Aplicom®

# APLICOM

# RDL PARTNER GUIDE

Rev. 3.0.4

Order code K503031

Aplicom Oy, P.O. Box 33, FI-44101 Äänekoski, Finland, Telephone +358 10 841 9414, Fax +358 14 520 800
Business ID 0995791-7, Äänekoski
**Info@aplicom.fi**

www.aplicom.com

CERTIFIED BY inspecta
ISO 9001

Aplicom is the registered trademark of Aplicom Oy.



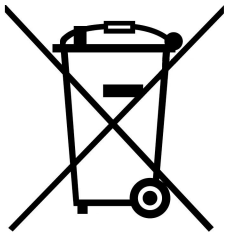
Printed in Finland.



Aplicom Oy has a policy of continuous improvement. Therefore we reserve the right to make changes and improvements to any of the products described in this guide without prior notice. Due to these improvements, the contents of this manual are subject to change without notice.

Aplicom Oy is not responsible for any loss of data, income or any consequential damage.

CE



This crossed-out wheelie bin means that within the European Union the product must be taken to separate collection points at the product`s end-of life. This applies to your device but also to any enhancements marked with this symbol. Do not dispose of any part of these products as unsorted municipal waste.

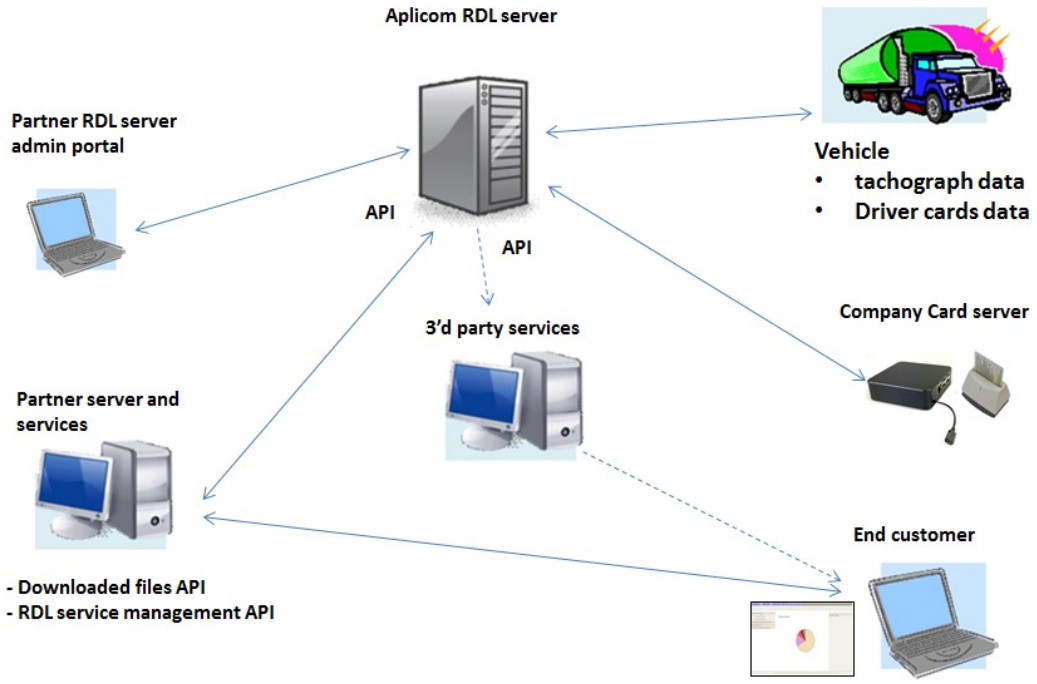
**TABLE OF CONTENTS**

# REVISION HISTORY

| Rev. | Date | Editor | Description |
|---|---|---|---|
| 3.0.4 | 30.05.2018 | PPe | API files storage time corrected |
| 3.0.2 | 31.10.2017 | JSa | Chapter 4 updated |
| 3.0.0 | 21.6.2017 | JSa | RDL service management API added |
| 2.0.0 | 9.5.2016 | JSa | Update to current product offering |
| 1.3.0 | 13.01.16 | Pni | Removing old items |
| 1.2.0 | 06.06.12 | JDu | First four chapters updated |
| 1.1.0 | 18.04.12 | JSa | API and updates added |
| 1.0.4 | 23.09.11 | JSa | Edit text and https support added |
| 1.0.2 | 31.05.11 | JSa | Edit text |
| 1.0.1 | 30.05.11 | RSJS | Clarifications to configuration examples |
| 1.0.0 | 10.05.11 | JSa | Original |

# 1 INTRODUCTION

## 1.1 Overview of Aplicom Remote Download service




EU has set directives concerning drive times, breaks and rest periods for professional drivers of heavy vehicles. The aim of this set of rules is to avoid distortion of competition, improve road safety and ensure drivers' good working conditions within the European Union. In order to control that these regulations are followed EU set a directive making it mandatory to install a digital tachograph from 1 May 2006 onwards in all new vehicles having a mass of more than 3,5 tons (in goods transport) and carrying more than 9 persons (in passenger transport).

Digital tachographs work by digitally storing data on the driver and vehicle in its memory, and also on a credit card-sized plastic smart card known as the 'driver card'. Transport operators must periodically download this data from the digital tachograph and driver card.

Aplicom offers a digital tachograph and driver card data remote download service (Aplicom RDL) for its contracted partners. Aplicom all-in-one RDL service solution is based on Aplicom hosted server collecting and storing the data downloaded from vehicle's telematics units. The data includes both the tachograph recorded data and data from driver cards.

Both tachograph and driver card data download automation became possible when second generation digital tachographs started to support remote download authentication using a company card connected on-line. After a successful authentication with the vehicle's digital tachograph the data download can be started. RDL solution includes software and hardware for office system to put the company card on-line.

Aplicom offers and hosts the back-end solution that supports Aplicom RDL service. Aplicom also supplies office units with software for company card service at customer site and telematics units for this service.

Telematics units are also capable to support other telematics functionality, thus making it a complete solution for Aplicom partners to offer both their own fleet management services and Aplicom RDL Service to their end-customers and resellers. Aplicom has range of dedicated A-series RDL product packages that support the RDL use.

The remote download works under Aplicom RDL server which manages the necessary background functions for the whole remote download process. The telematics units are configured to communicate with RDL server and also partner own telematics server.

The vehicle units are registered to the service with set of parameters on administration web portal and after that the RDL service can be used to manage downloads. After Aplicom A-series RDL unit has been configured to it's telematics functions and installed to the vehicle, the remote downloads can be made either by server timing or by activating the downloads based on user actions or configurable events in vehicle side. Actions like driver card insertion and detection if card is unread card it can be read immediately or for example every 14 days' time intervals.

Collected data can be downloaded from the Aplicom RDL server for further analyse or for archiving for future use. Data can be accessed and downloaded using web service API (Application Programming Interface).

Web service API is meant for server-to-server communication. It can be used e.g. by service partners who provide data analyze service or Aplicom partner to offer the complete service for end-customers.

According to EU directives it's mandatory to store digital tachograph data for minimum time of 1 year. The responsibility to store the data for the required time is at the end-customer or Aplicom Partner. Aplicom RDL Service stores the data for 2 months to give partner time to fetch the data to its own service and storage.

Aplicom charges for the use of the service according to the Aplicom RDL Service Terms and Conditions (D503304). The payment of the service fees are based on the number of vehicles registered in the system during each month. Specific opening fees and SW licences are also included in the software and hardware packages.

By using Aplicom RDL Service customers save time and money when there is no need to visit local office just to read vehicle and driver card data. Also when most of the tasks are automated the regularly collected data can be managed with minimal amount of work, making it easy to fulfil the directive requirements.

### 1.2 Using RDL service

By using the Aplicom RDL Service, it is possible to do a remote download of signed tachograph and driver card data and to store them in a wanted location. The files are stored in the RDL server for at least 2 months.

For a successful download, the end-customer (or service provider) needs to have a CCS-110 (the Company Card Server) with a card reader running at the customer office or in the back-end in order to connect end-customer's company card to the RDL service. The company card is used when authentication with a second generation tachograph from late 2009 onwards is done. Tachographs manufactured before the year 2009 do not allow a remote download.

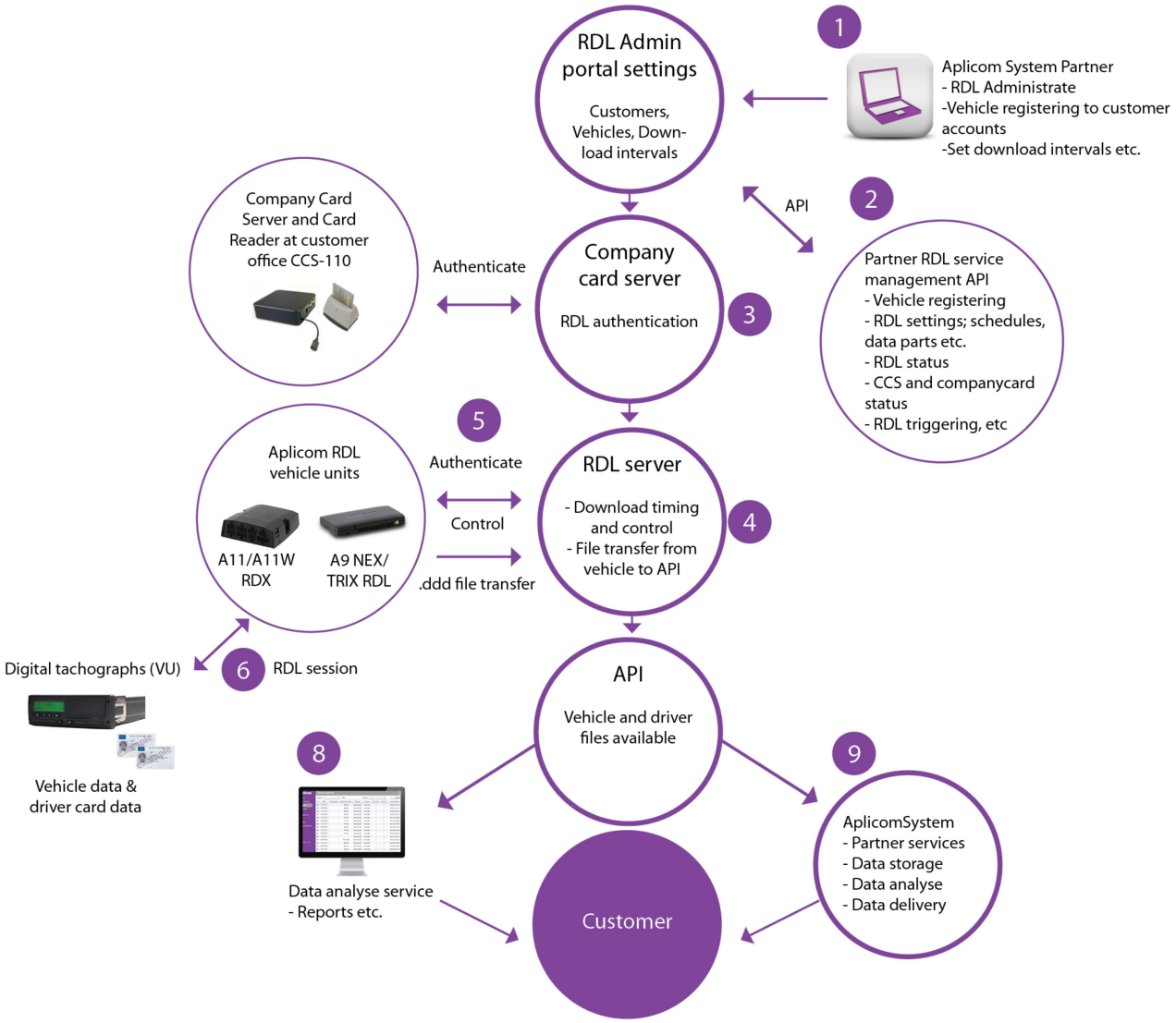
Web service API (Application Programming Interface) available in the RDL server is used to transfer data files automatically to partners or service providers server for further analysis. Typically these partners offer data evaluation, storage and drivers' hour validation services.

Before starting the selling and deliveries of the service a mutual agreement of terms and conditions needs to be accepted. This is done by starting to use the RDL Client to access the RDL service.

Aplicom Partners have important role in administrating and supporting the service for end-customers. This document describes the roles of different counter parties in the service offering and use.

Aplicom Partner uses a web browser based RDL Admin web portal to access and manage end-customers and the end-customer's vehicles in the service. User guide for the management application is included in this document.

To get started please contact Aplicom sales for more information.




An overview of Aplicom RDL service and it's components.

Usage scenarios when service is set up and running. See above principal picture of service.
Normal steps for remote download from vehicle unit and driver cards to server:

- Server (4) initiates remote download session by the time interval set at the Service management API use or with Partner admin web portal.
- Server waits vehicle to come online and starts the download process by commanding the vehicle unit to start download from tachograph and/or driver card(s). The online status is made to known to the server by alive message(s) sent from the vehicle unit.
- When the vehicle unit gets the download command the telematic unit starts the RDL session (6). The telematics unit starts the download session (5) with authentication request with company card server in order to enable data download from the tachograph or from the driver card(s) inserted in tachograph.

- The company card server (3) is installed at the customers office. Company card needs to be present in the company card reader connected to the company card server and be connected to the RDL server on Internet.
- The vehicle sends request of first authentication steps to be able to open the communications with the tachograph. If the company card is available at that moment, the RDL server will communicate with it and get the first data packet to start the authentication. If the company card was not available or busy with other authentication, the process will stop, and wait new attempt by the server or user actions. When the company card is available the vehicle unit passes the authentication data messages between the company card server and the vehicle digital tachograph until the authentication is complete.
- As a last thing to the authentication session the RDL server tells to the telematic unit what data and from which time period the data is requested from the tachograph. Driver card files are read complete since they are small files compared to the tachograph vehicle unit files.
- After authentication process is completed the vehicle unit closes the connection to the company card server and starts actual data download (6) from the tachograph to the telematics unit memory. The telematics unit stores the data files into its FLASH file system to keep them safe even the unit is turned off before the file upload happens.
- After data is successfully stored into telematics unit, it informs server that data was read from the digital tachograph is ready for file upload.
- Server gets information that telematics unit is ready to send the data to server. Server commands the telematics unit to start data uploading to the server.
- Telematics unit sends the data to the server with secure protocol and in packed format to save communications costs. Server checks the completeness of the sent data and stores it to its data storage.
- Server sends a file delete command to the telematics unit and successfully uploaded files are removed from telematics unit memory.
- Remotely downloaded data is stored in the server data store and forward system for minimum of 2 months availability (8) (9). The data is available at the server through API for further use and storage by partner and end-customers.

Typical end-customer gets the selected services from Aplicom partner or 3’d party services. The Aplicom partner uses the Web service API to get the files form the Aplicom RDL server.

## *1.3* Using RDL service API's

### 1.3.1 File transfer API

When using RDL service with API remotely downloaded data files can be transferred automatically to service provider's systems. End-customers use the service provider services to benefit from the remotely downloaded official data, analysis and reports.

API makes it easier for Partner to sell both RDL service and data analyze services as one package. This enables partners to offer the services easily to a large numbers of end-customers.

The interface provides several different methods and makes it possible to optimize traffic between RDL Service and Partner's server. For example request for available files can be made before actual file download and the selection of files to be downloaded can be made by using file index number.

API works on request basis. All remotely downloaded files belonging to the partners' or system providers' end customers using the API connection are automatically available and ready for further transfers. Even if the files have already been transferred using API web service to the connected partner or service provider server they are still available in RDL service file storage for at least 2 months.

Aplicom opens the API accounts for the service providers and partners when agreement of using the RDL service and the API connection is done. Aplicom Partner can assign the API connection for every end-customer individually. This is done by using RDL Admin tool.

The API functions in brief.

API FUNCTIONS

S100311_Remote_download_file_storage_API.pdf, v 1.0.0 and v 2.0.0

- GetNewFiles
- GetFiles
- GetNewFileHeaders
- GetFileHeaders
- LoadFileByID

All file functions are in 3 categories:

- Service Provider, PR
- Partner, PA
- End-customer

### 1.3.2 RDL service management API

**The RDL service management API functions and features**

The Aplicom RDL service has API (Application Programmers Interface), RDL Service Management API, to make RDL service easy to integrate to partners and system providers systems. Managing vehicles and other service administrative tasks can be made available through partner own telematics backend system to minimize RDL service related administrative tasks.

The API allows integration to partners own services to manage RDL related tasks that previously has been made in Aplicom RDL service web admin portal.

The main tasks to perform are adding vehicles to the service and managing their settings like download interval and data to be downloaded etc. in the RDL service. The API offers also additional settings and features that has not been available in partner admin web portal.

The main API functions that are available are:

- Adding and managing vehicles in the RDL service
- Setting of RDL download parameters and schedules
- Commanding RDL service
- Getting status of last downloads
- Monitoring company card servers and company cards status

The RDL service runs on set schedules after the settings and parameters are set for end-customer accounts. The everyday running of RDL service don't necessarily need the use of this management API to perform the routine RDL tasks.

The RDL service management API functions in brief.

API FUNCTIONS

S100311_Remote_download_file_storage_API.pdf, v 2.0.0

- Register Vehicle
- Register Vehicle RDL, creates new vehicle to the service
- Set Vehicle RDL, activate existing vehicle for RDL use
- Get Vehicles information, list of end-customer's vehicles
- Get Vehicle single vehicle information
- Set Vehicle License Plate registration number
- Set Vehicle Phone number
- Delete Vehicle
- Get Customers PR providers all end-customer credentials
- Get Customers PA partners all end-customer credentials
- Get CCS, end-customers company card servers and used company cards status information
- Start RDL, start RDL process now for a vehicle, with existing RDL settings
- Start RDL Ex, start RDL process with command defined settings for download
- Abort RDL, removes all RDL jobs from the working queue
- Get Last Successful RDL, returns last successful RDL information of vehicle
- Get RDL, returns status of specific RDL process ID

### 1.3.3 RDL service API implementation

**The RDL service management API functions and features**

Aplicom RDL service API's are based on SOAP 1.2 standard, a lightweight protocol for exchanging structured information in a decentralized, distributed environment. It provides a standardized XML-based solution for sending messages over HTTP.

The implementation is easy due there are tools available supporting creation of the API clients. A standard WSDL files for both API's are available from Aplicom support (support@apliocm.fi) on request.

Also the S100311_Remote_download_file_storage_API.pdf, v 2.0.0 specification describing both file transfer and service management API's, is available from Aplicom support.

# 2 PARTNER ROLE IN SERVICE OFFERING

## 2.1 Terms and conditions of service offering

For the use of the service, should the RDL Terms and Conditions (K503034) be accepted by the partner and for the end-user is a separate agreement (english version: K503035) available.
Aplicom RDL Terms and Conditions are automatically accepted by starting to use the service.

The following table describes the roles of the parties.

## 2.2 Roles of different players in offering and using Aplicom RDL Service

| | Aplicom | Partner | End Customer |
|---|---|---|---|
| Offers the service for partners and maintains the server running 24/7 basis. Service includes the Aplicom RDL service and data storage for 2 months for API users. | X | | |
| Delivers per order the company card server units with software and card readers for company card server use. | X | | |
| Creation and delivery of partner accounts and partners' end-customer accounts and related SW license keys per orders. | X | | |
| Support for partners. | X | | |
| Further development of service and related software | X | | |
| Regular invoicing partners of registered vehicles in the service. Report that shows partner the total amount of vehicles and grouped per end-customers. End customer grouping and details are available on partner admin portal. | X | | |
| Opens the API's for partners and service providers use | X | | |
| Sells the service to end-customers or partners/resellers. Prepares service agreement with end customer. | | X | |
| Sells and delivers of A-series RDL products with configuration that supports end customers RDL and possible telematics use scenarios. Special care must be taken of the vehicle installation specific issues and tachograph RDL capability. | | X | |
| Develop the API's to use the RDL service and manage it | | X | |
| Ordering end-customer accounts from Aplicom. | | X | |
| Delivers Company Card Server ready configured for customer use. | | X | |
| Registers and manages the lists of end-customers vehicles (IMEI numbers and used RDL parameters) that are registered in the service with provided partner admin Web portal. | | X | |
| Supporting installation of the office equipment. End-customer 1st level support. Possible integration to own real-time tacho-data analyzing SW. | | X | |
| Invoicing of end customers based on invoicing and reports from Aplicom. | | X | |
| Assigns the API for each end-customer that uses the API service. | | X | |
| Offers services to end-customer and arranges the services for end-customer use | | X | |
| Approves End-Customer Agreement. | | | X |
| Use of the service to fulfill end-customers own and EU directive | | | X |

| | |
|---|---|
| requirements. Possible use of third party analyzing tools for analyzing downloaded files. | |
| Securing office equipment stabile operation environment for company card server to ensure authentication capability at all times. | X |
| Backups of the downloaded data for maximum security | X |
| Reports changes in the fleet to partner, e.g. IMEI number change due to unit removed from vehicle or replaced during or after service. | X |
| Make necessary agreements and service contracts to use partner's and service provider's services | X |

# 3 PRACTICAL STEPS TO START USING APLICOM RDL SERVICE

## 3.1 Typical Aplicom RDL Service sales process

### 3.1.1 Getting familiar with the Aplicom RDL Service

To make it easy to get familiar with RDL Service a special RDL Service Kit (D109431) is available. First tests and demonstrations at end-customer can be also done using the Service Kit.

The package contains i.a. the following:

A9 RDL unit, cables and options
- A9 TRIX unit with K-line and RDL
- A9 NEX RDL Direct DL cable
- A9 NEX RDL FMS DL cable
- A9 TRIX RDL K-line cable, 5m
- A9 NEX Power and IO cable 0,5m
- Installation material
- GNSS antenna with RA MCX for A9 NEX
- A9 NEX Data cable, D9 female
- USB to 2x RS232 adapter
- Piezo buzzer
- Test configuration
- Product package with instructions
- Aplicom A9 NEX Quick Start Service

Aplicom Prepaid SIM card
Aplicom Company Card Server CCS-100
Opening of test account to RDL service
Aplicom workshop day

Note, that the test account to access the Aplicom RDL Service is opened only for Partner testing, not for end-customers testing or use.

### 3.1.2 First order of RDL Service

First order of RDL Service requires typically following steps.
Steps in brief:

- Terms and conditions agreement is made.
- Next step is to order opening of accounts for partner. This is made by ordering an account opening which opens 10 end-customer accounts for partner use for different end-customers or fleets.
- Partner admin web user account address and account information is delivered to partner (named personal account).
- Ordering vehicle units to customer, with required options and RDL service. See *K503210 Aplicom Service Catalogue* for different product offering for RDL use.
- The A-series RDL units are supplied with example configuration that can be simply taken in use with Aplicom SIM cards. Also other SIM cards can be easily activated by providing the necessary APN, and user ID and password of the SIM provider.
- For configuring the vehicle telematics units to work in the system please contact Aplicom support: support@aplicom.fi for latest configuration examples. Configurator tool is available on Aplicom Partner Extranet for making changes for the RDL user scenarios for optimizing as well as for parallel telematics uses.
- Delivering the vehicle units and arranging professional installation service.
- **It is important that installations are made carefully and with understanding of the remote download specific requirements.**
- Using web admin user interface to register the vehicle IMEI numbers to the service. They are registered under the end customer account that is dedicated to this customer.
- Checking the operation of the installed units.

- Making remote download test and checking the results from the web user interface.
- Supporting end-customer.

### 3.1.3 Next orders of Aplicom RDL Service end customer accounts

In this case the partner account already exists. New end-customer accounts will be opened to the service by Aplicom and will be shown on partner web user interface immediately after that.

Please give time for opening of the new accounts by ordering the new accounts before your last end-customer account is used.

# 4 IMPORTANT STEPS THAT MUST BE IN ORDER TO MAKE THE RDL WORK

1. **Read the RDL Service Description and Partner guide (this document) before starting**

2. **Have available a PC with reliable internet connection and the partner access credentials for Aplicom RDL Service administration portal or use RDL service management API (portal credentials and API documentation available from support@aplicom.fi)**

3. **Register A-series RDL units IMEI number and other settings to RDL Service with administration portal or the management API**

4. **Set-up Company Card Service with the server CCS-110 and have the company card inserted to the dedicated card reader. Make sure that the firewall settings allow company card server to use port 7021 for two way communications. Also allow ports 80 and 22 for outbound communications to server IP address 185.20.138.244.**

5. **Make sure that the vehicle tachograph's make and model supports remote download**

6. **Configure the A-series RDL unit with necessary settings communications and system IP addresses. Aplicom SIM default settings are in delivered configuration.**

7. **Install the Aplicom RDL unit with suitable cables according to installation instructions**

8. **Test installation according the test instructions**

9. **Set-up API connected service**

10. **Start vehicle remote download process and wait it to be completed**

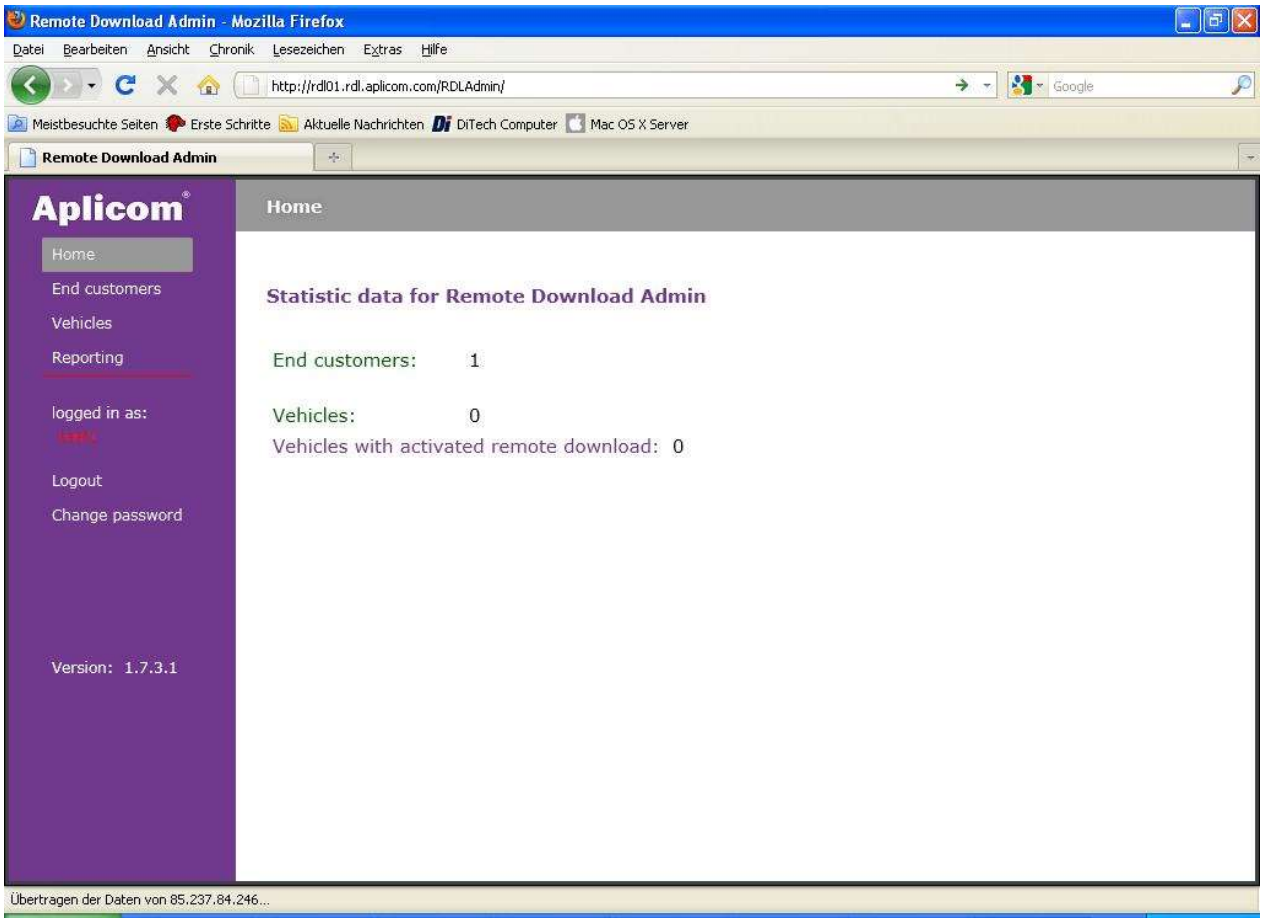
11. **Access the files with file transfer API service**

# 5 USER GUIDE FOR THE RDL ADMINISTRATION WEB TOOL

The RDL Admin tool (Remote Download Administration) allows you to view end-customer settings, assign vehicles to them and change remote download settings.

Go to http://rdl01.rdl.aplicom.com/RDLAdmin/#/Home to access the web tool.


To login, use your partner account Username and Password. With this account you can administrate your end-customers vehicle lists and see all your own end-customers download clients and Company Card Service end-customer account informations.




This is the main-screen after login. It shows you the count of customers, entire vehicles and vehicles with activated remote download.

## 5.1 Remote Download Menu Selections

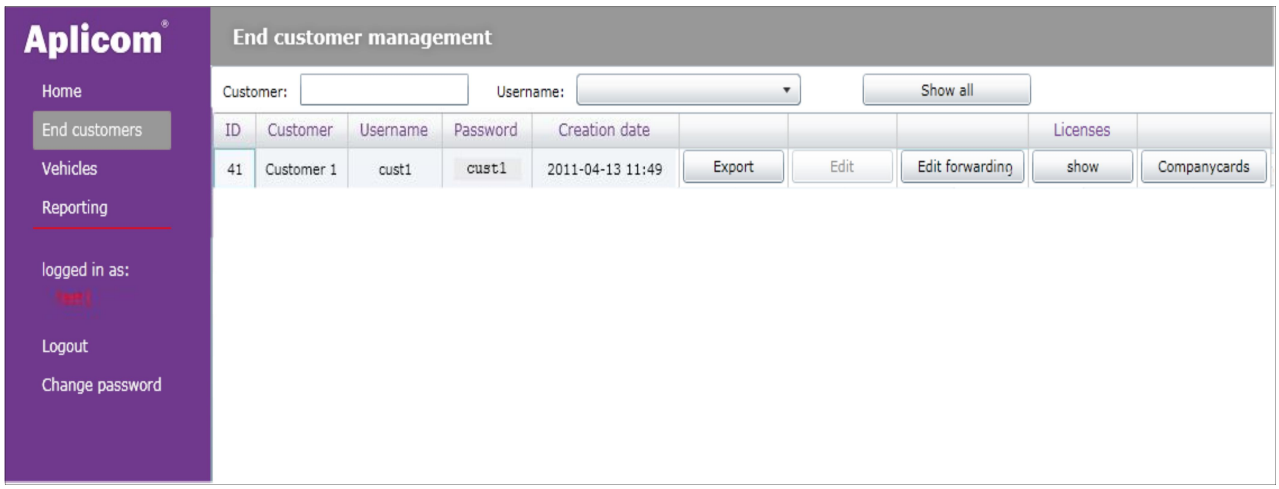
### 5.1.1 Home

This is also the main-screen after login. It shows you the count of customers, entire vehicles and vehicles with activated remote download.

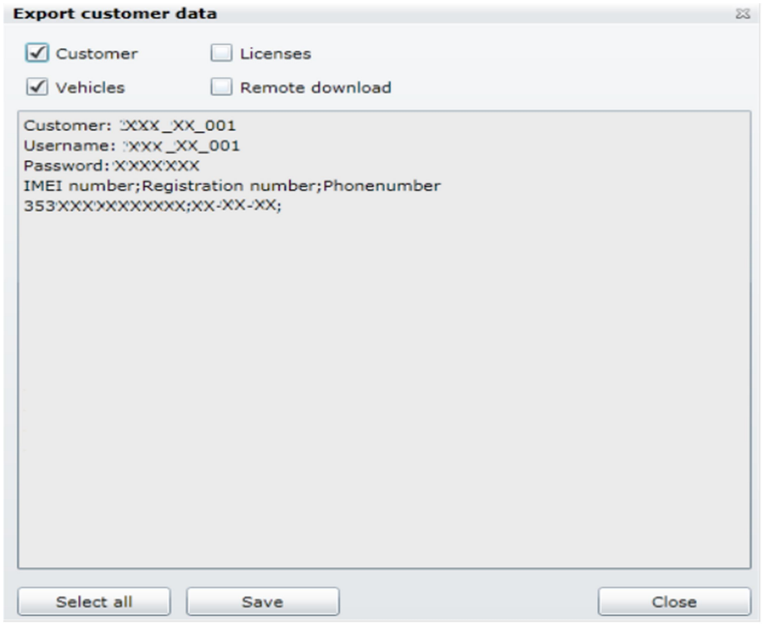
### 5.1.2 End-customers

In this section you find all your customers and their user credentials, which are needed to install the local software (Company Card Service and RDL Client).

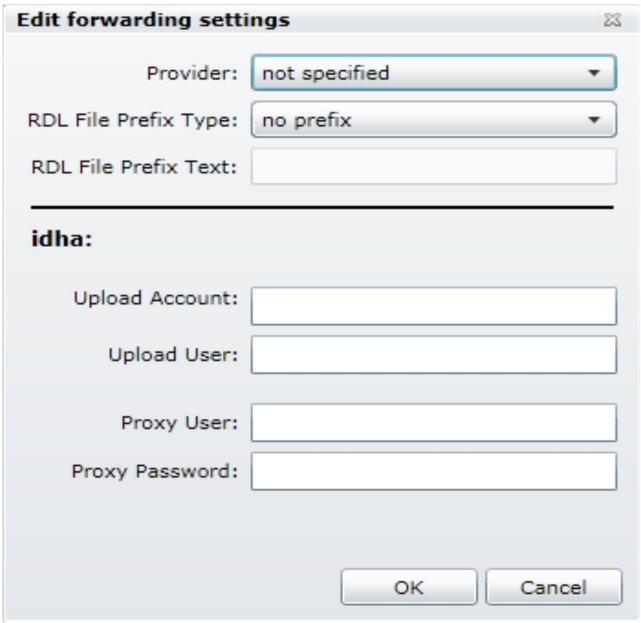
You can filter the list by simply typing the required customer name in the field on the top of the list, or select the creation-user from the drop-down-list. [Show all] clears all filters.




The button **[Export]** opens a dialogue from which it is easy to save or copy paste the end-customer related details in text format.



The button **[Edit forwarding]** opens a dialog from which it possible to select API use for selected end-customer




By selecting “Provider” field it opens a drop down list where it is possible to select used service provider API. Aplicom manages the API interfaces. So if new API is to be used, contact Aplicom for opening the API for the new service provider. After opening the API, it is possible to select the API from this list.

By selecting “RDL File Prefix Type” a list of available file prefix list is opened. Prefix is additional information that is added to the beginning of the remote downloaded ddd -file before putting it available to the API interface. The prefix is separated from the original ddd -file name with _ character, for example with customer name as prefix: 123456_00_001_M.... .. .ddd.The possible selections are: No prefix, vehicle IMEI number, customer name, free text.

If “free text” is selected, the text is then typed in the field “RDL File Prefix text”

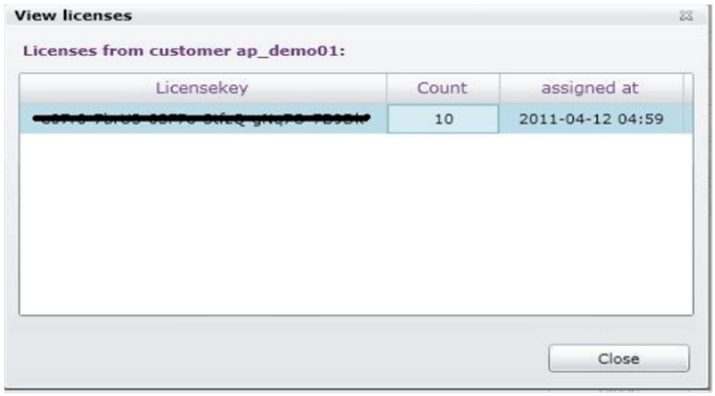
For partners offering IDHA service there is an alternative API definition available. Only one API type can be used per end-customer, so when using IDHA service, the API forwarding settings must be set: not specified.

The IDHA service credential are entered to the lower part of the screen, the IDHA partner given account name, and user names go to Upload Account and Upload User fields. The IDHA password is put in the Proxy Password field. Proxy user field is left empty.

When IDHA API settings are used, remote downloaded files are immediately sent to the IDHA service through the set web account.

The button **[show]** in the “Licenses” column opens a dialogue where you can see software license key for the RDL Client of your customer.


Here you see a customer which has one license key with 10 downloadable objects assigned. A downloadable object is either a driver card or a vehicle. In this example your customer can download 10 objects. (e.g. 4 vehicles and 6 drivers). Aplicom supplies licence keys with max. value 9999 objects.



You can also see the connection status of the company cards of your customer here. Click on the button **[Company cards]** from the end-customer list. You'll get a dialogue which shows the status of each card.

| | |
|---|---|
| ID | Internally used Identifier |
| Cardnumber | The number of the company card. This value can be “-” if the company card was never used for downloading. |
| Status | Shows the connection status of the company card. |
| Last action | The time stamp of the last heartbeat to the server from the card. |
| Expiry date | The date when the company card expires. |
| Validity begin | The date when the validity of the company card begins. |

The information of the company card status can help you to find the problem, if the remote download doesn't work. For example if no company card is connected, or the company card is expired, the download won't work.

Please note that if the remote download has not been performed with company card the number of the company card is not shown. After the first remote download is made, where this company card is used for authentication, the company card number is shown as illustrated above.

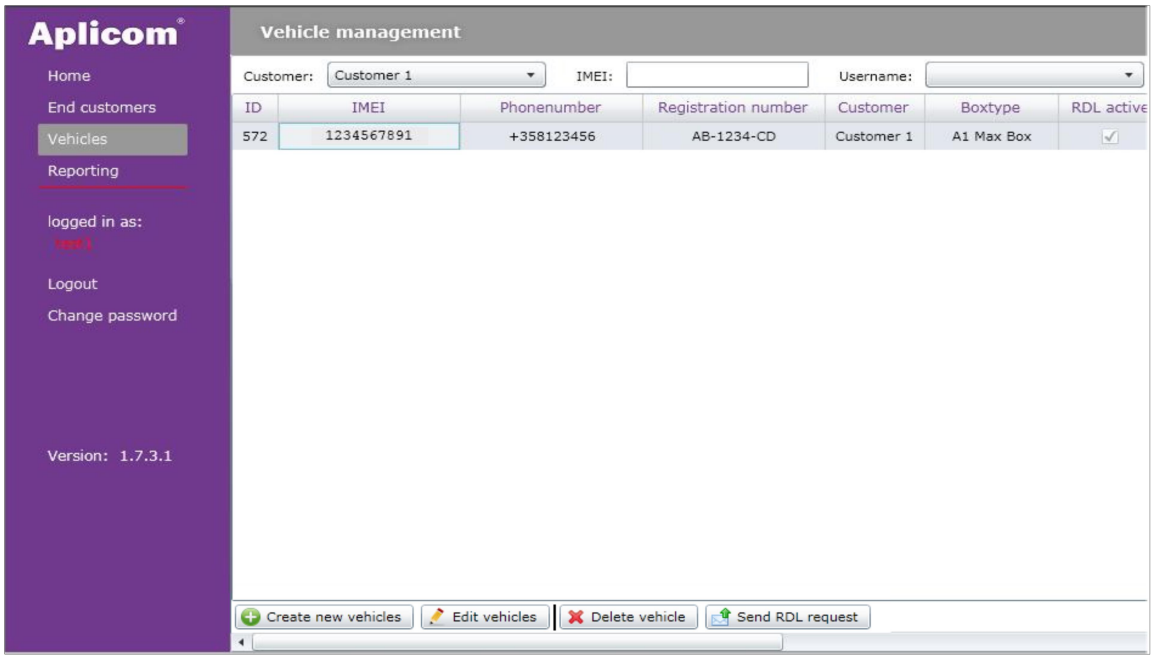
### 5.1.3 Vehicles

This section allows you to manage vehicles for your customers (assign or delete them, setting the remote download settings).

You can filter in the list with the input fields at the top of the list

- Customer (Select the customer from the drop-down list)
- IMEI number (Type in a part of the IMEI number)
- Creation user (Select the creation user from the drop-down-list

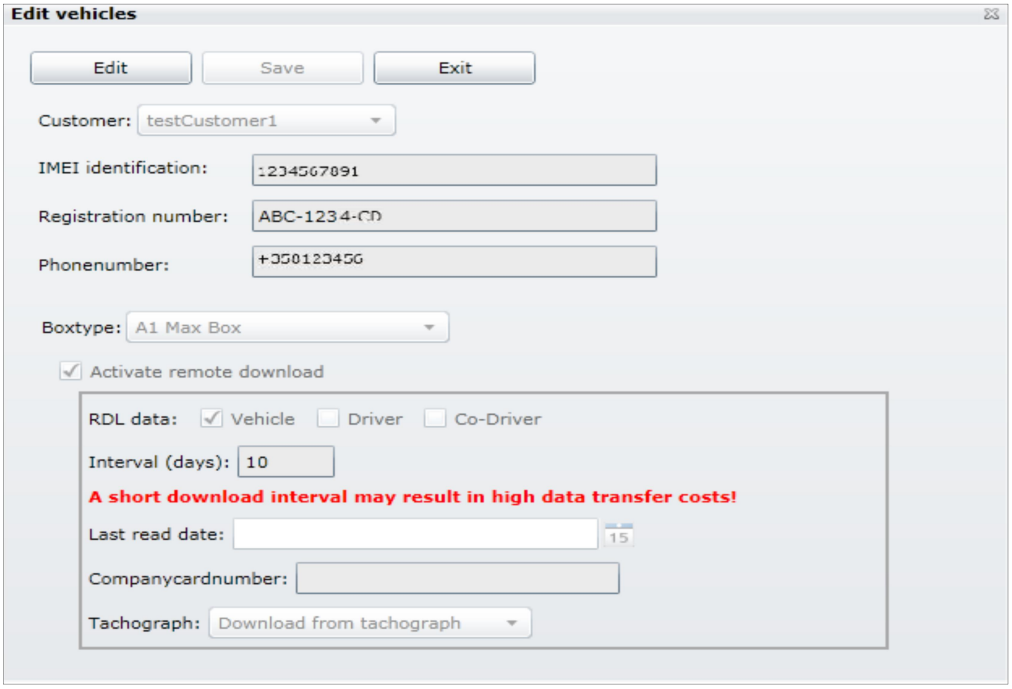
If you want to clear all filter fields, click on the button [Show all].




### 5.1.3.1 Add new vehicles

To create new vehicles click on the corresponding button at the bottom of the page. You'll get a dialogue where you can insert one or more vehicles at the same time.

The above example shows you how to assign two vehicles to a customer and set the automatic remote download to 30 days.

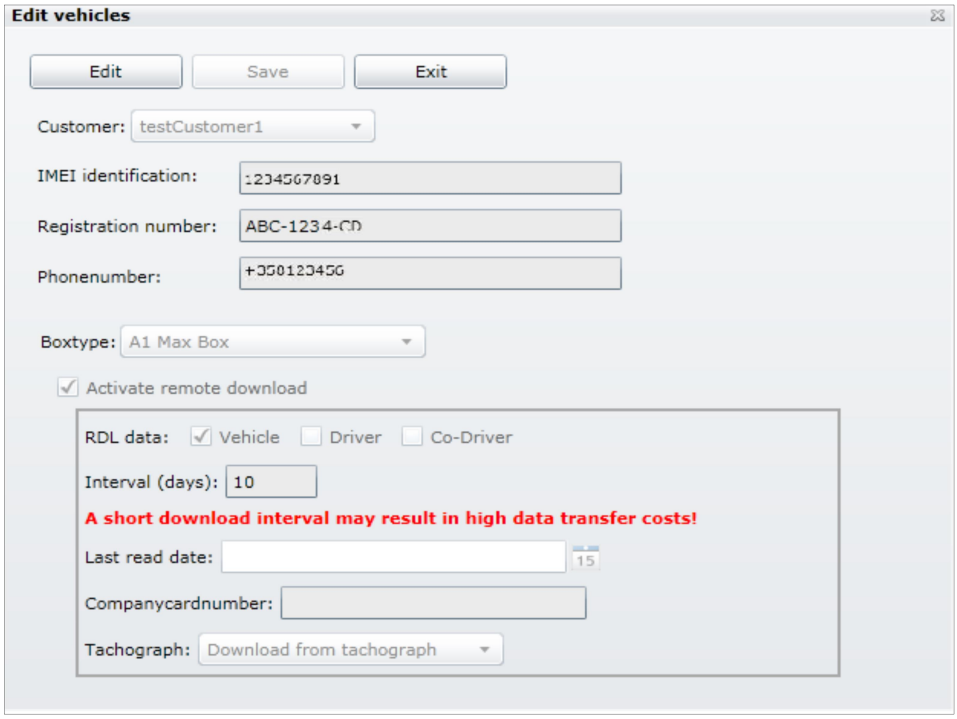


| | |
|---|---|
| Customer | The end-customer the new vehicle(s) belong(s) to |
| Vehicle information | The list of new vehicles.<br>“IMEI-Number”;”Registration number”;”Phone number”<br>If the registration number and phone number are unknown at this point of time, you can leave these values empty. In that case the input line looks like this (“123456891;;”)<br>**Important:** Make a new line for every vehicle. |
| Box type | The type of telematics box. By marking the box type A1 MAX the RDL works with A1 MAX RDL and A9 RDL units. |
| Activate remote download | Enables the remote download ability of the units. |
| Interval | This specifies the interval for the automatic remote download in days. If this value is set to 0 the download is deactivated. |
| RDL data | Select data to be read at set interval. |
| Last read date | You can leave this field empty on creation. If you specify here a date, all the data since this date will be downloaded in the next remote download. After a successful download this date will be set automatically to the date of the download. |
| Companycardnumber | This value will be set after the first successful remote download to the used card number. If you type here another card number, at the next download attempt will be tried to use this company card. If it's not available another card from the pool of this customer will be used. |
| Tachograph | Here you can set if the vehicle contains a second generation tachograph with enabled remote download interface, or if you want to use an external card reader for the download (this requires extra hardware on the vehicle site). |

### 5.1.3.2 Edit vehicles

If you want to change the settings of a vehicle, select it in the list and click on the command [Edit vehicle] at the bottom of the list. This opens a dialogue which looks very similar to the “Insert vehicle” dialogue.

The difference to the “Insert vehicle” dialogue is that it is designed to edit only one vehicle at a time. Therefore you have separate fields for the IMEI number, the registration number and the phone number.




**Important:** You can't change the assignment to an end-customer here. If you need to do this you have to delete the vehicle for this customer and re-create it for the other customer.

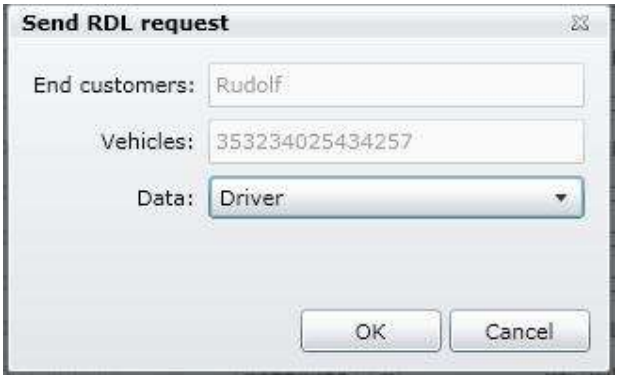
### 5.1.3.3 Delete vehicles

If you want to delete a vehicle for a customer permanently, select it in the list of vehicles and click on the button [Delete] at the bottom of the list.

### 5.1.3.4 Start a remote download manually

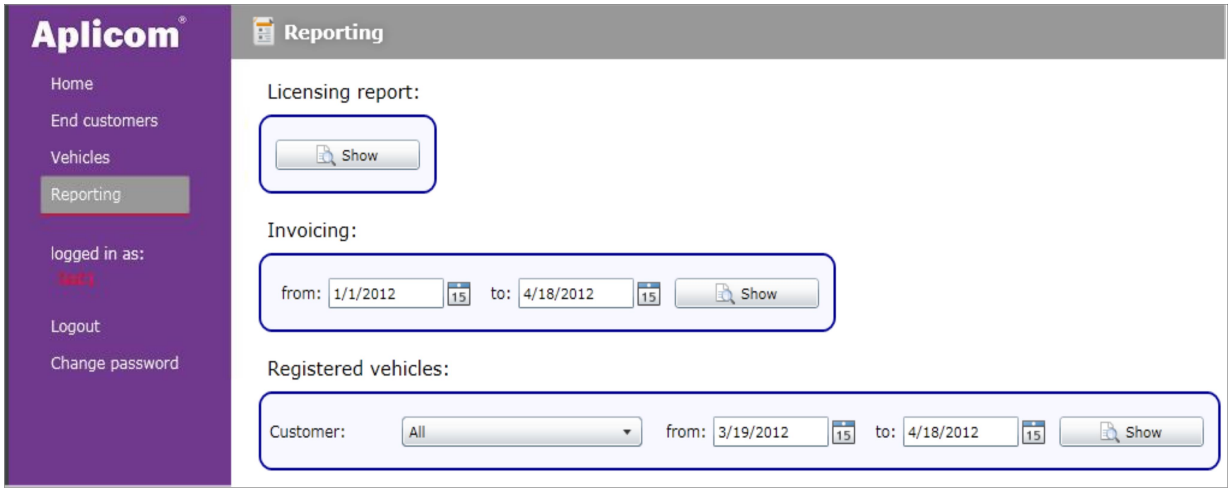
The RDL Admin tool allows you to send a remote download request to a vehicle. To do this, select the vehicle in the list and choose the command [Send RDL request] at the bottom of the screen.

You'll get the following screen, where you can select which data you want to download (Vehicle, Driver or Co-driver).



### 5.1.4 Reporting

In this section you can generate a report of all your end customers and their used license keys with object count. (Downloadable vehicles and drivers). Simply click on the [Show] button to get the report.




The reporting function makes it possible to generate reports of the partners end-customers registered vehicles and the stored file account and data amounts per selected date range. The reports have summary information for easy checking of registered vehicles. Lists are summarised per end-customer. It is also possible to generate report of registered vehicles in the RDL service.

Example of Invoicing report:

**Aplicom RDL Service Invoicing Report**

**Date from 01.01.2012 to 24.04.2012**

**Partner: 00000**

| End customer | API | Reg. vehicles | Nr of files | Storage MB | First date | Last date |
|---|---|---|---|---|---|---|
| 000000_00_001 | 3 | 11 | 163 | 8,549 | 07.05.2012 | 28.05.2012 |
| 000000_00_002 | IDHA | 0 | 0 | 0 | --- | --- |
| 000000_00_003 | | 0 | 0 | 0 | --- | --- |
| 000000_00_004 | | 0 | 0 | 0 | --- | --- |
| 000000_00_005 | | 0 | 0 | 0 | --- | --- |
| 000000_00_006 | | 0 | 0 | 0 | --- | --- |
| 000000_00_007 | | 0 | 0 | 0 | --- | --- |
| 000000_00_008 | | 0 | 0 | 0 | --- | --- |
| 000000_00_009 | | 0 | 0 | 0 | --- | --- |
| 000000_00_010 | | 0 | 0 | 0 | --- | --- |
| **Total API** | 2 | 11 | 163 | 8,549 | 07.05.2012 | 28.05.2012 |
| **Total no API** | 0 | 0 | 0 | 0 | --- | --- |
| **Total** | 2 | 11 | 163 | 8,549 | 07.05.2012 | 28.05.2012 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **All partner total API** | 2 | 11 | 163 | 8,549 | 07.05.2012 | 28.05.2012 |
| **All partner total no API** | 0 | 0 | 0 | 0 | --- | --- |
| **All partner total** | 2 | 11 | 163 | 8,549 | 07.05.2012 | 28.05.2012 |

When report is generated it will be shown on the screen. It can also be converted to .pdf format for further use.

The report shows information of the partners end customers and vehicles registered to them. The report shows if the end customer data is sent to API and the API id in the system. The report sum the number of API end-customers and end-customers that does not use API (no API) and total. Also vehicles are summarised same way.

The report shows also the amount of data that is stored in file storage and for API customers how much data has been forwarded to the API interface.

To exit from the report generator click the “Close” button at the right corner down of the screen.

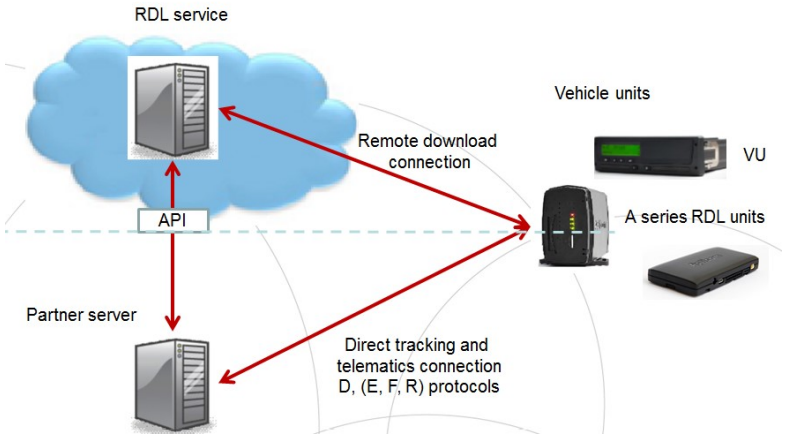
### 5.1.5 Change password

This section allows you to change the user password.

# 6 RDL CONFIGURATIONS

The telematics unit configuration is important part of a working RDL solution. It needs to make the RDL necessary things and additionally it can assist to manage the driver card reading in many ways by triggering the card reading when driver card is needed to be read after card insertion. The driver card identification uses tachograph real time data, and the data source can be selected in the configuration as well. Naturally the telematics unit installation and cabling must be compatible to the selection.

The configuration serves also the telematics use with Aplicom standard telematics functions and protocols.




The configuring of the telematics unit can be many ways and is depending on customer needs. The RDL related part is normally limited. They can include issues like optimization of communications costs since the connection to the RDL server must be opened by the vehicle unit and therefore unit sends alive messages to the RDL server when it is on. The frequency and events triggering for the alive sending can be adjusted in configuration to save SIM capacity. The example has basic scenarios that work normally with small amount of data, but they can be changed with configuration tool *Aplicom A1 SW Configurator Software D224180* (supports all A series RDL units) to fit specific needs. The basic VU and similarly inserted driver card read time interval is defined on server settings.

Aplicom has prepared example configurations for starting point of configuring the A series RDL units.
Please contact Aplicom support support@apliocm.fi for latest example configuration examples.

## 6.1 Configuration items

To enable the above described operations certain items has to be in the unit's configuration.

Among those are:

- A connection and transport for communication with the RDL server
- At regular intervals- or triggered sending of repeating “alive” message to keep the RDL server connection open.
- Event handlers for receiving the commands from the RDL server.
- Actions to start download.
- Actions to upload the tachograph and driver card files to RDL server as secure file transfer.

These elements are included in the example configurations. Below are typical terms used in the example configurations that are made with A1 SW configurator tool.

### 6.1.1 A transport is needed for the RDL server communication.

- Connection: the GPRS TCP/IP type connection configured.
- Formatter (protocol) : TV (text verbose)
- Destination address: **rdl01.rdl.aplicom.com:7015**
- Priority: make sure to set the priority in such a level that the transport is enabled when even the remote download action required.
- Queue size: for example 3 is appropriate. There is no need for a long queue.
- Selected fields: only IMEI. Snapshot is used to identify the device and keep the connection open.

### 6.1.2 Event handlers needed for successful RDL operations are:

- StartRDLserverConnection, sends the initial “alive” message to RDL server at software start. Uses AliveToRdlServeraction.

- Alarm timer or scheduled event setting to send “alive” message on set time interval and based on other events, thus keeping the connection open. Uses AliveToRdlServeraction.

- DownloadTachoRequest, receives the START_TACHO_RDL command from RDL server and starts the download session with authentication. Uses Confirm_tcp_command action to send OK to RDL server to indicate that the command was received and accepted.

- UploadDataDirList, receives the START_TACHO_LIST command from the RDL server and replies with the requested directory list of downloaded files, VU and driver card(s). Uses action UploadDataDirList.

- StartFileUpload, receives the START_TACHO_UPLOAD command from the RDL server and replies by sending the requested files. Uses actionStartFileUpload.

### 6.1.3 Following actions are used for RDL operations:

- UploadDataDirList, sends directory listing to RDL server.

- StartFileUpload, uploads tacho data files to RDL server.

- AliveToRdlServer, sends “alive” message to server.

- Confirm_tcp_command, sends *OK* text message to RDL.

# REFERENCES

*K503114 Aplicom RDL Service Description*

*S100311 Remote download file storage API specification*

*D224180 Aplicom A1 SW Configurator Software*

*K503021 A1 SW configurator user manual*

*K520051 A9 NEX SW user manual*

*K503050 A1 track SW and telematics SW user manual*