

Ontrack® Eraser
Software for Mobile Devices



Ontrack Eraser

Software for mobile devices

System Guide

Contact and Legal Information

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Generally, if such changes or variations are known to exist and affect the product significantly, a release note or Read Me file will accompany the System Guide, or will be available on the Ontrack Eraser software for mobile devices web site. In that event, please read the release notes of Read me file before using the product.

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U.S. Contact Information

Kroll Ontrack Inc.
9023 Columbine Road
Eden Prairie, MN 55347
Free Telephone: 800-872-5161
Telephone: 951-937-5161
Web: www.ontrackeraser.com

Software Sales

Free Telephone: (800) 645-3649
E-mail: ontrackeraser@krollontrack.com

Technical Support

Telephone: 952-937-2121
E-mail: support@ontrackeraser.com
Web: www.ontrackeraser.com/support
Open: 8:00 a.m. – 5:00 p.m. M-F CST

International Contact Information

Canada

155 Gordon Baker Road Suite 210
Toronto, Ontario M2H 2N7
Canada

Web: www.ontrackeraser.ca

Software Sales

Free Telephone: 800-645-3649
E-mail: software@ontrackeraser.ca

Technical Support

Telephone: 952-937-2121
E-mail: support@ontrackeraser.ca
Web: www.ontrackeraser.ca/support

United Kingdom

Kroll Ontrack
The Pavilions, 1 Weston Road
Kiln Lane, Epsom
Surrey, KT17 1JG
United Kingdom

Web: www.ontrackeraser.co.uk

Software Sales

Telephone: +44 (0)1372 741 999
E-mail: software@ontrackdatarecovery.co.uk

Technical Support

Telephone: +44 (0)1372 744 422
E-mail: support@ontrackdatarecovery.co.uk

Ireland

Kroll Ontrack
Marsh House
25-28 Adelaide Road
Dublin 2
Ireland

Web: www.ontrackeraser.ie

Software Sales

Telephone: +353 1 604 8250
E-mail: software@ontrackdatarecovery.ie

Technical Support

Telephone: 1800 930 183
E-mail: techsupport@ontrackdatarecovery.ie

Australia

28 Donkin Street, Suite #8
West End, QLD 4101
Australia

Web: www.ontrackeraser.com.au

Software Sales

Free Telephone: 1800 972 259
E-mail: software@ontrackeraser.com.au

Technical Support

Telephone: +61 7 3255 1199
E-mail: support@ontrackeraser.com.au
Web: www.ontrackeraser.com.au/support

France

2, impasse de la Noisette
97371 Verrières-le-Buisson Cedex 413
France

Web: www.ontrackeraser.fr

Software Sales

Telephone: +33 (0) 1 69 53 66 92
E-mail: logiciel@ontrackeraser.fr

Technical Support

Telephone: 0820 09 87 72
E-mail: support@ontrackeraser.fr
Web: www.ontrackeraser.fr/support

Germany

Kroll Ontrack GmbH
Hanns-Klemm-Strasse 5
71034 Böblingen
Germany

Web: www.ontrack.de/datenloeschung/

Software Sales

Telephone: +49 (0) 7031 / 644-123
E-mail: software@krollontrack.de

Technical Support

Telephone: +49 (0) 7031 / 644-244
E-mail: support@krollontrack.de
Web: www.ontrack.de

Austria

Zweigniederlassung Österreich
Landstraßer Hauptstraße 71/2
1030 Wien
Austria

Web: www.ontrack.at/daten-loeschen/

Software Sales

Telephone: +49 (0) 7031 / 644-123
E-mail: software@krollontrack.de

Technical Support

Telephone: +49 (0) 7031 / 644-244
E-mail: support@krollontrack.de
Web: www.ontrack.at

Switzerland

Kroll Ontrack S.a.g.l.
Piazza Boffalora, 4
P.O.Box 191
6830 Chiasso 3 Boffalora

Web: www.datenrettung.ch/daten-loeschen/

Software Sales

Telephone: +49 (0) 7031 / 644-123
E-mail: software@krollontrack.de

Technical Support

Telephone: +49 (0) 7031 / 644-244
E-mail: support@krollontrack.de
Web: www.datenrettung.ch

Spain

Kroll Ontrack
Calle Anabel Segura 7, 1ª Planta,
Oficina B, 28108 Alcobendas
Madrid
Spain
Web: www.ontrackeraser.es

Software Sales

Telephone: +34 900 112 012
E-mail: software@ontrackdatarecovery.es

Technical Support

Telephone: +34 900 122 012
E-mail: soporte@ontrack.es

Italy

Kroll Ontrack Srl
Via Lario, 1
22070 Fenegrò (CO) - Italy
Telephone: +39 031 3525 611
Fax: +39 031 3525 621
Web: www.ontrackeraser.it

Software Sales

Telephone: +39 031 3525 611
E-mail: software@krollontrack.it

Technical Support (English)

Telephone: +49 7031 644 244
E-mail: techsupport@krollontrack.it

Norway

Ibas Norge
Postboks 1250
Arkoveien 14
2206 Kongsvinger
Norway

Web: www.ontrackeraser.no

Software Sales

Free Telephone: 810 10 100
Telephone: +47 62 81 01 00
Fax: +47 62 81 01 10
E-mail: software@ontrackeraser.no

Technical Support

Telephone: +47 62 81 01 00
E-mail: support@ontrackeraser.no
Web: www.ontrackeraser.no/support

Sweden

Ibas AB
Märstagatan 4
753 23 Uppsala
Sweden

Web: www.ibas.se

Software Sales

Telephone: +46 (0) 18 10 44 40
Fax: +46 (0) 18 10 99 20
E-mail: erasure@ibas.se
Web: www.ibas.se

Technical Support

Telephone: +47 62 81 01 00
E-mail: support@ibas.no
Web: www.ibas.no/support

Denmark

Ibas Danmark
Teknikerbyen 25
2830 Virum
Denmark

Web: www.ibas.dk

Software Sales

Telephone: +45 70 22 34 00
Fax: +45 70 22 34 01
E-mail: erasure@ibas.dk

Technical Support

Telephone: +47 62 81 01 00
E-mail: support@ibas.no
Web: www.ibas.no/support

Belgium

Kroll Ontrack België
Regus Pegasus Park
Pegasuslaan 5
1831 Diegem

Software Sales

Telephone: +32 (0)2 512 30 22
E-mail: info@ontrackdatarecovery.be

Poland

Kroll Ontrack sp. z o.o.
Ul. Jana III Sobieskiego 11
40-082 Katowice
Poland

Web: www.ontrackeraser.pl

Software Sales

Telephone: +48 32 77 999 46
E-mail: soft@krollontrack.pl

Finland

Norman Ibas Oy
Läkkisepäntie 11
00620 Helsinki
Finland

Web: www.ibas.fi

Software Sales

Telephone: +358 9 2727 210
Fax: +358 9 2727 2121
E-mail: ibas@norman-ibas.fi

Technical Support

Telephone: +47 62 81 01 00
E-mail: support@ibas.no
Web: www.ibas.no/support

The Netherlands

Kroll Ontrack Netherlands
Holland Office Center
Kruisweg 825c
2132 NG Hoofddorp
Nederland

Web: www.krollontrack.nl

Software Sales

Tel. 0800 5 765 565
Tel. +31 (0)23 - 56 73 030
Fax +31 (0)23 - 56 73 031
E-mail: info@krollontrack.nl

Technical Support

Telephone: +47 62 81 01 00
E-mail: support@ibas.no

Web: www.ibas.no/support

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Introduction

Solution Overview

Ontrack Eraser software for mobile devices is a system solution that consists of three major components – Ontrack Eraser Server (later referred to as Server), Ontrack Eraser Desk (later referred to as Desk) and Ontrack Eraser Client (later referred to as Client). The main purpose of the system is to securely erase internal flash memory and other storage units (external memory card, SIM card) from the mobile devices.

Data erasure on mobile devices can be performed locally via cable connection or remotely over the air connection.

The erase process is performed at a high level. The application cannot perform a 100% secure erasure of all the smartphones storage units because of the nature of the units.

Local Erase

Local erasure is performed using the Desk PC application. Desk connects to the mobile device using USB cable. The Desk is the main user interface for the local device erasure process.

Depending on its configuration the Desk automatically or manually initiates the device erasure and handles the erasure action reporting to local file storage or to central server database. Desk features include automated Client software updates and license management from the Server.

Remote Erase

Server solution supports device erasure remotely over the air. The solution can be used for lost and stolen data protection but also for providing instant erasure to the end users. Instant erasure option requires system integration with service portal managing user authentication and billing. Example of such service portal is mobile operator's web portal or premium short message portal.

System Components

Ontrack Eraser Server is the centralized core of the system

- Administrated and managed by solution owner
- Provides web access for corporate customers to view and manage their own information
- GSM SMS/WAP_PUSH protocol connectivity with Ontrack Eraser Client
- HTTP(s) protocol connectivity with Ontrack Eraser Desk
- Includes SQL Database storage

Ontrack Eraser Desk is a PC tool to ease and automate local erasure

- Provides fast and easy local erasure execution in customer premises
- Automates data erasing, reporting, software updates and license deliveries

Ontrack Eraser Client is the software performing the data erasing on the mobile device

- Perform the actual data erasing on mobile devices
- Cellular Over-The-Air connection with Ontrack Eraser Server
- Wired USB connection with Ontrack Eraser Desk
- Each supported mobile operating system has eraser client of its own

User Roles and Tasks

Server Administrator:

- System Administrator management
- License management
- Client and Desk software management
- Remote erase management
- Corporate and Corporate Administrator management
- System Alarms management

Corporate Administrator

- Corporate Desk User management

- Remote erase
- Access to all corporate erase reports

Desk User

- Local erase
- Access to own erase reports

Ontrack Eraser software for mobile devices Editions

Ontrack Eraser software for mobile devices offers two kinds of licenses:

- License per Erasure: This license is based on an erasure counter and the counter is decreased per device being erased.
- Time Limited: The license is time limited. It provides unlimited erasures within the time specified.

Getting Help

Ontrack Eraser software for mobile devices provides you with the following ways to get help with the application: Online Help and Technical Support.

Online Help

Online Help includes all of the information in the user guide and it lets you quickly access this information by using one of three tabs. The Contents tab offers a hierarchical view of the contents of the help files.

Technical Support

If you have questions or problems that are not answered in the user guide or the online Help, call our Technical Support group. When reporting an issue, please include any information that might help us diagnose the problem. The following details are often the most helpful:

- Server version (Left side of screen)
- Desk application version (Desk application title bar)
- Client software version (Desk application/Setup dialog/Phone Software tab)
- The version of Operating System you are running
- The circumstances and sequence of steps that led to the problem
- The text of the error messages (If any appeared)

Contact Information

See “U.S. Contact Information” on page 3 and “International Contact Information” on page 3.

Conventions in this Manual

This manual uses guidelines for documenting notes and tips.

Notes (including cautions, important notes, tips, and warnings, as well as general notes) call the user’s attention to information of special importance or information that can’t otherwise be suitably presented in the main text.

Note indicates neutral or positive information that emphasizes or supplements important points of the main text. A note supplies information that may apply only in special cases—for example, memory limitations, equipment configurations, or details that apply to specific versions of a program.

Tip helps users apply the techniques and procedures described in the text to their specific needs. A tip suggests alternative methods that may not be obvious and helps users understand the benefits and capabilities of the product. A tip is not essential to the basic understanding of the text.

Important provides information essential to the completion of a task. Users can disregard information in a note and still complete a task, but they should not disregard an important note.

Caution advises users that failure to take or avoid a specified action could result in loss of data.

Chapter 1 Installation

Requirements

User should be familiar with basic (u)nix tools, Apache HTTP Server and PostgreSQL database.

System is tested and verified on Linux Ubuntu 8.04 LTS Server. Ubuntu installation package (.deb) file is provided. To install a fully functional system, operating system administration privileges are needed.

Installation and basic configuration of the Server

Dependencies

Server indirectly on the PostgreSQL database package. To create local database and Linux user account named `postgres`, run the following PostgreSQL install command.

```
$ aptitude install postgresql
```

Server directly depends following Ubuntu packages: `php5-pgsql`, `php5-xsl`, `php5-gd` and `smarty`.

```
$ aptitude install php5-pgsql php5-xsl php5-gd smarty
```

Installation

Use your preferred package management frontend. Like `dpkg` for commandline or `gdebi-gtk` for X-Windows. For example run as root (`sudo -s`):

```
$ dpkg -i ontrack-mobile-server.1.0.deb
```

Installation creates locations:

```
* /var/www/OESfMD
```

```
* /usr/share/doc/OESfMD
```

Configuring

Create PostgreSQL user and database for this service. For example run as postgres user (sudo su - postgres):

```
$ psql templatel
templatel=# create user eraser with password 'pwd';
templatel=# create database eraser owner eraser;
\q
```

Example above assumes PostgreSQL database been installed at localhost. More detailed information about PostgreSQL management and features can be found at PostgreSQL documentation.

Configuring Apache

Sample Apache configuration file for virtual host is provided as:

```
/usr/share/doc/OESfMD/examples/virtualhost.example.
```

Copy it under your apache configuration as /etc/apache2/sites-available/OESfMD. Edit it for required modifications; change at least server name, and SSL certificate modifications. Enable it by creating symbolic link in /etc/apache2/sites-enabled/ folder to it. Restart apache software to enable changes. More information about configuring can be found from Apache documentation.

```
$ ln -s /etc/apache2/sites-available/OESfMD /etc/apache2/sites-enabled/
```

Configuring Service

Edit database variables in file: `/var/www/OESfMD/config.php`. Test and finalize installation go to URL `http(s)://MYSERVERNAME/install`

Note: This step initializes the database and tests required file handling privileges. Follow the instructions given by the server.

Installing and configuring SMSC GW for Push erase [optional package]

Server supports two alternative Short Message Service Center Gateways (SMSC GW). The system default SMSC GW package is Kannel open source WAP and SMS gateway which is included in Ubuntu Linux delivery. The other option is NowSMS which is commercial product of NowMobile.com Limited.

In feature level there is no difference between these two options. Difference is that Kannel is available in Linux operating system and NowSMS is available only in Microsoft Windows platforms.

Both SMSC GW options have good user documentation and it is recommended to read through the selected SMSC GW manuals before installation to get to know basic concepts of the product.

Kannel

Installing Kannel to Linux Ubuntu

Install kannel from Ubuntu repositories.

Example:

```
$ sudo aptitude install kannel
```

Note: If Kannel is not able to communicate with modem or operator SMSC interface using the default configuration it may create huge log files under `/var/log/kannel` and fill system disk storage.

Configuring Kannel

This server uses incoming SMS messages and outgoing WAP-Push messages. Our sample configuration uses Siemens MC35i modem as an SMS gateway.

Copy `/usr/share/doc/OESfMD/examples/kannel.conf` to `/etc/kannel/`.

Edit file to suit your installation.

Enable Kannel smsbox by editing `/etc/default/kannel` file and uncomment `START_SMSBOX=1` line.

Disable Kannel wapbox functionality (not needed) by commenting out `START.WAPBOX=1` line.

Restart Kannel after changes.

```
$ /etc/init.d/kannel restart
```

For more information about Kannel configurations please refer to Kannel user documentation.

Important: This concerns installations using modem for cellular network connectivity. In default Ubuntu Server configuration and Kannel installation, the `kannel` user is missing from system `dialout` group meaning that Kannel user doesn't have rights to access modem. This problem can be corrected with following command:

```
$ usermod -a -G dialout kannel
```

Verifying Kannel installation

Send SMS “OESfMD” to your SMSC Gateway MSISDN number. Kannel should reply to you by static “hello world” message.

This verifies that low level system configurations are correct in the Server and that SMSC connectivity is working.

Configuring Incoming SMS messages

Ontrack Eraser Client software in the mobile device sends messages to the Server when the Client software is (un)installed, SIM card changed or phone erased.

In both Kannel and NowSMS configurations needs to be make in order to route the incoming SMS messages from mobile device to correct Server and to correct handler inside the Server. In Kannel systems, in the `/etc/kannel/kannel.conf` file, in the `sms-service` groups, the required handlers are defined.

When the message is received, the Kannel will evaluate the message and connect to the handler based upon the message. The decision of what URL to connect is based upon the first “word” of the received SMS message, the keyword. The keyword is defined in the leftmost column in the table below. It consists of a single letter defining handler, colon and a server identifier. Following handlers are defined:

| KEYWORD | URL |
|---------|--|
| E:[TAG] | http://[USER]:[PASSWORD]@[SERVER]/?action=clientConnect&method=EraseAck&Sender=[MSISDN]&Text=[MESSAGE] |
| I:[TAG] | http://[USER]:[PASSWORD]@[SERVER]/?action=clientConnect&method=Install&Sender=[MSISDN]&Text=[MESSAGE] |
| L:[TAG] | http://[USER]:[PASSWORD]@[SERVER]/?action=clientConnect&method=LockAck&Sender=[MSISDN]&Text=[MESSAGE] |
| N:[TAG] | http://[USER]:[PASSWORD]@[SERVER]/?action=clientConnect&method=Reregister&Sender=[MSISDN]&Text=[MESSAGE] |
| P:[TAG] | http://[USER]:[PASSWORD]@[SERVER]/?action=clientConnect&method=Pair&Sender=[MSISDN]&Text=[MESSAGE] |
| R:[TAG] | http://[USER]:[PASSWORD]@[SERVER]/?action=clientConnect&method=Report&Sender=[MSISDN]&Text=[MESSAGE] |

| | |
|---------|---|
| U:[TAG] | http://[USER]:[PASSWORD]@[SERVER]/?action=clientConnect&method=Uninstall&Sender=[MSISDN]&Text=[MESSAGE] |
| V:[TAG] | http://[USER]:[PASSWORD]@[SERVER]/?action=clientConnect&method=ConfigAck&Sender=[MSISDN]&Text=[MESSAGE] |

- [TAG] Server installation identifier. Same Kannel installation can be used with multiple Server installations. The default value is `ess` and the same value should be defined in the Settings, *Server Identifier* field. When the Kannel is serving multiple Servers, the handler should be defined for each of the server with corresponding server installation identifier and other Server parameters.
- [USER] Server user for performing authentication. The same value should be defined in the Settings, *Server Username* field.
- [PASSWORD] Server user's password for performing authentication. The same value should be defined in the Settings, *Server Password* field.
- [SERVER] Server IP address or domain name followed by colon and TCP port if required.
- [MSISDN] Sender MSISDN number from incoming SMS message (%p).
- [MESSAGE] Full body of incoming SMS message including the keyword (%a).

The URL parameters MSISDN and MESSAGE are parsed before the URL is fetched. Following fragment defines handler for erase command acknowledge from a mobile device:

```
group      = sms-service
keyword    = E:ess
get-url    = http://user:pwd@192.168.1.20/?action=clientConnect&
            method=EraseAck&Sender=%p&Text=%a
```

Chapter 2 Server Administration

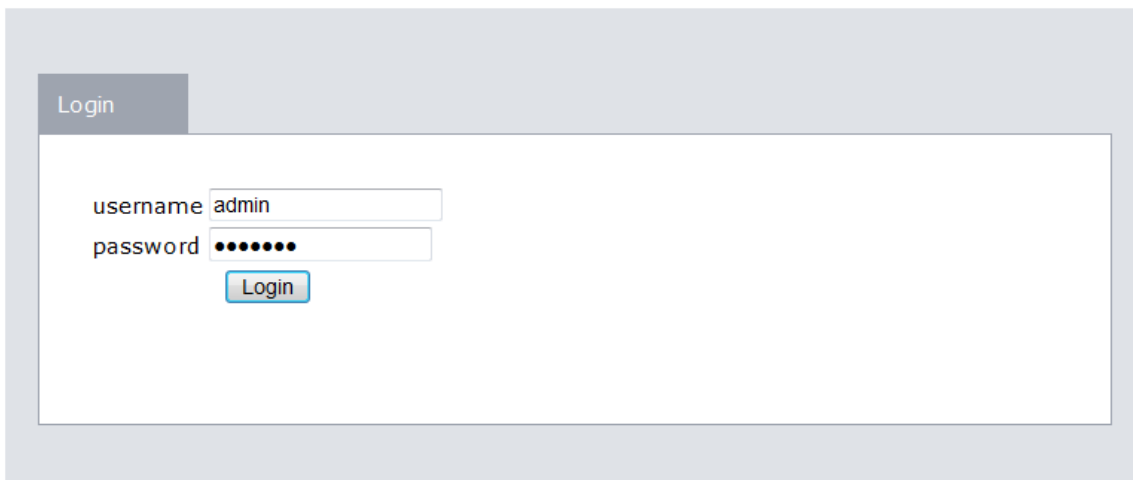
Server Administrator account is used to bring the system up and manage customer accounts, licenses, Client and Desk software, Remote erase and alarms.

For all the tasks described below please login to the Server with credentials (user name and password) that are associated to the Server Administrator role.

Administrative Accounts

Default Server Administrator Account

After installation one Server Administrator account exists. The user name is 'admin' and password is 'default'. Login to the Server using the credentials mentioned above.



The screenshot shows a web-based login interface. At the top left, there is a tab labeled "Login". Below the tab is a white rectangular form. Inside the form, there are two input fields: the first is labeled "username" and contains the text "admin"; the second is labeled "password" and contains seven black dots. Below the password field is a blue button with the text "Login".

Figure 1 - Login as Default Server Administrator

Select *My details* from the left side of the screen and change the password in the open form.

The screenshot shows a web interface with a tab labeled 'my details'. Below the tab is a form with the following fields: Username (containing 'admin'), Password (min 5 char), Verification of password, Name, Surname, Email, Phone, and Organisation. At the bottom of the form are 'Save' and 'Cancel' buttons.

Figure 2 - Change Password for Default Server Administrator

Fill also the rest of the fields if applicable even though none of them is mandatory.

Note: If you do not want Server Administrator to receive informative emails related to the Server pool license count then please leave the email address field empty. Emails are sent when the Server license count drops below threshold defined in Settings tab.

Important: Please use sufficient length passwords.

Hit *Save* and then hit *Logout* from the left side of the screen.

Managing Server Administrators

To add a new Server Administrator select *Settings* from the upper tab list. Select *Users* from the lower tab list. A list shows Server Administrators currently on the server.

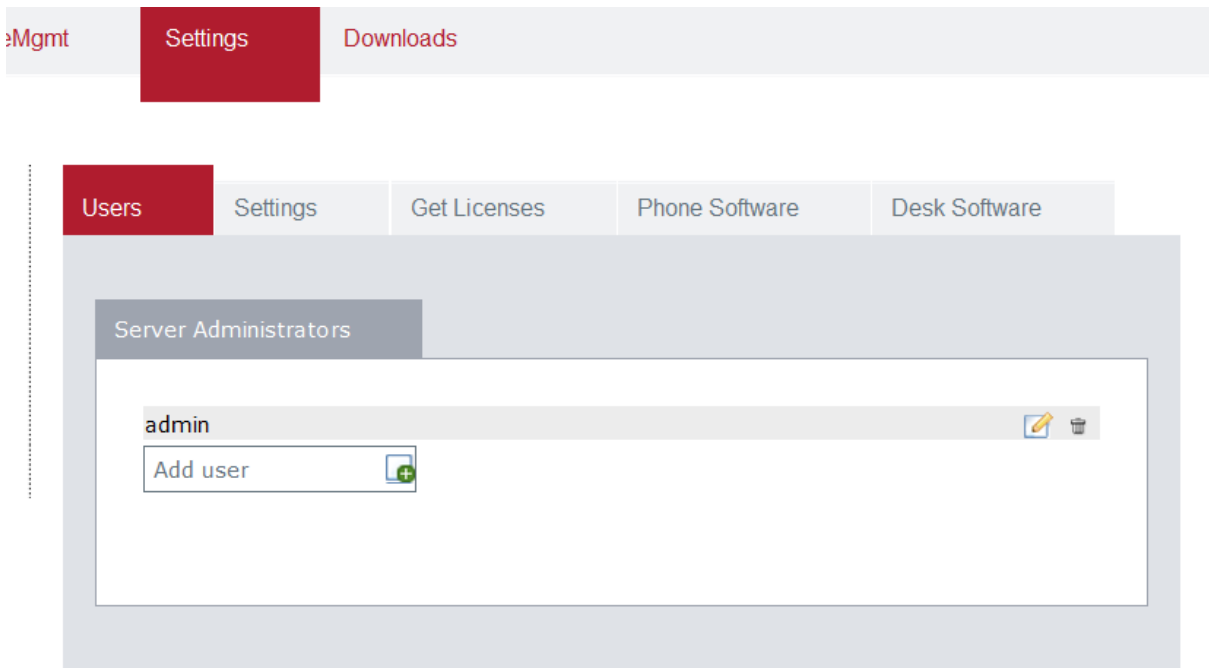


Figure 3 - List of Server Administrators

For adding Server Administrator hit *Add user* and complete the form.

Note: If you do not want Server Administrator to receive informative emails related to the Server pool license count then please leave the email address field empty. Emails are sent when the Server license count drops below threshold defined in Settings tab, *License threshold* field.

Important: Please use sufficient length passwords.

Hit *Save*.

For editing the Server Administrator hit edit icon (✎) from the list line.

For deleting the Server Administrator hit delete icon (🗑) from the list line.


License Management

Current amount of licenses in the Server pool is shown at the left side of the screen.

Licenses:60
Server Administrator

Name:

Last login:
2009-07-06 19:18

my details 


logout 

Figure 4 - License Count in the Server Pool

To add licenses to the Server pool select *Settings* from the upper tab list. Select *Get Licenses* from the lower tab list.

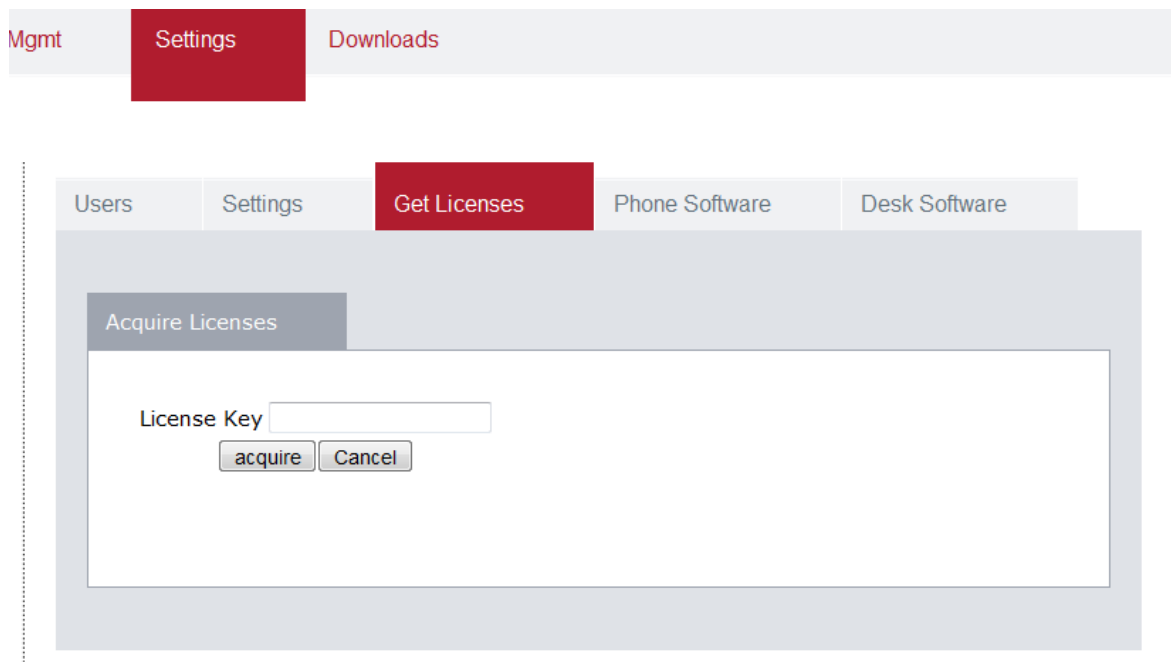


Figure 5 – Add Licenses to the Server Pool

Type the license key and hit *Acquire*. When licenses are assigned to the customers they are taken from this pool.

Software Management

Software management task includes both the Desk and the Client software management. Select *Settings* from the upper tab list.

Desk Software

To add new Desk application version to the Server for PC clients to download select *Desk Software* from the lower tab list.

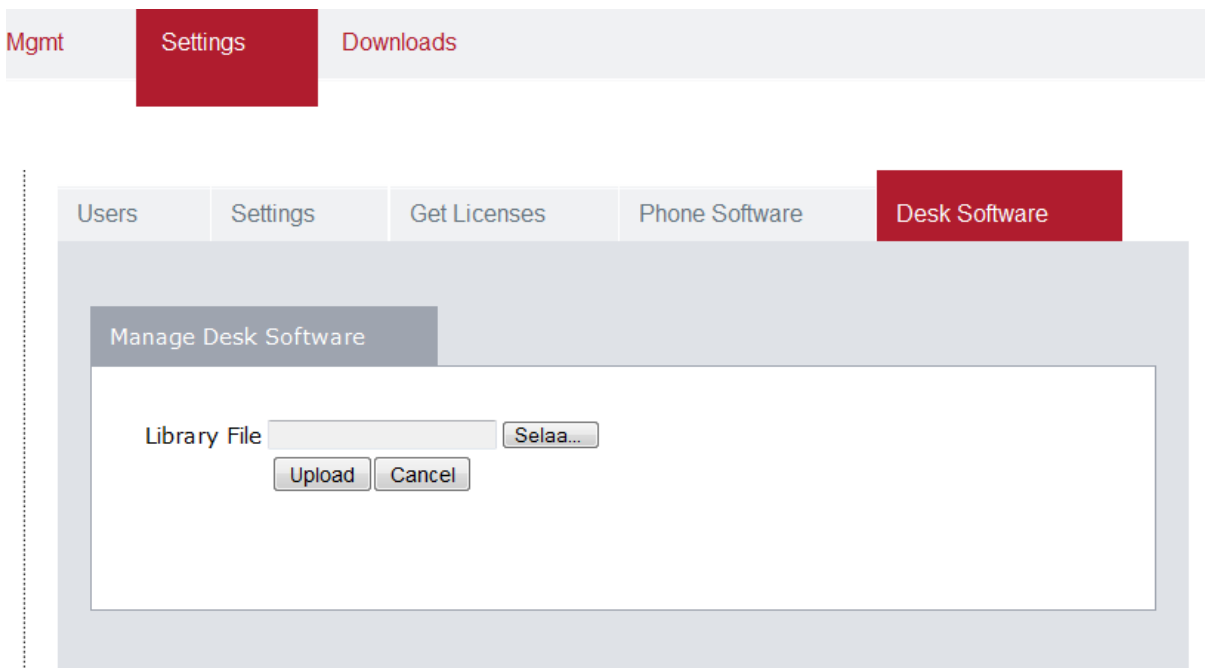


Figure 6 – Add New Desk Application to the Server

Select the new Desk application XML package into *Library File* field by hitting Browse on right side of the field and then hit Upload.

The Desk users will be notified of new Desk application version by their Desk application if they have configured their Desk application to check updates automatically. Otherwise they need to check updates manually.

The Desk application offers functionality to download the new application. The Desk user needs to install new versions in order i.e. if the user's current Desk version is 1.0.33 and the latest Desk version in the Server's XML package is 1.0.35 then the user is offered first 1.0.34 and then after 1.0.35.

Note: It is recommended to inform the Desk users to configure the Desk to check Desk application updates automatically so they would get the updates as soon as possible.

Client Software

To add new Client software package to the Server for PC clients to download and for remote erasure usage select *Phone Software* from the lower tab list.

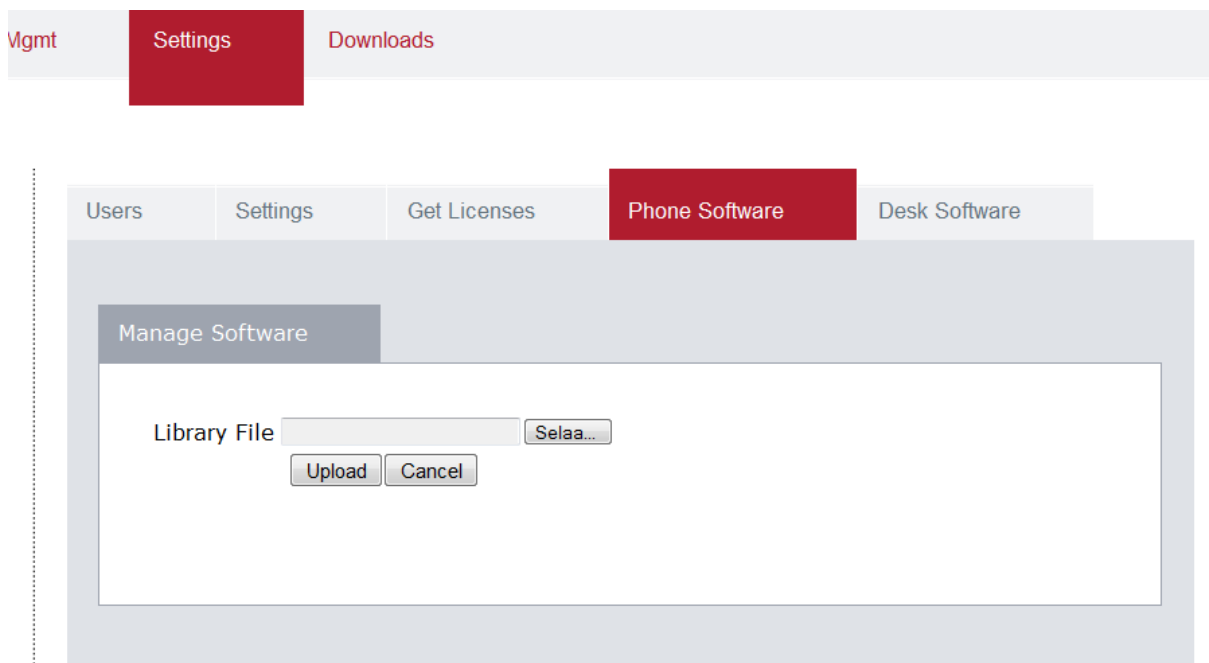


Figure 7 - Manage Client Software

Select the new Client Software XML package into *Library File* field by hitting Browse on right side of the field and then hit Upload.

The Desk users will be notified of new Phone (Client) software version by their Desk application if they have configured their Desk application to check updates to Phone Software automatically.

Otherwise they need to check updates manually. The Desk application offers functionality to download the new Phone Software to the Desk. It is enough to download the latest Phone Software to the Desk application.

Note: It is recommended to inform the Desk users to configure the Desk to check Phone Software updates automatically so they would get the updates as soon as possible.

Configuring Push Erase and License Warning Threshold

To configure license threshold and alarm message select *Settings* from the upper tab list and *Settings* from the lower tab list.

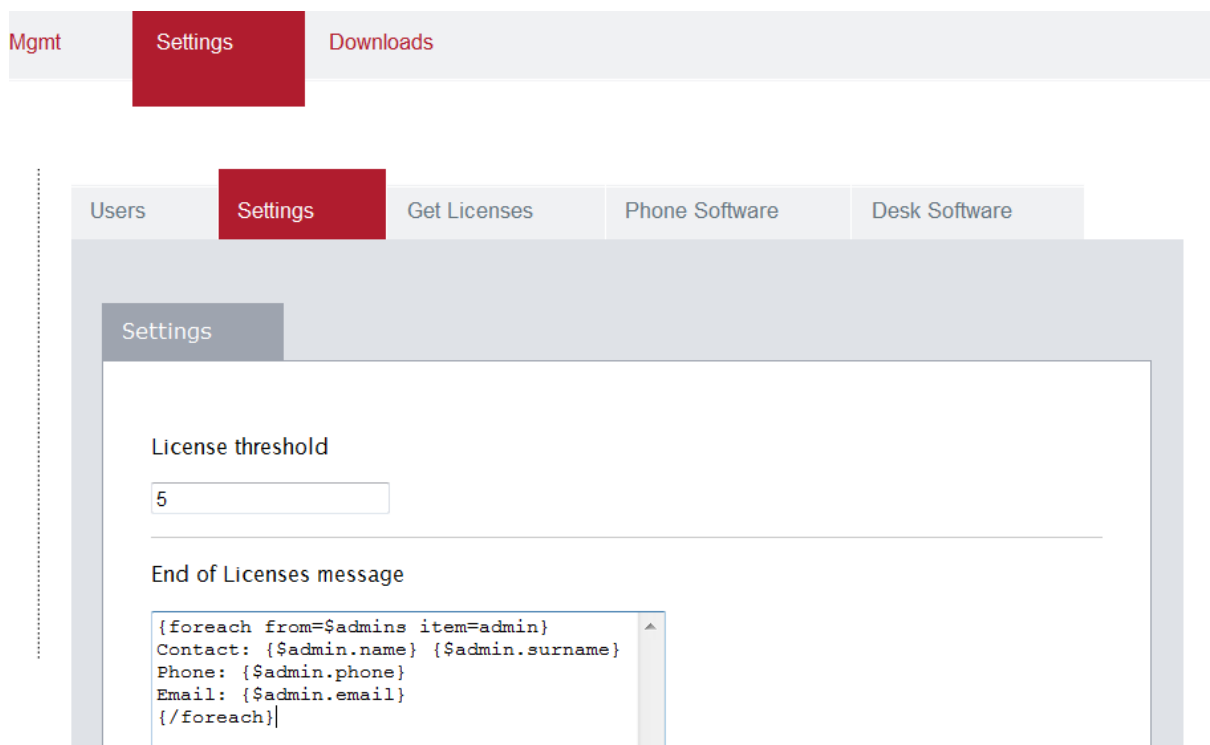


Figure 8 – License Threshold and Out of Licenses Alert

When the license count in the Server pool or in any Corporation pool is under the threshold defined in the *License Threshold* field, an email is sent to all Server Administrators and to Corporate Administrators if the email address is defined.

Message that the Desk user will see when the Desk application is out of licenses is defined in the *End of Licenses Message* field. It can be a simple fixed message or a script that will query contact information of customer’s Corporate Administrators. Table below describes two samples:

| FIELD | End of Licenses Message |
|--|---|
| Simple fixed message | Contact: Joe Smith Phone: +123456678 Email: joe.smith@email.com |
| Message containing contact information of Corporate Administrators | {foreach from=\$admins item=admin} Contact: {\$admin.name} {\$admin.surname} Phone: {\$admin.phone} Email: {\$admin.email} {/foreach} |

The rest of the fields in the Settings page configure Push Erase. They are summarized in the table below:

| FIELD | DESCRIPTION |
|------------------------------|---|
| Server Identifier | Unique three (3) letter identifier for the Server [TAG]. |
| Server Username | Username to the Server |
| Server Password | Password to the Server |
| SMSC Gateway | Kannel or NowSMS are supported |
| SMSC Gateway Number (MSISDN) | Number (MSISDN) of the SMSC Gateway that is attached to the Server |
| SMSC Gateway Location | IP address or domain name of SMSC GW |
| SMSC Gateway Port | TCP port of the SMSC GW |
| SMSC Gateway Username | Username to the SMSC GW |
| SMSC Gateway Password | Password to the SMSC GW |
| Client Download Server | IP address or domain name from where the Client software is downloaded by the phone |

Server Identifier is used in SMSC GW configuration. It allows single gateway to be used with multiple server installations. The Server sends this value to the mobile device as part of the pairing process. Later when the mobile device sends message to the Server, it includes this value in the message to be detected and acted upon by the gateway.

Server Username and *Server Password* are used in SMSC GW configuration. They allow the gateway to authenticate itself when the gateway is calling back to server after incoming SMS from the mobile device.

The values defined above must match the values in SMSC GW configuration. In Kannel they are used in the `/etc/kannel/kannel.conf` file, in the `sms-service` groups and in NowSMS in the *2-Way* tab.

SMSC Gateway defines the gateway used. The interface to the gateways is not similar and thus Server need to know which one is used for communicating with the gateway.

SMSC Gateway Number (MSISDN) is the telephone number to the SIM card that is attached to the mobile phone/modem that is connected to the gateway. It may also be operator assigned number if the gateway is connected to the operator. The Server uses this value in the Client software installing stage, by sending it to the mobile devices as part of the pairing process.

The value set above must match the values in SMSC GW configuration. In Kannel it is used in the `/etc/kannel/kannel.conf` file, in `smsbox` group and in NowSMS in the *SMSC* tab.

Important: In case the gateway uses something other than GSM Modem to connect cellular network, it is mandatory to assign long phone number to represent the Server from your mobile carrier. This requirement enables client phone and server connections also in case the phone is roaming.

SMSC Gateway Location is an IP address or domain name of SMSC GW and *SMSC Gateway Port* is the TCP port. They are defined in SMSC GW configuration.

The values defined above must match the values in SMSC GW configuration. In Kannel they are defined in the `/etc/kannel/kannel.conf` file, in `smsbox` group and in NowSMS in the *Web* tab.

SMSC Gateway Username and *SMSC Gateway Password* are defined in SMSC GW configuration. They allow the Server to authenticate itself when sending messages to the Client.

The values defined above must match the values in SMSC GW configuration. In Kannel they are defined in the `/etc/kannel/kannel.conf` in `sendsms-user` group and in NowSMS in the *SMS Users* tab.

Client Download Server field defines the IP address or domain name from where the Client software is downloaded by the phone.

Hit *OK* to save.

Server and SMSC Gateway IP Connection

As described above, there is an IP based connection between the Server and the SMSC GW module. With Kannel the default configuration is using localhost connection while both the Server and gateway are located on the same physical server. Though the default connection is via localhost the system may be distributed and then the only requirement is to provide IP connection between the Server and the gateway.

In case NowSMS product is used as a gateway the system is always distributed into two physical servers since NowSMS only supports Windows based operating systems.

Multiple Servers Sharing the Same SMSC Gateway Module

SMSC Gateway can be shared with multiple Servers. This requires routing of incoming SMS messages to corresponding Server. This routing is done using unique TAG-element for each Server. *Configuring Incoming SMS Messages* section describes how to configure TAG elements into incoming messages in the gateway.

Corresponding configuration needs to be made on each Server under *Settings* Tab to the “SMS Server Identifier” field.

Important: In case the gateway uses something other than GSM Modem to connect cellular network, it is mandatory to assign long phone number to represent the Server from your mobile carrier. This requirement enables client phone and server connections also in case the phone is roaming.

Corporate Management

Corporate Management functionality is used to manage customers. A new corporate entry will be created for each customer. In addition to defining basic information (address, email, phone etc.) the Server Administrator will create necessary amount of Corporate Administrators for a newly created corporate entry and assign licenses from the Server pool to individual Corporate.

Create Corporate

To create new corporate select *CorporateMgmt* from the tab list at upper portion of the screen.

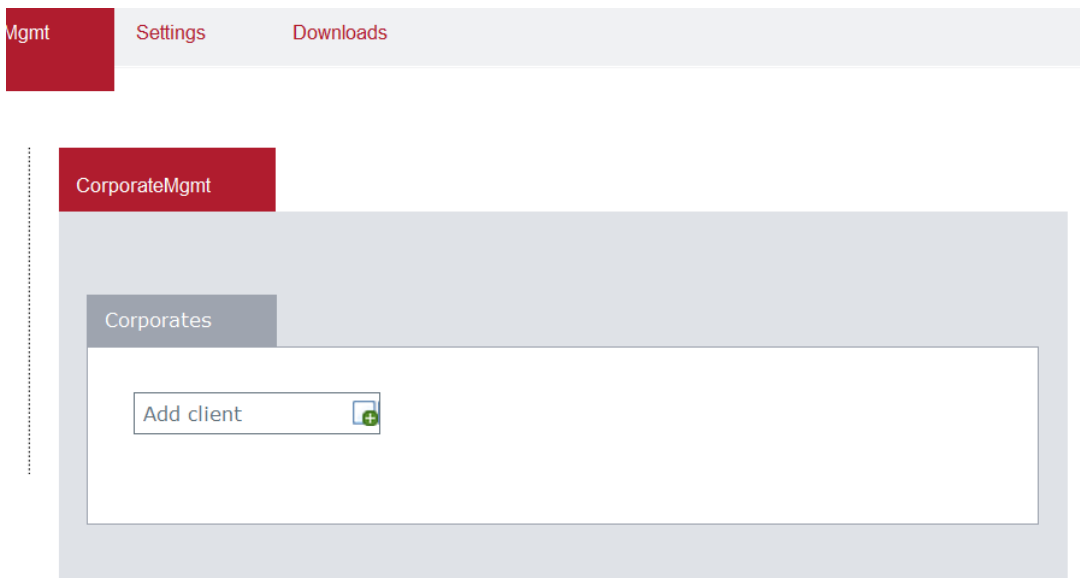


Figure 9 – Corporate List

Hit *Add client* and complete the form.

Name Customer Oy Ltd
Contact
Address
Postcode
City
Country
Email customer@email.com
Tel
Fax
Save Cancel

Figure 10 – Corporate Entry

Hit *Save*. A newly create corporate is shown in the list.

Mgmt Settings Downloads

CorporateMgmt

Client save success

Corporates

| Name | Contact | Licenses |
|-----------------|---------|----------|
| Customer Oy Ltd | | |

Add client

Figure 11 - Corporate Added

To edit Corporate hit the edit icon () in the corporate list row. To delete Corporate hit the delete icon () in the corporate list row.

Manage Corporate Administrators

To create administrators to a corporate, select *CorporateMgmt* from the tab list at upper part of the screen. Hit the Corporate Administrators icon () in the corporate list row.

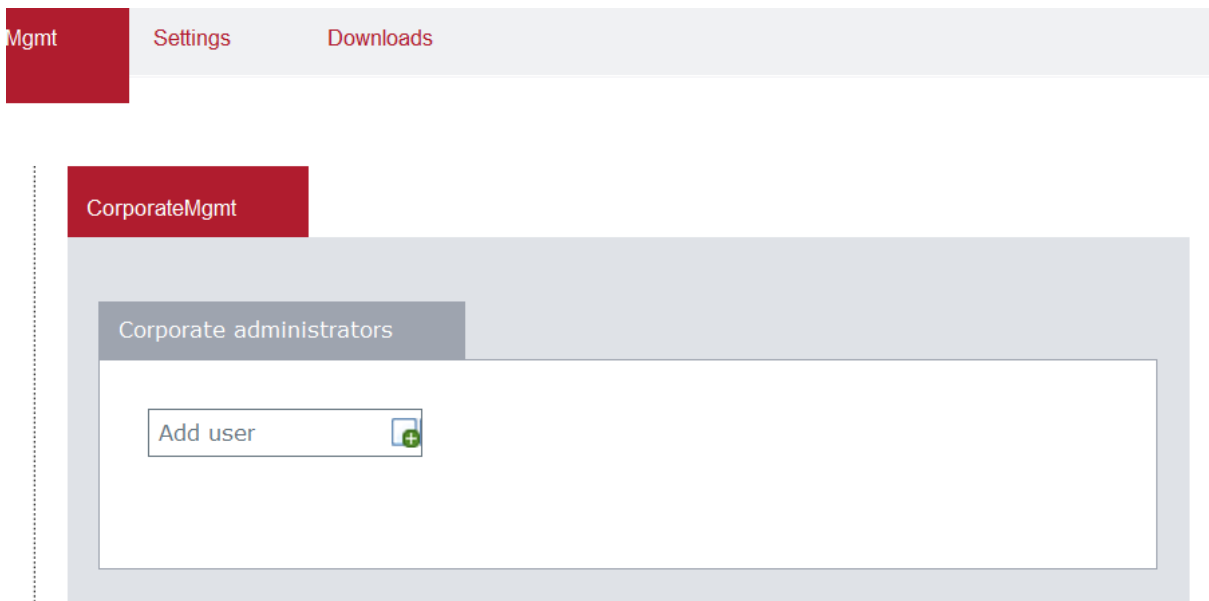


Figure 12 - Corporate Administrator List

Hit *Add user* and complete the form.

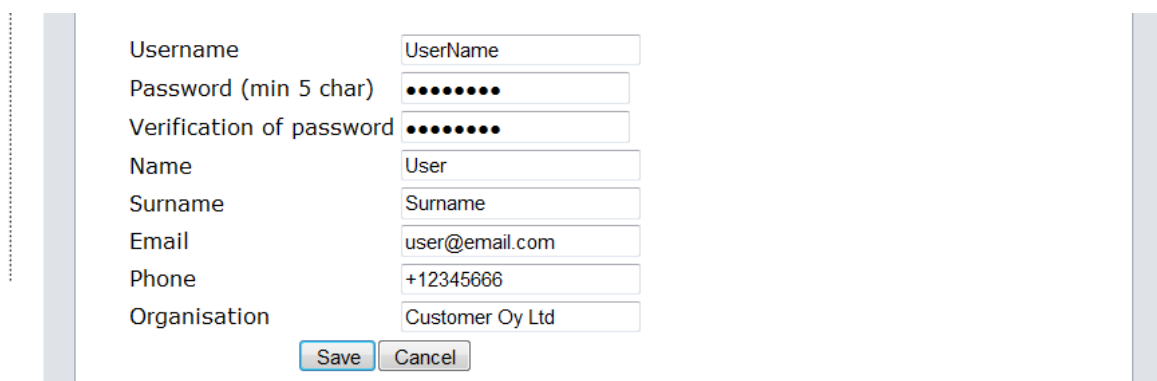
The image shows a form for adding a corporate administrator. The fields are: Username (text input with 'UserName'), Password (min 5 char) (password input with 7 dots), Verification of password (password input with 7 dots), Name (text input with 'User'), Surname (text input with 'Surname'), Email (text input with 'user@email.com'), Phone (text input with '+12345666'), and Organisation (text input with 'Customer Oy Ltd'). At the bottom, there are 'Save' and 'Cancel' buttons.

Figure 13 - Corporate Administrator Entry

Note: If you do not want Corporate Administrator to receive License Warning Threshold and Desk error notification emails then please leave the email address field empty.

Important: Please use sufficient length passwords.

Hit *Save*. A newly created corporate administrator is shown in the list.

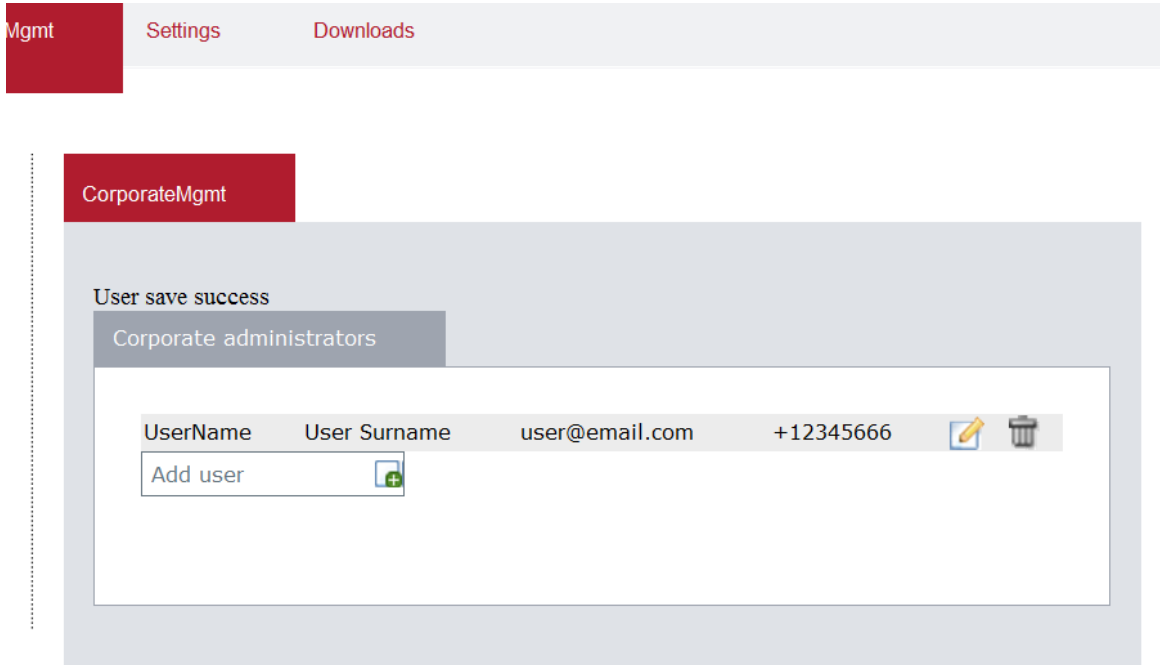





Figure 14 - Corporate Administrator Added

To edit Corporate Administrator hit the edit icon () in the administrator list row. To delete an administrator hit the delete icon () in the administrator list row.

Hit *CorporateMgmt* tab above the administrator list to go back to corporate list.

Manage Corporate Licenses

To assign licenses to the customer, select *CorporateMgmt* from the tab list at upper part of the screen. Hit the Assign Licenses icon () in the corporate list row.

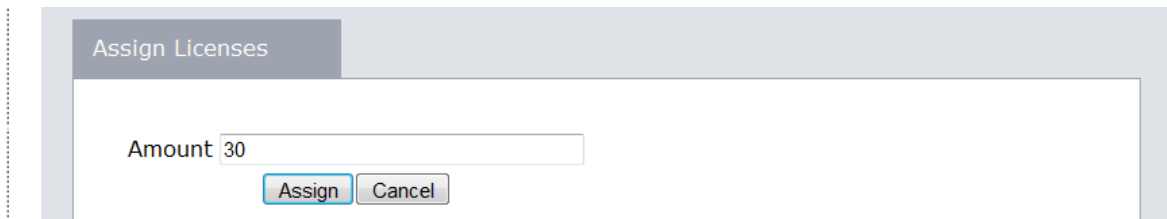


Figure 15 - Assign Licenses to Customer

Type amount and hit *Assign*. The amount will be reduced from the Server pool and added to corporate pool.

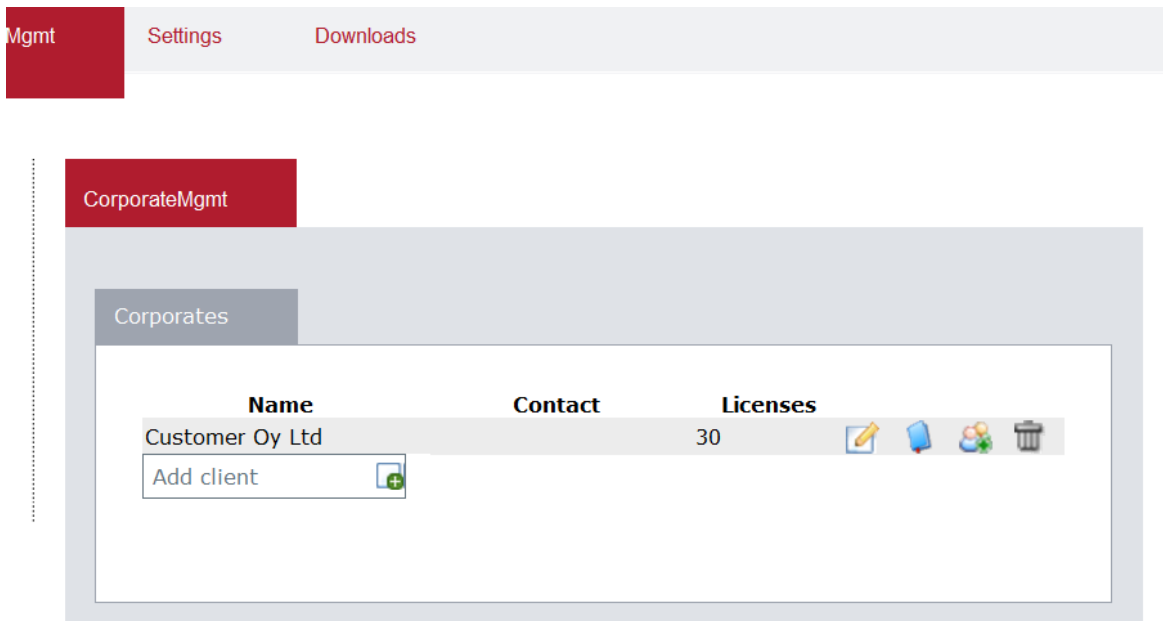


Figure 16 - Licenses Assigned

System Alarms

Desk errors

In case Desk user has opted to send error details that have occurred in the Desk to the Server, then all corresponding Corporate Administrators will receive the error detail email.

License Alarms

When the license count in the Server pool or in any Corporation pool is under the threshold defined in *Configuring Push Erase and License Warning Threshold* chapter, an email is sent to all Server Administrators and to corresponding Corporate Administrators.

Chapter 3 Operating Desks [Corporate Administrator]

This chapter describes the functionality to manage Desk User accounts and browse Desk originated erase reports.

For all the tasks described below please login to the Server with credentials (user name and password) that are associated to the Corporate Administrator role.

Desk User Management

Select *Desks* tab from the upper tab list. Select *Users* from lower tab list.

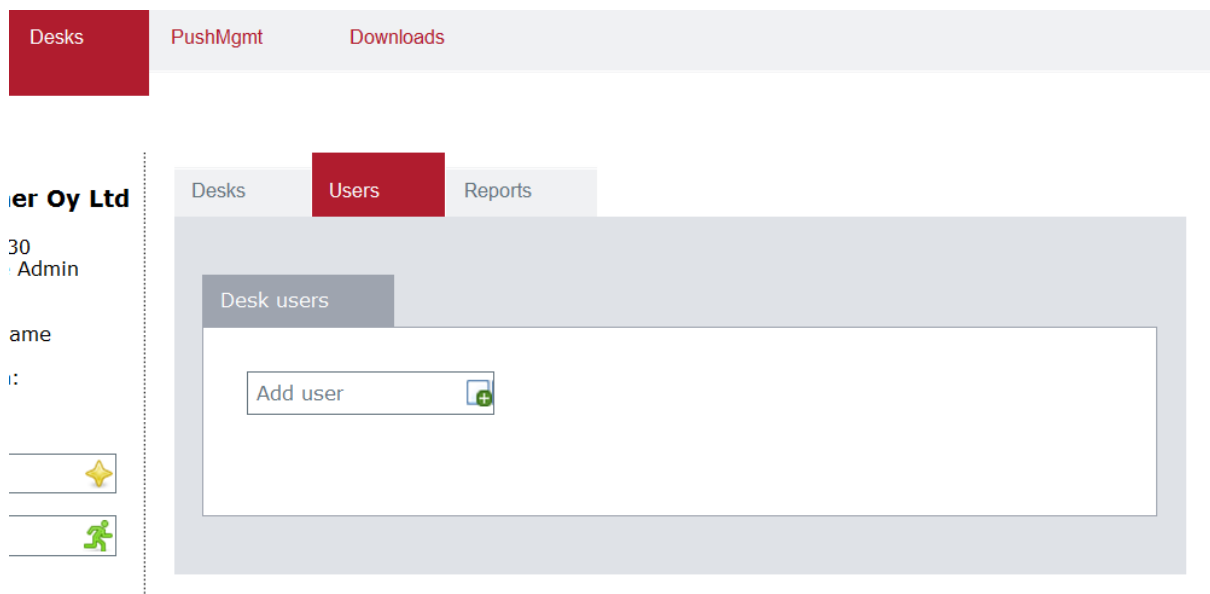


Figure 17 - Desk User List

Hit *Add User* and complete the form.

The screenshot shows a form titled "Desk users" with the following fields and values:

| | |
|--------------------------|----------------------|
| Username | CustomerDeskUser |
| Password (min 5 char) | •••••••• |
| Verification of password | •••••••• |
| Name | DeskUser |
| Surname | Surname |
| Email | deskuser@email.com |
| Phone | +12344577 |
| Organisation | DeskUserOrganisation |

At the bottom of the form are two buttons: "Save" and "Cancel".

Figure 18 –Desk User Entry

Important: Please use sufficient length passwords.

Hit *Save*. A newly created Desk user is shown in the list.

The screenshot shows the application interface with the following elements:

- Top navigation bar: Desks (selected), PushMgmt, Downloads
- Left sidebar: User Oy Ltd, 30, Admin, ame, I:, and two icons (a star and a person).
- Main content area: Desks, Users (selected), Reports
- Message: User save success
- Form: Desk users
- List of desk users: CustomerDeskUser DeskUser Surname deskuser@email.com +12344577 DeskUserOrganisation (with edit and delete icons)
- Buttons: Add user (with a plus icon)

Figure 19 - Desk User Added

To edit Desk user hit the edit icon (✎) in the Desk user list row. To delete a user hit the delete icon (🗑) in the Desk user list row. For example, if user has forgotten his/her password, a new password can be set by editing the user entry.

Desk View

Select *Desks* tab from the upper tab list. Select *Desks* from lower tab list.

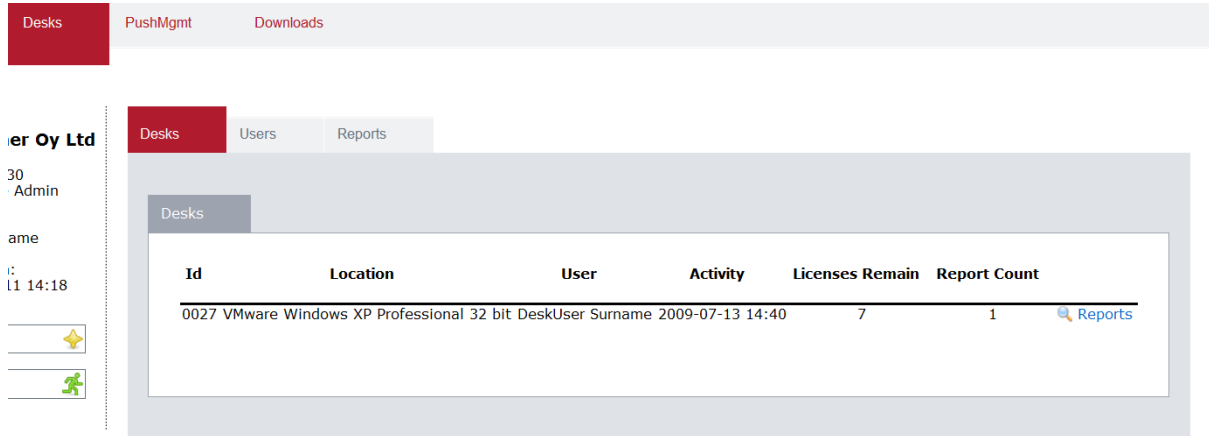


Figure 20 - Desk List

New Desks Installation

An entry for Desk is created automatically when Desk receives licenses the very first time from the Server. At this point Desk instance gets a unique ID that is stored into Server database and used to identify the Desk instance from there on.

Location information is a more user- friendly identifier of the Desk instance in order to enable Corporate Administrator to resolve where this Desk installation is physically located. It is strongly recommended that Administrators instructs Desk users to complete this field as descriptively as possible. This field is needed especially if multiple Desks are active with the same Desk username.

Remaining licenses and last activity fields are updated each time the Desk and Server exchange messages. Report count tells how many erase reports are stored into Server database and the *Reports* link opens the form listing those reports.

Link to Reports

To see the reports that are initiated by the Desk, click the *Reports* link in the Desk list row.

Desks PushMgmt Downloads

er Oy Ltd

30
Admin

ame

l: 14:18

✦

🏃

Desks Users Reports

| Report No.: | Date | |
|-------------------------------|---------------------|------------------------|
| 00004469 | 2009-07-13T11:31:54 | Report |
| Report Bundle | | |

Figure 21 - Desk Report List

Individual report can be opened by clicking the *Report* link in the report list row.

ERASE REPORT NO.: 00004469

| | | |
|--------------------------------|---|--|
| Model: | Nokia E70 (Nokia, RM-10) | |
| IMEI: | 357 | |
| OS: | Symbian OS, S60 3rd Edition, 3.0633.09.04 | |
| Internal flash: | 64.95 MB | |
| Memory card size: | 60.17 MB | |
| Memory card serial no: | 2362064272 | |
| SIM ICCID: | 0 | |
| IMSI: | 244 | |
| Erase software version: | 1.1.9_Signed | |
| Remarks: | ESS | |

| | | |
|--------------------------------|----------------------|--|
| Time: | 2009-07-13T11:31:54Z | |
| Phone: | Erase | |
| SIM: | Erase | |
| Memory card: | Erase | |
| Phone wipe count: | 1 | |
| SIM card wipe count: | 1 | |
| Memory card wipe count: | 1 | |

| | | |
|----------------------------|--------|--|
| Phone result: | Passed | |
| Memory card result: | Passed | |
| Result remarks: | | |

| | | |
|--------------------|--|--|
| Raw result: | P:1,1,1,1,1,1 2:-13,0 3:0,15,10 4:0,0,0,1,1 5:0,0,0,1,0 7:0,13,13,77,74,1,1 6:0,31,25 8:0,140,120,100,100 9:0,124928,2 DR:1 MCSN:2362064272 SIMSN:0 IMSI:244 | |
|--------------------|--|--|

| | | |
|---------------------|--------------------------------|-------------|
| Condition: | B+ | |
| Accessories: | Battery charger | Memory card |
| Other: | The phone is In good condition | |

Figure 22 - Desk Report

Searching Reports

More advanced search options are available under Reports tab. All corporate erase reports that are sent from Desks to the Server are stored into SQL database for later usage.

Select *Desks* tab from the upper tab list. Select *Reports* from lower tab list.

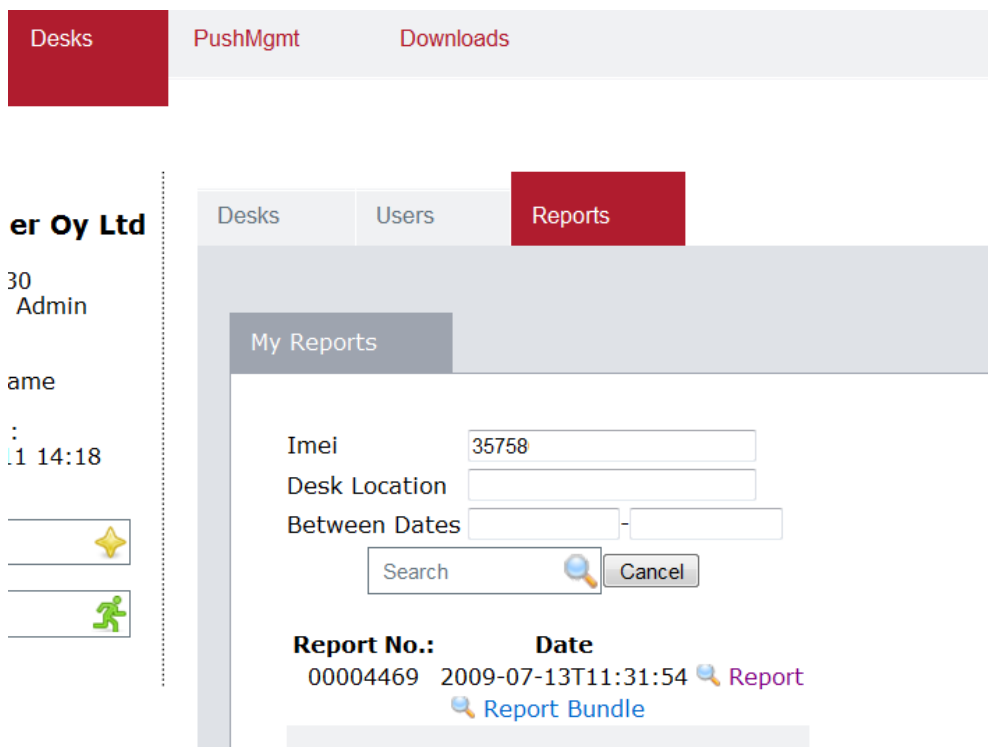


Figure 23 - Advanced Desk Report Query

Desk Operation Mode Parameters

The Desk application needs to be configured after installation. The person who makes the settings will need the information presented in this section to be able to perform the task.

We will now look at the Desk application settings. The settings should be considered carefully by Server/Corporate Administrators and then be made available to the person who is responsible for making the settings to the Desk application.

Note: Not all the settings are described, only those which are meant to be communicated to the person making the settings.

Tip: The Desk user guide is a good companion to this chapter.

Server connectivity related parameters

The Desk application connectivity related parameters define how to connect to the Server.

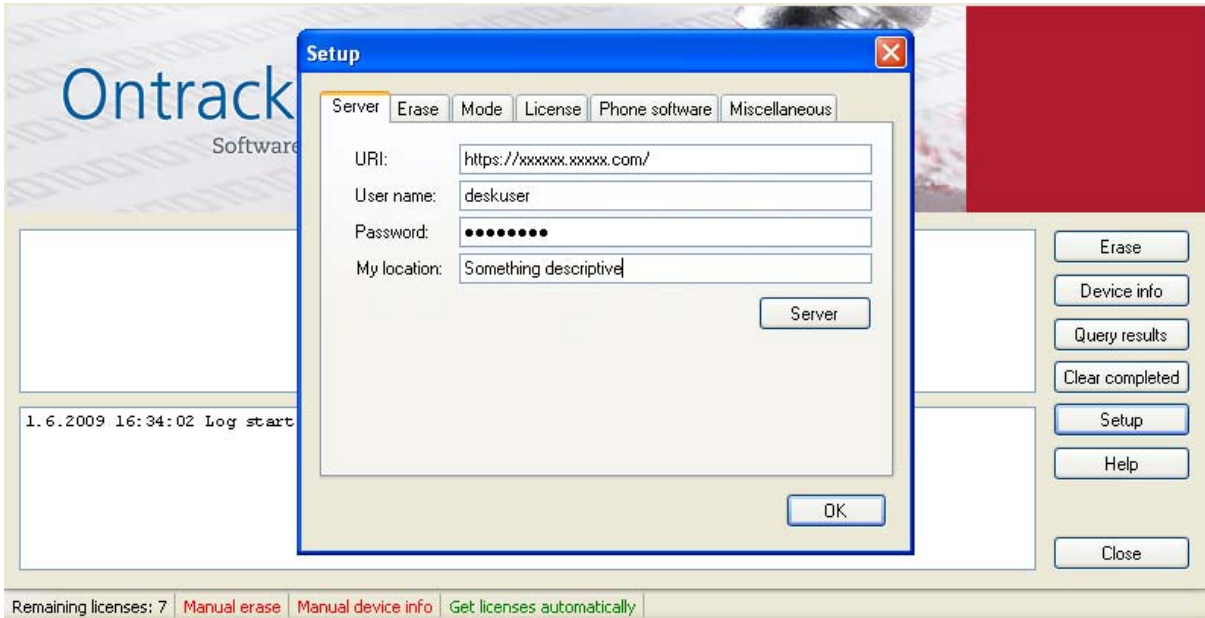


Figure 24 - Desk Application Connectivity Related Settings

| PARAMETER | DESCRIPTION |
|-------------|---|
| URI | Server address (http:// or https://) |
| User name | Desk user name |
| Password | Desk user password |
| My location | Free-form text identifying the location |

Note: Guide Desk users to fill *My location* field properly especially if multiple Desks are active with the same Desk username.

Important: When using SSL (i.e. https) and self signed certificate on the Server the certificate must be installed to the PC certificate store.

Note: For convenience, the Desk application installer queries the user for Server certificate URI. The user can be instructed to give the URI to the certificates already at installation stage if the server certificates are available online.

Erase related parameters

The Desk application erase related parameters define which storage units are erased and how many times the available and newly created free space in them is overwritten.

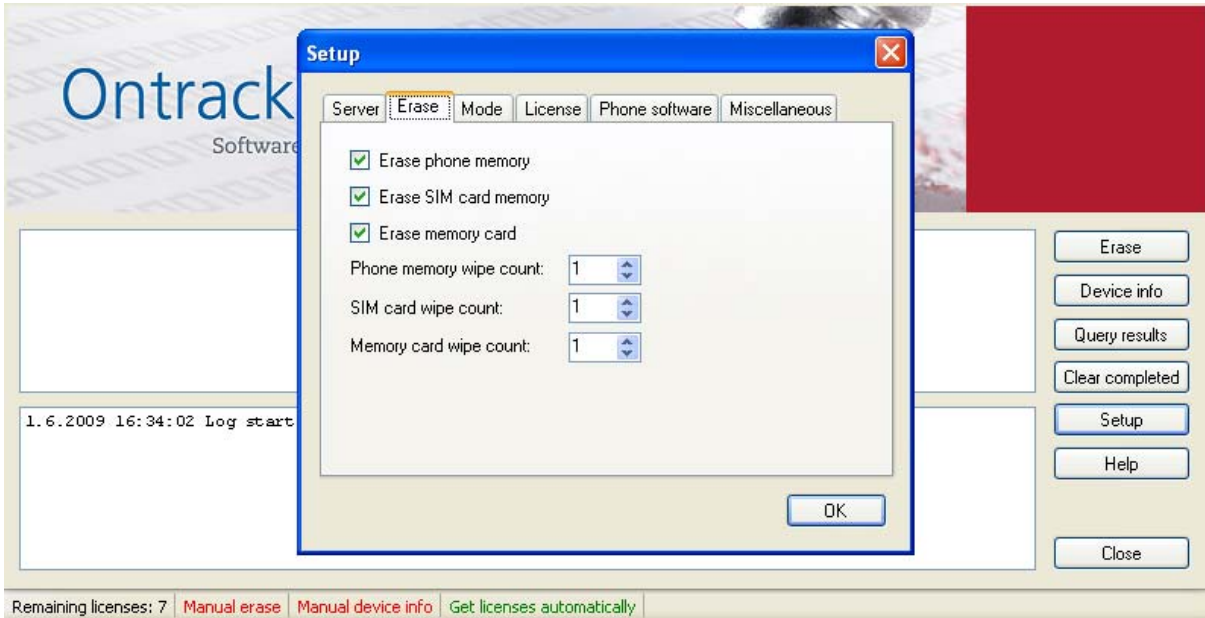


Figure 25 - Desk Application Erase Related Settings

| NAME | DESCRIPTION |
|-------------------------|---|
| Erase phone memory | When selected erases the phone internal storage |
| Erase SIM card memory | When selected erases the SIM card |
| Erase memory card | When selected erases the external memory card |
| Phone memory wipe count | Phone internal flash memory overwrite count |
| SIM card wipe count | SIM card wipe count |
| Memory card wipe count | Memory card wipe count |

Important: Guide Desk users to use wipe count greater than zero (0). Otherwise the data may not be securely erased in some storage units.

Operation mode related parameters

The Desk application operation mode related parameters define several operation modes for the Desk application. The parameters are flexible and allow a number of different approaches for using the Desk.

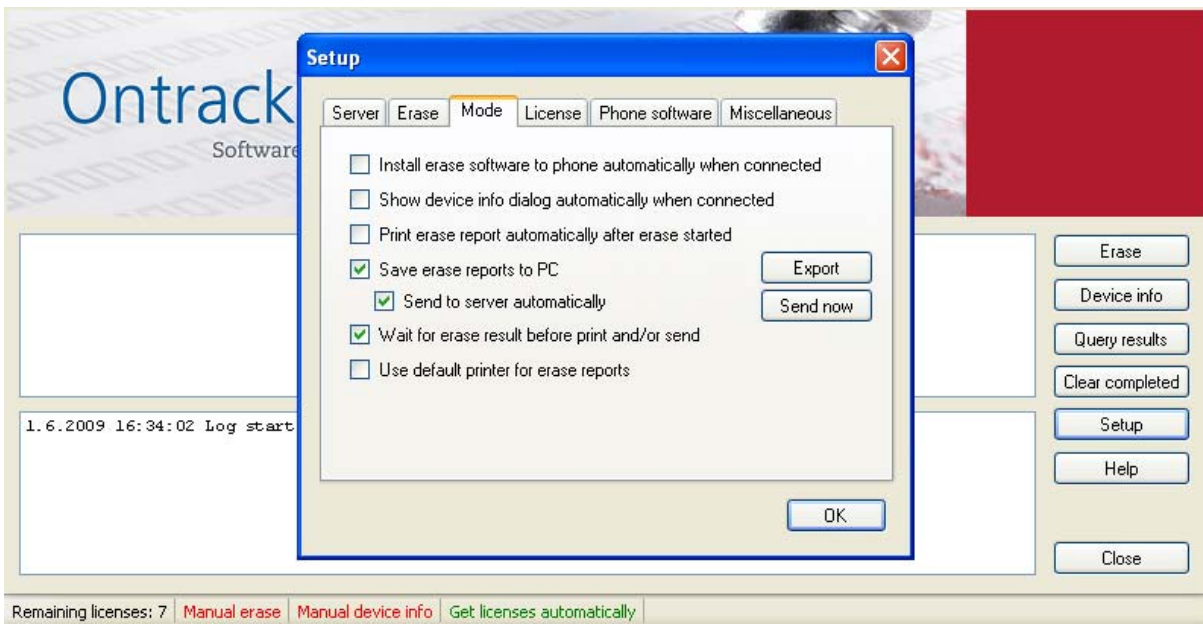


Figure 26 - Desk Application Operation Mode Related Settings

| NAME | DESCRIPTION |
|--|---|
| Install erase software to phone automatically when connected | When selected installs the Client software to the detected phone automatically |
| Show device info dialog automatically when connected | When selected opens the device information dialog automatically when the phone is detected |
| Print erase report automatically after erase started | When selected prints the erase report to printer automatically after the erase is started |
| Save erase reports to PC | When selected saves the erase report in XML form to the PC hard drive |
| Send to server automatically | When selected sends the erase report automatically to the Server (effectively leaving the hard drive report file empty) |
| Wait for erase result before print and/or send | When selected waits the erase result before automatic erase report printing/sending to the Server |
| Use default printer for erase reports | Prints the erase report to the default printer selected without asking printer from user |

License related parameters

The Desk application license related parameters define how the Desk downloads licenses from the Server to PC's hard drive.

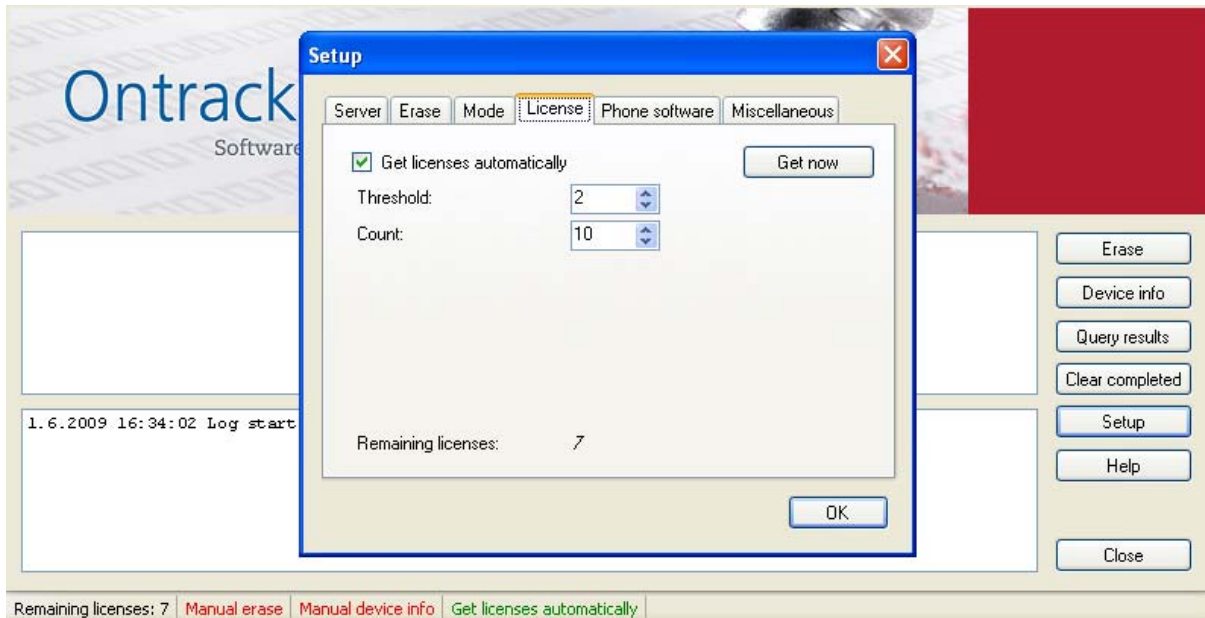


Figure 27 - Desk Application License Related Settings

| NAME | DESCRIPTION |
|----------------------------|---|
| Get licenses automatically | When selected the applications gets licenses automatically from the server when the license count drops below threshold |

Client software update related parameters

The Desk application Client software update related parameters define how the Desk downloads latest Client software from the Server to the PC's hard drive.

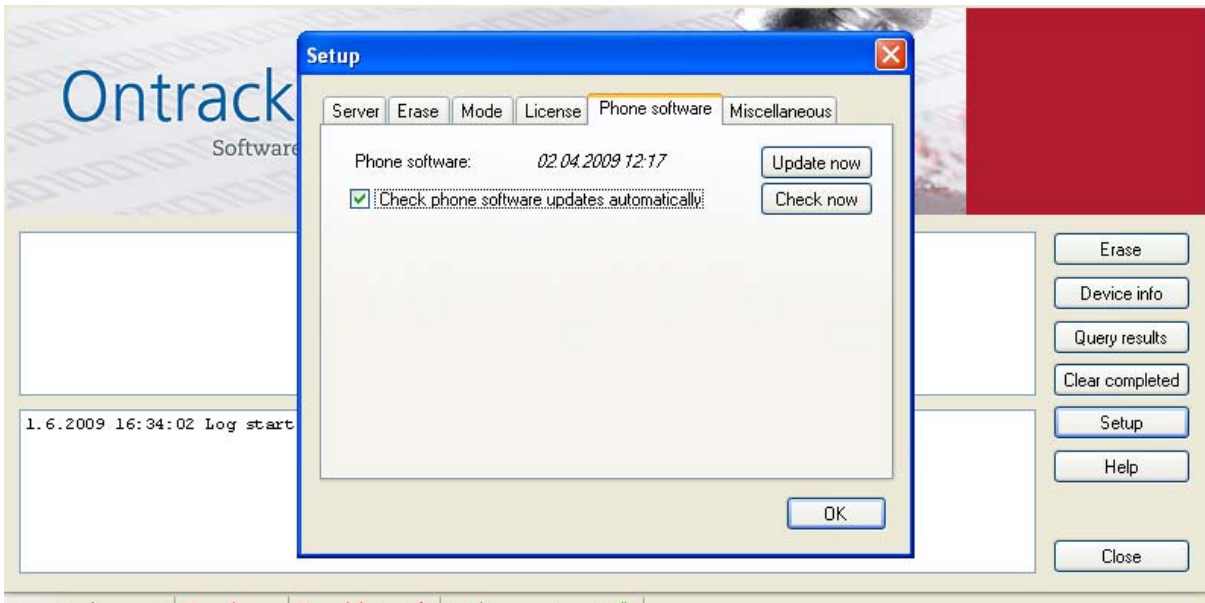


Figure 28 - Desk Application Client Software Update Related Settings

| NAME | DESCRIPTION |
|--|--|
| Phone software | Shows the date/time stamp of the current Client software saved to PC hard disk |
| Check phone software updates automatically | When selected the Desk connects to the Server automatically and checks if newer Client software exists in the Server |

Note: If the Client software updates are not checked automatically, the Desk users should be guided to perform manual check/update when new Client software exists.

Desk application related parameters

The method to check availability of new Desk application version from the Server is in the Miscellaneous setup tab in the Desk application. It can be set to automatic or manual. Desk application can also be set to send error details to the Server.

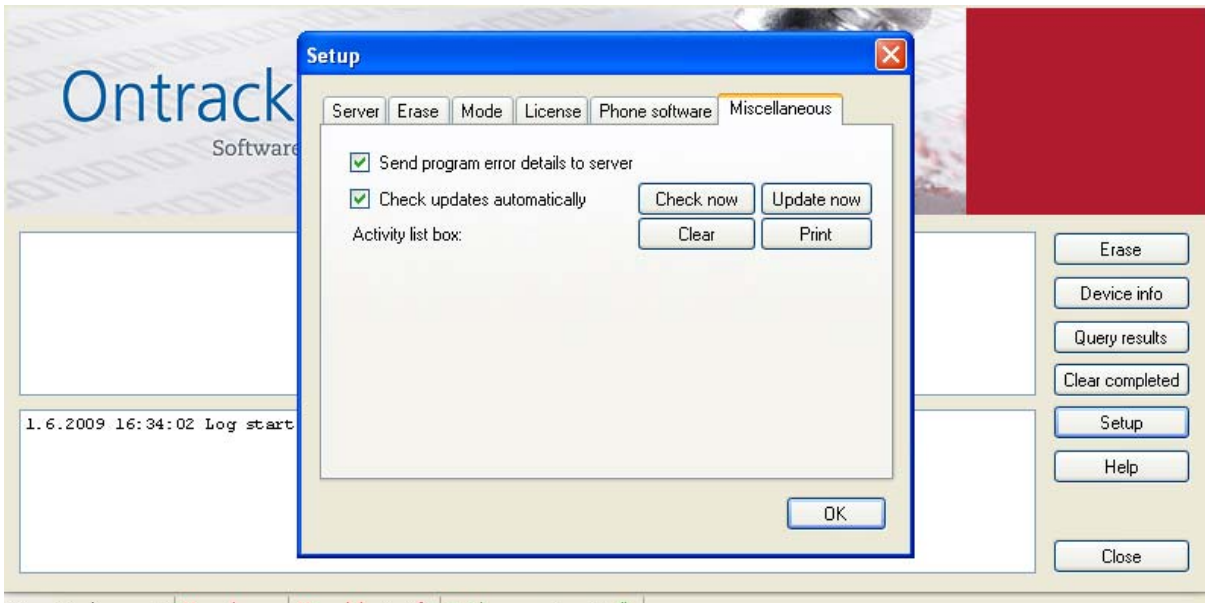


Figure 29 - Desk Application Desk Software Update Related Settings

| NAME | DESCRIPTION |
|--------------------------------------|---|
| Send program error details to server | When selected the details of the error that occurred in Desk operation are send to the Server. |
| Check updates automatically | When selected the Desk connects to the Server automatically and checks if newer Desk version exists in the Server |

Tip: When the Desk user asks support in error case, ask if he is connected to the Internet and is the *Send program error details to server* option selected. If not, guide the user to the repeat the error with above mentioned conditions set. Corporate Administrator will then have error details from Desk application emailed to his/her email box.

Note: If the Desk software updates are not checked automatically, the Desk users should be guided to perform a manual check when new Desk software exists.

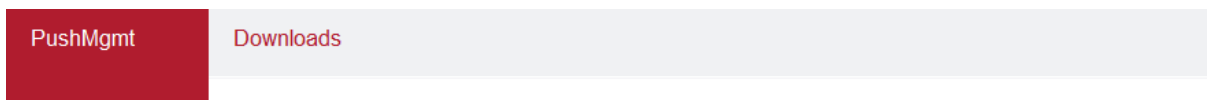
Chapter 4 Operating Remote Erasure [Corporate Administrator]

This chapter describes the functionality of managing Remote (Push) Erase.

For all the tasks described below please login to the Server with credentials (user name and password) that are associated to the Corporate Administrator role.

Add Mobile

Select *PushMgmt* tab from the upper tab list.



PushMgmt

Search Array

| Name | MSISDN | Status |
|-----------------------|------------------|-----------------------------|
| ★ = New Device | ➡ = Pair Request | 🔒 = Mobile Locked |
| ■ = Download msg Sent | ↔ = Pairing | 🔴 = Mobile Stolen |
| ■ = Downloaded | ↔ = Paired | 🟡 = Application Uninstalled |
| ■ = Erasing Mobile | ↔ = Pair Failed | |
| ■ = Mobile Erased | | |

Figure 30 - Remote Erasure Device List

Hit *Add mobile* and complete the contact details of mobile device user. Type the phone number (MSISDN) in international format i.e. prefix the area code and local number with plus (+) sign and country code. Notice that the area code is prefixed by a trunk code (usually 0), which is usually dropped when using international format. In case you are unsure, you can check correct format from your mobile operator. In the Description field you can type additional information like device model, etc if available.

Add mobile

Name, Surname , Surname

Email

msisdn

Description


Figure 31 - Remote Erasure Add Mobile

Hit *Save*.

You should see a new row in the list that displays contact information with initial phone number (user can change the SIM card later) and current state of the mobile device described by color code.

mobile save success

Search Array



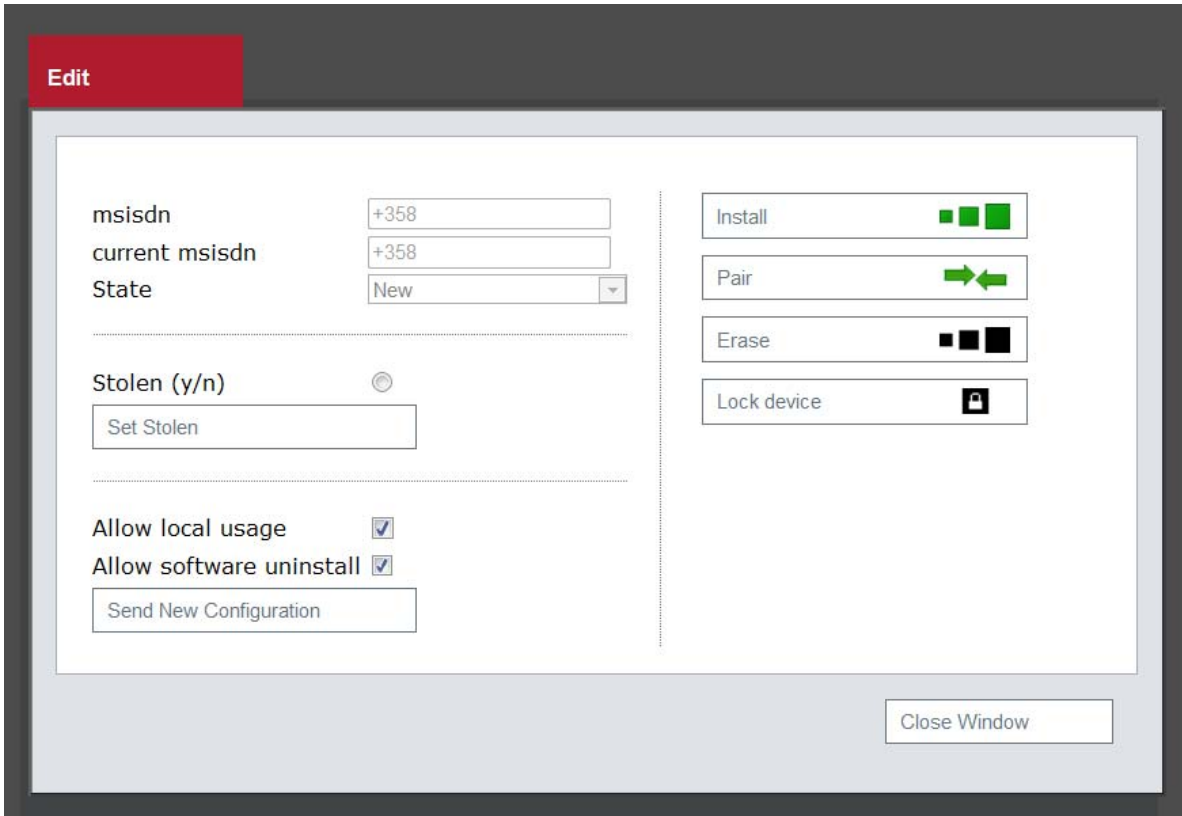
| Name | MSISDN | Status |
|--------------|--------|--------|
| Surname User | +358 | ★ |

| | | |
|---------------------------|--------------------|-----------------------------|
| ★ = New Device | ➡➡➡ = Pair Request | 🔒 = Mobile Locked |
| ■ ■ ■ = Download msg Sent | ➡➡➡ = Pairing | ■ = Mobile Stolen |
| ■ = Downloaded | ➡➡ = Paired | ■ = Application Uninstalled |
| ■ ■ ■ = Erasing Mobile | ➡➡ = Pair Failed | |
| ■ = Mobile Erased | | |

Figure 32 – Mobile Device Added for Remote Erasure

Erase Software Installation

Hit the phone number part of the list row. A form will open showing device details like the initial and current phone number and current state.



The screenshot shows a web interface titled "Edit" in a red header. The main content area is divided into two columns. The left column contains input fields for "msisdn" (value: +358), "current msisdn" (value: +358), and "State" (value: New). Below these is a "Stolen (y/n)" section with a radio button and a "Set Stolen" button. At the bottom left are two checked checkboxes for "Allow local usage" and "Allow software uninstall", along with a "Send New Configuration" button. The right column features four action buttons: "Install" (with a green progress indicator), "Pair" (with a green double-headed arrow), "Erase" (with a black square icon), and "Lock device" (with a padlock icon). A "Close Window" button is located at the bottom right of the form.

Figure 33 - Remote Erasure Software Installation and Operation

Hit *Install* button once and then hit *Close Window*. The list row status will be updated automatically as the installation proceeds as follows.

The mobile device will receive a message containing a link for downloading and installing the Ontrack Eraser Client software in to the device. After a while the Server sends an initial pairing message to the device. If the user has installed the application it will respond to pairing message and after another set of messages the installation is complete. The state is updated accordingly.

If the initial pairing message is not responded to by the mobile device then the Server repeats the sending of initial pairing message a few times. The interval between these messages will be extended after each sent message and eventually, if no response was received from the mobile

device, the pairing process will be aborted. There are several reasons why a device does not respond to the initial pairing message. Some reasons include: The user has not yet installed the application to the device, the device is switched off, or the device is in an area without network coverage. In this case the user should be contacted in order to solve the problem. The pairing can then be initiated manually.

Note: Currently the server sends the initial pairing message in less than five (5) minutes from the download of the software to the mobile device. It is expected that the user will install the application when it is downloaded. If the device does not respond in ten (10) minutes, pairing is tried second time. If the device does not respond to the second try, the device state is set to *install failed*.

Tip: The mobile devices in failed state will be shown in the top of the list (Figure 30). After adding new devices the list should be viewed from time to time to ensure that no device is in a failed state.

Pair Mobile Manually

Hit the phone number part of the list row. A form (Figure 33) will open.

Hit *Pair* and then hit *Close Window*. The list row will be updated automatically as the pairing proceeds.

The mobile device will receive an initial pairing message. If the user has installed the application to the device it will respond to a pairing message and after another set of messages the pairing is complete. The state is updated accordingly.

If the initial pairing message is not responded to by the mobile device then the pairing process will be aborted. There are several reasons why a device does not respond to the initial pairing message. Some reasons include: The user has not yet installed the application to the device, the device is switched off, or the device is in an area without network coverage. In this case the user should be contacted in order to solve the problem. The pairing can then be initiated manually again.

Configure Mobile

Hit the phone number part of the list row. A form (Figure 33) will open.

Two configuration options are available: Local usage and uninstall of the Client software can be either denied or allowed.

The Client software includes user interface that can be used to erase the mobile device locally by the user. By selecting *Allow local usage* checkbox and hitting the *Send New Configuration* button sends message to the device that configures the user interface of the Client software to allow user perform erase locally. By unselecting *Allow local usage* checkbox and hitting the *Send New Configuration* button sends message to the device that configures the user interface of the Client software not to allow local erase. Then hit *Close Window*.

The Client software includes feature that can be used to prevent uninstall of the software and start the erasure if uninstall is tried. By selecting *Allow software uninstall* checkbox and hitting the *Send New Configuration* button sends message to the device that configures the Client software to allow uninstall of itself. By unselecting *Allow software uninstall* checkbox and hitting the *Send New Configuration* sends message to the device that configures the Client software to start silent erasure if the Client software is tried to uninstall. Then hit *Close Window*.

By default both the local usage and software uninstall are allowed and no further configuration is needed if that setting is satisfactory.

Note: Both configurations are sent in the same message when the *Send New Configuration* button is hit. Be sure to select valid configuration to both of these checkboxes before you hit the button.

Caution: Be sure to understand that if uninstall is set to denied, the Ontrack Eraser Client software will automatically run erase silently if it is tried to be uninstalled.

Lock Mobile

Hit the phone number part of the list row. A form (Figure 33) will open.

Hit *Lock device* and then hit *Close Window*. The Server will send a message to the mobile device containing the command to set device lock. The lock will be applied if supported by the device.

Erase Mobile

Hit the phone number part of the list row. A form (Figure 33) will open.

Hit *Erase*. A form will open showing erase parameters. Select the parameters and type the captcha code. Hit *Send*. The form will close. Hit *Close Window*. The Server will send a message to the device containing the command to erase the device. Erase starts as soon as the message is received by the phone. The state is updated accordingly when the erase is completed.

Note: Initially the erase will start without notifying the user. If you want the user to be notified, remember to select *Notify* checkbox.

Set Mobile Stolen

Hit the phone number part of the list row. A form (Figure 33) will open.

The mobile device can be set to stolen state by hitting the *Set Stolen* button. By hitting the button again the devices goes to normal state.

In stolen state, when the Server receives message from the mobile device informing that the SIM card has been changed in the device, the Server sends erase command to the device automatically. The erase parameters are set to erase all storage locations (i.e. internal flash, external memory card, SIM card) and wipe count for the storage locations is set to one (1). The erase is done silently so that

no indication of the process is shown in the phone. The server will receive acknowledgement from the device when the erase has been started and also when the erase is completed, just before the device restarts.

In the following scenario an operator manages the Server for simplicity's sake:

1. A customer calls the operator that the phone is lost.
2. Operator sets the mobile device to the stolen state.
3. Operator sends erase command to the mobile device manually. If the device is in the network the message goes through and the server will be acknowledged of started erase and hopefully a summary of erase when completed.
4. Operator kills the SIM card. No use to send messages to the old number/SIM card anymore. The customer can now take compensatory phone and a new SIM card to the same number. If the manual erase command went through and confirmation of the device erasure was wanted, the SIM card killing can be delayed until the erasure is completed.
5. If manual erase did not get through the server waits for message from the device informing that the SIM card has been changed after which the erase command is send automatically.
6. On the other hand, if the mobile device is returned it can be set to normal state again.

Mobile States

Mobile device can be in one of several different states. The states are described in the Remote Erasure Device List (Figure 30).

Chapter 5 Desk User Report View

Desk is able to send erase reports to be stored into the Server database. Sending of reports can happen automatically after each erase event or manually when Desk user chooses to do so.

To examine the reports in the Server please login to the Server with credentials (user name and password) that are associated to the Desk User role.

Hit Search button to list all the reports available. The parameter fields can be used to limit report result set.

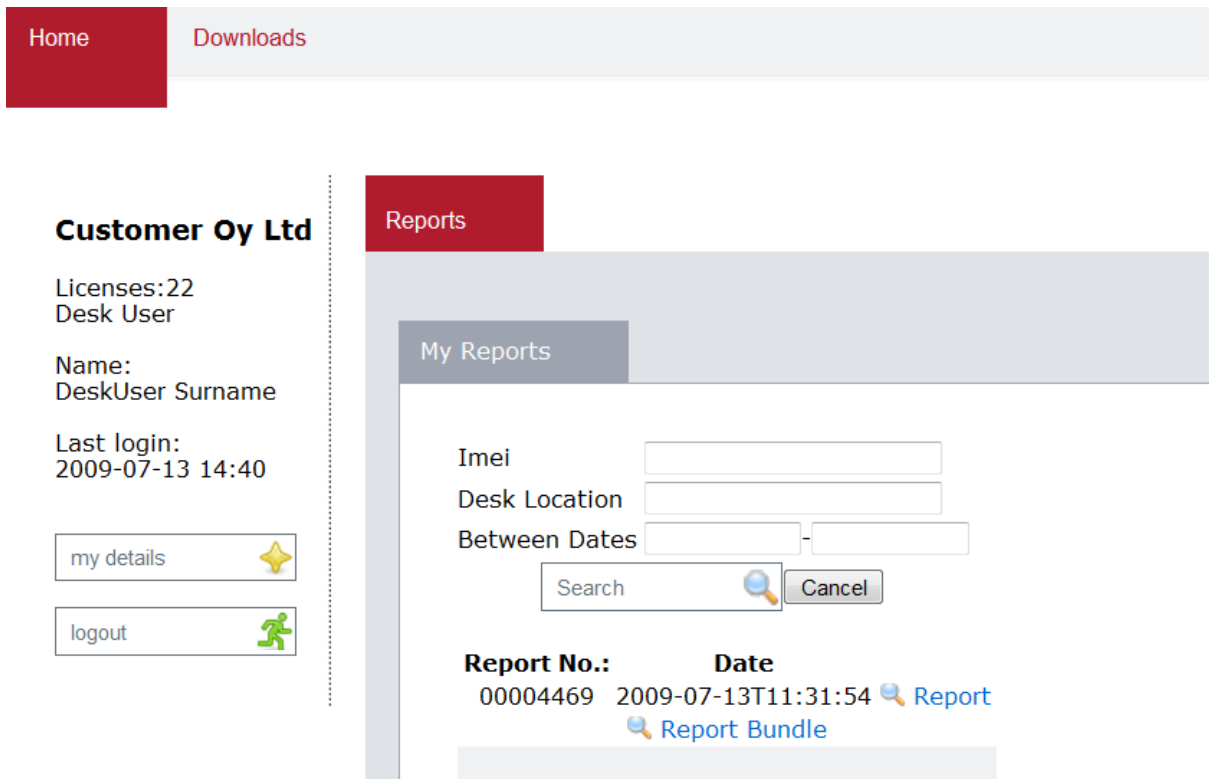


Figure 34 - Desk User Report List

User is able to browse generated reports from the opened WWW page. User is able to view only those reports that are delivered to server using his/her account.

Individual reports can be printed or exported as a file from the Report View.

Chapter 6 Troubleshooting and FAQ

1. Corrupted license file error in Desk appears if end user tries to copy or modify the file storing the licenses. License file “rawkeys” MUST not be edited or opened with other applications other than Ontrack Eraser Desk.
2. In case of problems with Microsoft .NET Framework after the Desk installation. Verify that you have downloaded all the critical .NET updates using Windows Update.
3. Samsung SGH-i600U is missing the necessary system module resulting in Client not being able to run on that device.
4. Samsung SGH-i450 is not providing operating system information to the Desk resulting in Client not being able to run on that phone.
5. Current Client software for Windows Mobile 6 devices requires the device lock to be turned on by the user for the Lock Mobile feature to work.

Appendix A. Self signed SSL Certificate Usage

Appendix B. Ontrack Eraser System Installation Acceptance Test Cases

Test case 1- Server Login View

| | |
|---------------------|--|
| Purpose: | Verify server web service and user login |
| Equipment: | Browser |
| Test procedure | Log into server with Browser using default Server Administrator account http://serverURL . Create new Server Administrator user. Change default Server Administrator password Log in using new account. Log in using default account |
| Acceptance criteria | All logins successful |

Test case 2 – Server administration

| | |
|---------------------|--|
| Purpose: | Verify server management |
| Equipment: | Browser |
| Test procedure | Log into server with Browser using Server Administrator account. <i>Settings >> Get License</i> ; check that server holds valid license or give KEY provided by your Ontrack Eraser sales person and acquire your license file. <i>Settings >> Phone Software</i> ; check your phone software status |
| Acceptance criteria | All procedures successful |

Test case 3 – Create Corporate Customer

| | |
|---------------------|--|
| Purpose: | Verify server user handling and database |
| Equipment: | Browser |
| Test procedure | Create new corporate customer and corporate administrator for that customer <i>CorporateMgmt >> Add Client</i> Login to server using Corporate Administrator account |
| Acceptance criteria | Login successful |

Test case 4 – Desk service

| | |
|----------------|--|
| Purpose: | Verify Desk system usage |
| Equipment: | Browser, Desk, Phone |
| Test procedure | Create new Desk user Install Desk application Configure Desk Get license(s) from Server into Desk Get phone software package from Server |

| | |
|---------------------|---|
| | Erase phone Send report to Server |
| Acceptance criteria | All procedures successfully executed. Erase report visible in Server UI under installed Desk |

Test case 5 –Server Administrator login using default credentials

| | |
|---------------------|--|
| Purpose: | Verify disabling Server Administrator default account |
| Equipment: | Browser |
| Test procedure | Try to login into Server with Browser using default Server Administrator account using default password. |
| Acceptance criteria | Login fails |

Test case 6 – Push erase

| | |
|---------------------|--|
| Purpose: | Verify push erase functionality |
| Equipment: | Browser, Phone |
| Test procedure | Login to Corporate Administrator account Add new mobile Install, Configure and Erase the phone |
| Acceptance criteria | All procedures successfully executed Phone status <i>erased</i> in Server UI |

Successfully executing these high level test cases verifies that your Ontrack Eraser Software for Mobile System is correctly installed and configured.



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