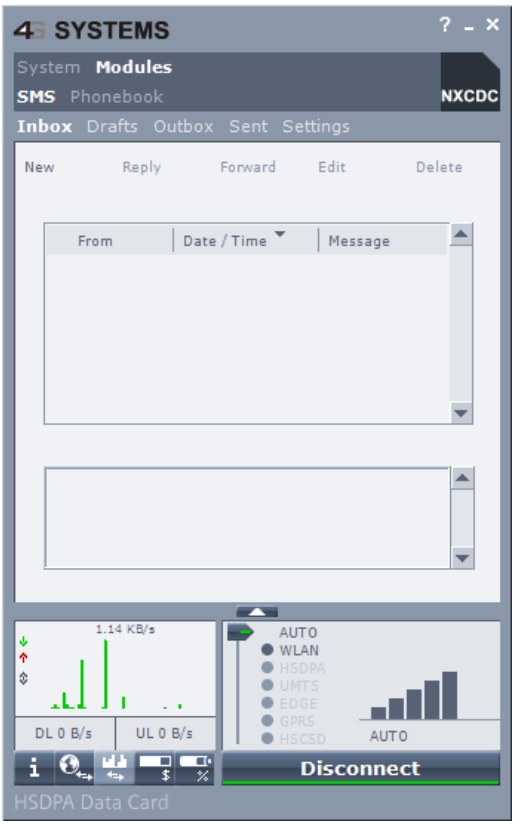
SMS Manager Module

When you install the SMS Manager, you can send and receive text messages and either keep them on your SIM or in the Data Suite. You can only use the SMS Manager if a mobile device is installed and active. You cannot sent or receive text messages using a LAN connection or WLAN-only device.

> **Note:** With most mobile devices, you can only send or receive text messages when you are not connected to a data network. Some devices will let you send messages while connected. For further information, please refer to the manual of your mobile device.

To open the SMS Manager, choose **System** > **Modulator** > **Modules** and double-click the **SMS** icon. (If you have added the SMS Manager to your favorites, choose **Modules** > **SMS**.)

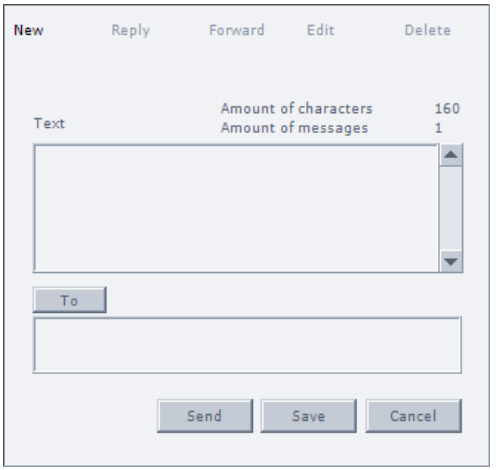
Interface of the SMS Manager



New text messages appear in the **Inbox**. You can sort the messages received by sender, phone number or the date/time you received them.

To forward a text message or reply to a text message, select the message you want and click **Forward** or **Reply**.

To create a new text message, click **New**.



Each message can be 160 characters long. Longer messages will be split up and sent as multiple text messages. In the top area you write your message, in the bottom area you enter the phone number or, if you have the Phonebook Manager installed, the contact you want to send it to. You can only send a message if you have specified at least one phone number.

If you want to save but not send the text message, click the **Save** and then the **Cancel** button. To send your message directly, click the **Send** button.

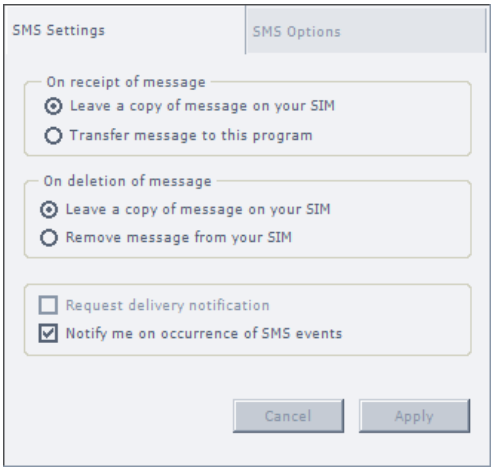
Saved text messages are stored in the **Drafts** folder of the SMS Manager.

Sent text messages are stored in the **Outbox** and once they have been sent successfully appear in the **Sent** folder. A text message that cannot be sent remains in the **Outbox**.

Settings Window

In the **Settings** window of the SMS Manager, you can control how the Data Suite treats text messages. It is divided into two tabs: **SMS Settings** and **SMS Options**.

SMS Settings Tab



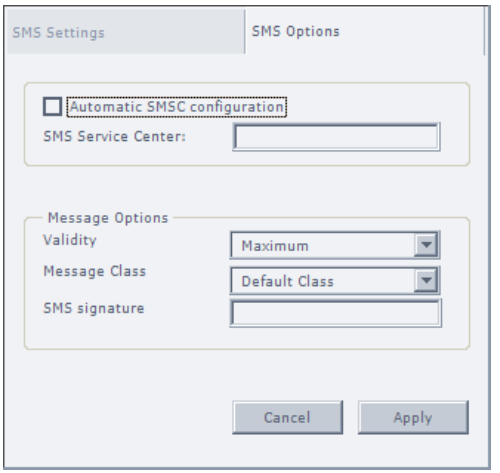
When you receive a text message you can choose to either keep it on your SIM and in the Data Suite or only in the Data Suite. By default, copies of your messages are kept on SIM.

Similarly, when you delete a text message from the Data Suite you can choose to also remove it from your SIM. By default, messages are not deleted from the SIM when you delete them from the Data Suite.

If you select the **Request delivery notification** check box, you will be informed when your text messages have been successfully delivered. Delivery notification must be supported by your device and operator.

If you select the **Notify me on occurrence of SMS events** check box, you will be informed via the Multi Functional Display when messages are sent or received or errors occurred.

SMS Options Tab



SMSC configuration

When you send a text message it is not directly sent from your mobile device to the recipient, but first goes to a Short Message Service Center (SMSC). There it is forwarded to the recipient. Normally, your SMSC is determined automatically from your SIM.

If you want to use a different SMSC, clear the **Automatic SMSC configuration** check box and enter the desired SMSC in the **SMS Service Center** field.

Validity

The **Validity** is the period of time the SMSC keeps your text message and tries to deliver it. If the message cannot be delivered within this period, it will be deleted.

Possible values of the validity are the maximum period supported by your SMSC, one hour, six hours, one day, or one week. The recommended setting is **Maximum** to increase the chance that your message can be sent to the recipient. **Maximum** is also the default setting.

Message Class

In the **Message Class** drop-down list you specify where on your recipient's phone your text message will appear.

- **Default Class**: This delivers the text message to the standard place.
- **Phone Screen**: This delivers the text message directly to the display of the recipient’s phone.
- **Phone Memory**: This delivers the text message directly to the recipient’s phone.
- **SIM Memory**: This delivers the text message directly to the recipient’s SIM card.

SMS signature

In the **SMS signature** field you can enter text that will be placed under every text message you send, for example, your name and contact details.

The number of characters used for your signature will be subtracted from the 160 characters available for each text message. For example, using “John Q. Public” for your signature takes up 14 characters, which leaves 146 characters for your message.

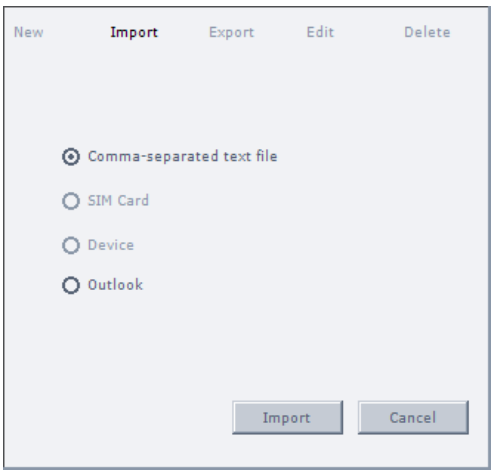
Phonebook Manager Module

With the Phonebook Manager you can manage all your contacts, whether from your SIM card, your mobile phone, or Microsoft Outlook, in one place. If you have both the Phonebook Manager and the SMS Manager installed, you can send text messages to any contact from your phonebook.

To open the Phonebook Manager, choose **System** > **Modulator** > **Modules** and double-click the **Phonebook** icon. (If you have added the Phonebook Manager to your favorites, choose **Modules** > **Phonebook**.)

Importing Contacts

For importing contacts, you have the following options:



The single options are not always available. If you use a datacard, the **Device** option is not available. In general, if no device is connected, the **SIM Card** option and the **Device** option are grayed out. The **Outlook** option is only available, if Microsoft Outlook is installed (not Microsoft Outlook Express).

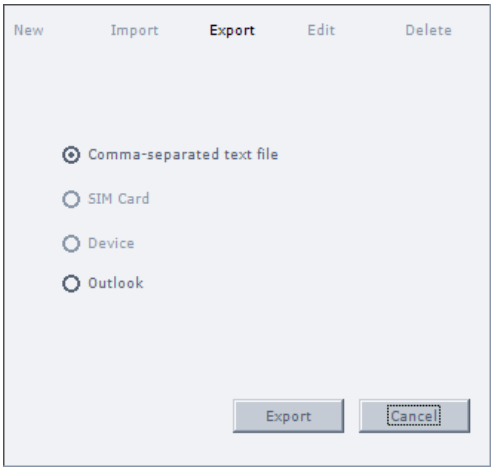
If you choose the **Comma-separated text file** option, a dialog opens in which you can browse for the CSV file you would like to import.

Finishing the import from SIM or device may take a while, especially when you have a large list of contacts to import.

When importing from Microsoft Outlook, Microsoft Outlook will warn you that a program is trying to access its contacts and will ask you if you want to allow this. This warning is for security reasons. You have to click the **Yes** button to start the import. Otherwise, you won't be able to import contacts from Microsoft Outlook.

Exporting Contacts

For exporting contacts you have the following options:



The single options are not always available. If you use a datacard, the **Device** option is not available. In general, if no device is connected, the **SIM Card** option and the **Device** option are grayed out. The **Outlook** option is only available, if Microsoft Outlook is installed (not Microsoft Outlook Express).

If you choose the **Comma-separated text file** option, a dialog opens in which you can browse for the CSV file you would like to export to.

Finishing the export to SMS or device may take a while, especially when you have a large list of contacts to export.

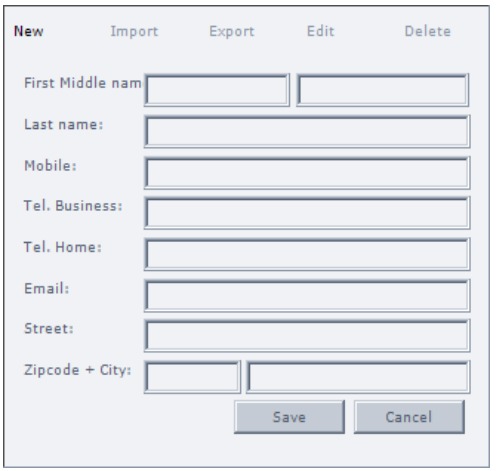
When exporting to Microsoft Outlook, Microsoft Outlook will warn you that a program is trying to access its contacts and will ask you if you want to allow this. This warning is for security reasons. You have to click the **Yes** button to start the export. Otherwise, you won't be able to export contacts to Microsoft Outlook.

Managing Contacts

With the Phonebook Manager you can edit or delete existing contacts or create new contacts.

> **Note:** Be careful with exporting contacts created or edited to SIM or device. Not all information can be exported.

To create a new contact, click **New**.



You have to enter at least a name and a telephone number.

To edit or delete a contact, select the desired contact and click **Edit** or **Delete**. You can only edit one contact at the same time, but delete multiple contacts at once.

Usage Manager Module

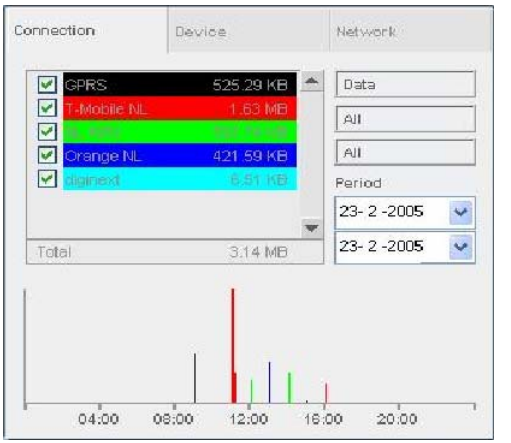
The Usage Manager enables you to keep track of how much time you spent online, how much data you downloaded and uploaded, and which connections, networks, and devices you have used.

To open the Usage Manager, choose **System** > **Modulator** > **Modules** and double-click the **Usage** icon. (If you have added the Usage Manager to your favorites, choose **Modules** > **Usage**.)

The Usage Manager is divided into three tabs:

- **Connection**: Shows your usage broken down into the automatic and manual connections established.
- **Device**: Shows your usage broken down into the devices used.
- **Network**: Shows your usage broken down into the networks connected to.

Connection Tab



The **Connetion** tab is divided into two areas. At the top of the tab you find a list with the usage totals of the various connections you have established. When you connect manually, the connection names will be the same as the network you established the connection with, for example, Vodafone NL. When you connect automatically, the names will be the automatic connection names, for example, GPRS or UMTS.

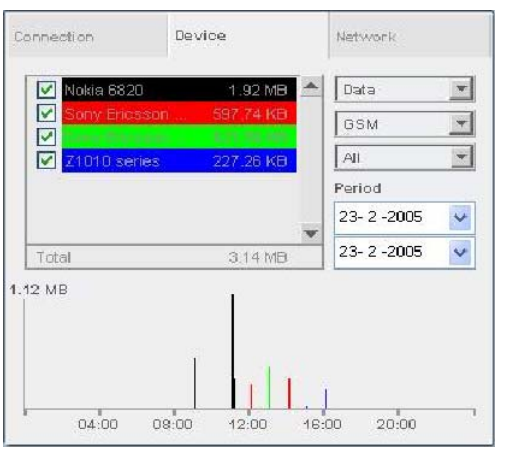
There are three drop-down lists to the right of this list, which control the kind of data shown in the list and in the graph below.

- The upper drop-down list determines whether the usage shown is time based or data based.
- In the middle drop-down list you select whether you want to show all devices, only GSM devices, or only WLAN devices.
- The bottom drop-down list (only active when **GSM** is selected in the middle drop-down list) allows you to show only 2G or only 3G connections.

At the bottom of the tab a graph shows your usage pattern in the period you have determined in the **Period** fields. The horizontal scale of the graph depends on the start and end date you have chosen:

- Start and end date are the same: The scale shows a period of 24 hours.
- Start and end date cover less than a week: The scale shows a period of 7 days.
- Start and end date cover more than a week: The scale shows a period of 31 days.
- Start and end date cover more than 31 days: The scale shows a period of 26 weeks.
- Start and end date cover more than 26 weeks: The scale shows a period of 12 months.

Device Tab



The **Device** tab is divided into two areas. At the top of the tab you find a list with the usage totals of the devices you have used.

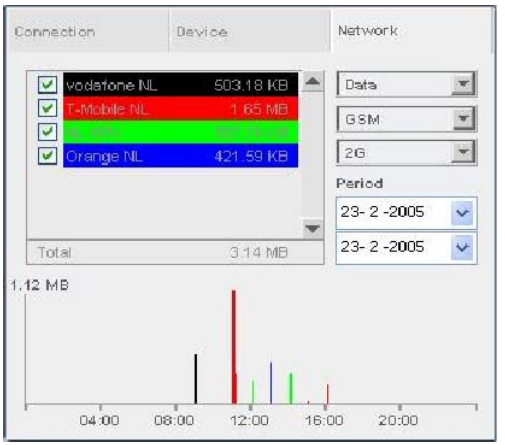
There are three drop-down lists to the right of this list, which control the kind of data shown in the list and in the graph below.

- The upper drop-down list determines whether the usage shown is time based or data based.
- In the middle drop-down list you select whether you want to show all devices, only GSM devices, or only WLAN devices.
- The bottom drop-down list (only active when **GSM** is selected in the middle drop-down list) allows you to show only PC card based devices.

At the bottom of the tab a graph shows your usage pattern in the period you have determined in the **Period** fields. The horizontal scale of the graph depends on the start and end date you have chosen:

- Start and end date are the same: The scales shows a period of 24 hours.
- Start and end date cover less than a week: The scale shows a period of 7 days.
- Start and end date cover more than a week: The scale shows a period of 31 days.
- Start and end date cover more than 31 days: The scale shows a period of 26 weeks.
- Start and end date cover more than 26 weeks: The scale shows a period of 12 months.

Network Tab



The **Network** tab is divided into two areas. At the top of the tab you find a list with the usage totals of the networks you have been connected with.

There are three drop-down lists to the right of this list, which control the kind of data shown in the list and in the graph below.

- The upper drop-down list determines whether the usage shown is time based or data based.
- In the middle drop-down list you select whether you want to show all devices, only GSM devices, or only WLAN devices.
- The bottom drop-down list (only active when **GSM** is selected in the middle drop-down list) allows you to show only 2G or only 3G connections.

At the bottom of the tab a graph shows your usage pattern in the period you have determined in the **Period** fields. The horizontal scale of the graph depends on the start and end date you have chosen:

- Start and end date are the same: The scale shows a period of 24 hours.

- Start and end date cover less than a week: The scale shows a period of 7 days.
- Start and end date cover more than a week: The scale shows a period of 31 days.
- Start and end date cover more than 31 days: The scale shows a period of 26 weeks.
- Start and end date cover more than 26 weeks: The scale shows a period of 12 months.

RSS Feed Module

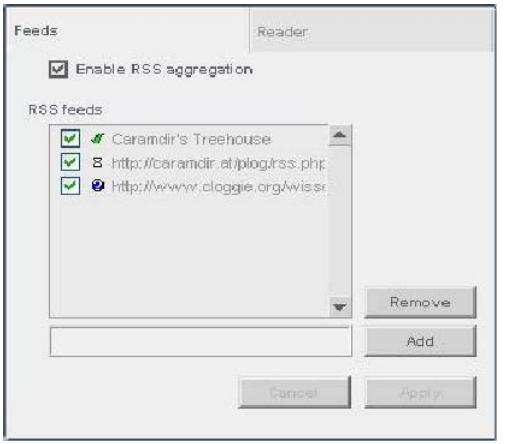
The RSS Feed module allows you to read your favorite Internet news sites and weblogs from within the Data Suite. With the RSS reader you no longer have to browse to your favorite sites to see the latest posts or news items – you will be able to read them from the Data Suite.

There are several different versions of the RSS protocol. The RSS Feed module supports correct feeds of the following types:

- RSS 0.90
- RSS 0.91
- RSS 1.0
- RSS 2.0

The RSS Feed module does not yet support Atom based feeds.

To start the reader, choose **System** > **Modulator** > **Modules** and double-click the **RSS** icon. (If you have added the RSS Feed to your favorites, choose **Modules** > **RSS**.) On the **Feeds** tab select the **Enable RSS aggregation** check box.

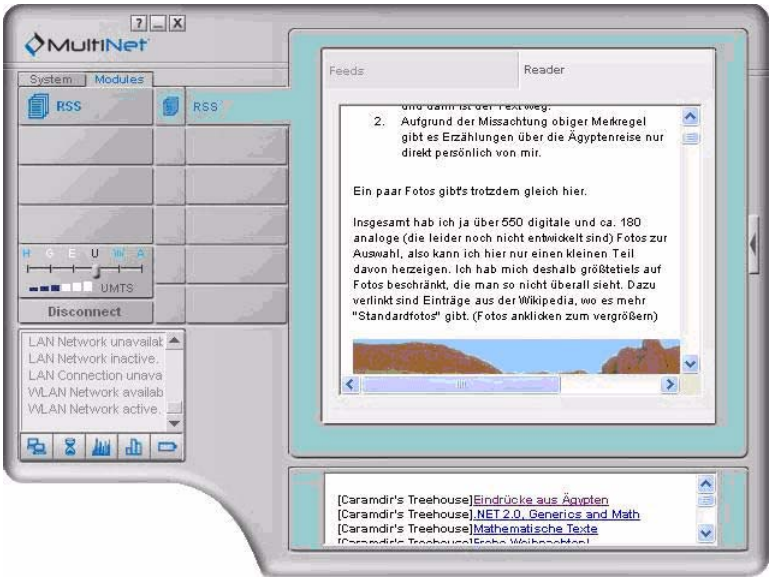


To add a new feed, enter its URL in the field below the **RSS feeds** list and click the **Add** button followed by the **Apply** button.

Once a feed is added and the Data Suite is connected, the RSS reader tries to validate the feed. The following symbols indicate the status of the feed:

- green check: The feed is validated. You can read posts from it.
- question mark or hourglass: The feed is still being validated.
- stop sign: The feed is not valid.

Once a feed is active, the links to the posts will appear in the area below the main area. If you click one of those links, the post will appear on the **Reader** tab. New items are shown at the top of the link list. The link area is always visible when you have the Data Suite in extended mode, even when you are not in the RSS reader itself.



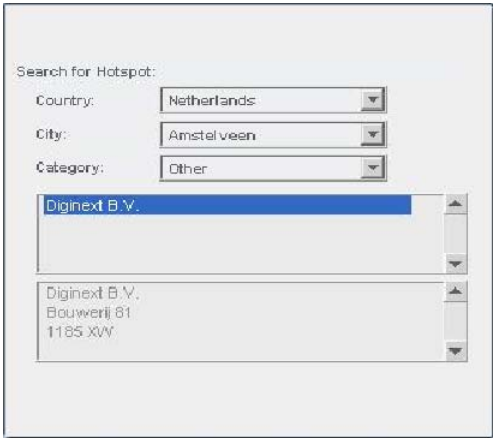
At the end of every post there is a link which opens the post in your preferred browser. Some feeds show only short summaries of their posts or news items. In those cases, just click the link to open the complete post in your browser.

To remove a feed, select the desired feed and click the **Remove** button followed by the **Apply** button.

When you remove a feed, all posts and links of that feed will be removed from the reader as well. If there are no feeds available and therefore no links shown, the link list is not visible.

Hotspots Module

The Hotspots module lets you search for close-by WLAN hotspots. When you buy this module, you also get a subscription for the Hotspots Update Service, which will keep the information in the hotspots database up to date for you.



You can search for hotspots by means of the **Country**, **City**, and **Category** drop-down lists.

The WLAN hotspots found are listed in the field below the drop-down list. If you select one of them, its details will be shown in the field below. Details can include the physical location of the hotspot, as well as information about the kind of WLAN on offer.

Index

A

add
- contact 72
- GPRS connection 46
- HSCSD connection 51
- mobile connection 45
- RAS connection 52
- WLAN connection 47

APN (Access Point Name) 42

Applications window 26

automatic connections 44

B

bandwidth meter 19

battery status 20

Bluetooth phone installation 35

C

change
- APN 42
- contact 72
- operator setting 41
- PIN 25

choose
- browser 27
- e-mail client 26
- VPN client 28

Connect area 17

Connection tab 74

connections
- automatic 44
- default settings 41
- manual 53
- status 18

contacts
- create 72
- delete 72
- edit 72
- export 71
- import 70
- manage 72

create
- contact 72
- GPRS connection 46
- HSCSD connection 51
- mobile connection 45
- RAS connection 52
- WLAN connection 47

D

data limit counter 19

Data Suite
- create user account 60
- customize 22
- extend 59
- install 9
- options and preferences 22
- select Language 24
- user interface 15

delete contact 72

device
- installation 31
- list 38

Device tab 75

E

edit
- APN 42
- contact 72
- operator setting 41
- PIN 25

Email Client tab 26
export contacts 71

G

General window 22

H

Hotspots 81

I

IEEE 802.1x authentication 48
import contacts 70
Info sub-menu 21
Info window 56
installation
- Bluetooth phone 35
- Data Suite 9
- device 31
- multiple devices 37

L

Language tab 24
Log tab 29

M

manage contacts 72
manual connections 53
menu bar 16
Modulator sub-menu 59
modules
- buy 61
- Hotspots 81
- Phonebook Manager 69
- RSS Feed 78
- SMS Manager 64
- SwitchBlade 56
- test 61
- Usage Manager 73

Modules menu 16
Multi Functional Display 18

N

network
- information 18
- search 54

Network tab 77
new
- contact 72
- GPRS connection 46
- HSCSD connection 51
- mobile connection 45
- RAS connection 52
- WLAN connection 47

O

Order by tab 57

P

Phonebook Manager 69
PIN
- change 25
- disable request for 25

PIN tab 25
Prompts tab 23

R

roaming 55
RSS Feed 78

S

Scan/Select tab 57
Settings window (SMS Manager) 66
Settings window (Switchblade) 57
SMS Manager 64
SMS Options tab 68
SMS Settings tab 67

SMSC configuration 68
Standby tab 24
Start Up tab 22
Status window 62
sub-menu
    Info 21
    Modulator 59
SwitchBlade 56
System menu 16
system requirements 6

T

tab
    Connection 74
    Device 75
    Email Client 26
    Language 24
    Log 29
    Network 77
    Order by 57
    PIN 25
    Prompts 23
    Scan/Select 57
    SMS Options 68
    SMS Settings 67
    Standby 24
    Start Up 22
    VPN 28
    Web Browser 27

U

Updates window 63
Usage Manager 73
user interface
    Connect area 17
    Data Suite 15
    menu bar 16
    Modules menu 16
    Multi Functional Display 18
    System menu 16

V

VPN tab 28

W

Web Browser tab 27
WEP key 48
Wi-Fi protected access 48
window
    Applications 26
    General 22
    Info 56
    Settings (SMS Manager) 66
    Settings (SwitchBlade) 57
    Status 62
    Updates 63