



zenon
by COPA-DATA



The background features a series of overlapping, 3D-rendered rectangular blocks in shades of blue, light blue, and orange, arranged in a stepped, staircase-like pattern that recedes into the distance. The perspective is from the bottom-left, looking up and to the right. The lighting creates strong shadows on the left side of the blocks, emphasizing their depth and the overall architectural feel of the design.

Manuel de zenon Mobile applications for zenon

v.8.20



COPA-DATA

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1 Welcome to COPA-DATA help

TUTORIELS VIDÉO DE ZENON.

Des exemples concrets de configurations de projets dans zenon sont disponibles sur notre chaîne YouTube (https://www.copadata.com/tutorial_menu). Les tutoriels sont regroupés par sujet et proposent un aperçu de l'utilisation des différents modules de zenon. Les tutoriels sont disponibles en anglais.

AIDE GÉNÉRALE

Si vous ne trouvez pas certaines informations dans ce chapitre de l'aide ou si vous souhaitez nous suggérer d'intégrer un complément d'information, veuillez nous contacter par e-mail : documentation@copadata.com.

ASSISTANCE PROJET

Vous pouvez obtenir de l'aide pour tout projet en contactant par e-mail notre service d'assistance : support@copadata.com

LICENCES ET MODULES

Si vous vous rendez compte que vous avez besoin de licences ou de modules supplémentaires, veuillez contacter l'équipe commerciale par e-mail : E-mail sales@copadata.com.

2 Mobile applications for zenon

With the mobile applications, you can visualize your zenon projects on mobile end devices, tablets and desktop computers. The basis of this display is an existing zenon project. There is no additional project configuration work required.

For display on mobile end devices, tablets and desktop computers, there are zenon apps available in the respective app store.

You can also create your own mobile applications for the visualization of your zenon project

configuration. You can find further information and examples of code in the Everywhere Server data model (à la page 115) chapter.

THE FOLLOWING APPS ARE AVAILABLE:

- ▶ **Everywhere Essentials Alarm Management** (à la page 8)
Visualizes alarms of the productive Runtime on mobile devices. Filtering of the alarms according to equipment groups can be configured in the connection.
This app is available for devices with the Apple iOS operating system.
- ▶ **Everywhere Essentials QR Data App** (à la page 19)
Visualizes real-time data from the productive Runtime to mobile devices. Individual variables can be entered. Alternatively, a QR code with the connection settings contained in it and variables to be displayed can be scanned.
This App is available for devices with the Android and Apple iOS operating systems.
- ▶ **Everywhere App by zenon:**
This app allows simple access to zenon via smartphones, tablets and desktop computers.
The following apps are available:
 - ▶ **Everywhere App by zenon** (à la page 37) for Windows Mobile
 - ▶ **Everywhere App by zenon** (à la page 57) for iPhone, iPad product range
 - ▶ **Everywhere App by zenon** (à la page 76) for Windows Desktop
 - ▶ **Everywhere App by zenon** (à la page 86) for Android
- ▶ **Everywhere Server by zenon** (à la page 97):
Provides zenon data for mobile applications.

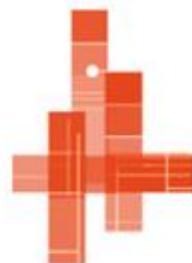
Once a server has been configured, the following functions are available via the app:

- ▶ Visualization of values of a zenon project in real time.
- ▶ Authentication by means of the mobile application
- ▶ Selection of the equipment model of the active project
- ▶ Assignment of the configured user authorizations (via .INI entry)
- ▶ Individual variables can be activated
- ▶ Display of values in lists ...
 - ▶ ... with graphic progress bars
 - ▶ ... with dynamic pointer instruments
 - ▶ ... Alarm messages with time

3 Everywhere - Alarm Management

Carrier 

8:53 AM



Everywhere
Essentials by zenon



Everywhere Essentials - Alarm Management visualizes the alarm message list of zenon Runtime in a simplified display.

A connection to the COPA-DATA demo server is pre-configured by default.

Informations

The app is available for devices with the Apple iOS operating system.

3.1 Installation

Carry out the following steps in order to be able to use **Everywhere Essentials - Alarm Management** on your device:

- ▶ Start the app store on your device.
- ▶ Enter *Everywhere Essentials* or *Alarm Management* as a search term.
- ▶ Select **Everywhere Essentials - Alarm Management** and install the app on your device.

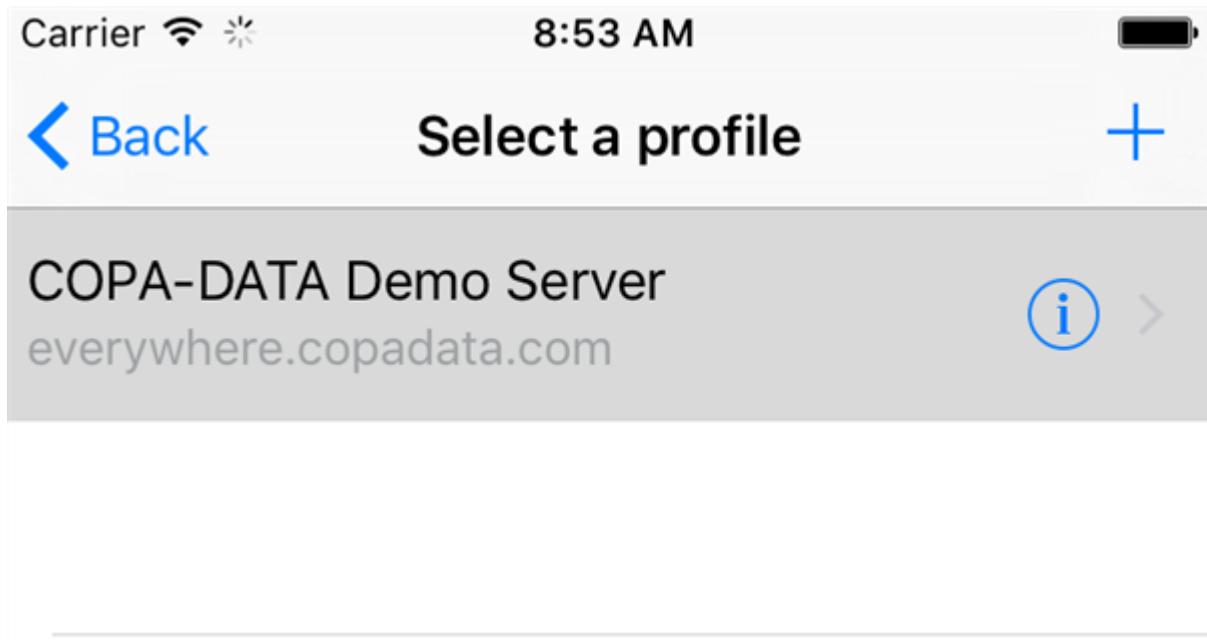


To use the app:

- ▶ Open **Everywhere Essentials - Alarm Management** on your device.
The app starts with the alarm screen (à la page 15).

3.2 Profile List

The profile overview lists existing profiles and administers these.



HEADER

Parameter	Description
< Back	Switches to the alarm screen (à la page 15).
+	Creates a new profile and opens the configuration dialog for a profile (à la page 12).

PROFILE LIST

List with all configured connections. Select an existing profile to connect to the respective server.

3.2.1 Edit profile

In this screen, existing profiles can be changed and new profiles can be configured.

Carrier 

8:53 AM



Done

Profile name:

COPA-DATA Demo Server

Server address:

everywhere.copadata.com

Port:

8050

Project name:

DEMO_AUTOMOTIVE

Select alarms from equipmentgroup:

User:

Manager

Password:

•••••••

HEADER

Parameter	Description
Done	Saves the configuration and switches to the alarm screen (à la page 15).

CONNECTION SETTINGS

Parameter	Description
Profile Name	Freely definable name of the connection.
Server address	Name or IP address of the Everywhere Server to which a connection is to be created.
Port	HTTPS port for communication with the Everywhere Server Par défaut : 8050
Project name	Name of the Everywhere Server project.
Select alarms from equipment group	Name of the equipment group, as configured in the zenon Editor. Note: In the alarm screen, only the alarms that are linked to selected equipment group are visualized.
User	User name for login at the Everywhere Server.
Password	Password for login at the Everywhere Server.

3.3 Alarm screen

The alarm screen visualizes the alarm message list of zenon Runtime in a simplified display.

Everywhere Essentials - Alarms

Connection status:
online

Wartung Spanner RS01

Time received:
10.06.2016, 08:53:45

Status:
Active

Wartung Schrauber SC01

Time received:
10.06.2016, 08:53:43

Status:
Active

Störung Schrauber SC02

HEADER

Parameter	Description
Cog symbol	Switches to profile overview (à la page 11) for the selection or configuration of a connection.
Connection status	Shows the status of the current connection to the Everywhere Server by zenon <ul style="list-style-type: none"> ▶ <i>online</i> Active connection to the server ▶ <i>offline</i> No connection to the server

15 | 129

ALARM ENTRY

Wartung Spanner RS01

Time received: 10.06.2016, 08:53:45

Status: Active

Parameter	Description
[Alarm text]	Alarm text
Time received	Timestamp of the alarm: <i>DD.MM.YYYY, hh:mm:ss</i>
Status	Status of the alarm: <ul style="list-style-type: none">▶ <i>Active</i> Alarm is active.▶ <i>Acknowledged</i> Alarm has been acknowledged.▶ <i>Gone</i> Alarm has gone.

EXAMPLE

Carrier 

8:53 AM



Everywhere Essentials - Alarms



Connection status:

online

Wartung Spanner RS01

Time received: 10.06.2016, 08:53:45

Status: Active

Wartung Schrauber SC01

Time received: 10.06.2016, 08:53:43

Status: Active

Störung Schrauber SC02

Time received: 10.06.2016, 08:53:40

Status: Active

Bus Warnung

Time received: 10.06.2016, 08:53:36

Status: Active

Roboter Störung RS01

Time received: 10.06.2016, 08:53:33

4 Everywhere Essentials QR Data App



The free **Everywhere Essentials QR Data App** visualizes real-time data from the productive Runtime to mobile devices. The relevant information is read from a QR code directly.

This QR code can be created for the app with the **Everywhere Essentials QR Code Generator** of an existing configuration.

Note: The app is available for devices with the Windows 10, Windows 10 Mobile, Android and Apple iOS operating systems.

Informations

The **Everywhere Essentials QR Data App** visualizes the project data provided by the Everywhere Server (à la page 97).

4.1 Installation

Carry out the following steps in order to be able to use **Everywhere Essentials QR Data App** on your device:

- ▶ Start the app store on your device.
- ▶ Enter *QR Data App* or *Essentials QR* as a search term.
- ▶ Select **Everywhere Essentials QR Data App** and install the app on your device.



To use the app:

- ▶ Open the **Everywhere Essentials QR Data App** on your device.
The start screen (à la page 20) is shown.

4.2 App Bar



The app bar is for navigation on Android devices.

Note: There is no app bar available for Apple iOS devices.

APP BAR

Symbol	Description
zurück <i>(symbol: curved arrow to the right)</i>	Switches to the previous app screen.
Home <i>(symbol: house)</i>	Closes the app and switches back to the Start screen of the Android device.
nn <i>(symbol: overlaid screens)</i>	Overview of the last apps open on the device.



Informations

The appearance and functionality of the app bar is the same on all screens. This bar is very often already integrated into the hardware of an Android device. In this case, no app bar is displayed.

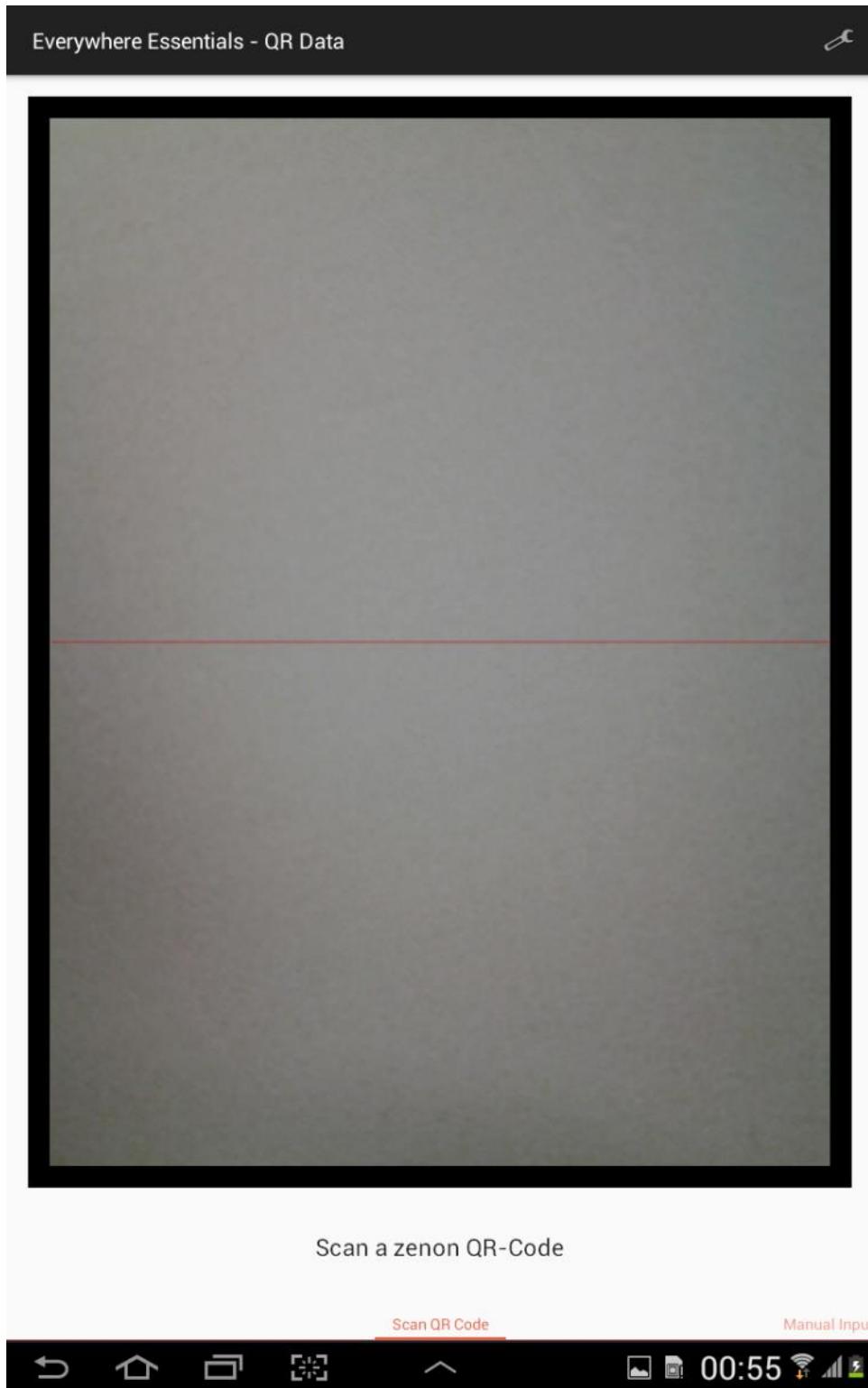
4.3 Start screen

The **Everywhere Essentials QR Data App** starts either with the **scan screen** (à la page 21) or with the **screen for manual entry** (à la page 24).

This depends on the view in which the app was last closed.

4.3.1 Scan screen

QR codes are scanned and the profile list is called up in the scan screen.



ACTION BAR - ACTION BUTTONS

Parameter	Description
Profiles <i>(symbol: screw-wrench)</i>	Calls up the Profil list (à la page 26).

FOOTER

Parameter	Description
Manual Input	Switches to manual input (à la page 24).

SCAN PROCESS

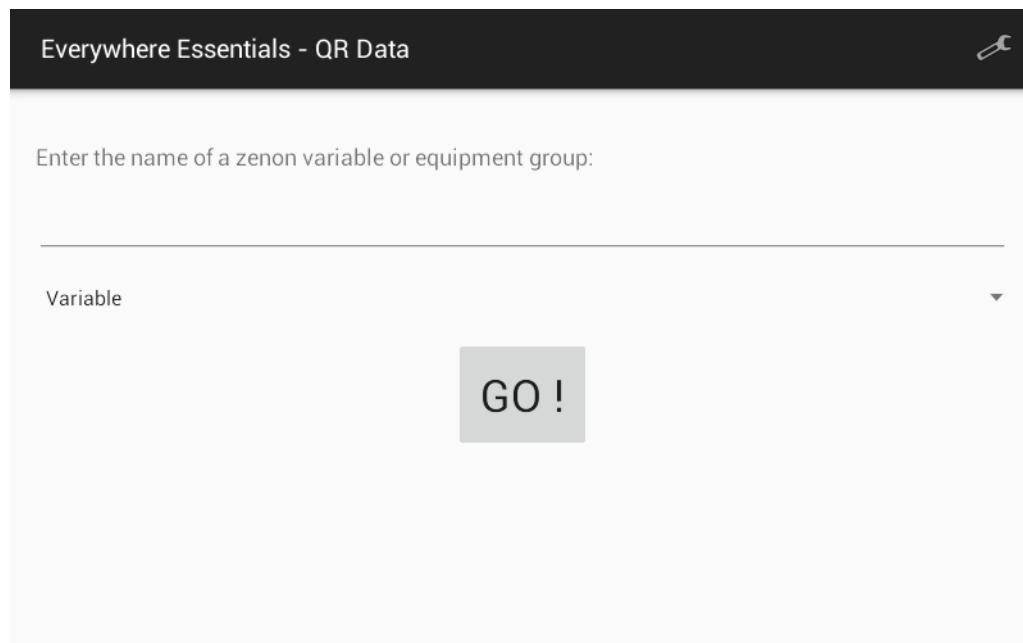


To scan a QR code:

- ▶ Focus on the QR code with your device's camera.
 - After successful identification of the QR code:
 - ▶ The screen is highlighted with a thick edge.
 - ▶ Prominent parts of the QR code are also accentuated in color.
 - ▶ The name of the detected project or the detected equipment group is visualized in the footer
 - ▶ The app establishes a connection to Everywhere Server by zenon.
 - Note:** You can find detailed information on this in the Establishing a connection (à la page 31) chapter.
 - ▶ After successful connection to Everywhere Server by zenon, the app switches to the event screen (à la page 32).
- The values of the variables identified are shown according to the configuration.

4.3.2 Screen for manual entry

You can enter the variable name or the name of the equipment group manually in the **screen for manual entry**.



ACTION BAR - ACTION BUTTONS

Parameters	Description
Profiles	Calls up the Profil list (à la page 26).

Parameters	Description
(symbol: screw-wrench)	

MANUAL INPUT

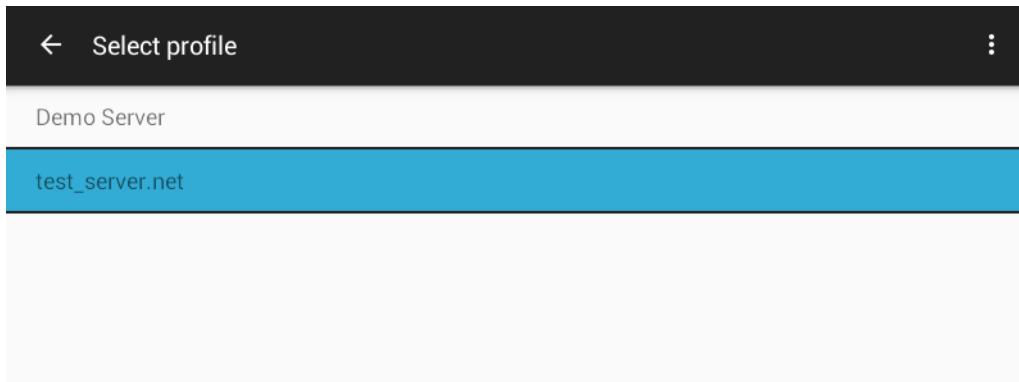
Parameters	Description
<i>Input field</i>	<p>Input field for variable name or name of the equipment group.</p> <p>Hinweis: Achten Sie bei der Eingabe auf Groß-/Kleinschreibung!</p>
<i>Input type</i>	<p>Drop-down list to select the query type:</p> <ul style="list-style-type: none"> ▶ <i>Variable</i> The name entered corresponds to a variable name (Nom). ▶ <i>Equipment Group</i> The name entered corresponds to the name of an equipment group (Nom).
Go	<p>Button to start the query.</p> <p>The result is then visualized in the event screen (à la page 32).</p>

FOOTER

Parameters	Description
Scan QR Code	Switches to the scan screen (à la page 21).

4.4 Profile List

The profile overview lists existing profiles and administers these.



ACTION BAR - ACTION BUTTONS

Parameter	Description
<- Select profile	Switches back to the input screen: <ul style="list-style-type: none"> ▶ Scan screen ▶ Screen for manual entry This depends on the view in which the profile overview was called up.
Action Overflow (Symbol: drei senkrechte Punkte)	Click the button to open a drop-down list of the actions.

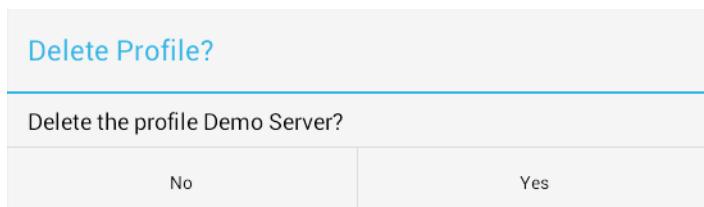
LIST OF PROFILES

Lists all configured profiles. Selection of a profile by tapping on the profile name.

Parameter	Description
Add new profile	Creates a new profile and opens the screen to configure a profile (à la page 27). Note: You can find further information on the use of profiles when establishing a connection in the Establishing a Connection (à la page 31) chapter.
Edit selected profile	Opens the screen to configure a profile (à la page 27).
Delete selected profile	Deletes the selected profile. Before deletion, you are requested to confirm the

Parameter	Description
	deletion of the profile.

SAFETY QUERY



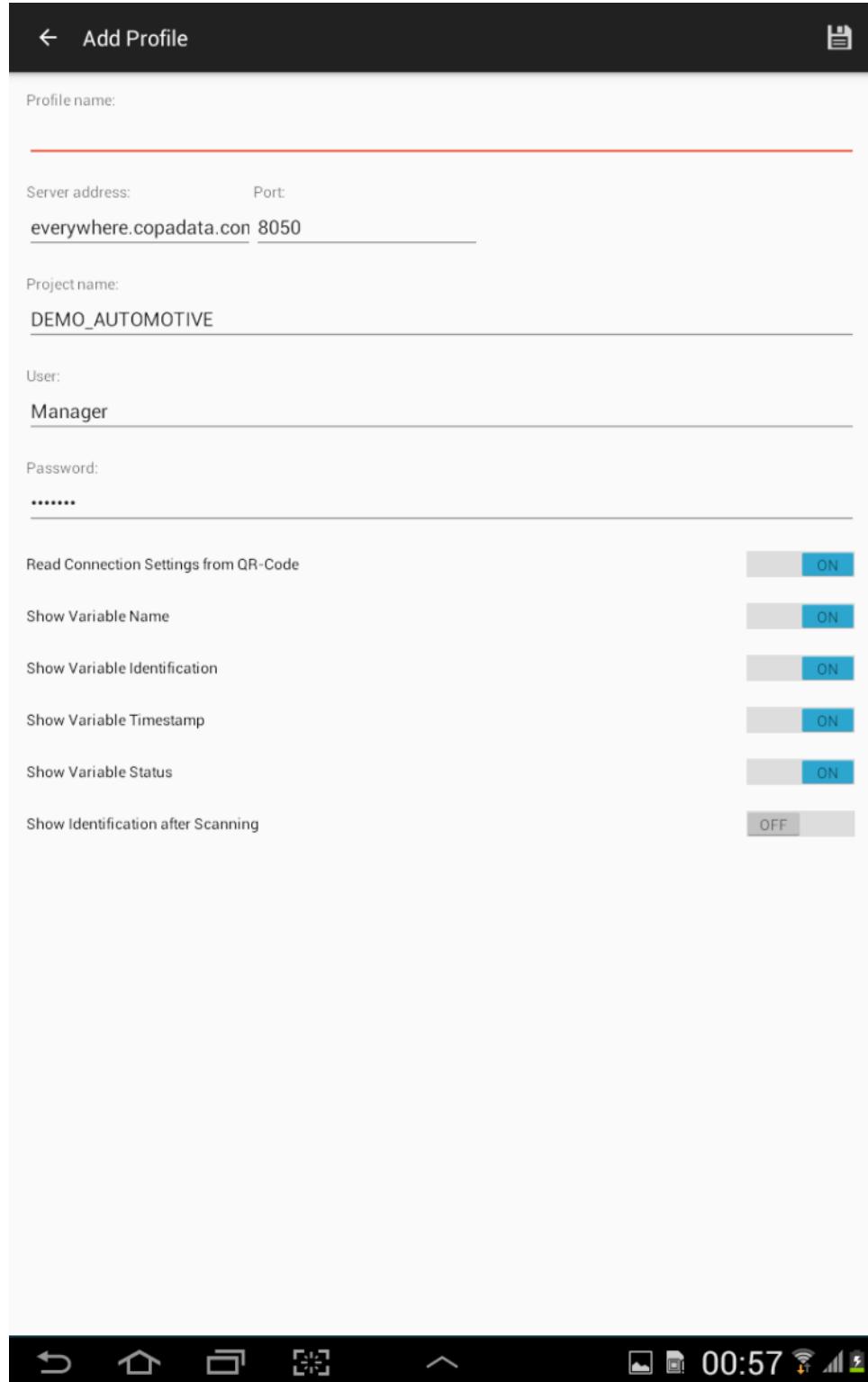
A confirmation dialog is called up before a profile is deleted.

Parameter	Description
No	The profile will not be removed from the list The dialog is closed in the process.
Yes	The profile is deleted The dialog is closed in the process.

4.4.1 Profile bearbeiten

In this screen, existing profiles can be changed and new profiles can be configured. Zusätzlich konfigurieren Sie die Granularität der Ergebnisanzeige (à la page 32).

Hinweis: Achten Sie bei der Eingabe auf Groß-/Kleinschreibung!



The screenshot shows the 'Add Profile' screen of the Everywhere Essentials QR Data App. At the top, there is a back arrow and the text 'Add Profile'. On the right side, there is a save icon. Below this, there are input fields for 'Profile name' (empty), 'Server address' (everywhere.copadata.con), 'Port' (8050), 'Project name' (DEMO_AUTOMOTIVE), 'User' (Manager), and 'Password' (*****). Below these fields are several toggle switches, all of which are set to 'ON': 'Read Connection Settings from QR-Code', 'Show Variable Name', 'Show Variable Identification', 'Show Variable Timestamp', 'Show Variable Status', and 'Show Identification after Scanning'. At the bottom of the screen, there is a navigation bar with icons for back, home, recent apps, and search, along with a status bar showing the time (00:57) and signal strength.

ACTION BAR - ACTION BUTTONS

Parameter	Beschreibung
<- Add Profiles	Schaltet zurück zur Profilübersicht.
Profil speichern <i>(Symbol: Diskette)</i>	Sichert die Profileinstellungen und schaltet zur Profilübersicht. Vor dem Sichern wird eine Bestätigungsdialog aufgeschaltet.

VERBINDUNGSEINSTELLUNGEN

Parameter	Beschreibung
Profile Name	Frei konfigurierbarer Name der Verbindung.
Server	Name oder IP-Adresse des Everywhere Servers, zu welchem eine Verbindung aufgebaut werden soll.
Port	HTTPS-Port für die Kommunikation mit dem Everywhere Server Par défaut : 8050
Project Name	Projektname des Everywhere Server Projekts.
User	Benutzername für die Anmeldung am Everywhere Server.
Password	Passwort für die Anmeldung am Everywhere Server.

ANZEIGEDETAILS

Die Eigenschaften werden jeweils mit einem Schieberegler aktiviert bzw. deaktiviert.

Diese Einstellungen haben direkte Auswirkung auf die Ausprägung der Anzeige im Ergebnisbildschirm.

Parameter	Beschreibung
Read Connection Settings from QR Code	Die Verbindungseinstellungen zum Everywhere Server werden vom QR-Code übernommen. Par défaut : <i>active</i> Ist diese Eigenschaft deaktiviert oder sind im QR-Code keine Verbindungseinstellungen codiert,

Parameter	Beschreibung
	werden die Verbindungseinstellungen des zuletzt gewählten Profils verwendet.
Show Variable Name	Anzeige des Variablenamens. Aktiviert oder deaktiviert die Anzeige des Variablenamens im Ergebnisbildschirm. Par défaut : <i>active</i> Hinweis: Dies entspricht der Eigenschaft Nom in der zenon Projektierung.
Show Variable Identification	Aktiviert oder deaktiviert die Anzeige der Variablenkennung im Ergebnisbildschirm. Par défaut : <i>active</i> Hinweis: Dies entspricht der Eigenschaft Identification in der zenon Projektierung.
Show Variable Timestamp	Aktiviert oder deaktiviert die Anzeige des Zeitstempels im Ergebnisbildschirm. Par défaut : <i>active</i>
Show Variable Status	Aktiviert oder deaktiviert die Anzeige des Variablenstatus im Ergebnisbildschirm. Par défaut : <i>active</i> Hinweis: Dies entspricht der Eigenschaft StatusString in der zenon Projektierung.
Show Identification after Scan	Die Anmeldedaten zum Everywhere Server werden während des Verbindungsaufbaus angezeigt. Par défaut : <i>inactive</i>

PROFIL SPEICHERN - BESTÄTIGUNGSDIALOG

Save Profile?

No	Yes
----	-----

Vor dem Speichern eines Profils wird ein Bestätigungsdialog aufgerufen.

Parameter	Beschreibung
No	Profil wird nicht gespeichert. Der Dialog wird anschließend geschlossen.
Yes	Das Profil wird gespeichert. Der Dialog wird anschließend geschlossen.

4.5 Verbindungsauftbau

Für die Verbindung zu einem Everywhere Server by zenon gelten folgende Regeln:

- ▶ Enthält der QR-Code Verbindungseinstellungen, welche bereits in einem vorhanden Profil gespeichert sind, baut die App sofort eine Verbindung auf. Das Ergebnis wird bei erfolgreicher Verbindung ohne weitere Zwischenschritte im Ergebnisbildschirm (à la page 32) angezeigt.
- ▶ Bei manueller Eingabe der Werteabfrage oder wenn keine Verbindungseinstellungen im QR-Code inkludiert sind, werden immer die Verbindungseinstellungen des aktuellen Profils verwendet.
- ▶ Enthält der QR-Code Verbindungseinstellungen, welche noch nicht in einem Profil gespeichert sind, wird automatisch ein neues Profil mit den Default-Einstellungen erstellt. Vor dem Verbindungsauftbau werden die Login-Daten in einem Dialog abgefragt.
- ▶ Sind in dem aktuell gewählten Profil die Login-Daten (**User** oder **Password**) nicht vorhanden oder falsch konfiguriert wird ein Dialog zur Eingabe der Login-Daten aufgeschaltet.
- ▶ Konnte keine Verbindung zum Everywhere Server by zenon aufgebaut werden, wird eine Fehlermeldung angezeigt.

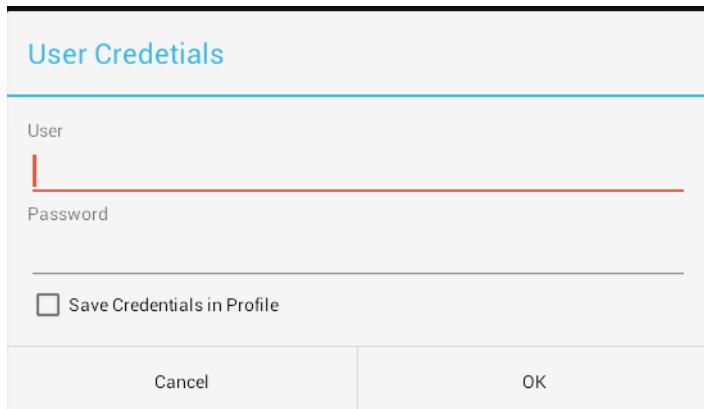
FEHLER BEI VERBINDUNGSAUFTBAU

Konnte keine Verbindung zum Everywhere Server by zenon aufgebaut werden, wird folgende Fehlermeldung angezeigt.

Looking up the server returned an
undefined state

4.5.1 Login dialog

Dialog for the entry of the login data on the server.



The screenshot shows a dialog box titled "User Credentials". It contains two input fields: "User" and "Password", both with placeholder text. Below the fields is a checkbox labeled "Save Credentials in Profile". At the bottom are two buttons: "Cancel" and "OK".

Parameters	Description
User	Input field for user name.
Password	Input field for password.
Save Credentials in Profile	<p>Checkbox to save the data entered.</p> <ul style="list-style-type: none"> ▶ If activated: Login data entered is saved in the profile. <p>If the checkbox is not activated, the login dialog is shown again the next time a connection is established.</p>
Cancel	<p>Annule toutes les modifications et ferme la boîte de dialogue.</p> <p>No connection is established.</p>
OK	Applique les paramètres et ferme la boîte de dialogue.

4.6 Ergebnisbildschirm

In diesem Bildschirm werden aktuelle Variablenwerte der produktiven Laufzeitumgebung visualisiert. Die Werte werden laufend aktualisiert.

Hinweis: Die Ausprägung der Anzeige ist abhängig von den Einstellung in den Profileinstellungen (à la page 27).

Parameter	Beschreibung
< Value of [Eingabequelle]	<p>Schaltet zurück zum Eingabefenster:</p> <ul style="list-style-type: none"> ▶ Scan-Bildschirm Eingabequelle = <i>Variablenname</i> ▶ Bildschirm für manuelle Eingabe Eingabequelle = <i>Anlagengruppe</i> <p>Dies ist abhängig davon, in welcher Ansicht die Profilübersicht aufgerufen wurde.</p>

BEISPIELE

← Value of '4264126f-e7a8-49e4-a7ea-37ae5d494edd'			
327.376 MW Energy06	612.176 MW Energy03	695.467 MW Energy04	922.444 MW Energy01
04/02/2016 10:09:00	04/02/2016 10:08:58	04/02/2016 10:09:00	04/02/2016 10:08:58
990.203 MW Energy05	424.942 MW Energy02		
04/02/2016 10:08:58	04/02/2016 10:09:00		

← Value of '297866ed-7e0e-4b63-9683-e8074ce83c10'			
160 BodyShop1.Sum	54 BodyShop1.Target	-0.773 BodyShop1.Delta	53.227 BodyShop1.Actual
11/01/2016 15:34:58 Online, Time invalid	22/01/2016 09:23:40 Online, Time invalid	22/01/2016 09:23:43 Switched off	22/01/2016 09:23:40 Online, Time invalid

← Value of 'Energy06'

202.32 MW

Energy06

Online, Time invalid

← Value of '4264126f-e7a8-49e4-a7ea-37ae5d494edd'

326.637 MW

Energy06

Online, Time invalid

574.979 MW

Energy03

Online, Time invalid

701.249 MW

Energy04

Online, Time invalid

849.834 MW

Energy01

Online, Time invalid

973.426 MW

Energy05

Online, Time invalid

447.106 MW

Energy02

Online, Time invalid

5 Everywhere App by zenon

Apps ermöglichen die Visualisierung eines zenon-Projekts auf mobilen Endgeräten, Tablets und Desktop-Geräten. Der Funktionsumfang ist dabei identisch. Die grafische Benutzeroberfläche variiert, abhängig vom eingesetzten Betriebssystem.

Die jeweiligen Apps führen Sie Schritt für Schritt durch Ihre Projektierung. Sie wählen jeweils die gewünschten Parameter und bekommen so die dazugehörigen Informationen. Die Navigation ist intuitiv und folgt einer chronologischen Reihenfolge.

6 Folgende Apps stehen zur Verfügung:

- ▶ Everywhere App by zenon für MS Windows Phone (à la page 37)
- ▶ Everywhere App by zenon für iPhone und iPad (à la page 57)
- ▶ Everywhere App for Desktop for Desktop (à la page 76)
- ▶ Everywhere App by zenon (à la page 86) für Android

6.1 Requirements

The Everywhere App by zenon visualizes the project configuration provided by Everywhere Server (à la page 97) on a smartphone, tablet or desktop computer.

SYSTEM REQUIREMENTS

- ▶ Windows Phone 7.5 or higher (Windows Phone 8 or higher recommended)
- ▶ iOS 6 or higher for Apple iPhone and iPad
- ▶ Windows 8 or higher for Everywhere App for Desktop
- ▶ Android 2.2.x - Froyo or higher

Informations

The Everywhere App by zenon user interface is only available in English.

6.2 Installation

Führen Sie folgende Schritte aus, um Everywhere App by zenon auf Ihrem Gerät nutzen zu können:

- ▶ Starten Sie den App-Store.
- ▶ Geben Sie als Suchbegriff *zenon* oder *Everywhere App* ein.
- ▶ Wählen Sie Everywhere App by zenon.

Conseil

Bei der Installation wird bereits ein Profil für ein Demo-Projekt mitinstalliert. So können Sie die Everywhere App by zenon auch dann testen, wenn Sie noch keine eigene Projektierung mit zenon vorgenommen haben.

6.2.1 Note for OEM user:

Informations

Wählen Sie immer Everywhere App by zenon!
Die App wird für verschiedene Produkte eingesetzt.

Die Everywhere App by zenon ist kompatibel mit allen OEM-Projektierungen.

Folgende Apps stehen zur Verfügung:

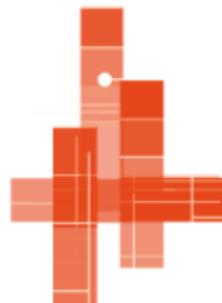


6.3 Everywhere App by zenon for MS Windows Phone

6.3.1 Anmeldung

Der Anmeldebildschirm ermöglicht die Anmeldung an einen Everywhere Server by zenon und die Auswahl von Benutzerprofilen.

Folgende Apps stehen zur Verfügung:



Everywhere

App by zenon

Profile

COPA-DATA demo server

User name

Manager

Password

••••••••



...

Parameter	Beschreibung
Profile	Name des gewählten Profils. ► Tap auf den Profilnamen öffnet den Dialog

Folgende Apps stehen zur Verfügung:



Parameter	Beschreibung
	<p>zur Auswahl eines bestehenden Profils.</p> <ul style="list-style-type: none">▶ Tap auf den Profilnamen öffnet auch den Dialog zur Neuanlage eines Profils.
User name	Benutzername für die Anmeldung am Everywhere Server.
Password	Passwort für die Anmeldung am Everywhere Server.

Hinweis: Achten Sie bei der Eingabe auf Groß-/Kleinschreibung!

APP-LEISTE

login (Symbol >)	Logs the app into Everywhere Server and switches to the next screen.
...	Erweitert die Darstellung der App-Leiste.

Folgende Apps stehen zur Verfügung:



6.3.2 Profile List

The profile overview lists existing profiles and administers these.



SELECT PROFILE

COPA-DATA demo server

Server: ATSZG-WKS062

Port: 8050

Project: DEMO_AUTOMOTIVE



Parameter	Description
<i>Profile List</i>	<p>Lists existing profiles.</p> <p>The profile that is currently selected is highlighted in color.</p> <p>Tapping on the desired profile activates the profile and switches to the login screen.</p>

APP BAR

Parameter	Description
edit (pencil symbol)	Tapping on the symbol switches to the symbol display from edit (pencil symbol) to add (+ symbol).
add (+ symbol)	Tapping on the symbol edit makes the add symbol available. Another tap opens the screen to configure a profile.
...	Erweitert die Darstellung der App-Leiste.

TO EDIT AN EXISTING PROFILE:

- ▶ Tap the **Edit-Symbol** in the app bar.
- ▶ Tap an existing profile from the list.

6.3.3 Edit Profile

In this screen, existing profiles can be changed and new profiles can be configured.

 9:54

 EDIT PROFILE

Profile name

COPA-DATA demo server

Server host name

ATSG-WKS062

Port HTTPS

8050

Project name

DEMO_AUTOMOTIVE

Display variables by

Name

Remember Password

On



...



Parameter	Description
Profile name	Name of the profile: Freely selectable
Server host name	Name of the Everywhere Server to which a connection is to be created.
Port HTTPS	Port address for the connection to the Everywhere Server. Par défaut : 8050
Project name	Project name for the connection to Everywhere Server.
Display variables by:	Display of the variables. Select from drop-down list: <ul style="list-style-type: none"> ▶ Name Variable display according to name ▶ Identification Variable display according to identification ▶ Res. Label Variable display according to resources label
Remember password: (Slider)	Save password for input. The setting is also shown as text: <ul style="list-style-type: none"> ▶ OFF: (slider left and bright) Password for login is not saved in the profile settings. ▶ ON: (slider left and dark) Password is saved in the profile settings. Par défaut : OFF

APP BAR

Parameter	Description
Save (Symbol)	Saves the current settings and returns to the profile overview.
Delete (Recycle Bin symbol)	Deletes the selected profile.
...	Erweitert die Darstellung der App-Leiste.

Folgende Apps stehen zur Verfügung:



Folgende Apps stehen zur Verfügung:



6.3.4 Anlagenmodell

This screen shows the configured equipment model.

CHOOSE VARIABLES

Home

models

Automotive



Folgende Apps stehen zur Verfügung:



Tap auf Anlagenmodellnamen schaltet zum nächsten Bildschirm mit der Auswahl der Anlagengruppen.

APP BAR

Symbol	Description
continue (<i>Symbol ></i>)	Logs the app into Everywhere Server and switches to the next screen.
logout (<i>X-Symbol</i>)	Ends connection to the server and returns to the login screen.
...	Erweitert die Darstellung der App-Leiste.

6.3.5 Anlagengruppen

In this screen, the configured equipment groups are listed and selected.

 CHOOSE VARIABLES

Automotive

groups

Body-Shop

Paint-Shop

Assembly-Shop

Alarm Messages



Folgende Apps stehen zur Verfügung:



Tap auf den Anlagenmodellnamen schaltet zum nächsten Bildschirm mit der Auswahl der zugeordneten Variablen.

APP BAR

Symbol	Description
continue (<i>Symbol ></i>)	Logs the app into Everywhere Server and switches to the next screen.
logout (<i>X-Symbol</i>)	Ends connection to the server and returns to the login screen.
...	Erweitert die Darstellung der App-Leiste.

6.3.6 Variables selection

In diesem Bildschirm werden projektierte Variablen aus der ausgewählten Anlagengruppe aufgelistet und ausgewählt.



Automotive→Body-Shop

variables group

BodyShopAll.Actual

BodyShopAll.Delta

BodyShopAll.Sum

BodyShopAll.Target

BodyShopDelta

LinValueTest

StringTest



...

Lists all available variables. Select the variables by tapping.

Note: All variables can be selected or deselected with the **Extended app bar**.

APP BAR

Symbol	Description
continue (Symbol >)	Logs the app into Everywhere Server and switches to the next screen.
logout (X-Symbol)	Ends connection to the server and returns to the login screen.
...	Erweitert die Darstellung der App-Leiste.

EXTENDED APP BAR

(only visible if the app bar has been extended by tapping on ...)

Button	Description
select all variables	Activates/deactivates all variables in the list.
clear variables	Shows new screen with detail view of the selected variable(s). <i>Inactive</i> if no variable is selected.

Folgende Apps stehen zur Verfügung:



6.3.7 Values view

This screen visualizes the values of the selected variables. There are two views available.



ONLINE VIEW

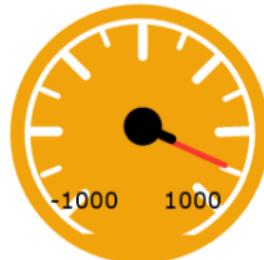
Automotive→Body-Shop

variables alarm

BodyShopAll.Actual

832.437

1/21/2014, 9:55:52 AM, 640ms
SPONT, T_STD



BodyShopAll.Delta

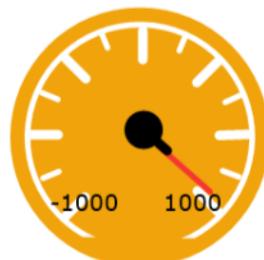
4.437



BodyShopAll.Sum

960

1/21/2014, 9:14:34 AM, 141ms
SPONT, T_STD



BodyShopAll.Target

828



...

VARIABLE LIST

Parameters	Description
<i>Variablenliste</i>	<p>List of selected variables: Tapping on the variable switches between "<i>normal view</i>" and "<i>detailed view</i>"</p> <ul style="list-style-type: none">▶ <i>Normal view:</i> Variable name Variable value (numerical) Variable value (bar display)▶ <i>Detail view:</i> Variable name Date and time of last update Communication type Data type of the variable value with pointer instrument display

6.3.8 Alarm List

Dieser Bildschirm visualisiert anstehende Alarne in einer Liste. Alarne können via Tap auf den Alarmeintrag quittiert werden.



Automotive→Alarm Messages

alarms variable

Not Aus Roboter RS02

Alarms_BodyShop[4]

Value: 1

Received: 1/21/2014, 9:57:13 AM, 50ms

Cleared: No

Acknowledged: No

Not Aus gedrückt

Alarms_PaintShop[4]

Value: 1

Received: 1/21/2014, 9:57:11 AM, 299ms

Cleared: No

Acknowledged: No

Sammelalarm Linie 1

Alarms_PaintShop[1]

Value: 1

Received: 1/21/2014, 9:57:00 AM, 801ms

Cleared: No

...

ALARMS

Parameters	Description
<i>Liste mit Alarmeinträgen</i>	<p>List of active alarms:</p> <ul style="list-style-type: none">▶ Variable nameValueDate and time of the alarmAcknowledged alarm: Yes/NoCleared alarm: Yes/No <p>Tapping on an alarm entry acknowledges that entry.</p>

APP BAR

...	Erweitert die Darstellung der App-Leiste.
-----	--

6.3.9 Acknowledge alarms

An alarm can be acknowledged by tapping on the list entry.



Received: 1/21/2014, 9:57:00 AM, 801ms

Cleared: No

Acknowledged: No

Störung Sicherheitssystem Linie 2

Alarms_AssemblyShop[2]

Value: 1

Received: 1/21/2014, 9:56:57 AM, 301ms

Cleared: No

Acknowledged: No

Störung Schrauber SC01

Alarms_AssemblyShop[3]

Value: 1

Received: 1/21/2014, 9:56:39 AM, 801ms

Cleared: No

Acknowledged: No

...

Folgende Apps stehen zur Verfügung:



ACKNOWLEDGING AN ALARM WITH EVERYWHERE APP:

1. Tap on the alarm entry in the alarm screen.
2. A dialog is opened.
3. Tap **Yes** if you want to acknowledge the alarm.
4. **No** closes the acknowledgment dialog

After acknowledgment, the entry for the alarm (*Acknowledged:*) shows the date and time of acknowledgment.

Folgende Apps stehen zur Verfügung:



6.4 Everywhere App by zenon for iPhone and iPad

6.4.1 Authentication

Der Anmeldebildschirm ermöglicht die Anmeldung an einen Everywhere Server by zenon und die Auswahl von Benutzerprofilen.

Carrier



5:42 PM



ATSZG-WKS062.copa-da... A text input field containing a placeholder and a right-pointing arrow button.

Manager

••••••• A horizontal ellipsis followed by a right-pointing arrow button.

Login

A green rectangular button with a white keyhole icon and the word "Login".

Folgende Apps stehen zur Verfügung:



Parameters	Description
Profilname	Name of the selected profile.
(arrow symbol)	Opens the <i>profile</i> overview screen.
Username	User name for login at the Everywhere Server.
Passwort	Password for login at the Everywhere Server.
Login (button)	Logs the app into Everywhere Server and switches to the next screen.

Hinweis: Achten Sie bei der Eingabe auf Groß-/Kleinschreibung!

Folgende Apps stehen zur Verfügung:



6.4.2 Profilübersicht

The profile overview lists existing profiles and administers these.

A screenshot of a smartphone displaying the 'Profiles' screen. The top status bar shows 'Carrier' with signal strength, '5:45 PM', and battery level. Below the status bar, there's a back button with a left arrow, the title 'Profiles' in bold, and a plus sign for creating new profiles. A list of profiles is shown, with the first item being 'ATSZG-WKS062.copa-data...' followed by a red minus sign icon, and 'ATSZG-WKS062.copa-data.internal:8050...' followed by a grey right arrow icon. The rest of the screen is filled with several empty horizontal lines, likely representing scrollable content.

Parameter	Beschreibung
< Back	Schaltet zurück zum Anmeldebildschirm

Parameter	Beschreibung
Edit	<p>Schaltet die Liste der vorhandenen Profile in den Bearbeitungsmodus</p> <p>Hinweis: wurde die Schaltfläche Edit geklickt wird diese als + Symbol dargestellt.</p> <p>In der Liste der konfigurierten Profile wird ein weißes - in einem roten Kreis vorangestellt.</p> <p>(Durch Klick auf einen Profilnamen öffnet sich der Bildschirm zum Bearbeiten der Profile.)</p>
> (Symbol)	Öffnet den Bildschirm zum Bearbeiten der Profile.
Profilname	Liste der bereits konfigurierten Profile

NEUES PROFIL ANLEGEN

- ▶ Zum Neuanlegen eines Profils drücken sie die Schaltfläche +

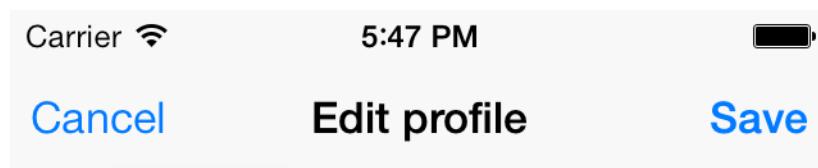
BEARBEITUNG EINES PROFILS

Um in den Bearbeitungsmodus eines Profils zu wechseln:

- ▶ Tappen Sie auf das Symbol >, rechts neben dem Profilnamen.

6.4.3 Edit Profile

In this screen, existing profiles can be changed and new profiles can be configured.



Profile name

ATSZG-WKS062.copa-data.internal

Server

ATSZG-WKS062.copa-data.internal

HTTPS Port

8050

Project

DEMO_AUTOMOTIVE

Display variables by:

Name Identification Res. label

Remember password:



Parameter	Description
Cancel	Cancels input and returns to the profile overview.

Parameter	Description
Save	Saves the input and returns to the profile overview.
Profile name	Name of the profile: Freely selectable
Server	Name of the Everywhere Server to which a connection is to be created.
HTTPS Port	Port address for the connection to the Everywhere Server. Par défaut : 8050
Project	Project name for the connection to Everywhere Server.
Display variables by: <i>(Toolbar)</i>	Display of the variables. Select from drop-down list: <ul style="list-style-type: none"> ▶ Name Variable display according to name ▶ Identification Variable display according to identification ▶ Res. Label Variable display according to resources label
Remember password: <i>(Slider)</i>	Save password for input: <ul style="list-style-type: none"> ▶ <i>OFF</i>: (slider left and bright) Password for login is not saved in the profile settings ▶ <i>On</i>: (slider right and dark) Password is saved in the profile settings Par défaut : <i>OFF</i>

Folgende Apps stehen zur Verfügung:



6.4.4 Anlagenmodell

This screen shows the configured equipment model.

A screenshot of a smartphone displaying the 'Anlagenmodell' application. The top status bar shows 'Carrier' with signal strength, '5:43 PM', and battery level. Below the status bar, there are two buttons: 'choose variables' in black and 'Logout' in blue. A dark grey navigation bar contains the word 'Home'. The main content area has a title 'Automotive' followed by a right-pointing arrow. Below this, there are several horizontal lines, likely representing data rows or sections of the equipment model. At the bottom, there is a table with two columns: 'Parameter' and 'Beschreibung'.

Parameter	Beschreibung
Logout	Ends connection to the server and returns to the

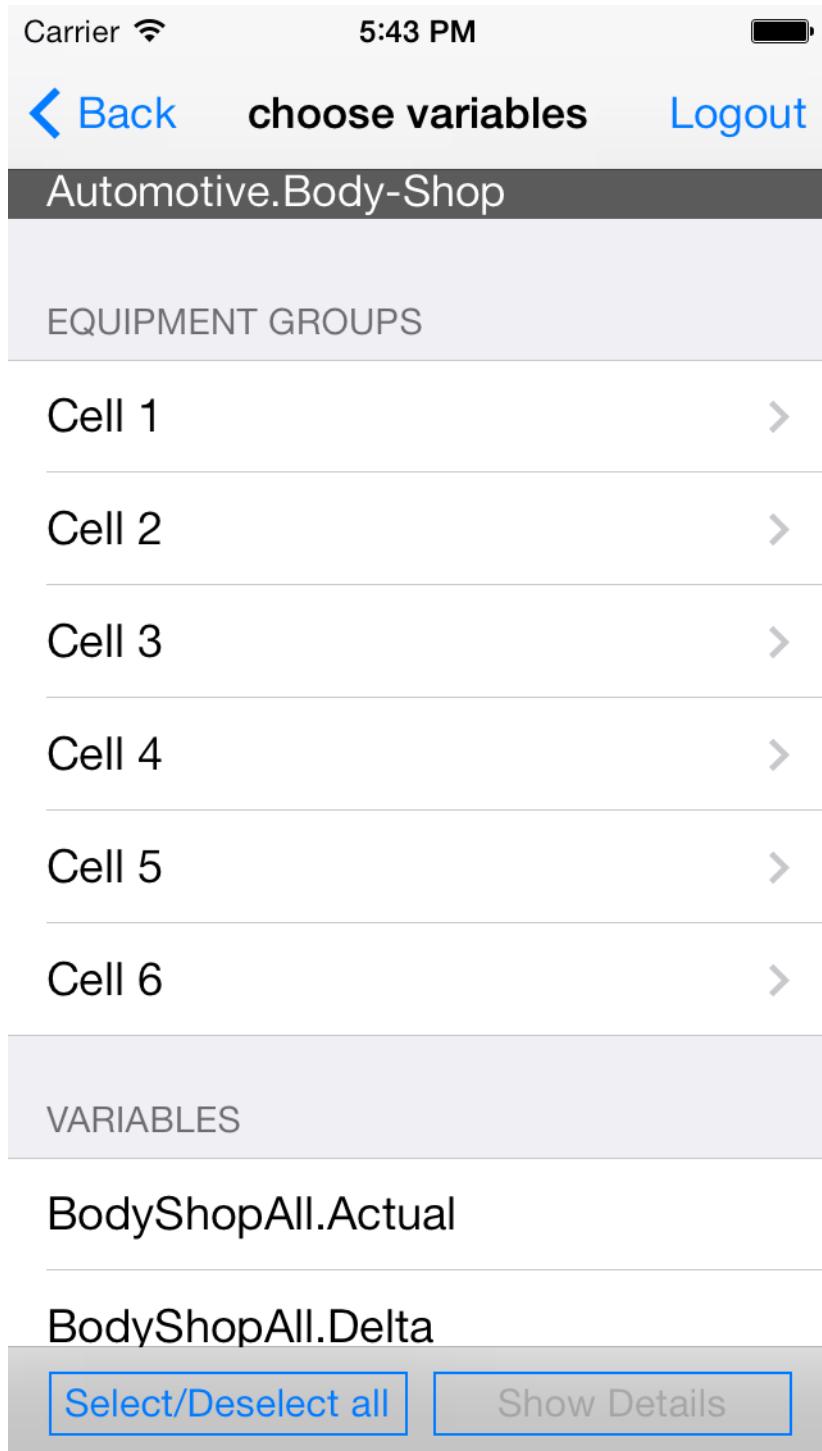
Folgende Apps stehen zur Verfügung:



Parameter	Beschreibung
	login screen.
<i>Projektname</i>	Liste der verfügbaren Projekte am Everywhere Server
> (Symbol)	Öffnet den Bildschirm zur Auswahl des Anlagenmodells.

6.4.5 Equipment groups and variables

This screen lists available equipment groups of the selected equipment model as well as the attendant variables.



The screenshot shows a mobile application interface for managing equipment variables. At the top, there is a header bar with the text "Carrier" and a signal icon, "5:43 PM", and a battery icon. Below the header, there are three buttons: "Back" with a left arrow icon, "choose variables" in bold black text, and "Logout" with a blue link icon. A dark grey navigation bar below the header contains the text "Automotive.Body-Shop". The main content area has a light grey background. It starts with a section titled "EQUIPMENT GROUPS" in bold black text. Below this, there is a list of six items, each consisting of a label followed by a right-pointing arrow: "Cell 1", "Cell 2", "Cell 3", "Cell 4", "Cell 5", and "Cell 6". After this list, there is another section titled "VARIABLES" in bold black text. Below "VARIABLES", there is a single item labeled "BodyShopAll.Actual". At the bottom of the screen, there is a grey footer bar containing two buttons: "Select/Deselect all" and "Show Details".

Carrier 5:43 PM

Back choose variables Logout

Automotive.Body-Shop

EQUIPMENT GROUPS

Cell 1 >

Cell 2 >

Cell 3 >

Cell 4 >

Cell 5 >

Cell 6 >

VARIABLES

BodyShopAll.Actual

Select/Deselect all Show Details

HEADER

Parameters	Description
Back	Returns to previous screen. Note: Swipe to the right also returns to the previous screen.
Logout	Ends connection to the server and returns to the login screen.

EQUIPMENT GROUPS

Parameters	Description
List of equipment groups	
> (Symbol)	

VARIABLES

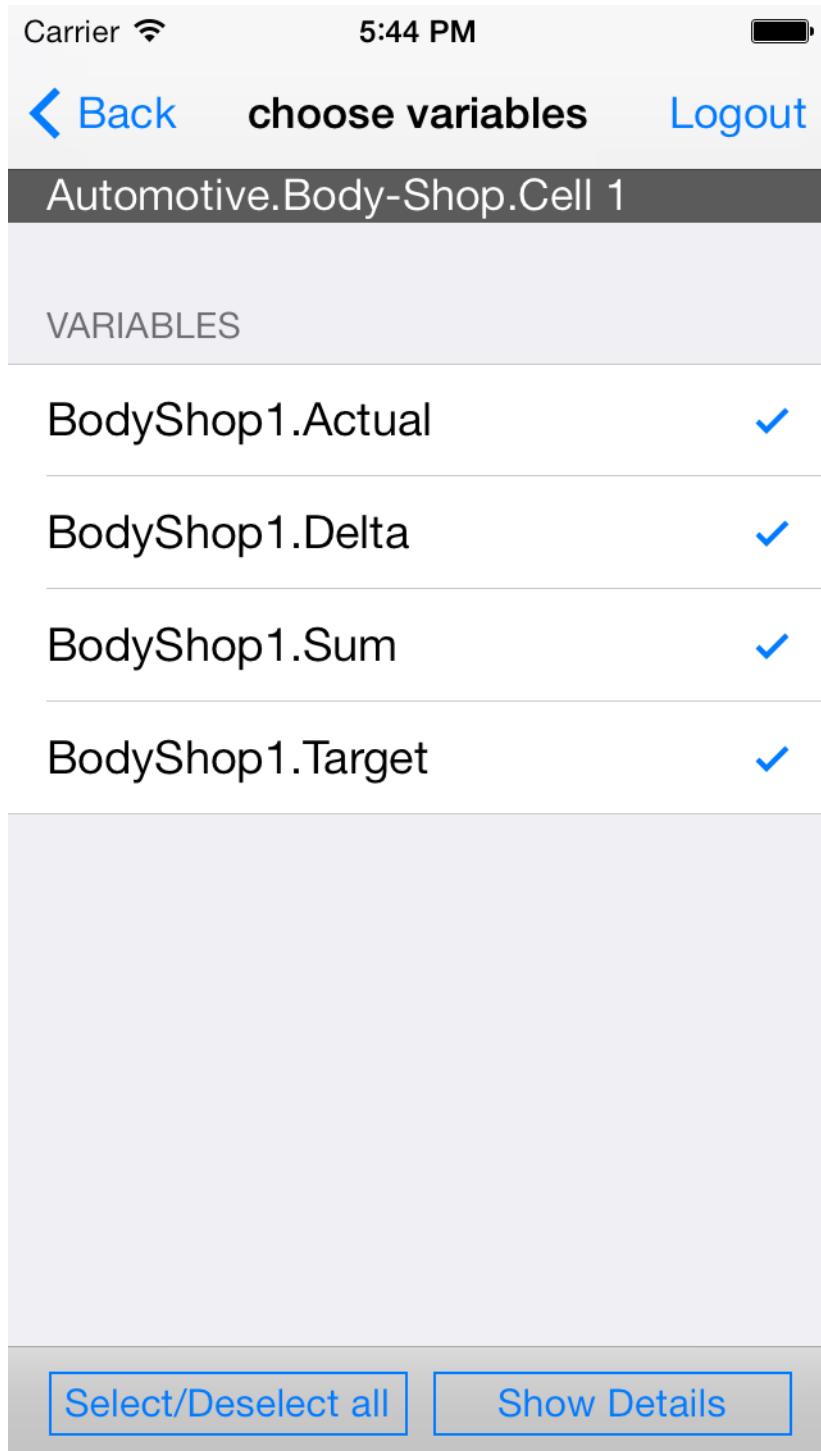
Parameter	Description
<i>Variable list</i>	List of the available variables. Selection/deselection by simply tapping. Selected variables are indicated by a blue tick .

FOOTER

Parameter	Description
Select/Deselect all	Activates/deactivates all variables in the list.
Show Details	Shows new screen with detail view of the selected variable(s). <i>Inactive</i> if no variable is selected.

6.4.6 Variablenauswahl

In diesem Bildschirm werden projektierte Variablen aus der ausgewählten Anlagengruppe aufgelistet und ausgewählt.



The screenshot shows a mobile application interface titled "choose variables". At the top, there are status icons for "Carrier" and "5:44 PM", and a battery icon. Below the title, there are navigation links: "Back" with a left arrow, "choose variables" in bold, and "Logout" with a right arrow. The main title "Automotive.Body-Shop.Cell 1" is displayed in a dark bar. The word "VARIABLES" is centered above a list of four items. Each item consists of a variable name followed by a checked checkbox icon. At the bottom, there are two buttons: "Select/Deselect all" and "Show Details".

VARIABLE	Selected
BodyShop1.Actual	✓
BodyShop1.Delta	✓
BodyShop1.Sum	✓
BodyShop1.Target	✓

Select/Deselect all Show Details

HEADER

Parameters	Description
Back	Returns to previous screen. Note: Swipe to the right also returns to the previous screen.
Logout	Ends connection to the server and returns to the login screen.

VARIABLES

Parameter	Description
<i>Variable list</i>	List of the available variables. Selection/deselection by simply tapping. Selected variables are indicated by a blue tick .

FOOTER

Parameter	Description
Select/Deselect all	Activates/deactivates all variables in the list.
Show Details	Shows new screen with detail view of the selected variable(s). <i>Inactive</i> if no variable is selected.

6.4.7 Values view

This screen visualizes the values of the selected variables. There are two views available.

Carrier  5:44 PM 

[!\[\]\(67ccd413cef3001d93f18e58e941d30c_img.jpg\) Back](#) [online view](#) [Logout](#)

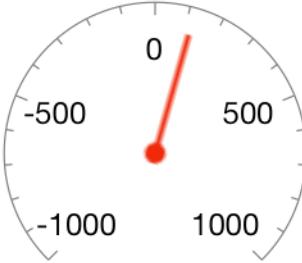
Automotive.Body-Shop.Cell 1

BodyShop1.Actual

117.3065

20.01.2014, 17:43:12, 382

SPONT, T_STD



BodyShop1.Delta

-0.762

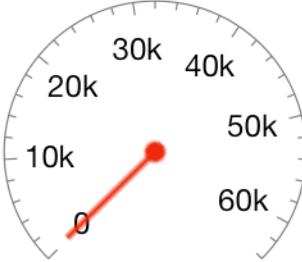


BodyShop1.Sum

160

20.01.2014, 12:23:54, 603

SPONT, T_INTERN, T_STD



BodyShop1.Target

118



HEADER

Parameters	Description
Back	Returns to previous screen. Note: Swipe to the right also returns to the previous screen.
Logout	Ends connection to the server and returns to the login screen.

VARIABLE OVERVIEW

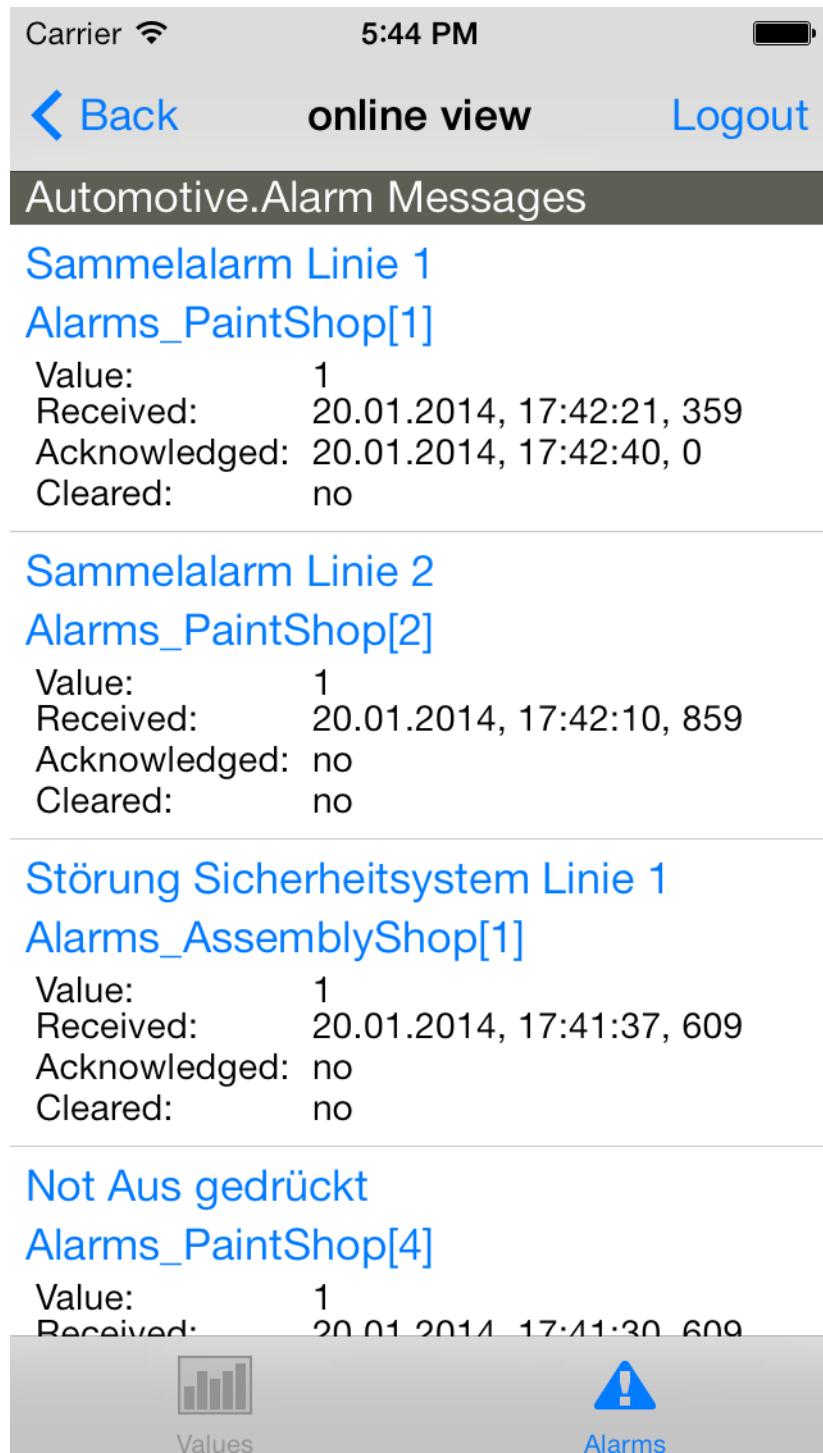
Parameters	Description
<i>Variable list</i>	List of selected variables: <ul style="list-style-type: none"> ▶ <i>Normal view:</i> Variable name Variable value (numerical) Variable value (bar display) ▶ <i>Detail view:</i> Variable name Date and time of last update Communication type Data type of the variable value with pointer instrument display

FOOTER

Parameters	Description
Values (Symbol)	Switches to display of values of the variables. Blue background if active.
Alarms (Symbol)	Switches to display of alarms. Blue background if active.

6.4.8 Alarm List

Dieser Bildschirm visualisiert anstehende Alarne in einer Liste. Alarne können via Tap auf den Alarmeintrag quittiert werden.



Carrier  5:44 PM 

[!\[\]\(9e80670eb21a940c7a09c9cdfd15c5b0_img.jpg\) Back](#) [online view](#) [Logout](#)

Automotive.Alarm Messages

Sammelalarm Linie 1
[Alarms_PaintShop\[1\]](#)

Value: 1
Received: 20.01.2014, 17:42:21, 359
Acknowledged: 20.01.2014, 17:42:40, 0
Cleared: no

Sammelalarm Linie 2
[Alarms_PaintShop\[2\]](#)

Value: 1
Received: 20.01.2014, 17:42:10, 859
Acknowledged: no
Cleared: no

Störung Sicherheitssystem Linie 1
[Alarms_AssemblyShop\[1\]](#)

Value: 1
Received: 20.01.2014, 17:41:37, 609
Acknowledged: no
Cleared: no

Not Aus gedrückt
[Alarms_PaintShop\[4\]](#)

Value: 1
Received: 20.01.2014, 17:41:30, 600

 Values  Alarms

ALARMS

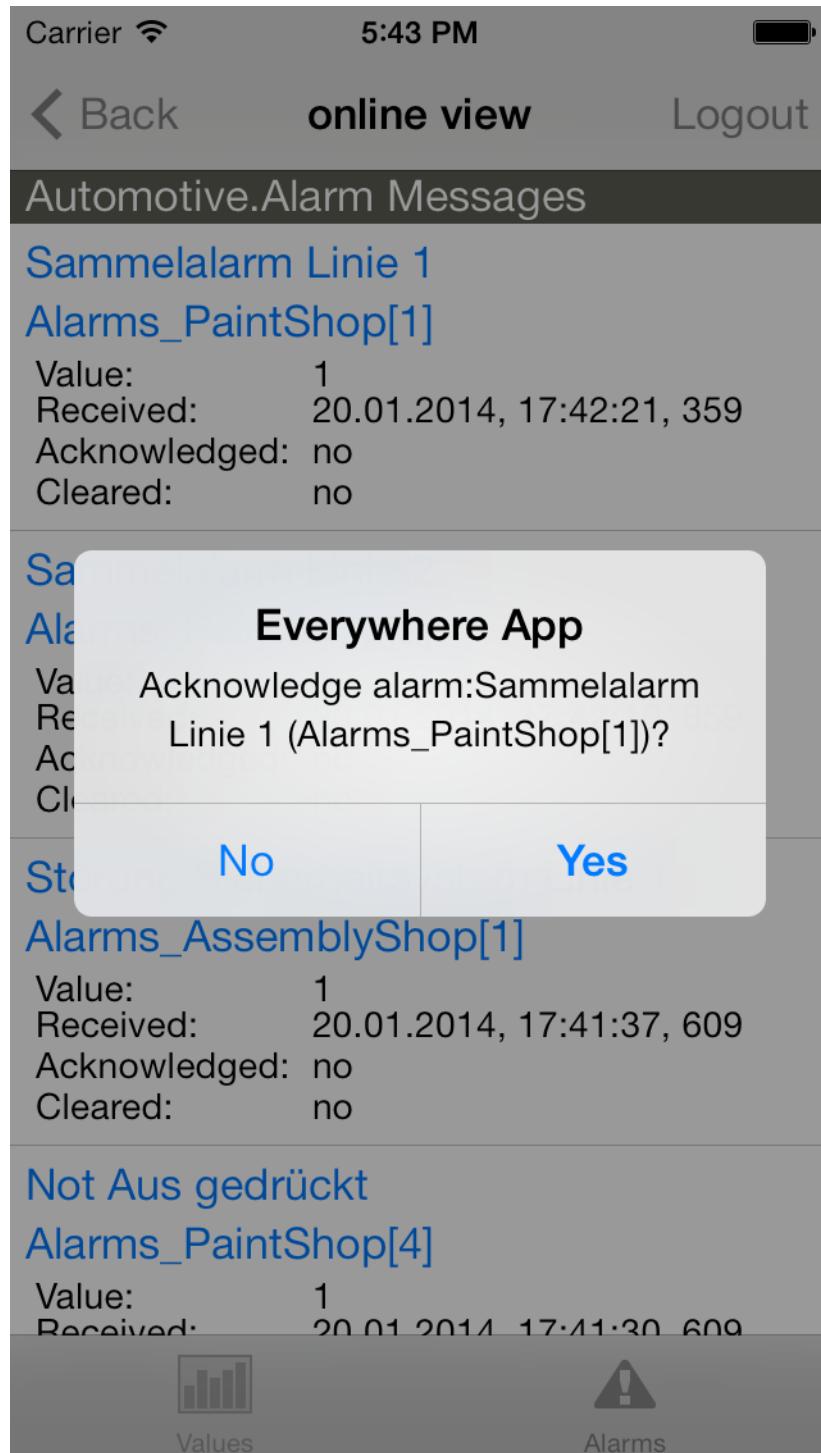
Parameters	Description
<i>List with alarm entries</i>	<p>List of active alarms:</p> <ul style="list-style-type: none"> ▶ Variable name Value Date and time of the alarm Acknowledged alarm: Yes/No Cleared alarm: Yes/No <p>Tapping on an alarm entry acknowledges that entry.</p>

FOOTER

Parameters	Description
Values (Symbol)	Switches to display of values of the variables. Blue background if active.
Alarms (Symbol)	Switches to display of alarms. Blue background if active.

6.4.9 Acknowledge alarms

An alarm can be acknowledged by tapping on the list entry.



The screenshot shows a mobile application interface for managing alarm messages. At the top, there is a header bar with 'Carrier' and signal strength, the time '5:43 PM', and a battery icon. Below the header, there are navigation buttons: a back arrow labeled 'Back', the text 'online view' in bold, and 'Logout'. The main content area has a dark header bar with the text 'Automotive.Alarm Messages'. Below this, there is a list of alarm entries. The first entry is 'Sammelalarm Linie 1' under 'Alarms_PaintShop[1]'. It displays the following details:

- Value: 1
- Received: 20.01.2014, 17:42:21, 359
- Acknowledged: no
- Cleared: no

A modal dialog box is overlaid on the screen, centered over the first alarm entry. The dialog has a light gray background and contains the text 'Everywhere App' at the top. Below it, a question is displayed: 'Acknowledge alarm:Sammelalarm Linie 1 (Alarms_PaintShop[1])?'. At the bottom of the dialog are two buttons: 'No' on the left and 'Yes' on the right. The rest of the list continues with another entry for 'Alarms_AssemblyShop[1]' and a third entry for 'Not Aus gedrückt' under 'Alarms_PaintShop[4]'. At the bottom of the screen, there are two icons: a bar chart labeled 'Values' and an exclamation mark inside a triangle labeled 'Alarms'.

Folgende Apps stehen zur Verfügung:



ACKNOWLEDGE AN ALARM WITH EVERYWHERE APP:

1. Tap on the alarm entry in the alarm screen.
2. A dialog is opened.
3. Tap **Yes** if you want to acknowledge the alarm.
4. **No** closes the acknowledgment dialog

After acknowledgment, the entry for the alarm (*Acknowledged*) shows the date and time of acknowledgment.

Carrier  5:44 PM 

[!\[\]\(8f743fc354aa1804a3928e439874b189_img.jpg\) Back](#) [online view](#) [Logout](#)

Automotive.Alarm Messages

[Sammelalarm Linie 1](#)
[Alarms_PaintShop\[1\]](#)

Value: 1
Received: 20.01.2014, 17:42:21, 359
Acknowledged: 20.01.2014, 17:42:40, 0
Cleared: no

[Sammelalarm Linie 2](#)
[Alarms_PaintShop\[2\]](#)

Value: 1
Received: 20.01.2014, 17:42:10, 859
Acknowledged: no
Cleared: no

[Störung Sicherheitssystem Linie 1](#)
[Alarms_AssemblyShop\[1\]](#)

Value: 1
Received: 20.01.2014, 17:41:37, 609
Acknowledged: no
Cleared: no

[Not Aus gedrückt](#)
[Alarms_PaintShop\[4\]](#)

Value: 1
Received: 20.01.2014, 17:41:30, 609

 Values  Alarms

6.5 Everywhere App for Desktop

6.5.1 Authentication

Der Anmeldebildschirm ermöglicht die Anmeldung an einen Everywhere Server by zenon und die Auswahl von Benutzerprofilen.



Parameters	Description
Profile	Name of the selected profile. ▶ Tapping or left-clicking opens the drop-down list to select an existing profile.
User name	User name for login at the Everywhere Server.
Password	Password for login at the Everywhere Server.
login (Symbol)	Logs the app into Everywhere Server and switches to the next screen.

Hinweis: Achten Sie bei der Eingabe auf Groß-/Kleinschreibung!

APP BAR

Parameters	Description
edit (pencil symbol)	Tapping or left-clicking opens the screen to configure a profile.

6.5.2 Profile List

The profile overview lists existing profiles and administers these.



NAVIGATION

<- (Symbol)	Switches to the previous screen.
--------------------------	----------------------------------

Parameters	Description
<i>Profile List</i>	<p>Lists existing profiles.</p> <ul style="list-style-type: none"> ▶ The profile that is currently selected is accentuated graphically. ▶ Tapping or left-clicking on the desired profile selects the profile.

Parameters	Description
	<ul style="list-style-type: none"> ▶ Tap or click the edit symbol to edit the selected profile.

APP BAR

Parameter	Description
Edit (pencil symbol)	Switches the selected profile to editing mode.
Add (+ symbol)	Creates a new profile.
Delete (Recycle Bin symbol)	Deletes the selected profile.
Save (Disk symbol)	Saves changes to the selected profile. Note: <i>Inactive</i> if no profile is being edited.
Reset (X-Symbol)	Discards all inputs. Note: <i>Inactive</i> if no profile is being edited.

TO EDIT AN EXISTING PROFILE:

- ▶ Tap or click on an existing profile from the list.
- ▶ Tap or click on the edit symbol in the app bar.

6.5.3 Edit Profile

In this screen, existing profiles can be changed and new profiles can be configured.

 Edit profile

Profile name	franz
ATSGS-WD0070	
DemoServer	

Profile name	
Server host name	
Port HTTPS name	
Project name	
Display variables by	

Remember Password

NAVIGATION

 (Symbol)	Switches to the previous screen.
--	----------------------------------

Parameter	Description
Profile name	Name of the profile: Freely selectable
Server host name	Name or IP address of the Everywhere Server to which a connection is to be created.
Port HTTPS	Port address for the connection to the Everywhere Server. Par défaut : 8050
Project name	Project name for the connection to Everywhere Server.
Display variables by: <i>(Drop-down list)</i>	Display of the variables. Select from drop-down list:

Parameter	Description
	<ul style="list-style-type: none"> ▶ Name Variable display according to name ▶ Identification Variable display according to identification ▶ Res. Label Variable display according to resources label
Remember password: <i>(Slider)</i>	Save password for input. The setting is also shown as text: <ul style="list-style-type: none"> ▶ OFF: (slider left and bright) Password for login is not saved in the profile settings ▶ ON: (slider right and dark) Password is saved in the profile settings Par défaut : <i>OFF</i>

APP BAR

Parameter	Description
Edit <i>(pencil symbol)</i>	Switches the selected profile to editing mode.
Add <i>(+ symbol)</i>	Creates a new profile.
Delete <i>(Recycle Bin symbol)</i>	Deletes the selected profile.
Save <i>(Disk symbol)</i>	Saves changes to the selected profile.
Reset <i>(X-Symbol)</i>	Discards all inputs.

6.5.4 Equipment model and equipment groups

This screen shows the configured equipment model. Once an equipment model has been selected, the attendant equipment groups are displayed.

Folgende Apps stehen zur Verfügung:



The attendant hierarchy is displayed by selecting an equipment group.
If a selected group contains variables, the view switches to the variable overview screen.

The screenshot shows a software interface with a navigation bar at the top. Below the navigation bar, there are three dropdown menus. The first dropdown is labeled "Automotive" and has a blue outline. The second dropdown is labeled "Body-Shop" and has a blue outline. The third dropdown is labeled "Paint-Shop" and has a blue outline, indicating it is the active selection. To the right of these dropdowns is a vertical list of items: "Station 1", "Station 2", "Station 3", "Station 4", "Station 5", and "Station 6". At the bottom of the interface is a dark grey footer bar with a circular icon containing a small symbol.

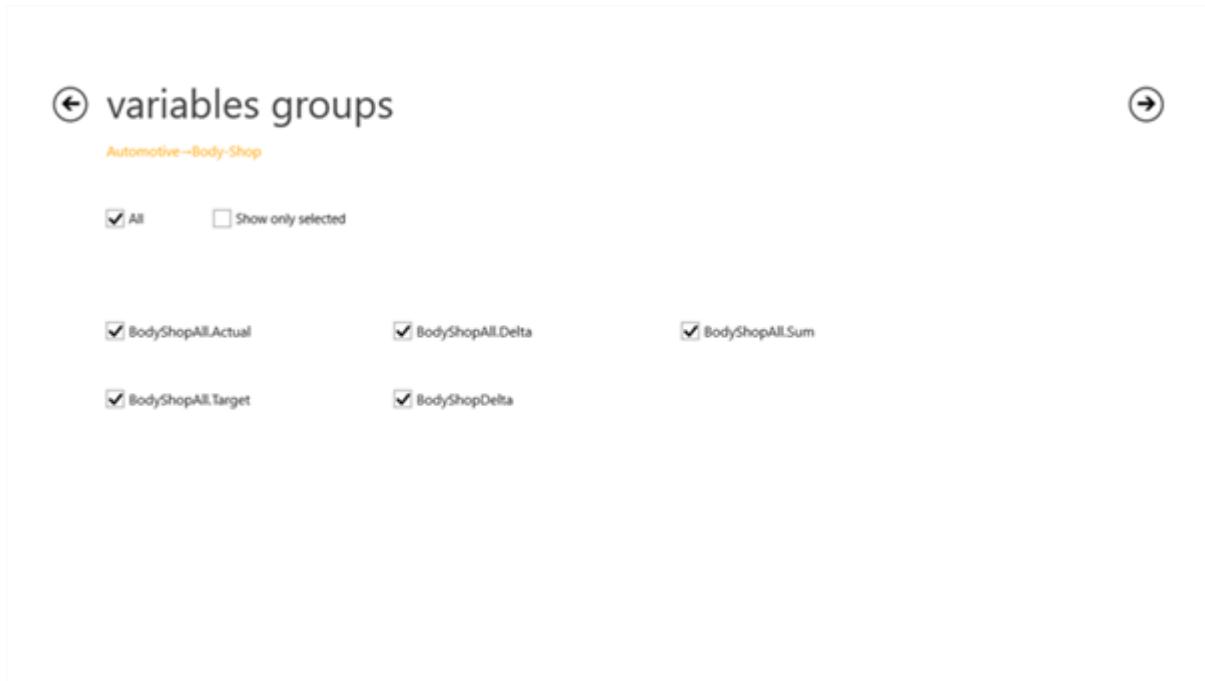
APP-LEISTE

Logout
(geöffnetes Schloss Symbol)

Ends connection to the server and returns to the login screen.

6.5.5 Variable selection

In diesem Bildschirm werden projektierte Variablen aus der ausgewählten Anlagengruppe aufgelistet und ausgewählt.



The screenshot shows a list of variables under the heading 'variables groups'. The path 'Automotive--Body-Shop' is selected. There are two checkboxes at the top: 'All' (checked) and 'Show only selected' (unchecked). Below these are five variables, each with a checked checkbox: 'BodyShopAll.Actual', 'BodyShopAll.Delta', 'BodyShopAll.Sum', 'BodyShopAll.Target', and 'BodyShopDelta'.

Select the variables by tapping or left-clicking.

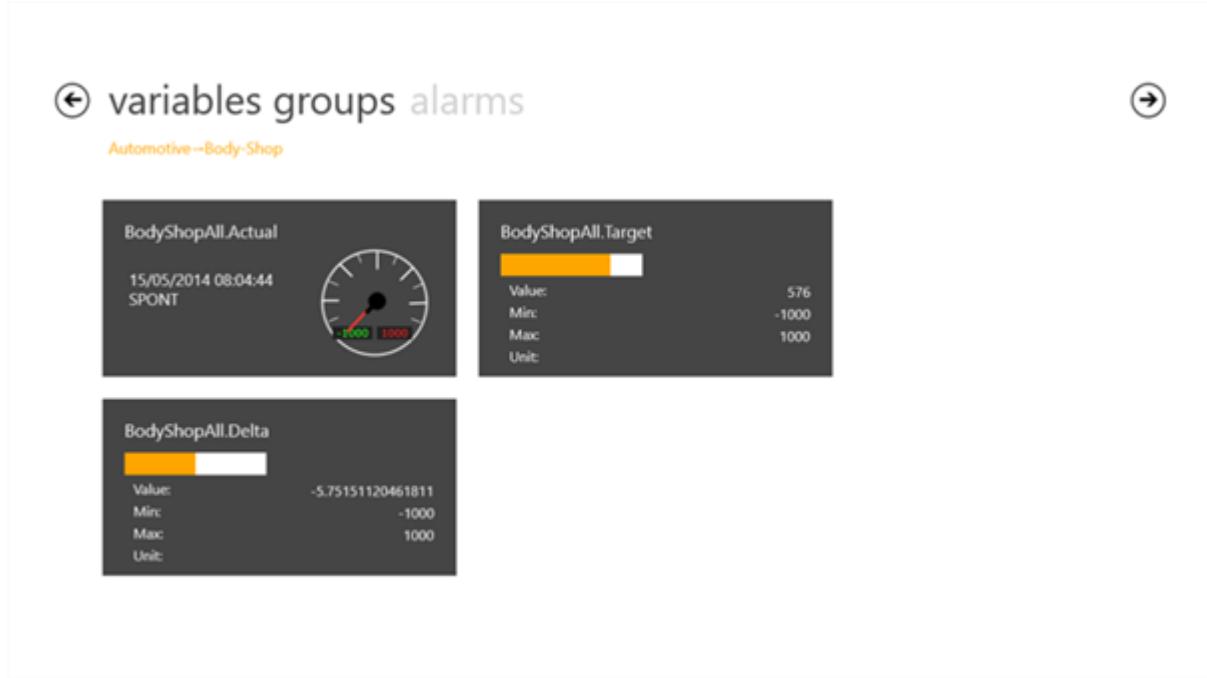
<- (Symbol)	Switches to the previous screen.
-> (Symbol)	Switches to the next screen.
All	Activates/deactivates all variables.
Show only selected	Only the selected variables are displayed in the screen of the variable view. <i>Inactive</i> if there is not at least one variables selected.

APP-LEISTE

Logout (geöffnetes Schloss Symbol)	Ends connection to the server and returns to the login screen.
---	---

6.5.6 Values view

This screen visualizes the values of the selected variables. There are two views available.



Select the variables by left-clicking or tapping.

<- (Symbol)	Switches to the previous screen.
-> (Symbol)	Switches to the next screen.

VARIABLE LIST

Parameters	Description
<i>Variable display</i>	<p>Tapping or left-clicking on the variable switches between "normal view" and "detailed view"</p> <ul style="list-style-type: none"> ▶ <i>Normalansicht:</i> Variablenname Variablenwert (numerisch) Variablenwert (Balkenanzeige) Min, max und Unit ▶ <i>Detailansicht:</i> Variablenname Datum und Uhrzeit der letzten

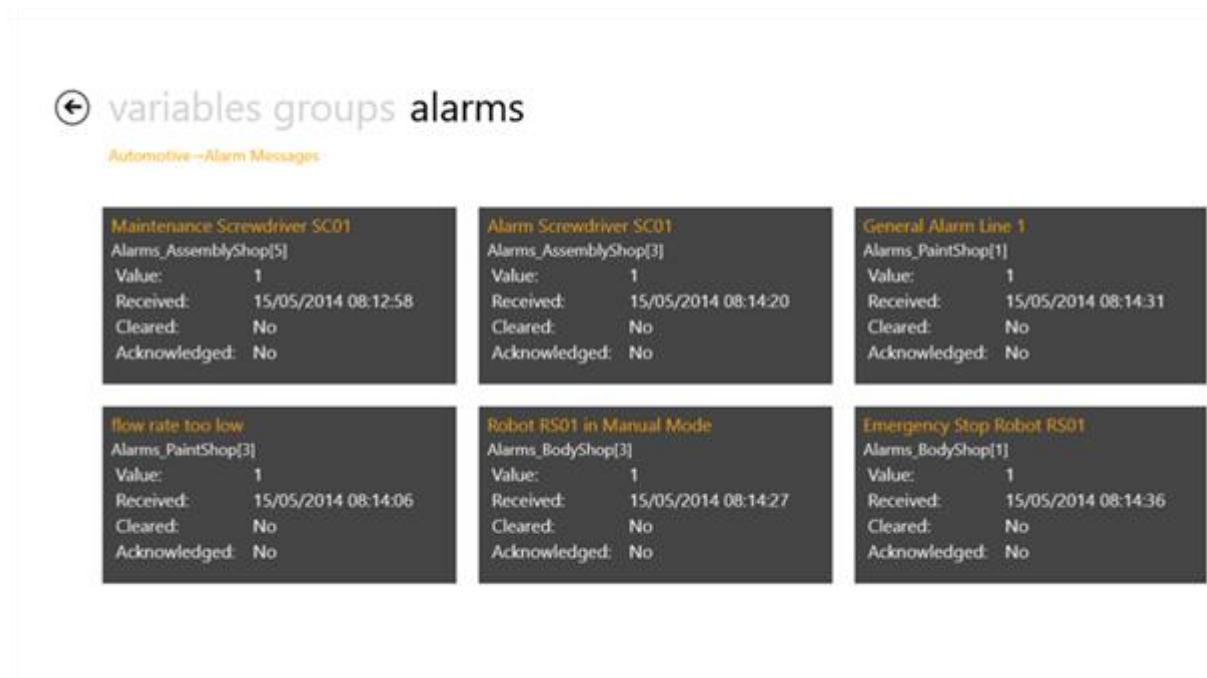
Parameters	Description
	Aktualisierung
	Kommunikationsart
	Datentyp der Variable
	Wert in numerischer Darstellung
	Wert mit Zeigerinstrumentdarstellung

APP-LEISTE

Logout <i>(geöffnetes Schloss Symbol)</i>	Ends connection to the server and returns to the login screen.
---	---

6.5.7 Alarm List

Dieser Bildschirm visualisiert anstehende Alarne in einer Liste. Alarne können via Tap auf den Alarmeintrag quittiert werden.



The screenshot shows a list of five alarms:

- Maintenance Screwdriver SC01**
Alarms_AssemblyShop[5]
Value: 1
Received: 15/05/2014 08:12:58
Cleared: No
Acknowledged: No
- Alarm Screwdriver SC01**
Alarms_AssemblyShop[3]
Value: 1
Received: 15/05/2014 08:14:20
Cleared: No
Acknowledged: No
- General Alarm Line 1**
Alarms_PaintShop[1]
Value: 1
Received: 15/05/2014 08:14:31
Cleared: No
Acknowledged: No
- flow rate too low**
Alarms_PaintShop[3]
Value: 1
Received: 15/05/2014 08:14:06
Cleared: No
Acknowledged: No
- Robot RS01 in Manual Mode**
Alarms_BodyShop[3]
Value: 1
Received: 15/05/2014 08:14:27
Cleared: No
Acknowledged: No
- Emergency Stop Robot RS01**
Alarms_BodyShop[1]
Value: 1
Received: 15/05/2014 08:14:36
Cleared: No
Acknowledged: No

Select the alarms by tapping or left-clicking.

<- <i>(Symbol)</i>	Switches to the previous screen.
---------------------------------	----------------------------------

ALARMS

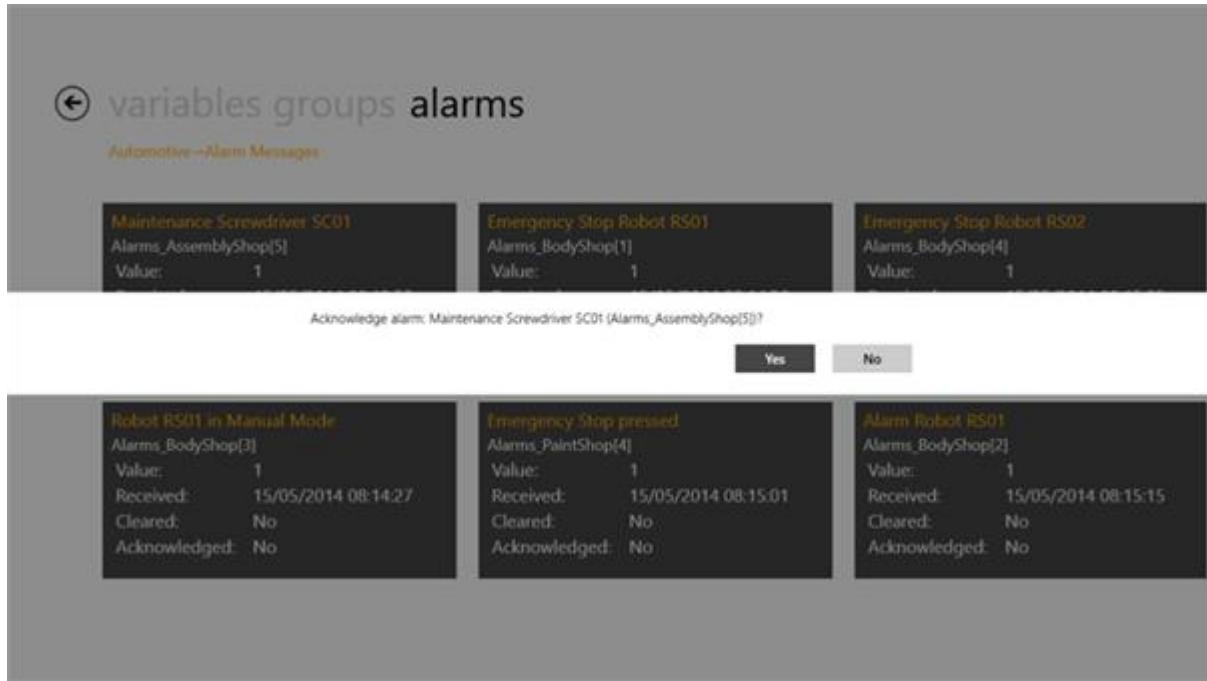
Parameters	Description
<i>List with alarm entries</i>	<p>List of active alarms:</p> <ul style="list-style-type: none">▶ Variable nameValueDate and time of the alarmAcknowledged alarm: Yes/NoCleared alarm: Yes/No <p>This alarm can be acknowledged by tapping or left-clicking.</p>

APP-LEISTE

Logout <i>(geöffnetes Schloss Symbol)</i>	Ends connection to the server and returns to the login screen.
---	--

6.5.8 Acknowledge alarms

An alarm can be acknowledged by tapping on the list entry.



ACKNOWLEDGING AN ALARM WITH EVERYWHERE APP FOR DESKTOP:

1. Tap or click on the alarm entry in the alarm screen.
2. A dialog is opened.
3. Tap or click **Yes** if you want to acknowledge the alarm.
4. **No** closes the acknowledgment dialog

After acknowledgment, the entry for the alarm (*Acknowledged:*) shows the date and time of acknowledgment.

6.6 Everywhere App by zenon für Android

6.6.1 Self-signed certificates

Self-signed certificates can be used from Android version 4.4. Only official certificates can be used for versions before this. Version 4.03 or higher must be used for the use of certificates.

For each profile, a certificate installed on the device can be selected and linked. This certificate is used when establishing a connection. In this case, the **Everywhere TrustManager** replaces the **Android TrustManager** for precisely this profile and only this application. This does not influence the security of other apps and also does not replace the standard **Android TrustManager**.

USE SELF-SIGNED CERTIFICATE

To use a self-signed certificate:

1. Ensure that the desired certificate has been installed on the device. You can find information on the creation and distribution of self-signed certificates in the **Everywhere Server by zenon** (à la page 97) manual, **Everywhere - Certificate creator** (à la page 103) chapter.

2. Open the profile settings (à la page 90).

3. Click on the **Browse** button.

The file manager to select a certificate file is opened.

4. Navigate to the desired certificate.

Note: All data types are displayed. However, only **CER**-coded certificate files (*.cer or *.crt) are accepted.

5. Select the certificate

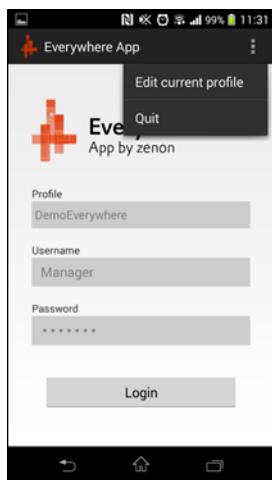
If a file is not accepted, the user is informed accordingly.

If a correct certificate has been detected, it is accepted and the selection dialog is closed.

The installed certificate is shown in the profile.

6.6.2 Authentication

Der Anmeldebildschirm ermöglicht die Anmeldung an einen Everywhere Server by zenon und die Auswahl von Benutzerprofilen.



ACTION BAR - ACTION BUTTONS

Parameter	Description
Action Overflow	Click the button to open a drop-down list of the

Parameter	Description
(Symbol: drei senkrechte Punkte)	actions.
Edit current profile	Opens the screen to configure a profile (à la page 90).
Quit	Closes the app and switches back to the Start screen of the Android device.

Parameter	Description
Profile	Name of the selected profile. Tapping on the profile name opens the dialog to select an existing profile.
Username	User name for login at the Everywhere Server.
Password	Password for login at the Everywhere Server.
Login	Logs the app into Everywhere Server and switches to the next screen.

Hinweis: Achten Sie bei der Eingabe auf Groß-/Kleinschreibung!

APP BAR

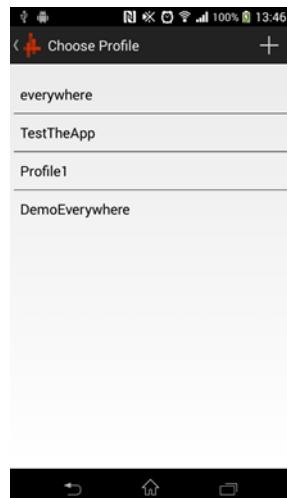
Symbol	Description
zurück (symbol: curved arrow to the right)	Switches to the previous app screen.
Home (symbol: house)	Closes the app and switches back to the Start screen of the Android device.
nn (symbol: overlaid screens)	Overview of the last apps open on the device.

💡 Informations

The appearance and functionality of the app bar is the same on all screens. This bar is very often already integrated into the hardware of an Android device. In this case, app bar is displayed.

6.6.3 Profile List

The profile overview lists existing profiles and administers these.



ACTION BAR - ACTION BUTTONS

Parameter	Description
< (Symbol)	Switches back one screen.
+	Creates a new profile and switches to the Edit profile screen.

Parameter	Description
Profile List	<p>Lists existing profiles.</p> <p>A long click on an entry opens a context menu:</p> <ul style="list-style-type: none"> ▶ <i>Edit profile</i> Switches to the profile editing screen.

Parameter	Description
	<p>Allows changes to an existing profile.</p> <ul style="list-style-type: none"> ▶ <i>Delete profile</i> Deletes selected profile <p>Tapping on the desired profile activates the profile and switches to the login screen.</p>

TO EDIT AN EXISTING PROFILE:

- ▶ Tap an existing profile from the list.
- Attention:** Ensure that you tap on the list entry for a long time.
- ▶ Select the **Edit profile** entry in the context menu that appears.
 - ▶ You switch to the **Edit profile** screen.

6.6.4 Edit Profile

In this screen, existing profiles can be changed and new profiles can be configured.



ACTION BAR - ACTION BUTTONS

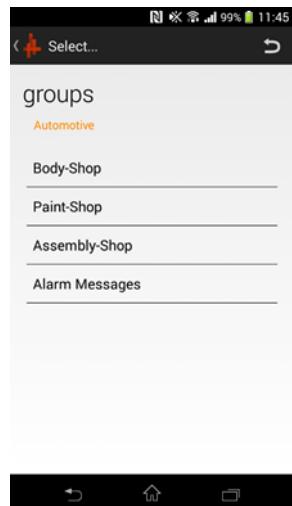
Parameter	Description
< (Symbol)	Switches back one screen.
Save	Saves the current settings and returns to editing

Parameter	Description
(Disk symbol)	the profiles.

Parameter	Description
Profile name	Name of the profile: Freely selectable
Server host name	Name of the Everywhere Server to which a connection is to be created.
Port HTTPS	Port address for the connection to the Everywhere Server. Par défaut : 8050
Project name	Project name for the connection to Everywhere Server.
Display variables by:	Display of the variables. Select from drop-down list: <ul style="list-style-type: none"> ▶ Name Variable display according to name ▶ Identification Variable display according to identification ▶ Res. Label Variable display according to resources label
Remember password: (Checkbox)	Save password for input. The setting is also shown as text: <ul style="list-style-type: none"> ▶ <i>inactive</i>: Password for login is not saved in the profile settings ▶ <i>active</i>: Password is saved in the profile settings. Par défaut : <i>inactive</i> .
Certificate	Display of certificate
Browse	Opens the file browser to select a certificate.

6.6.5 Equipment model and equipment groups

This screen shows the configured equipment model. Tapping on an equipment model shows the equipment groups contained therein. Tapping on an equipment group name switches to the next screen with the selection of the allocated variables.



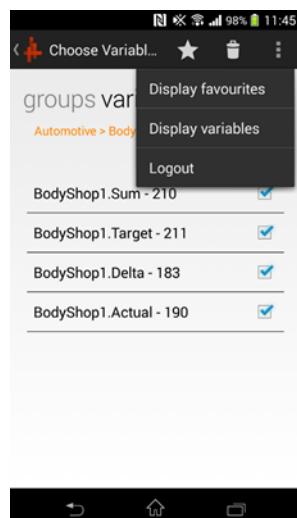
ACTION BAR - ACTION BUTTONS

Parameter	Description
< (Symbol)	Switches back one screen.
Logout: (symbol: curved arrow to the left)	Ends connection to the server and returns to the login screen.

Parameters	Description
[name of equipment group]	For easier orientation, either the equipment model name or the equipment group name - depending on the selection - is displayed in orange text above the list.
<i>List of the configured equipment groups or variables.</i>	<p>Lists existing profiles:</p> <p>Clicking on the equipment group name switches to the overview of configured equipment groups.</p> <p>Clicking on an equipment group name switches to the variable overview and lists all variables configured in the equipment group in a list.</p>

6.6.6 Variable selection

In diesem Bildschirm werden projektierte Variablen aus der ausgewählten Anlagengruppe aufgelistet und ausgewählt.



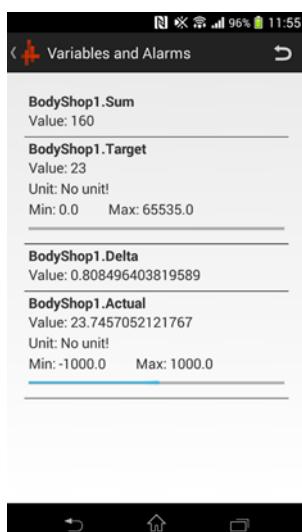
ACTION BAR - ACTION BUTTONS

Parameter	Description
< (Symbol)	Switches back one screen.
<i>Favorites</i> (star symbol)	Adds the selected variable(s) to the list of favorites.
<i>Delete favorites</i> (Trash symbol)	Deletes all variables from the list of favorites.
Action Overflow (Symbol: drei senkrechte Punkte)	Click the button to open a drop-down list of the actions.
Display favorites	Displays all variables from the list of favorites in a list.
Display variables	Displays all activated variables of the selected equipment group in a list. To activate a variable, the checkbox in the right column must be activated.
Logout	Ends connection to the server and returns to the

Parameter	Description
	login screen.
<i>Display all</i>	Selects all listed variables. This is visualized by a blue tick in the checkbox next to the variable name.

6.6.7 Values view

This screen visualizes the values of the selected variables. There are two views available.



ACTION BAR - ACTION BUTTONS

Parameter	Description
< (Symbol)	Switches back one screen.
Logout: (symbol: curved arrow to the left)	Ends connection to the server and returns to the login screen.

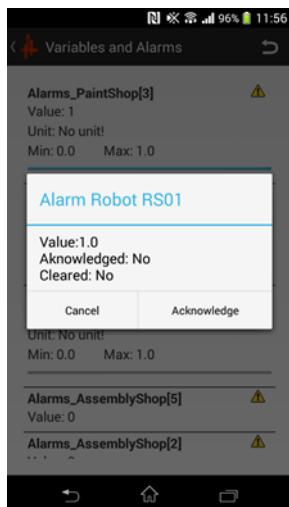
VARIABLE LIST

Parameters	Description
<i>Variable list</i>	<p>List of selected variables: Clicking on the variable switches between "<i>normal view</i>" and "<i>detailed view</i>"</p> <ul style="list-style-type: none"> ▶ <i>Normal view:</i> Variable name Variable value (numerical) ▶ <i>Detailed view:</i> Variable name Variable value Minimum and Maximum value Value in bar graph display

6.6.8 Acknowledging alarm list and alarms

The alarms are integrated directly into the value view of the variables. If there is an alarm, a warning sign is shown next to the variable in the value view screen.

A long click on the variable entry opens the attendant alarm entry. The alarm can be confirmed in the subsequent dialog.



ACTION BAR - ACTION BUTTONS

Parameter	Description
< (Symbol)	Switches back one screen.
Logout: (symbol: curved arrow to the left)	Ends connection to the server and returns to the login screen.

ALARMS

Parameter	Description
<i>List with alarm entries</i>	The word Alarms_ is placed in front of the variable name. A long tap on an alarm entry opens the dialog to acknowledge an alarm.

CONFIRM ALARM DIALOG

Parameter	Description
Variablenname	Name of the variable with pending alarm. The word "Alarm_" is placed in front of the variable name.
Wert	Value of the variable.
Acknowledged:	Alarm confirmed: <ul style="list-style-type: none"> ▶ No: Alarm has not yet been confirmed ▶ Yes: Alarm has already been confirmed Par défaut :No Note: This field cannot be changed.
Clear	Alarm ended: <ul style="list-style-type: none"> ▶ No: The alarm state still keeps occurring. ▶ Yes: The alarm state no longer occurs. Par défaut :No

Parameter	Description
	Note: This field cannot be changed.
Cancel	Closes the dialog and returns to the value view of the variables.
Acknowledge	Confirms alarm and closes the dialog.

ACKNOWLEDGING AN ALARM WITH EVERYWHERE APP:

1. Click on the alarm entry in the **value view** for a long time.
2. A dialog is opened.
3. Tap **Acknowledge** if you want to acknowledge the alarm.
4. **Cancel** closes the acknowledgment dialog

After acknowledgment, the entry for the alarm (*Acknowledged:*) shows the date and time of acknowledgment.

7 Everywhere Server by zenon

The Everywhere Server by zenon is for visualization of real-time data of a zenon project configuration on smartphones, tablets and desktop computers.

It runs in the context of zenon Runtime and is configured in zenon6.ini. No additional program need be started for configuration.

Informations

Any device that supports the OData protocol can be used as a client.

In addition to its programming, an app is provided for smartphones, tablets and desktop computers.

These apps are available for free in the respective app stores.

7.1 Licensing

Everywhere Server obtient la licence du Runtime. **Everywhere Server** n'est pas utilisable si le Runtime ne comporte pas une licence correspondante. Ceci peut faire que le Runtime s'exécute mais que le **Everywhere Server** ne peut être démarré par manque de licence.

7.2 Requirements

To use the server for use with mobile applications, the following requirements must be met:

- ▶ zenon from version 7.11 on
- ▶ Users have to be configured in the project.
For details about user administration, see also the Elements in the report area chapter.
- ▶ For communication via HTTPS, the corresponding port must be enabled on the Server and the Client. This is port 8050 by default.
- ▶ zenon Runtime must also be running on the computer on which Everywhere Server by zenon is running.
This computer/server must at least be contactable in the internal network.

REQUIREMENT FOR THE USE OF EVERYWHERE APP BY ZENON

The following requirements need only be met if the zenon project is visualized with Everywhere App by zenon:

- ▶ An equipment model must be configured in the project.
Variables can be linked from zenon 7.11 at each level.
You can find details on the configuration of an equipment model in the Equipment modeling chapter.
 - ▶ zenon Runtime must also be running on the computer on which Everywhere Server by zenon is running.
If the Everywhere App is only used in an internal network, no Internet connection is required.
Tip: If the Everywhere Server by zenon is to be contactable from outside, it is highly recommended that a VPN connection is used and the Everywhere Server by zenon and the computer with the publishing service is placed in a DMZ.
This computer must also have a public IP address. In this case, ensure that you define strict rules on the firewall.
- Attention:** 192.168.xxx.xxx is not a public address!

Informations

You can find additional safety notices in the zenon Hardening Guide. If you are interested in this manual, contact support@copadata.com.

7.3 Data security

Secure transfer of data via HTTPS is ensured by the use of the Transport Layer Security encryption protocol (TLS). The identity of the Server is checked by the Client. This guarantees the integrity, origin and target of the data transfer.

OVERVIEW OF COMMUNICATION

- ▶ Everywhere Server by zenon uses a server certificate.
Everywhere Server is not started without a server certificate. This server certificate is created with the *Everywhere - Certificate creator.exe* tool.
If several servers are in use, separate server certificates can be used for each server.
- ▶ The server certificate is based on a root certificate.
If several servers are in use, separate server certificates can be used for each server.
These server certificates originate from the same root certificate.
Advantage: different servers can be called up with a single root certificate.
- ▶ The root certificate can be purchased or you can create one yourself.
Root certificates are also called SLL certificates.
Tip: If a root certificate or SLL certificate is purchased from a provider, there is no installation on the Client. These certificates are installed together with the installation of the operating system.

7.4 Configuration

Everywhere Server by zenon is integrated into zenon Runtime. No additional program needs to be started. The necessary settings are made in zenon6.ini directly.

Conseil

All .ini entries can also be made with the *Everywhere.Config.exe* (à la page 101) program. This program offers a graphical user interface. The configurations are also transferred to zenon6.ini.

8 zenon6.ini entries:

- ▶ Open zenon6.ini in an text editor.
Note: You can find zenon6.ini under the following path:
%ProgramData%\COPA-DATA\System

- ▶ Insert the server entries:

Entrée	Description
[EVERWHERE]	Configuration des propriétés globales pour Everywhere Server.
CERTIFICATE=	<p>Objet du certificat du serveur pour HTTPS</p> <p>Objet du certificat. Le certificat doit être enregistré dans le magasin de l'ordinateur, dans le noeud MY (vos certificats).</p> <p>Par exemple : CERTIFICATE=CN=MyComputerName</p>
ENABLE=	<ul style="list-style-type: none"> ▶ <i>1</i> : Everywhere Server est exécuté depuis le Runtime de zenon. ▶ <i>0</i> : Everywhere Server ne démarre pas. <p>Par défaut : <i>0</i></p>
PORT=	<p>Port HTTPS de communication avec Everywhere Server</p> <p>Par défaut : <i>8050</i></p>
WRITE_ACCESS=	<ul style="list-style-type: none"> ▶ <i>0</i> : Accès en lecture <i>seule</i> autorisé via Everywhere Server. ▶ <i>1</i> : Autorise l'écriture de variables et l'acquittement d'alarmes. <p>Par défaut : <i>0</i></p>

En raison des restrictions du système, seuls les codages ANSI et Unicode sont pris en charge lors de la lecture de fichiers INI.

⚠ Attention

Le format UTF-8 n'est pas pris en charge !

Vous devez donc toujours enregistrer vos fichiers INI sous forme de fichier texte, avec un encodage ANSI ou Unicode.

👍 Conseil

You can find further information on .ini entries in the Configuration files manual.

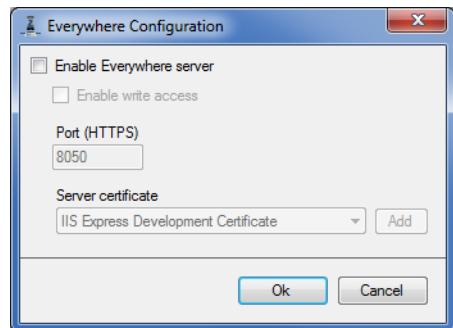
8.1.1 Configuration with the Everywhere.Config.exe

The .ini entries for the Everywhere Server can also be configured using the **Everywhere.Config.exe** program. You can find this program in the folder `C:\Program Files (x86)\Common Files\COPOA-DATA\STARTUP`.

Informations

The program **Everywhere.Config.exe** is only available in English.

Double-clicking on the program opens the configuration dialog:



Parameter	Description
Enable Everywhere server	If the checkbox is active, the Everywhere Server by zenon starts when zenon Runtime is started. Par défaut : <i>inactive</i> Note: If this checkbox is not active, all other settings are also inactive and grayed out.
Enable Everywhere write access	Activates write access to variables and alarms (acknowledgment) by the server. 0: read access only 1: Writing to variables and acknowledgment of alarms possible Par défaut : 0
HTTPS port:	HTTPS port that is used by the Everywhere Server by zenon. Par défaut : 8050
Server certificate	Server certificate for HTTPS communication. This can be selected in the drop-down list. This drop-down list contains all available

Parameter	Description
	<p>certificates.</p> <p>Note: The certificate must contain a private key. If no server certificate is selected, Everywhere Server is not started! Certificates can be created with the Everywhere.CertificateCreator.exe tool.</p>
Add	<p>The Everywhere.CertificateCreator.exe (à la page 103) program is opened by clicking on the button. This program is used for the creation of separate server certificates.</p> <p>The entry in the drop-down list is based on the Friendly name of the Everywhere.CertificateCreator.exe</p>
OK	Applique les paramètres et ferme la boîte de dialogue.
Cancel	Annule toutes les modifications et ferme la boîte de dialogue.

Note: These configurations are saved in zenon6.ini.

You can find further information about these .ini entries in the Configuration files manual in the Everywhere Server [EVERYWHERE] chapter

⚠ Attention

The configuration is also applicable for all zenon installations on one computer.

8.1.2 User authorization

The allocation of user authorizations takes place in the zenon Editor via the configuration of the corresponding property or alternatively via an INI entry.

EDITOR

To assign an authorization level, configure the project properties:

1. Click on the **Gestion des utilisateurs** node.
2. Select the **Serveur Everywhere** property group

3. For the **Niveau d'autorisation** property, select the authorization level from the drop-down list, which should have access to the Everywhere Server.

Informations

Authorization level 0 means write and read access for all users.

You can find further information on **Authorization levels** in the **User administration** manual.

INI ENTRY

The authorization level can also be managed in **project.ini**.

To do this, add in the **[PASSWORD]** section, the entry **EVWH_ACCESS=**.

Entry	Description
[PASSWORD]	Settings for the user administration.
EVWH_ACCESS=	<p>Configuration of the access authorization for Everywhere Server.</p> <p>Entry for the authorization level required to use the Everywhere Server.</p> <p>Value: Number of the configured authorization level.</p> <ul style="list-style-type: none"> ▶ Minimum: 0 - no limit ▶ Maximum: 127 <p>Par défaut : 0 (= everyone has access)</p>

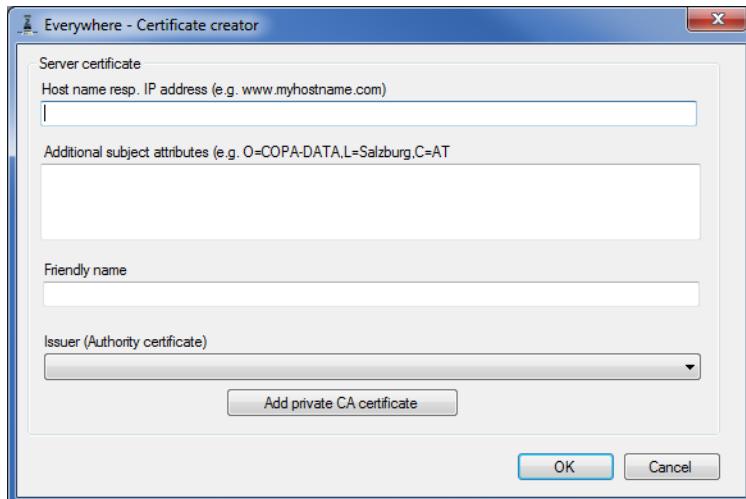
8.1.3 Everywhere - Certificate creator

The **Everywhere - Certificate creator** is used to create new server certificates. Certificates are required for secure communication between the client and server. You can find this program in the following folder: %Program Files (x86)%\Common Files\COPA-DATA\STARTUP.

Informations

Android apps before version 4.4 do not allow self-signed certificates. Only official certificates can be used for communication on these Android devices. From version 4.4, it was also possible to use certificates (à la page 86) signed through Everywhere Server by zenon.

To start the program, double-click on **Everywhere.CertificateCreator.exe**. A configuration dialog is opened:



Parameter	Description
Server certificate	
Host name resp. IP address	Name or IP address via which the Everywhere Server is accessed by the clients. This is either the IP address or the name of the computer on which the service is running, or the address/name of the firewall/router that connects the computer to the internet.
Additional subject attributes	Additional attributes for the certificate (optional). (e.g. O=Firma, L=Ort, C=AT)
Friendly name	Name for the display in the program Everywhere.Config.exe .
Issuer (Authority certificate)	Issuer certificate or certificate that is to be used to verify the server certificate. The certificates present are shown in the drop-down list. The entry in the drop-down list is based on the Friendly name from the dialog Create root certificate .
Add private CA certificate	Opens dialog to configure the root certificate (à la page 105). Note: The root certificate is a mandatory part of the server certificate!

Parameter	Description
OK	Applique les paramètres et ferme la boîte de dialogue.
Cancel	Annule toutes les modifications et ferme la boîte de dialogue.

⚠Attention

Administrator rights are required to execute this program.

8.1.4 Create root certificate

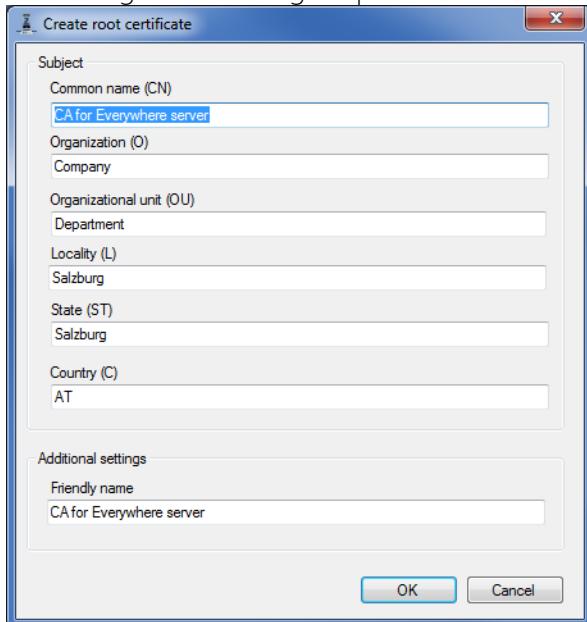
A root certificate is used on the mobile device for secure communication between the server and mobile devices. This ensures that the end device is also actually connected to the given server.

💡Informations

Android apps before version 4.4 do not allow self-signed certificates. Only official certificates can be used for communication on these Android devices. From version 4.4, it was also possible to use certificates (à la page 86) signed through Everywhere Server by zenon.

To create your own root certificate:

- ▶ Click in the **Everywhere - Certificate creator** (à la page 103) on the button **Add private CA certificate**.
- ▶ The configuration dialog is opened:



Parameter	Description
Subject	
Common name (CN)	General name Par défaut : <i>CA for Everywhere Server</i>
Organization (O)	Company name Par défaut : <i>Company</i>
Organizational unit (OU)	Name of the organizational unit (department name) Par défaut : <i>Department</i>
Locality (L)	Location name Par défaut : <i>Salzburg</i>
State (ST)	State or district name Par défaut : <i>Salzburg</i>
Country (C)	Country name Par défaut : <i>AT</i>
Additional settings	Additional information
Friendly name	Abbreviated name Par défaut : <i>CA for Everywhere server</i>

Parameter	Description
OK	Accepts the changes and opens the save dialog to save the root certificate.
Cancel	Annule toutes les modifications et ferme la boîte de dialogue.

Informations

The *Everywhere - Certificate creator* creates signatures with the sha256 hash algorithm.

8.1.5 Certificate on the client

The certificate is checked on the Client. If this certificate has not been created by a root certificate from a generally-known Authority (=purchase certificate), the certificate used must be installed on the Client.

Informations

Android apps before version 4.4 do not allow self-signed certificates. Only official certificates can be used for communication on these Android devices. From version 4.4, it was also possible to use certificates (à la page 86) signed through Everywhere Server by zenon.

INSTALLATION OF A CERTIFICATE ON THE CLIENT

Unverified certificates must be installed on the Client in order for them to be accepted.

Carry out the following steps for the installation:

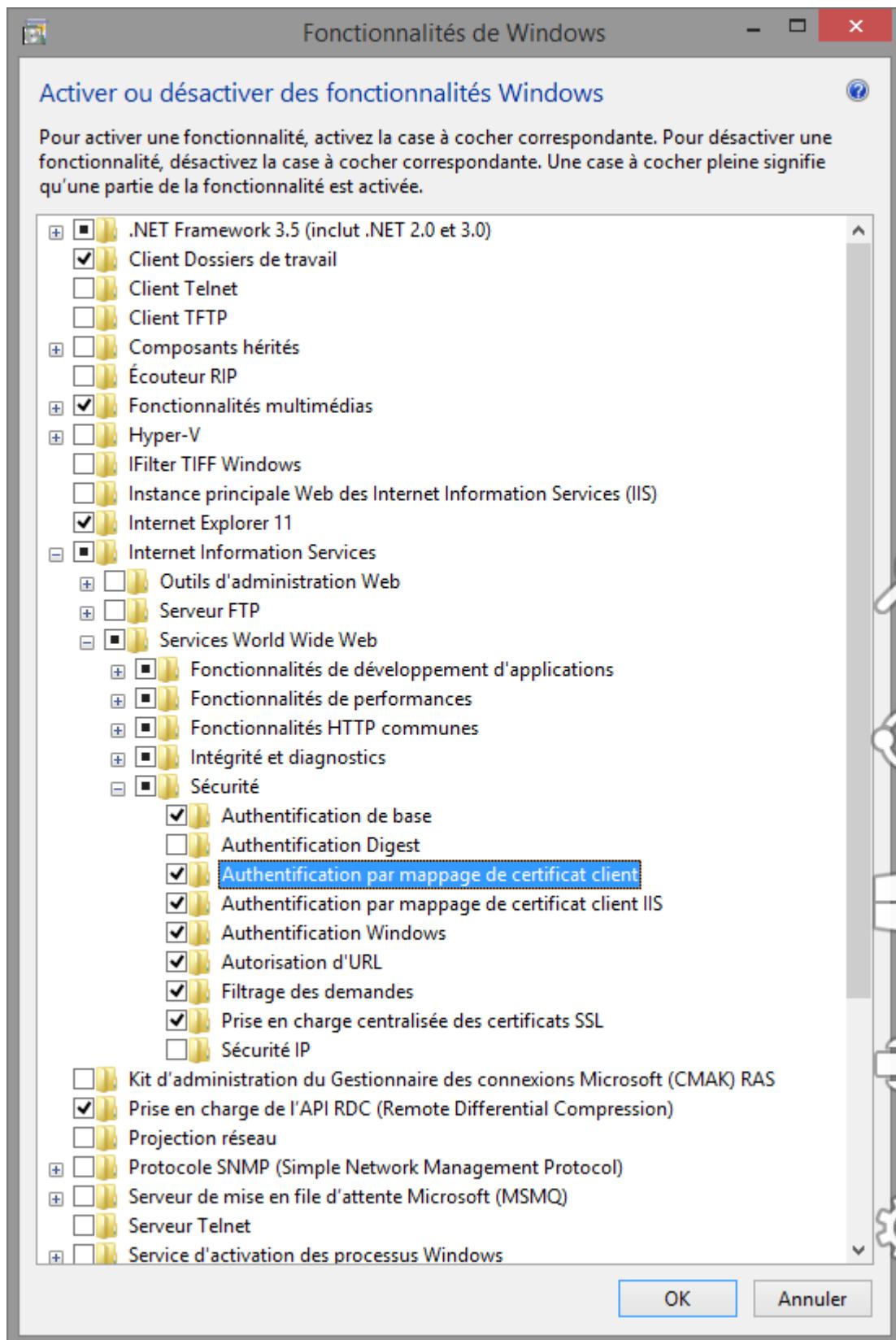
1. Make the the exported certificate (.cer file) available on a web server or FTP server. You can find detailed instructions for this in the Offer certificate for download (à la page 108) chapter.
2. Open this certificate on the client using the browser.

Alternatively, it can also be sent as an email attachment and opened on the client.

8.1.6 Offer certificate for download

A certificate on the client is required for encrypted connections. These instructions describe how this certificate is provided for download.

1. Install IIS (optional)
Install - if not already present - the Internet Information Services.
To do this, open the Control Panel on the computer.
 - a) Click on **Start** and then on **Control Panel**
 - a) In the Control Panel, click on **Programs** and then on **Turn Windows features on or off**.
The dialog to activate the Windows features is opened.
 - b) Click in the dialog **Windows-Features** on *Internetinformationsdienste*.
 - c) Tick the **World Wide Web Services** checkbox.
Activate the corresponding services in the subnodes.
2. Finish activation by clicking on the **OK** button.
The selected components are installed.



Note: If you install IIS using the Control Panel, you get the standard installation with a minimum number of features. If you need additional IIS features, such as application

development features or web management tools, you must tick the checkbox for these features in the Windows Functions dialog field.

You can also find further information in the zenon Web Server manual, in the Publishing service installation chapter.

3. Copy certificate

Copy the Everywhere certificate (example name: *Certificate.cer*) in the IIS root folder.

Path: C:\inetpub\wwwroot

4. Creation of index.html

Create an additional page, index.html. Insert the following HTML code into the document:

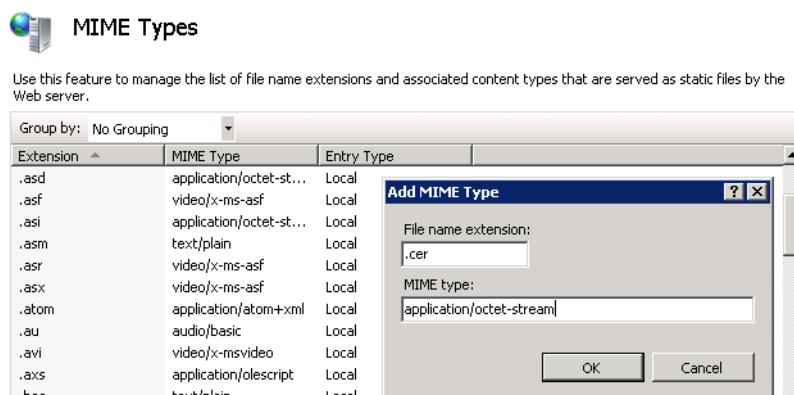
```
<!DOCTYPE html>
<html>
  <head>
    <title>Certificate download</title>
  </head>
  <body>
    <a href="Certificate.cer"><font size="5">Click to download the certificate.</font></a>
  </body>
</html>
```

Note: Amend the name of the certificate. In this example, the certificate name is Certificate.cer.

5. Configure MIME type in the IIS

Add the new MIME type .cer in the IIS Manager:

- a) Open the Internet Information Services (IIS) Manager program.
- b) In the node of the Manager, switch to the node of your computer.
- c) In the IIS group, select the MIME types property symbol:
The dialog to configure the MIME types is opened.
- d) Select the **Add...** entry in the context menu.
The Add Mime Type dialog is opened.
- e) Enter .cer in the File name extension input field.
- f) Enter, in the **MIME-type:** input field, *application/octet-stream*.



The certificate can then be easily downloaded using the browser.

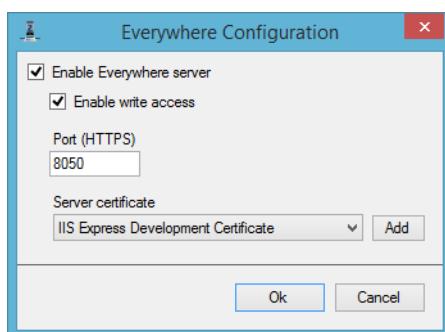
INSTALLATION SCRIPT FOR IIS

You get the complete IIS 7.5 installation with all available feature packages with this script. If you do not require certain feature packages, you should edit the script so that only the required packages are installed.

```
start /w pkgmgr
/iu:IIS-WebServerRole;IIS-WebServer;IIS-CommonHttpFeatures;IIS-StaticContent;IIS-DefaultDocument;IIS-DirectoryBrowsing;IIS-HttpErrors;IIS-HttpRedirect;IIS-ApplicationDevelopment;IIS-ASPNET;IIS-NetFxExtensibility;IIS-ASP;IIS-CGI;IIS-ISAPIExtensions;IIS-ISAPIFilter;IIS-ServerSideIncludes;IIS-HealthAndDiagnostics;IIS-HttpLogging;IIS-LoggingLibraries;IIS-RequestMonitor;IIS-HttpTracing;IIS-CustomLogging;IIS-ODBCLogging;IIS-Security;IIS-BasicAuthentication;IIS-WindowsAuthentication;IIS-DigestAuthentication;IIS-ClientCertificateMappingAuthentication;IIS-IISCertificateMappingAuthentication;IIS-URLAuthorization;IIS-RequestFiltering;IIS-IPSecurity;IIS-Performance;IIS-HttpCompressionStatic;IIS-HttpCompressionDynamic;IIS-WebServerManagementTools;IIS-ManagementConsole;IIS-ManagementScriptingTools;IIS-ManagementService;IIS-IIS6ManagementCompatibility;IIS-Metabase;IIS-WMICompatibility;IIS-LegacyScripts;IIS-LegacySnapIn;IIS-FTPPublishingService;IIS-FTPServer;IIS-FTPManagement;WAS-WindowsActivationService;WAS-ProcessModel;WAS-NetFxEnvironment;WAS-ConfigurationAPI
```

8.1.7 Certificates

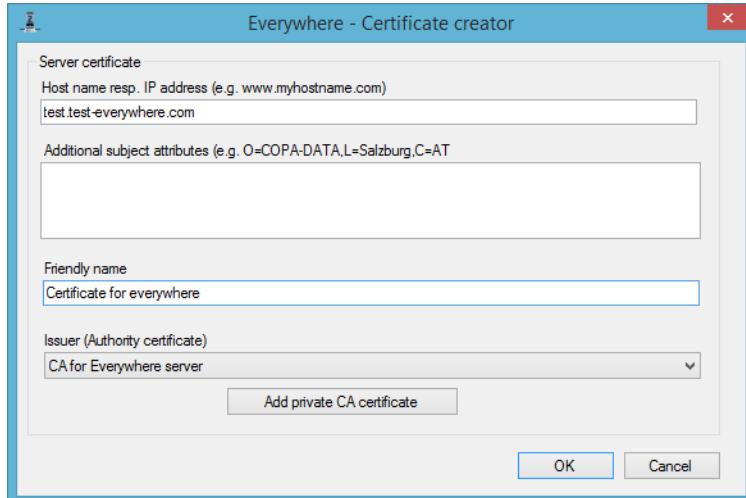
To install Everywhere Server by zenon correctly, carry out the following steps:



1. Start the **Everywhere.Config.exe** program.
2. Activate the **Enable Everywhere server** checkbox
3. Enter the correct port in the **Port (HTTPS)** input field.
4. Select a server certificate from the **Server certificate** drop-down list.

CREATE A SERVER CERTIFICATE

To create a server certificate:



1. Click, in the **Everywhere.Config.exe** program, on the **Add** button to start the **Everywhere - Certificate creator** program.
2. Enter your data into the input fields.
3. Assign a **Friendly name**.
4. Select an SLL certificate from the **Issuer (Authority certificate)** drop-down list.

Informations

Android apps before version 4.4 do not allow self-signed certificates. Only official certificates can be used for communication on these Android devices. From version 4.4, it was also possible to use certificates (à la page 86) signed through Everywhere Server by zenon.

CREATION OF A ROOT CERTIFICATE (SLL CERTIFICATE)

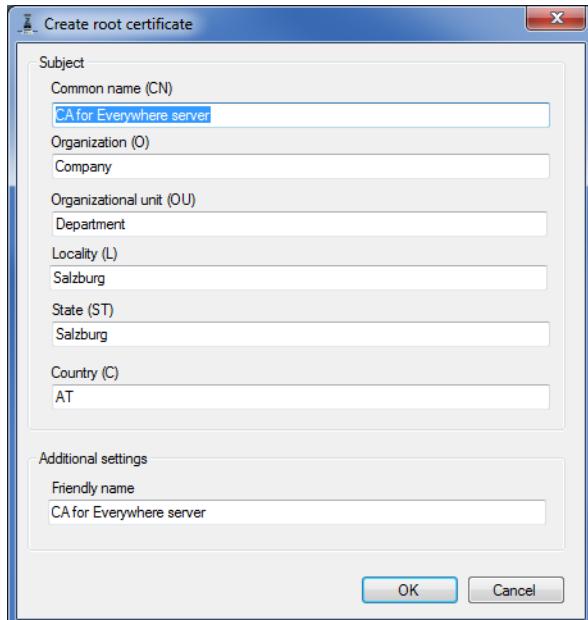
Purchase a certificate from a provider of SLL certificates.

Installation on the Client becomes superfluous as a result, because common certificate providers are already installed on the end device by default.

Search for "SLL certificates" on the Internet. Some providers are, for example:

1. GoDaddy (<http://www.godaddy.com>)
2. VeriSign (<http://www.verisign.com>)
3. CAcert (<http://wiki.cacert.org/FAQ/AboutUs>)

Alternatively, create your own root certificate:



1. Click, in the *Everywhere - Certificate creator*, the **Add private CA certificate** button.
2. Enter your data into the input fields.
3. Assign a **Friendly name**.
4. Click on the **OK** button
5. The dialog to save the SLL certificate appears.
6. Name your SLL certificate and save it.

Informations

This saved root certificate is the certificate that must be installed on the Client.

8.2 CEL entries

When logging into the Everywhere Server, a CEL entry is created if

- ▶ the login data sent was checked by Runtime.

This happens:

- ▶ On the first request of a client.
- ▶ Every 5 minutes
- ▶ Always before a write request if more than a second has passed since the last check.

For variables that have not been acknowledged, alarms and CEL entries are supported by an incremental transfer of value changes.

LOG ENTRIES:

Level error	Description
Level Error	Errors that occur during the execution of the Everywhere Server. However not an error that has something to do with the execution of client requests.
Level Warning	Errors that occur during the execution of the Everywhere Server. However not an error that has something to do with the execution of client requests.
Level Success	Successfully executed client requests that lead to a change of the internal status of the Everywhere Servers or the zenon Runtime.
Level Failed	<ul style="list-style-type: none"> ▶ Error in the execution of client requests ▶ Error in the checking of credentials
Level Msg	Everywhere Server status: <ul style="list-style-type: none"> ▶ Start / stop ▶ Successful creation of sessions ▶ Ending of sessions
Level Debug	Incoming and outgoing requests with <ul style="list-style-type: none"> ▶ Session-ID, ▶ URI (Uniform Resource Identifier) ▶ Method and status
Level Deep Debug	Status of the Everywhere Server as well as incoming and outgoing requests, compiled into an entry (Level Msg + Level Debug).

8.3 Data model of the Everywhere Server

The **Open Data Protocol (= OData)** is used as an interface for the inclusion of data in your own web application. This protocol is a "WCF data service".

This data service is a "**RESTful services**" (**Representational State Transfer Architecture – REST**). Only methods for manipulating or querying the data model are defined in this (**CRUD – Create – Read – Update – Delete**).

Because these methods cover the HTTP commands (**(GET, PUT, POST, DELETE)**) data services can be implemented very well via the HTTP protocol. In doing so, the desired object is identified by means of the URL and the operation via the respective HTTP command.

Conseil

PUT, CREATE und **DELETE** must "point" to different instances.

You can find further information in the official ODATA online documentation.

Link: <http://www.odata.org/documentation/odata-version-2-0/operations/>
[\(http://www.odata.org/documentation/odata-version-2-0/operations/\)](http://www.odata.org/documentation/odata-version-2-0/operations/)

The data is, like a relational database, organized in tables. Filter criteria can be defined for querying data (comparable to an SQL query).

Note: In contrast to traditional data services, a session-dependent data model is used in the Everywhere Service. This means that the data model can - depending on the session - contain different data.

Informations

The **Everywhere** Service is a WCF data service.

You can find details and comprehensive documentation for the OData services at: www.odata.org (<http://www.odata.org>).

8.3.1 Data model - static project data

EQUIPMENT MODELS (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonEquipmentModel
 - ▶ Name (string)
 - ▶ Guid (string, key)
 - ▶ EquipmentGroups (collection, **Everywhere.Service.Data.ZenonEquipmentGroup**)

EQUIPMENTGROUPS (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonEquipmentGroup
 - ▶ Guid (string, key)
 - ▶ Name (string)
 - ▶ ParentGroup (**Everywhere.Service.Data.ZenonEquipmentGroup**)
 - ▶ ChildGroups (**collection, Everywhere.Service.Data.ZenonEquipmentGroup**)
 - ▶ Model (Everywhere.Service.Data.ZenonEquipmentModel)

VARIABLES (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonEquipmentModel
 - ▶ EquipmentGroupGuids (String, commaseparated GUIDs of the related groups)
 - ▶ MinimumValue (Real)
 - ▶ MaximumValue (Real)
 - ▶ Unit (String)
 - ▶ ResourcesLabel (String)
 - ▶ Identification (String)
 - ▶ Name (String)
 - ▶ Id (int, key)

ALARMCLASSES (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonAlarmClass
 - ▶ EquipmentGroupGuids (String, commaseparated GUIDs of the related groups)
 - ▶ Description (String)
 - ▶ Number (int, key)
 - ▶ Name (String)

ALARMGROUPS (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonAlarmGroup
 - ▶ EquipmentGroupGuids (String, commaseparated GUIDs of the related groups)

- ▶ Description (*String*)
- ▶ Number (*int, key*)
- ▶ Name (*String*)

ARCHIVES (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonArchive
 - ▶ Id (*String, key*)
 - ▶ Name (*String*)
 - ▶ Values (**Collection, Everywhere.Service.Data.ZenonArchiveValue**)

ARCHIVEVALUES (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonArchiveValue
 - ▶ Archiveld (*String, key*)
 - ▶ VariableName (*String*)
 - ▶ Timestamp (*Int64, Unixtime [ms], key*)
 - ▶ Type (*int, key*, **None = 0, Sum = 1, Average = 2, Min = 3, Max = 4**)
 - ▶ Value (*string*)
 - ▶ VariableId (*int, key*)

8.3.2 Data model - project data that changes

Below you can find the data model for values that update themselves.

ALARMS (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonAlarm
 - ▶ Deleted (*bool*)
 - ▶ Acknowledged (*bool, writeable*)
 - ▶ VariableStatus (*Int64*)
 - ▶ Value (*string*)
 - ▶ AlarmClass (**Everywhere.Service.Data.ZenonAlarmClass**)
 - ▶ AlarmGroup (**Everywhere.Service.Data.ZenonAlarmGroup**)

- ▶ UserId (*String*)
- ▶ ReactivateNumber (*int*)
- ▶ ReactivateStatus (*Int64*)
- ▶ ReactivateTime (*Int64, Unixtime [ms]*)
- ▶ TimeAcknowledged (*Int64, Unixtime [ms]*)
- ▶ TimeCleared (*Int64, Unixtime [ms]*)
- ▶ TimeReceived (*Int64, Unixtime [ms], key*)
- ▶ ComputerName (*string*)
- ▶ Comment (*string, writeable*)
- ▶ Text (*string*)
- ▶ Variable (**Everywhere.Service.Data.ZenonVariable**)
- ▶ AlarmStatus (*int*)
- ▶ Cookie (*int*)
- ▶ Id (*int, key*)

Exemple

The "`Acknowledged`" and "`Comment`" properties can be used to acknowledge an alarm in zenon or to save a comment.

These properties can then be transferred to the server with the "`PUT`" or "`MERGE`" command.

CEL (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonEvent
 - ▶ VariableStatus (*Int64*)
 - ▶ Value (*string*)
 - ▶ AlarmClass (**Everywhere.Service.Data.ZenonAlarmClass**)
 - ▶ AlarmGroup (**Everywhere.Service.Data.ZenonAlarmGroup**)
 - ▶ UserId (*String*)
 - ▶ TimeReceived (*Int64, Unixtime [ms], key*)
 - ▶ ComputerName (*string*)
 - ▶ Comment (*string*)

- ▶ Text (*string*)
- ▶ Variable (**Everywhere.Service.Data.ZenonVariable**)
- ▶ Cookie (*int*)
- ▶ Id (*int, key*)

ONLINEVARIABLES (COLLECTION)

- ▶ Type: Everywhere.Service.Data.ZenonOnlineVariable
- ▶ Id (*int, key*)
- ▶ Variable (**Everywhere.Service.Data.ZenonVariable**)
- ▶ Status (*Int64*)
- ▶ Timestamp TimeReceived (*Int64, Unixtime [ms]*)
- ▶ Value (*string, writeable*)

Exemple

- ▶ To sign variables in again, a new instance must be created in the collection. This is carried out with the `CREATE` command. This registration is removed again with `DELETE`.
- ▶ For identification of the online variable that was created on the client, its ID must be established. This ID corresponds to the ID of the zenon variable whose values are to be queried.
`PUT` or `MERGE` writes a value to a variable.

8.3.3 Querying archives

Archive variables can only be queried from the respective project of the Everywhere Server. Cross-project variables are not supported.

NOTE ON THE QUERYING OF ARCHIVE VALUES:

In order to query archive data, the following properties must also be entered for the server query:

- ▶ Archive ID
- ▶ Start time

- ▶ End time

⚠ Attention

Values without these filter criteria being stated cannot be queried.

Examples:

- ▶ `https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE/ArchiveValues?$form at=json&$filter=Archiveld%20eq%20%27Fl%27%20and%20Timestamp%20gt%201377690862000L%20and%20Timestamp%20lt%201377690862000L`
- ▶ `https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE/Archives%28%27Fl%27%29/Values?$format=json&$filter=Timestamp%20gt%201379934601375L%20and%20Timestamp%20lt%201379934601377L%20and%20VariableName%20eq%20%27BodyShop1 .Actual%27`

8.3.4 Calling up the data model using a web browser

The data model of the Everywhere Server can be displayed in a web browser. This can be used to give you a quick overview and test the first programming lines.

To call up a data model, use Mozilla Firefox or Google Chrome (recommended).

Attention: Microsoft Internet Explorer does not support the full functionality!

URI ADDRESS

`https://server address or DNS name:port number\zendata\project name`

Parameter	Description
<code>https://</code>	URI schematic diagram of the WWW communication protocol. https: stands for the secure transfer protocol Hypertext Transfer Protocol Secure
Server address or DNS name	IP address or DNS name of the Everywhere Server.
:	: (colon) Separates the server address from the port number.
Port number	Port number for communication, as configured in

Parameter	Description
	Everywhere Server (à la page 99).
zendata	Constant: is always zendata
Project name	Name of the zenon project configuration.

Exemple

https://everywhere.copadata.com:8050/zendata/Demo_Automotive

8.3.4.1 Logging in to the data model

If it is not possible to log in when in secure mode (<https://>), a warning sign appears in the browser. This warning sign can be skipped by clicking on the respective button (Chrome: "**Continue anyway**", Firefox: "**I am aware of the risk**"). Communication then takes place unsecured.

THE LOGIN DIALOG APPEARS:

USER NAME:

The user name is the session ID at the same time. This session ID comprises:

Time Stamp|Device ID|User Name

Parameter	Description
Timestamp	32-bit time stamp of the session: <ul style="list-style-type: none"> ▶ UTC Unix time (UTF8 coded: 8-digit HEX string) ▶ must be 8 digits
	Pipe character Alt GR key and <-key
Device ID	ID of the end device (mobile device, ...) - normally UUID. The device ID is device-dependent and must be unique.
	Pipe character Alt GR key and <-key

Parameter	Description
User name	User name, as configured in zenon. When entering this, note capitalization. Note: The user name must not contain a colon.

Exemple

538497B4|550e8400-e29b-11d4-a716-446655440000|Manager

PASSWORD:

The password comprises:

Type of password sending and password

Parameter	Description
Type of password sending	How the password is sent: <ul style="list-style-type: none"> ▶ = (equal sign) unencrypted ▶ + (plus sign) encrypted Note: The password must be preceded with the type of sending (= or +). Otherwise logging in to the data model will not be successful!
Password	Password as configured in zenon. Note: Pay attention to capital letters and small letters when entering the data!

Exemple

+Manager

Encrypted communication with the Everywhere Server - login with the password *Manager*.

8.3.5 Examples

You can find some examples of code here. Theses examples should show how values from the server can be updated.

Note: The examples use the Java programming language.

8.3.5.1 Code example - login to the server

Example of code for logging in to an Everywhere Server:

```
// get authentication information from the user interface

    String userName = arg0[0].getString("UserName");
    String password = arg0[0].getString("Password");
    String server = arg0[0].getString("Server");
    String project = arg0[0].getString("Project");
    String port = arg0[0].getString("Port");
    Date curTime = new Date();

    // full username -> as described
    String fullUserName = Long.toHexString(curTime.getTime())+"|"; // 8 digit hex timestamp
    fullUserName = fullUserName + Settings.Secure.ANDROID_ID +"|";
    fullUserName = fullUserName + userName;

    // set the authentication to basic https (OClientBehaviour from odata4j)
    OClientBehavior authBehavior = OClientBehaviors.basicAuth(fullUserName, "=" + password);
    OClientBehavior allowSelfSignedBehavior = AllowSelfSignedCertsBehavior.allowSelfSignedCerts();

    // Consumer declaration: private ODataConsumer consumer;
    // here the url to the server has to be inserted
    // we have https:"the server IP or name":Portnumber(for HTTPS 8050)/zendata(fixed)/Projectname
    consumer = ODataConsumers.newBuilder("https://"+server+":"+port+"/zendata/"+project).setClientBehaviors
        (authBehavior, allowSelfSignedBehavior).build();
```

8.3.5.2 Examples for browser display

A browser can be used to display your zenon project configuration.

Note: The web addresses shown here relate to the demo project of the Everywhere Server.

DATA MODEL - OVERVIEW

To display a simplified overview of your data model in your browser, enter the following URI into the browser:

https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE

DATA MODEL - DETAILED OVERVIEW

The following URI lists the complete data model:

[https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE/\\$metadata](https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE/$metadata)

DISPLAY OF VARIABLES

You get an overview of all variables with the URI:

[https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE/Variables?\\$format=json](https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE/Variables?$format=json)

DISPLAY OF VARIABLES WITH FILTERING

The display of variables can be filtered. The address below displays the variable with the ID 321

[https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE/Variables?\\$format=json&\\$filter=id%20eq%20321](https://everywhere.copadata.com:8050/zendata/DEMO_AUTOMOTIVE/Variables?$format=json&$filter=id%20eq%20321)

Note: You can find a precise description of all filters in the OData online documentation. You can find this documentation on the Internet at the address www.odata.org (<http://www.odata.org>).

Note: Use " | Manager" as user name and "=Manager" as password for the login.

8.3.5.3 Example of code - calling up instances from the server

RECEIVING ALARMS

The example shows how alarms are updated. This syntax can also be used for the other data types in the same way.

```
private class RequestPollAlarmsTask extends ConnectionTask{
    public RequestPollAlarmsTask( EverywhereConnectionHandler handler ) {
        super(handler);
    }
}
```

```

@Override
protected Void doInBackground(Bundle... arg0) {

    try {
        lock.acquire();
    } catch (InterruptedException e1) {
        // TODO Auto-generated catch block
        e1.printStackTrace();
    }

    int updateIntervall = arg0[0].getInt("Intervall");
    String filter = arg0[0].getString("Filter");

    try {
        // Consumer declaration: private ODataConsumer consumer;
        // alarms declaration: private Enumerable <OEntity>
        alarms = consumer.getEntities("Alarms").expand("Variable").execute();
        isConnected=true;
    }
    catch (Exception e) {
        isConnected=false;
        connectionException=e;
    }
    lock.release();
    return null;
}

```

8.3.5.4 Example of code - calling up OEntity objects from the server

This example shows how information in relation to an OEntity object can be called up from the server. This data can thus be taken on for the user programming. This example also shows how properties can be called up from a data object.

```

/**
 *
 * @param position: Object at which position of the entityset should be returned

```

```

        * @return the finished Item Alarm for the Listt of Alarms

    */

protected Alarm GetAlarmFromEntity(int position) {

    Alarm retAlarm = new Alarm();

    // We use position as listItem. Here we could use some other unique id
    // to reference the list data
    ListView listViewAlarms = (ListView)findViewById(R.id.alarmlist);

    OEntity var = alarms.elementAt(position).getLink("Variable",
    OLink.class).getRelatedEntity();

    int EntityItemCnt= alarms.count();
    OProperty<String> varName = var.getProperty("Name", String.class);

    OProperty<String> alarmText = alarms.elementAt(position).getProperty("Text",
    String.class);
    String Header = varName.getValue() + " - " + alarmText.getValue();

    // Body data
    Bundle bodyBundle = new Bundle();
    OProperty<?> alarmValue = alarms.elementAt(position).getProperty("Value");
    String timeReceived =
    alarms.elementAt(position).getProperty("TimeReceived").getValue().toString();
    String timeCleared =
    alarms.elementAt(position).getProperty("TimeCleared").getValue().toString();
    String Acknowledged =
    alarms.elementAt(position).getProperty("Acknowledged").getValue().toString();
    Date date = new java.util.Date(Long.parseLong(timeReceived));
    String dateString = new SimpleDateFormat("dd.MM.yyyy HH:mm").format(date);

    retAlarm.setAlarmName(varName.getValue());
    retAlarm.setTimeReceived(dateString);
    retAlarm.setValue(alarmValue.getValue().toString());
    retAlarm.setAcknowledged(Acknowledged);
    retAlarm.setCleared(timeCleared);
    retAlarm.setAlmText(alarmText.getValue());

    return retAlarm;
}

```

8.3.5.5 Other examples of code

Other examples for programming with OData are on the Internet.

The example given shows how information relating to an OEntity objects can be called up from the server to the end device. This example also shows how properties of a data object can be received.

Link: [\(https://github.com/vorburger/odata4j/tree/master/odata4j-core/src/test/java/org/odata4j\)](https://github.com/vorburger/odata4j/tree/master/odata4j-core/src/test/java/org/odata4j)

Attention

This Internet site is not shown in Internet Explorer!

8.3.6 Using the app on a mobile device (Android)

In order to use your own applications on a mobile end device (Android), compile it with the **Eclipse** program.

Eclipse is a programming tool for developing software and was originally used as an integrated development environment for the Java programming language.

Informations

Eclipse is available as a free download.

INSTALLATION:

In order to be able to use **Eclipse** for your development environment, install the program including the Android Developer Bundle.

The following components must be installed on the development computer:

► **Android Developer Bundle**

The Android Developer Bundle is available for free on the Internet.

Link to the installer: [\(http://developer.android.com/sdk/index.html\)](http://developer.android.com/sdk/index.html)

It is important that the correct driver for the mobile device is installed on the Desktop computer. Otherwise no communication between the development computer and the end device is possible.

► Java Development and Runtime Environment

The Java Development Environment (JRE) and the Java Runtime Environment (JSE) must be installed on the development computer.

JRE and JSE can be downloaded directly from the Java website. Both environments must be installed separately.

Link to download: www.oracle.com/technetwork/java/javase/downloads/index.html
<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

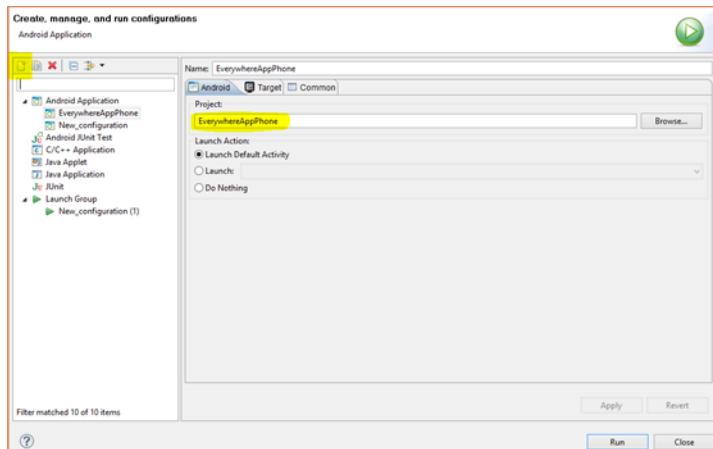
► Required libraries:

To be able to use OData in **Eclipse**, you need to connect the appropriate library for your preferred development environment to **Eclipse**.

Libraries for the common programming languages can be found on the OData Internet site. Select your desired programming language in the tabs shown in order to get to the respective downloads.

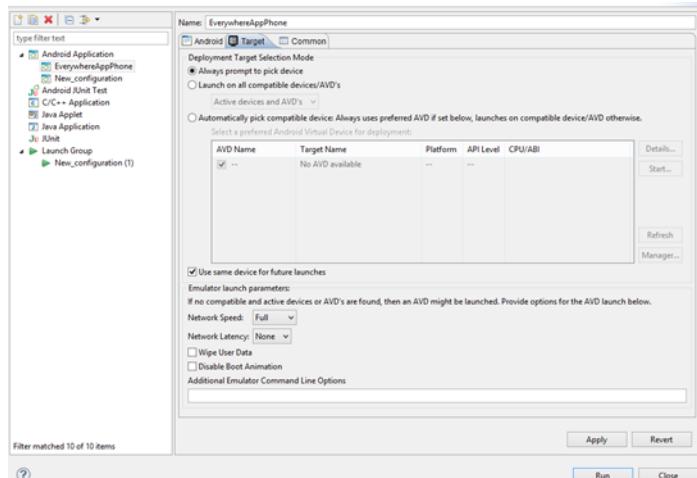
Link to the libraries: www.odata.org/libraries (<http://www.odata.org/libraries>).

8.3.6.1 Recommended settings for the Eclipse programming environment



To configure **Eclipse** for mobile end devices, carry out the following steps:

1. Select, the **Run configurations...** entry in the **Run** menu bar.
2. The configuration dialog for a new **Run** configuration appears.
3. Click on the symbol **New launch configuration**.
4. In the **Android Application** tree, the new entry *NEW_configuration* is added.
5. Name your Android app project in the **Android** tab.
6. Click on the **Browse...** button to select your Android project. This is then transferred to the mobile device.
7. Now connect your mobile end device to the development computer.



8. Configure your target device in the **Target** tab.
9. Ensure that the *Always prompt to pick device* property is activated.
Note: In this case, you are asked before execution which device your app is to be executed on.
10. Start the debug process:
11. Start the app.
Note: For the remaining entries, it is recommended that the existing default settings are left unchanged.
12. After clicking on the **Play** or **Debug** buttons, you are requested to select your end device or your emulator in order to start the program.
13. The app is then started automatically on the end device.