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1 Introduction

Web client (Reliance Web Client) and a client for mobile devices (Reliance Mobile Client) are commonly referred to as thin clients. Thin clients are designed for a comfortable access to a visualization from remote locations. Thin clients connect to data servers and provide similar visualization features as runtime software. This document describes the Mobile client.

What is Reliance Mobile Client?

Mobile Client installation

Mobile Client start
1.1 What is Reliance Mobile Client?

Reliance Mobile Client is the software designed for running a visualization on a remote device connected to the network (Internet). Remote users are able to view real time data, to control visualized process, to view and acknowledge alarms/event and to view trends and reports. Reliance Mobile Client uses one of the Reliance data servers (Reliance Server or Reliance Control Server) as the data source. Communication between the mobile client and the data server is based on web services and on the SOAP protocol. Communication messages of the SOAP protocol are encrypted and compressed.

Mobile Client is based on the Microsoft .NET Compact Framework 2.0 platform. This platform is designed to work on OS Windows CE-based systems (Windows CE, Windows Mobile, Packet PC, etc.). Mobile Client is CPU independent and therefore it can run on most CPUs present in modern mobile devices (ARM, MIPS, SH4, x86, etc.).
1.2 Mobile Client installation

The .NET Compact Framework 2.0 SP2 runtime environment has to be installed on the target device before installation process of Mobile Client can start. If this runtime environment is not present on your device, it has to be installed additionally.

**Note:** The .NET Compact Framework 2.0 SP2 runtime environment installer is a part of Reliance 4 Add-On Pack, or it can be downloaded from the official Microsoft pages.

**Welcome!**
Welcome to Reliance 4 Control Server Web page.

**Project**
Choose the project part you want to display:

- Devices and Tags
- Current Alarms & Events
- Reports
- Custom Reports

**Status**

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>Pre-Alpha 0.1 (2.0.1.0)</td>
</tr>
<tr>
<td>Serial Number</td>
<td>260409980</td>
</tr>
<tr>
<td>Data Points</td>
<td>65000</td>
</tr>
<tr>
<td>Thin Clients</td>
<td>4/154</td>
</tr>
<tr>
<td>Project</td>
<td>AirCondition</td>
</tr>
<tr>
<td>Computer</td>
<td>p2t</td>
</tr>
</tbody>
</table>

**Thin Clients**
Choose what kind of thin client you want to start.

- ![Reliance Web Client](image)
  To start the Web client (Reliance Web Client) use this [page].

- ![Reliance Mobile Client](image)
  To download the mobile client (Reliance Mobile Client) use this [page].

**Server**
Administration

**Data server – Main page**

*Mobile Client* can be downloaded and installed from data server's web pages. *Reliance* data servers (*Reliance Server* and *Reliance Control Server*) contain built-in web server to provide web pages. For more information about *data servers* refer to a specialized document *Data Servers*. 
4 Mobile Client installation

**Note:** Web page required to start *Mobile Client* is available only after visualization project has been exported for remote users. Export for remote users can be done from the *Reliance Design* development environment (Enterprise edition) via > Project > Export for remote users. For more information on Export for remote users wizard see the Development environment help.

To display the list of configurations available for *Mobile Client*, select the link *Reliance Mobile Client* in the Thin Clients section of the data server main page.

<table>
<thead>
<tr>
<th>Configurations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
</tr>
<tr>
<td>pc1</td>
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<tr>
<td>pc2</td>
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<table>
<thead>
<tr>
<th>Program Files</th>
</tr>
</thead>
<tbody>
<tr>
<td>Download program files of Reliance 4 Mobile Client</td>
</tr>
<tr>
<td>Download setup of Reliance 4 Mobile Client</td>
</tr>
</tbody>
</table>

**Configurations and program files**

Each configuration corresponds to the *Computer* defined in the visualization project. Click selected link to download an archive containing project files. Manual download is usually not required, project files are in most cases downloaded and updated via Mobile Client Updater described below.

Mobile Client can be installed manually (program files are extracted from an archive) or automatically via Mobile Client installer.

Mobile Client installer

Manual program files extraction

**1.2.1 Mobile Client installer**

*Mobile Client* can be easily installed via standardized installer in CAB format ("Microsoft Windows native compressed archive format"). Click Download link in the Mobile Client installer paragraph to download the installer.
Mobile Client is by default installed to the <Program Files>\Reliance_4_Mobile_Client folder. After installation is finished, Mobile Client can be started from the Start menu. An entry is added to the system registry to assist program removal via "Remove programs".

1.2.2 Manual program files extraction

First download the archive containing program files from data server web page by clicking on the Download link in the Mobile Client program files paragraph. Use appropriate program to extract program files from the zip archive to target directory on the mobile device. Start Mobile Client with the R_MobileClient.exe file.

No entry is added to the system registry if Mobile Client is installed manually. To uninstall mobile client simply delete the directory.
1.3 Mobile Client start

Mobile Client can be started either via Start Menu > Programs > Reliance 4 Mobile Client link or directly by executing the `R_MobileClient.exe` file from the program directory.

Splash screen displayed while Mobile Client is starting shows progress in project loading. If project is not available on the target device (first start) an Updater utility is automatically started. The Updater utility can be used to download the latest version of the project and program files.

Automatic update via Updater

In some cases, you can be asked to enter the access code.

Entering access code

1.3.1 Automatic update "Updater"

Part of the Mobile Client installation is the Updater utility. Utility can be used to update program and/or project files. Utility is usually automatically started from Mobile Client, or it can be started manually from the program directory (the `R_Updater.exe` file).

If Updater is started for the first time, URL address of the data server has to be entered. URL address is in the following format: `http://[IP]:[Port]/MobileClient` where [IP] is the data server's IP address and [Port] is the data server's TCP port. Complete URL could be for example `http://194.228.224.73:40000/MobileClient/`. 

![Server URL](image)

Enter data server URL address  List of available updates
After connection to the data server is successfully established, updater performs detection of available updates (program and project).

**Update**
- Force check for updates.

**Proxy**
- Displays dialog to define proxy server.

**Server**
- Displays dialog to define data server address.

**Next**
- Next step of the wizard.

**Close**
- Close the Updater utility.

If later version of program or project is available, the download can be performed in the next step.

**Select updates for download**

Following steps are performed if you choose "Update now":

1. Optional backup of installed files.
2. Download of program files (optional).
3. Download of project files (optional).
4. Mobile Client is closed.
5. Update of program files.
6. Update of project files.
7. Start of Mobile Client (optional).

1.3.2 Entering access code

You can be asked to enter the access code on the Mobile Client start. If this is the case the Enter access code dialog window is displayed. Program will start after correct access code is entered.
2 Mobile Client description

Mobile Client user interface
Virtual keyboard
Options

Following chapters are similar to those of Web Client, refer to the Web Client help.

User logon/logoff
Editing tag values
Alarm/Event viewers
Trend viewers
System information
Information dialogs
Text data viewer

Current Alarm/Event Viewer
Trend Viewer
2.1 Mobile Client user interface

Splash screen displayed while Mobile Client is starting shows progress in project loading.

The Mobile Client main window is displayed after project is loaded.

- **Main window**
- **Title bar**
- **Toolbar**
- **Main menu**

Following chapters are similar to those of Web Client, refer to the Web Client help.

- **Visualization windows**
- **Bottom alarms/events panel**
2.1.1 Main window

Mobile Client's main window contains following parts:

- Title bar (not shown)
- Toolbar
- Visualization windows area

2.1.2 Title bar

The text contained in the title bar has the following format:

Reliance 4 Mobile Client - [<project_name>] - <connection_state>

where:

- <project_name>
  - Name of the visualization project loaded by Mobile Client.
- <connection_state>
  - Indicates state of the connection with a data server ("Disconnected", "Connecting", "Connected", "Disconnecting"
2.1.3 Toolbar

Toolbar contains following parts:

- A command that opens Main menu (1)
- Selected commands from the main menu (2):
  - User login
  - User logoff
  - Previous window
  - Next window
  - Current alarms/events
  - Historical alarms/events
  - Trends
  - System information
2.1.4 Main menu

- **Users menu**

  *Log on user*
  
  Brings up a dialog for user logon.

  *Log off user*
  
  Logs off the current user.

  *Logged user information*
  
  Displays a dialog window with the information about the currently logged on user.

- **Window menu**

  *Previous window*
  
  Shows the previously shown window.
**Next window**

Shows the next window. The command can be used after the *Previous window* command.

**Language menu**

*Program language*

Brings up a dialog which contains a list of program languages available in Mobile Client (Czech and English). You can choose GUI language (texts defined in the project are not affected).

*Project language*

Brings up a dialog which contains a list of languages defined in the project. You can choose the language of the texts defined in the project (GUI is not effected).

**View menu**

*Current alarms/events*

Displays a list of current alarms/events.

*Historical alarms/events*

Displays a list of historical alarms/events.

*Trends*

Displays a list of available trends. A trend selected in the list is displayed in the *trend viewer*.

*Tag Trends*

Shows a list of defined *tags*. A trend of selected *tag* can be displayed in the *trend viewer*.

*System information*

Displays a window containing system information.
• **Tools menu**

  *Display scrollbars*
  Displays the scrollbars on the bottom and right side of visualization windows. Scrollbars enables you to view all components even if visualization have been designed for different screen resolution.

  *Options*
  Brings up a dialog window where you can change various Mobile Client settings.

• **Connection menu**

  *Connect*
  Connects Mobile Client to the data server.

  *Disconnect*
  Disconnects Mobile Client from the data server.

• **Miscellaneous**

  *Update*
  Starts the *Updater* external utility. The utility is designed to check for and download program and/or project updates from the data server.

  *About Reliance Mobile Client*
  Displays a window with basic program and license information (version, registration, etc.).

  *Minimalize*
  Minimizes/hides an application into the icon in the taskbar of the mobile device. To restore the application click on the icon.

  *Close*
  Closes the Mobile Client application.
2.2 Virtual keyboard

Virtual keyboard can be used to enter values on devices without physical keyboard. To provide comfortable input on different devices, keyboard integrated with an OS is used. Virtual keyboard is sometimes called SIP "Soft Input Panel".
2.3 Options

The Options dialog contains following groups of settings:

![Options dialog](image)

### Alarms/events

Defines parameters displayed in the alarm/event viewers.

### Screen

Enables you to select an orientation of a device and define if Mobile Client should run in the full screen mode.

**Note:** Function is available only if it is supported by device's OS. Function is supported on Windows Mobile 5.0 and later.
3 Appendix

Windows CE emulator installation and configuration
3.1 Windows CE emulator installation and configuration

You can also start Reliance Mobile Client on a common PC (with MS Windows installed) inside an emulator (e.g. to test the functionality).

**Required software**

- Install the .NET Compact Framework 2.0 SP2 runtime environment on your computer (it is available in the Reliance 4 Add-On Pack package).

- Install the Microsoft Windows CE 5.0 Device Emulator application (it is available as a part of the Reliance 4 Add-On Pack since the version 4.0.4). Both the applications can also be downloaded from the official Microsoft web pages.

**Emulator configuration**

- On the hard drive of your computer create a folder that will be used to share data between Windows and the emulator (e.g. C:\PDA_Storage).

- Copy the .NET Compact Framework installation package to the newly created folder (the package is located in C:\Program Files\ Microsoft.NET\ SDK\ CompactFramework\ v2.0\ WindowsCE\ wce500\ x86\ NETCFv2. wce5.x86.cab). Set the "read only" attribut of the file.

- Start the Windows CE emulator with the following parameters: "nk.cem / ethernet shared /video 240x360x16 /sharedfolder C:\PDA_Storage" (you can edit the parameters of the sample device shortcut located in the start menu).

- Install the .NET Compact Framework inside the emulator (start the NETCFv2. wce5. x86.cab package located in the My Device\Storage Card folder).

- Install the Reliance Mobile Client application as described in the section Mobile Client installation.