



CALLISTO⁺

CRUISE ALARMING

ADMINISTRATION MANUAL



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Setup

Installation

Cruise Alarming is installed through Callisto's Open Application Manager. The installation and updating process for OAM applications is described in the chapter [Options](#) of the Callisto platform administration manual.

Privileges

The following application privileges can be assigned to a user for the Cruise Alarming application. For setting user privileges, see the chapter [User administration](#) of the Callisto platform administration manual.

Settings	Provides access to the <i>Settings</i> tab.
EspaSources	Provides access to the <i>Espa Configuration</i> tab.
ActiveAlarms	Provides access to the <i>Active Alarms</i> tab.
ClearedAlarms	Provides access to the <i>Cleared Alarms</i> tab.
Alarm Groups	Provides access to the <i>Alarm Groups</i> tab.
SMCSIntegration	Provides access to the <i>SMCS Alarm Integrations</i> tab.

Access



Configure icon

Administrators can access the Cruise Alarming configuration by navigating to System > Open Application Manager in the main menu. In the tab Applications, locate the Cruise Alarming instance and click on the *Configure* icon.

Users who were granted privileges to access the Cruise Alarming instance can do so by navigating to Applications in the main menu and clicking on the name of the ProfACD instance.

Settings

The Settings tab contains the general settings of Cruise Alarming.

Settings Espa Configuration Alarm Groups SMCS Alarm

Settings Cruise Alarming

Copy/Paste this URL to your callmanager's IP Phone Service.
Parameter 'version' should be provided (version=2)

`http://callisto/Applications/Inbound/Cruise%20Alarming/src/PhoneListAl;`

Base URL for REST services
<group> and <message> must be replaced by the actual values.

`http://callisto/Applications/Inbound/Cruise%20Alarming/src/REST.asp?a;`

Phone Activate Alarm Service
Create the needed service in CUCM with this URL.
Parameters 'groupID' and 'message' should be provided.

`http://callisto/Applications/Inbound/Cruise%20Alarming/src/PhoneAASer`

Redundancy delay (seconds):

Automatically delete reports after (days):

Save

Service URLs

At the top of this tab are three predefined URLs:

Call manager phone service URL

The first URL is used to set Cruise Alarming as a phone service on the call manager. This service provides the possibility to list the alarm history directly on phones which are subscribed to the service. Paste this URL to the call manager's phone service definition.

REST services

The second URL is the base URL for the REST API provided by Cruise Alarming.

The URL contains two placeholders which must be replaced when calling the REST API:

- <group>: The ID or name of the group to which the alarm message are sent to (see chapter [Alarm groups](#)).
- <message>: The content of the alarm message.

“Activate alarm” phone service

The third URL is used on IP phones to set up services which can activate predefined alarms (e.g., engineer call). To use such a this service, two parameters :

- groupID: The ID/group number of an alarm group (see chapter [Alarm groups](#)).
- message: The text to display of alarm which will be shown on the alarm group phones when alarm is activated.

Paste this URL to the call manager’s phone service definition.

Additional settings

Redundancy delay

Set in seconds. The interval of how often Callisto checks for duplicate messages. This is helpful if multiple alarming systems send the same messages. If set to 0, no redundancy check will be performed.

Automatically delete reports after

Set in days. The time how long alarm reports will be kept before being deleted automatically.


ESPA configuration

Callisto Crusie Alarming supports both ESPA 4.4.4 and ESPA-X interfaces for alarm communication. Choose the interface to use by selecting the Espa Configuration tab and clicking the respective button at the top of the panel.

ESPA-X Server

ESPA-X clients can be integrated with Callisto via an embedded ESPA-X server.

Callisto supports ESPA-X protocol version 1.00 rev 4.



Espa Configuration

Alarm Service

ESPA-X Server
ESPA 4.4.4 Sources

Server General Settings

Port:

ESPA-X Server Port
If set to 0 then ESPA-X Server is turned off

Heartbeat interval:

Heartbeat interval in seconds
Default value is 120

Maximum client connections:

Maximum parallel ESPA-X Client connections
Default value is 4

Max parallel sessions:

Maximum parallel sessions of same client
If multiple instances of same client (redundant)
exists set to 2 or more. Default value is 2

Client Credentials

Username	Password	Description
<input type="text" value="bridge_panel"/>	<input type="password" value="••••••"/>	<input type="text" value="main alarm on bridge"/>
<input type="text" value="vent_a"/>	<input type="password" value="••••••"/>	<input type="text" value="smoke ventilation A"/>
<input type="text" value="vent_b"/>	<input type="password" value="••••••••"/>	<input type="text" value="smoke ventilation B"/>
<input type="text" value="pag_medical"/>	<input type="password" value="••••"/>	<input type="text" value="paggers medical staff"/>
<input type="text" value="pag_engineer"/>	<input type="password" value="••••••"/>	<input type="text" value="paggers engineering staff"/>
<input type="text" value="backup"/>	<input type="password" value="••••"/>	<input type="text" value="backup alarming"/>

Active sessions...
Reports...
Save
Cancel

Port

The server port (TCP) on which ESPA-X clients connect to the ESPA-X server. The recommended port is 2023, but can be set to any free port. Setting the port to 0 disables the ESPA-X server.

Heartbeat interval

Set in seconds. If there are no activities from an ESPA-X client during this interval (i.e., no heartbeat ESPA-X messages are received), the respective ESPA-X client session will be terminated.

To avoid erroneous termination of a session, the Heartbeat interval set here should be set at least 20% higher than the heartbeat interval configured on the ESPA-X client.

Maximum client connections

The maximum of clients which can be connected to the ESPA-X server simultaneously. The recommend setting is 10.

Max parallel sessions

If multiple instances of the same client exist (e.g., in a redundant system), the maximum of allowed parallel sessions with the same client can be set here.

Client credentials

Enter the username, password and an optional description of all ESPA-X clients that connect to the configured server.

Active ESPA-X sessions can be monitored in real-time by clicking the Active sessions... button. Clicking on the Reports... button will list all past EXPA-X sessions.

Session ID	Client user	Client Address	Start time	End time	Status
a98814ac11f2410897349ebafa8655a9	vent_a	192.168.100.114	08.04.2024 16:03:35	08.04.2024 16:04:08	Client Logout
4896a07ce6b145629d984c8d151ff57a	vent_a	192.168.100.114	08.04.2024 16:01:55	08.04.2024 16:03:10	Client Logout
1c1af91202ae4524886b71115552033e	pag_engineer	192.168.100.154	11.09.2020 15:41:42	11.09.2020 15:42:49	Client Logout
a214168630634a4e8acf94a620f14c77	backup	192.168.100.102	23.07.2020 15:55:00	23.07.2020 15:57:04	Client Logout

More information about ESPA-X can be found in the [ESPA-X Server interface manual](#).

ESPA 4.4.4. Sources

You can configure up to 10 COM ports for ESPA 4.4.4. Sources (Alarm systems on the ship). When an alarm system detects a problem somewhere on board (e.g., a fire sensor detects fire in a cabin), the alarm system immediately informs Callisto Cruise by sending the respective ESPA messages via COM port. Depending on the calling source's address, the received alarm message will be pushed to any related alarm groups (see chapter [Alarm Groups](#)).

COM name	Bitrate	Databits	Stopbits	Parity	Handshake	RXlen	TXlen	RX timeout	TX timeout	DTR	Description
COM3	br_1200	db_7	sb_1	py_none	hs_none	4096	4096	5	5	Disabled	Fire Alarm 1
COM4	br_110	db_5	sb_1	py_none	hs_none	2	2	2	2	Enabled	Fire Alarm 2
COM5	br_110	db_5	sb_1	py_none	hs_none	2	2	2	2	Enabled	Smoke Vent A
COM6	br_110	db_5	sb_1	py_none	hs_none	2	2	2	2	Enabled	Manual Alarm

The dots on the left side of each ESPA source represent the current status of the COM ports. A green dot indicates an open port, a red dot means that the port is either closed or encountering an issue. Hovering over the dot will reveal more information on the current status.

Alarm groups

This tab lists all alarm groups. Each alarm group contains the configuration of a specific alarm's behavior when executed (e.g., prompt to display, ringtone, vibration, repetitions) as well as which target devices the alarm will be distributed to.

Settings Espa Configuration **Alarm Groups** SMCS Alarm Integration Alarm Reports

Alarm Groups Alarm Service

[+ Add](#)

Group Number ^	Description	Subject	Prompt	Ringtone	Vibration	Repetitions	RepetitionDelay	Minimum logged-in devices	Privileges
854	Fire Alarm	Fire detected!	Go to evacuation area	Alarm1.raw	1000:3000:8	3	5	All	2 Entries
943	Water Ingress	Flooding detected!	Pumps activated	Alarm1.raw	2000:1000:8	3	5	All	1 Entries
719	Engine Fault	Engine system error!	Check engine room now	Synth.raw	4000:3500:5	3	5	2	0 Entries
640	Hull Breach	Hull integrity alert!	Check lower deck immediately	Alarm2.raw	5000:500:8	3	5	5	3 Entries
598	Man Overboard	Man overboard!	Rescue team called	Horn.raw	2000:1000:8	5	5	All	3 Entries
460	Navigation Error	Nav system warning!	Manual check required	Synth.raw	1000:500:5	3	5	2	0 Entries
467	High Wind	Strong winds ahead!	Secure all open areas	Synth.raw	2500:1000:5	3	5	2	0 Entries

An alarm group is uniquely identified by the group number.

If an alarm group should be triggered by an ESPA source, the ESPA source's call address must be used as the group number.

Adding an alarm group

To add an alarm group, click on the Add button in the top-left corner and a dialog window will appear to configure the new alarm group.

Add Alarm Group

Group Number: ?

Description: ?

Subject: ?

Prompt: ?

Ringtone: ?

Vibration: ?

Repetitions: ?

RepetitionDelay: ?

Minimum logged-in devices: All ?

Group Number

The unique identifier for this group. Needs to be the

Description	same as the ESPA call address which should trigger this group alarm.						
Subject	A short text to describe the alarm group. Text to be shown as a push message's title on any phone that receives the alarm (maximum 32 characters).						
Prompt	Text to be shown as a push message's text body on any phone that receives the alarm (maximum 32 characters).						
Ringtone	The file name of the ringtone that will be used on any device that receives the alarm.						
Vibration	<p>Typing any text in this field will reveal a list of all available ringtones that match the entered text. Configure the vibration that will be activated on any device that receives the alarm.</p> <p>A vibration has the format vibrateDuration:silenceDuration:count.</p> <table border="0"> <tr> <td style="padding-right: 20px;">vibrateDuration:</td> <td>The duration of the vibration (set in milliseconds; value between 0 and 65536).</td> </tr> <tr> <td>silenceDuration:</td> <td>The duration of the silence after the vibration (set in milliseconds; value between 0 and 65536).</td> </tr> <tr> <td>count:</td> <td>The count of how often the vibration is repeated (value between 0 and 100).</td> </tr> </table>	vibrateDuration:	The duration of the vibration (set in milliseconds; value between 0 and 65536).	silenceDuration:	The duration of the silence after the vibration (set in milliseconds; value between 0 and 65536).	count:	The count of how often the vibration is repeated (value between 0 and 100).
vibrateDuration:	The duration of the vibration (set in milliseconds; value between 0 and 65536).						
silenceDuration:	The duration of the silence after the vibration (set in milliseconds; value between 0 and 65536).						
count:	The count of how often the vibration is repeated (value between 0 and 100).						
Repetitions	How often an alarm is repeated on a device if the alarm isn't answered.						
RepetitionDelay	The interval between alarm repetitions (set in seconds; values between 2 and 60).						
Minimum logged-in devices	The minimum number of devices that are required to be logged into the alarm group. Checking All will require all devices to be logged in.						

Privileges and editing alarm groups

There are two privileges that can be given to users regarding alarm groups:

- Edit: Permission to change the group's attributes (e.g., description, subject, prompt...), add and configure the destinations, or delete a group.
- Execute: Permission to activate the alarm for a group.

Administrators can edit and delete any alarm group as well as execute the respective alarms. Regular users need the appropriate privileges to edit an alarm group and/or execute an alarm. To edit user privileges, click on the Privileges column of any alarm group to access the group's privilege settings. Here, you can set which users and user groups have the privilege to edit/delete the alarm group or execute the group's alarm.

Alarm Groups Privileges - Fire Alarm

Name	Edit	Execute
Security staff	<input type="checkbox"/> Edit	<input checked="" type="checkbox"/> Execute
Scott.Williams	<input checked="" type="checkbox"/> Edit	<input checked="" type="checkbox"/> Execute
Clara.Stevens	<input checked="" type="checkbox"/> Edit	<input checked="" type="checkbox"/> Execute

New Entry:

+ Edit Execute Add

Users can only be selected for alarm group privileges if they meet the following criteria:

- The user has access to the Cruise Alarming instance (see chapter [User administration](#) in the Callisto Platform administration manual).
- The user has the privilege to access the *Alarm Groups* tab (see chapter [Setup](#)).

Likewise, when a user group is granted any privileges, only group members that meet those two criteria will effectively gain the selected privileges.

If a regular user creates a new alarming group, he will be automatically given the privilege to edit and execute the alarm group. The user can then remove his own privileges, but won't be able to restore them afterwards. A group without any privilege entries can only be edited by administrator users.

Alarm group destinations





Destinations icon

Alarm group destinations define the devices which receive alarms triggered by an alarm group. To edit the alarm group destinations, hover over an alarm group and click on the *Destinations* icon on the right side.

Alarm Service

Minimum logged-in devices	Privileges	
All	2 Entries	
All	1 Entries	
2	0 Entries	
5	3 Entries	

Alarm Group Destinations - Fire Alarm			
Destination IP ^	Description	Device Type	Login State
 247.207.9.21	Office Phone 210	Cisco Phone ▾	Logged in ▾
 247.207.9.26	Office Phone 211	Cisco Phone ▾	Logged in ▾
 247.207.9.32	Office Phone 220	Cisco Phone ▾	Logged in ▾
 247.207.9.34	Office Phone 221	Cisco Phone ▾	Logged in ▾
 247.207.179.48	Mobile Phone Deck Shift	Android ▾	Logged in ▾
 247.207.179.82	Mobile Phone Deck Backup	Android ▾	Logged out ▾
New Entry:			
 <input type="text"/>	<input type="text"/>	Cisco Phone ▾	Logged out ▾ <input type="button" value="Add"/>

For each destination, the following parameters can be set:

Destination IP
Description
Device Type

The IP address or DNS entry of the target.
An internal description of the target.
Set the device type for Cruise Alarming to use the appropriate protocols and ports for the push notification. The following device types are available:

- Cisco Phone
- Android
- SIP Phone

Login State

For Cisco Phones and Android devices, a Secure option is also available. With this options, a secure port is used for transmitting the alarm message (443 on Cisco Phones, 8443 on Android devices).
The device's login state. The state can also be controlled from the GUI. Changing state will be reflected on the device. The following states are available:

- Logged out
- Logged in
- Always logged in: With this option, it is not possible to log the device out from the GUI.



Activate Alarm icon

Users with the Execute privilege can immediately send the alarm to all destination devices by clicking the *Activate Alarm* icon on the right side of the alarm group.

SMCS alarm integration

SMCS Safety Monitoring & Control System integration provides integration with the Callisto module *SMCS Alarm*. Integration with SMCS Alarm allows the Cruise Alarming service to play pre-recorded messages to phones when an alarm is triggered.

SMCS Alarm Integration				Alarm Service
+ Add				
Group ^	Description	Number	SMCS Alarm Message ID	
854	Fire Alarm	CABIN %number%:Alarm	130	
943	Water Ingress	CABIN %number%:Alarm	132	
719	Engine Fault	%number%	187	
640	Hull Breach	1097	182	
508	Man overboard	%number%	130	

Group

ID/Number of the alarming group (alarm system). When alarm for that group is received call will be placed to the phone which number is defined in 'number' field

Description

A descriptive text about the alarm group/integration

Number

Number to which call will be placed (i.e., play a pre-recorded alarming message). The number can be static or be extracted from an alarm message (if possible).

The format for extraction must be provided by entering the text and placing the placeholder %number% where the actual number is written in the alarming message.

The system receives the following text message:

Fire alarm, sensor 8080 CABIN 1020:Alarm

To extract the phone number (in this case, 1020), the following expression can be used:

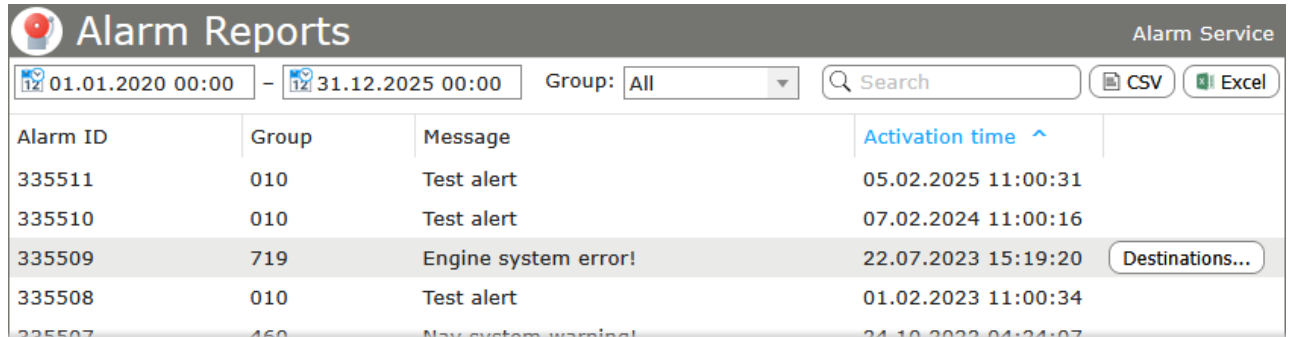
CABIN %number%:Alarm

SMCS Message ID

The ID of a pre-recorded message as defined in the *SMCS Alarm* module

Alarm reports

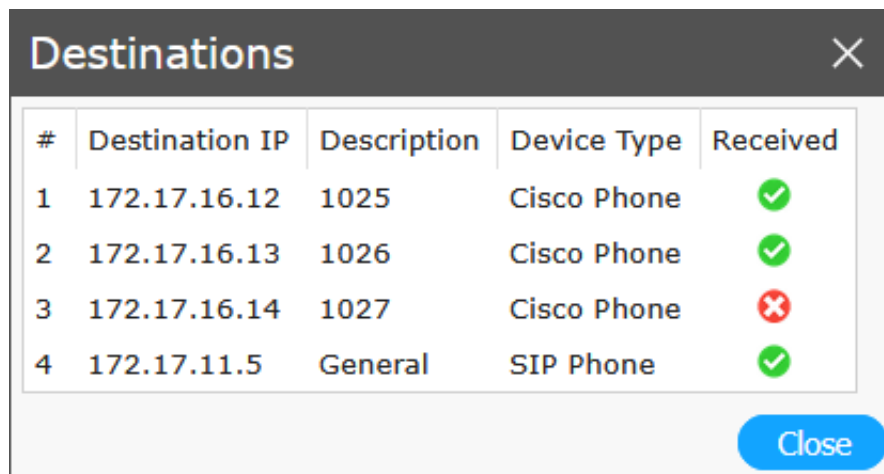
The *Alarm Reports* tab lists every occurrence when an alarm was triggered.



The screenshot shows the 'Alarm Reports' interface. At the top, there is a header 'Alarm Reports' and 'Alarm Service'. Below the header, there are filters for a date range (01.01.2020 00:00 to 31.12.2025 00:00), a 'Group' dropdown menu set to 'All', a search field, and buttons for 'CSV' and 'Excel'. The main content is a table with the following data:

Alarm ID	Group	Message	Activation time	
335511	010	Test alert	05.02.2025 11:00:31	
335510	010	Test alert	07.02.2024 11:00:16	
335509	719	Engine system error!	22.07.2023 15:19:20	Destinations...
335508	010	Test alert	01.02.2023 11:00:34	
335507	460	Nav system warning!	24.10.2022 04:24:07	

To show the alarms triggered during a certain time, set the time frame with the two date/time input fields on the top left corner. Selecting a group from the Group drop-down menu, only alarms of the selected group will be shown. With the search field, alarms can be filtered by any available metadata. Clicking the buttons labeled CSV or Excel will export the current report listing in the respective file format.



The screenshot shows a 'Destinations' dialog box with a close button (X) in the top right corner. The dialog contains a table with the following data:

#	Destination IP	Description	Device Type	Received
1	172.17.16.12	1025	Cisco Phone	✓
2	172.17.16.13	1026	Cisco Phone	✓
3	172.17.16.14	1027	Cisco Phone	✗
4	172.17.11.5	General	SIP Phone	✓

At the bottom right of the dialog, there is a blue 'Close' button.

Clicking on the button labeled Destinations... will show all the destinations to which the alarm was sent; the symbol in the column Received indicates whether the destination actually received the alarm message.



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CRUISE ALARMING

ESPA-X SERVER INTERFACE DESCRIPTION

ESPA-X Server interface description

Overview

The *Alarming* application handles alarms (i.e., configuring alarm groups and activating alarms) from different sources:

- ESPA 4.4.4 via COM ports
- via ESPA-X clients
- manually via the web GUI
- via REST web service



Services button

These alarms are sent as push messages to the configured groups of phones set as alarm destinations. The phone displays the most recent alarm message; the five most recent alarms can be viewed by pressing the *Services* button on the phone.

For more information on configuring an ESPA-X server, refer to the chapter [ESPA configuration](#) in the administration manual.

ESPA-X supported messages

LOGIN

To start a session, an ESPA-X client needs to send a REQ.LOGIN message immediately after the connection to the server is established. Every request coming before the REQ.LOGIN request will be refused with the response code 407 (*authentication required*).

If the login is successful, the server will send a RSP.LOGIN response with response code 200 (*OK*) and a *sessionID* will be provided.

During a session, the *sessionID* provided in the RSP.LOGIN response must be used in every request by the client.

LOGOUT

When the server receives a REQ.LOGOUT message from the client, the Callisto ESPA-X server will disconnect the client and terminate the connection.

HEARTBEAT

A HEARTBEAT message needs to be sent from the client constantly within the defined interval. If an interval passes without Callisto receiving a HEARTBEAT message, the client is disconnected and the session will be terminated.

P-START

When call/alarm is triggered from a client, a P-START message is sent. The most important fields in the P-START message recognized by the Callisto ESPA-X server are:

CP-GROUPID:	The group number (address) which identifies the group of destinations which will be notified. See chapter Alarm groups in the administration manual.
CP-TEXTMSG:	A text message which will be sent to all destinations of the alarm group.

When the P-START message is received, Callisto immediately notifies the alarm group via push notifications. Also, a response (RSP.P-START) is sent including the following fields:

RSP.P-START

RSP-CODE	A 3-digit response code. Callisto responds with either of these codes: <ul style="list-style-type: none">• 200: request processed successfully• 407: authentication required
RSP-REASON	A text relating to the RSP-CODE (either "OK" or "Authentication required")
CP-PR-REF	The process reference received from client in the P-START request
SP-PR-TAN	The process transaction number of the server

Immediately after RSP.P-START, Callisto sends the following indications to the client: P-STARTED and P-ENDED (on server side, the process is ended immediately after the push notifications have been sent).

P-STARTED

SP-STATUS	Always returns "Active"
SP-CREATED	The time when the process started
CP-PR-REF	The process reference received from client in the P-START request
SP-PR-TAN	The process transaction number of the server

P-ENDED

SP-RESULT	None
SP-ENDREASON	Always returns "Finished"
SP-CREATED	The time when the process ended
CP-PR-REF	The process reference received from client in the P-START request
SP-PR-TAN	The process transaction number of the server
CP-GROUPID	The group number (address) which identifies the group of destinations which will be notified. See chapter Alarm groups in the administration manual.
CP-PHONENO	The phone number to which call is addressed

P-STOP

The *Process Stop* request message (REQ.P-STOP) is supported by Callisto but doesn't have any effect on the process control because Callisto sends push notifications to a group of endpoints. Currently, this request is reserved for future use. Callisto always responds with 200 "OK" upon receiving a RSP.P-STOP message.



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CRUISE ALARMING

CRUISE ALARMING MOBILE MANUAL

Overview

This chapter describes the purpose of the Cruise Alarming Mobile application, its intended audience, and its platform and version requirements.

Purpose

The Cruise Alarming Mobile application is designed to receive and display alarms transmitted from the Alarm Service application. By implementing the CiscoIPPhone XML protocol, it offers a flexible solution that can serve as a complete replacement for, or operate in parallel with, existing Cisco Wireless IP phones.

Audience

This manual is specifically intended for users of the Android client application.

Documentation Reference

It is assumed that the Alarming Mobile application has been configured correctly and is fully operational prior to using this guide. Detailed instructions for the configuration process are available in the **Application Configuration Manual**.

Platform Requirements

Item	Requirement
Platform	Android mobile devices only
Application version	2.0.0
Protocol	CiscoIPPhone XML
Backend service	Callisto Alarm Service with Phone Services URL endpoint

Installation

This chapter covers how to install the application, configure the Phone Services URL, grant the required system permissions, and set up alarm sound files.

Installation Methods

The application can be installed using any standard Mobile Device Management (MDM) platform, or manually by side-loading the generated .apk file from the device file system.

Phone Services URL Configuration

Upon the first successful launch after installation, all required permissions must be granted. The immediate next step is to configure the **Phone Services URL**. This URL connects the client application to the backend service and allows it to retrieve and display alarm history for the associated user groups.

The URL can be set in two ways:

- **Via MDM tool** — recommended for managed deployments. MDM configuration has higher priority and overwrites user configuration.
- **Manually by the user** — recommended for testing purposes only.

Note: To enable the *Alarm Groups Log in/out* feature, add the `version=2` parameter to the base URL.

MDM Configuration

The application supports managed configuration via the `service_address` attribute in the MDM IT admin console. The following parameters can be configured:

Parameter	Type	Description
<code>service_address</code>	string	Phone Services URL endpoint
<code>always_play_sound</code>	boolean	Play sound even in silent/vibrate mode
<code>notification_sound_volume</code>	integer (0–15)	Notification volume level
<code>save_logs</code>	boolean	Save application logs to file

Parameters set within the managed configuration have **higher priority** and cannot be changed via Intents.

Example VMware Workspace ONE Custom Settings XML:

```
<characteristic
  type="com.airwatch.androidwork.app:com.callistocruise.alarming"
  uuid="568bc89d-1df8-4ce9-a041-e5a24acdb7ec">
  <parm name="service_address"
    value="http://CALLISTO_IP_ADDRESS/Applications/Inbound/Alarm%20Service/src/
PhoneListAlarms.asp?version=2"
    type="string">
  <parm name="always_play_sound" value="True" type="boolean">
  <parm name="notification_sound_volume" value="10" type="integer">
  <parm name="save_logs" value="True" type="boolean">
</characteristic>
```

If the MDM console cannot read the configuration schema, use an Intent broadcast instead.

SOTI example:

```
sendintent -b "intent:#Intent;action=com.callistocruise.alarming.intent.action.SET_HOST_ADDRESS;S.service_address=http://CALLISTO_IP_ADDRESS/Applications/Inbound/Alarm%20Service/src/PhoneListAlarms.asp?version=2;end"
```

VMware Workspace ONE example:

```
mode=implicit,broadcast=true,  
action=com.callistocruise.alarming.intent.action.SET_HOST_ADDRESS,  
extraString=service_address=http://CALLISTO_IP_ADDRESS/Applications/Inbound/Alarm%20Service/src/PhoneListAlarms.asp?version=2
```

Sound Configuration

The application supports custom alarm sound files per alarm group. To use different sounds:

1. Place MP3 files in: /storage/emulated/0/Android/media/com.callistocruise.alarming
2. This folder is created automatically on the first app launch.
3. File names must exactly match the sound name defined in the group configuration.

Always Play Sound

The app can play sound even when the device is in Vibrate or Mute mode (subject to DND Alarms exception). Configure via MDM (always_play_sound attribute) or via Intent:

```
sendintent -b "intent:#Intent;action=com.callistocruise.alarming.intent.action.SET_ALWAYS_PLAY_SOUND;B.always_play_sound=true;end;"
```

Note: This option has no effect if the user has turned off Show Notifications for the app, or if the Alarms DND exception is disabled in phone settings.

Notification Sound Volume

Volume can be set from 0 (minimum) to 15 (maximum). Configure via MDM (notification_sound_volume attribute) or via Intent:

```
sendintent -b "intent:#Intent;action=com.callistocruise.alarming.intent.action.NOTIFICATION_SOUND_VOLUME;i.notification_sound_volume=15;end;"
```

Required Permissions

To ensure the application functions correctly and provides continuous alarm monitoring, the following permissions must be explicitly granted by the user at runtime.

Notification Permission

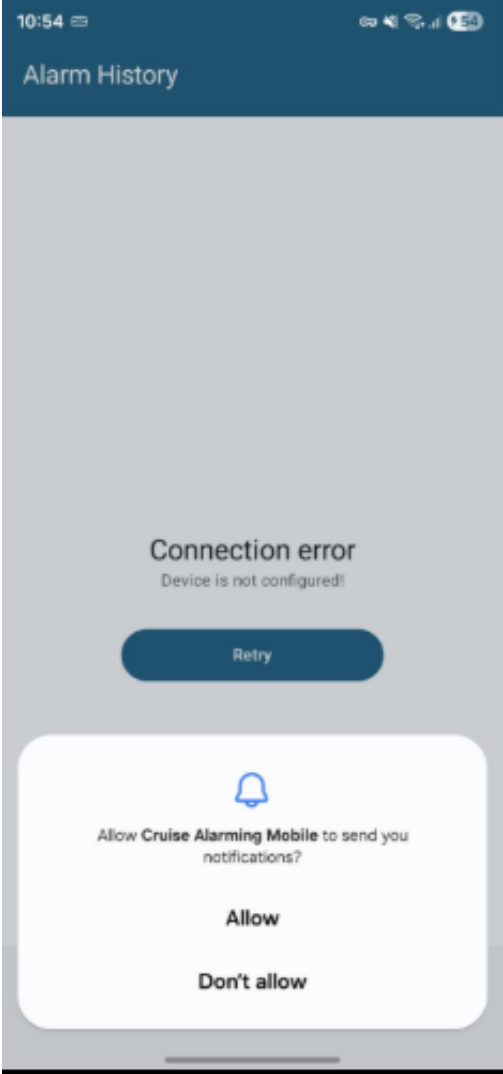
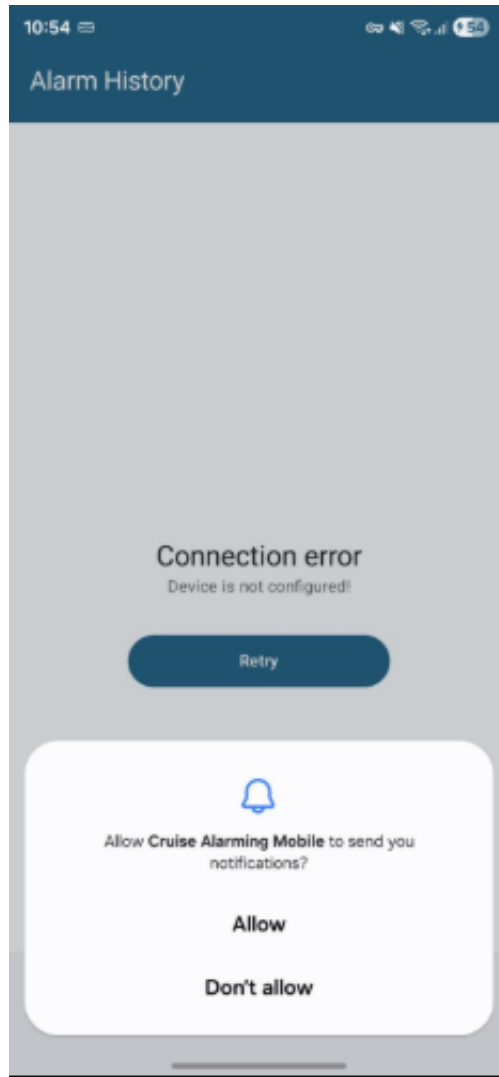


Figure 1: Notification Permission Dialog



Attribute
Type
Action
Impact if denied

Detail
Runtime Permission
Tap **Allow** in the system dialog.
No visual notifications or notification sounds will be received.

Appear on Top / Display over other apps

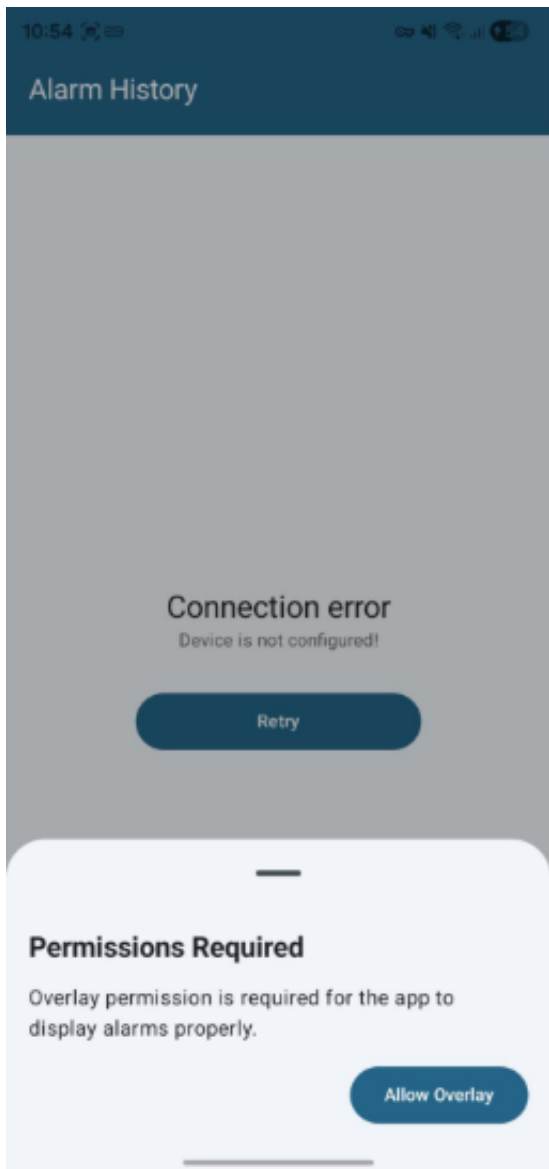


Figure 2: Overlay Permission Dialog

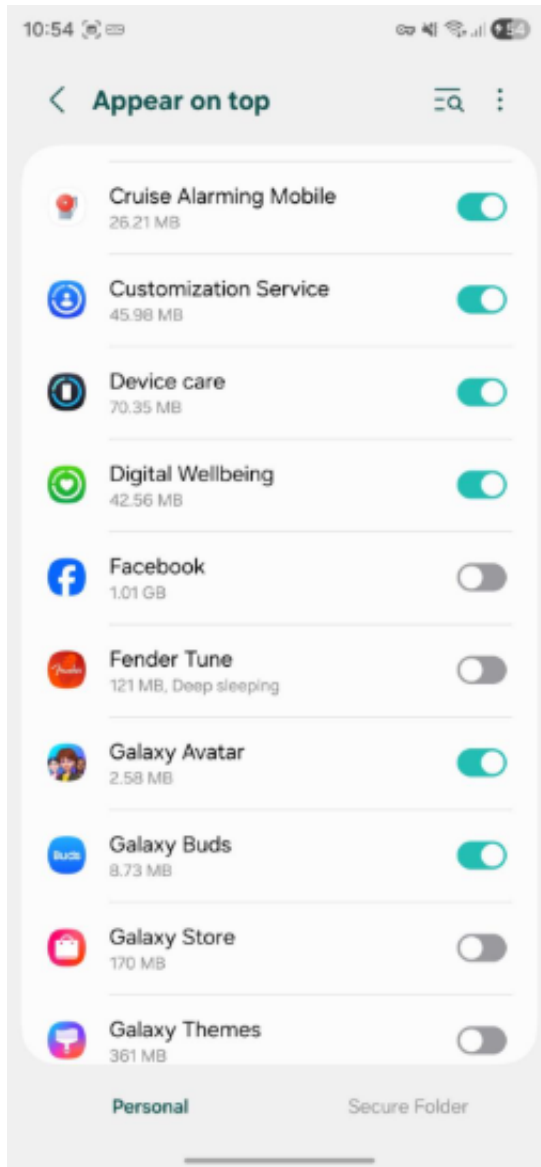


Figure 3: Appear on top — settings screen

Attribute

Type

Action

Impact if denied

Note

Detail

Special Permission

Tap **Allow Overlay**, then enable the toggle in the settings screen.

Service will not restart automatically on system boot; alarms may not display over other apps.

Required for Android OS versions higher than 10.

Do Not Disturb (DND) Access

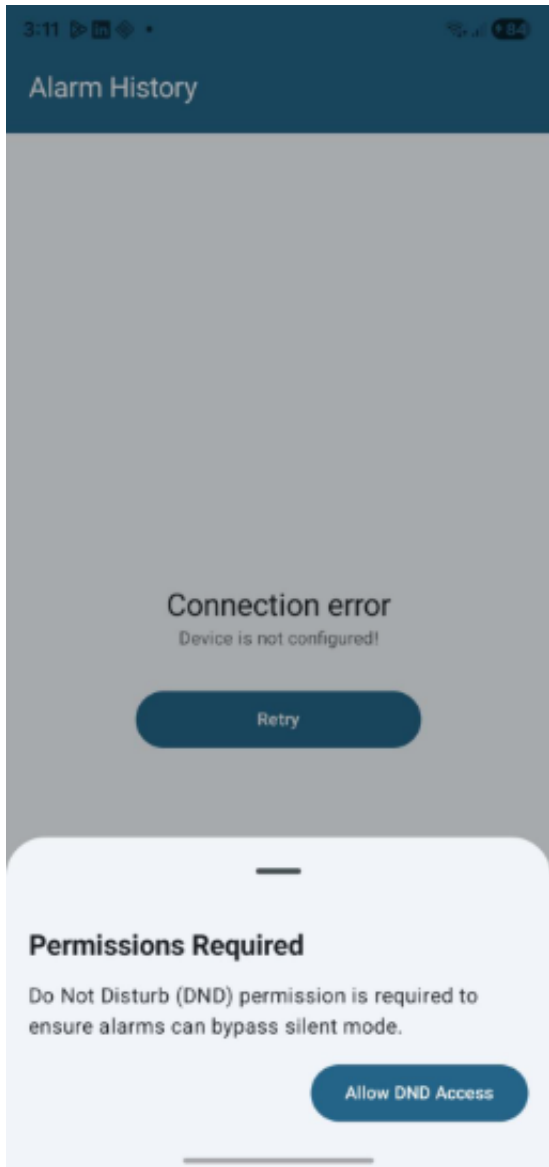


Figure 4: DND Access Dialog

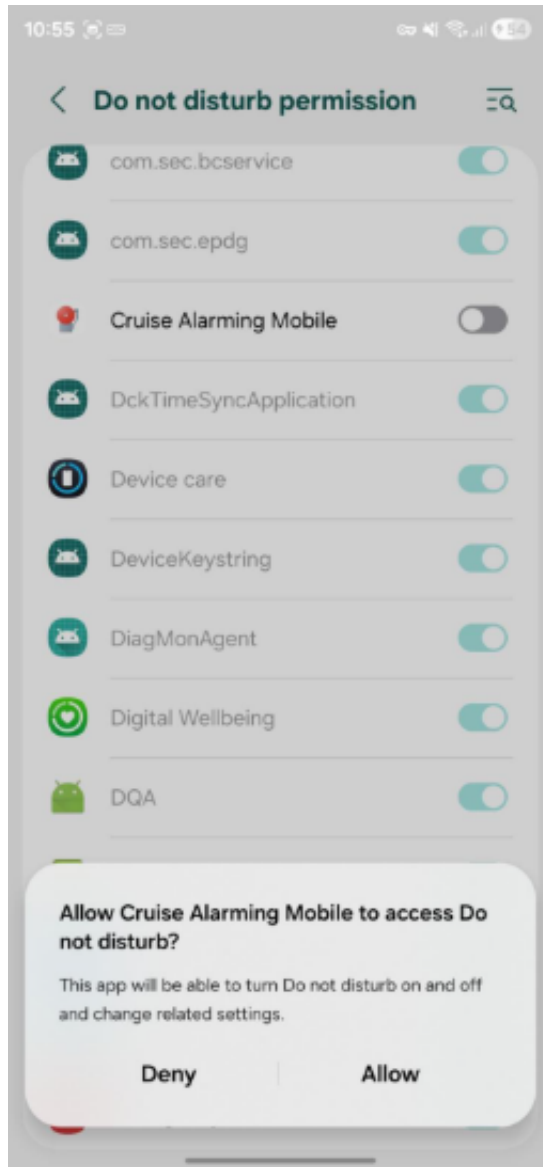


Figure 5: Do Not Disturb permission settings screen

Attribute
 Type
 Action
 Impact if denied

Detail
 Special Permission
 Tap **Allow**.

Alarms will be silenced by DND mode; the *Always Play Sound* feature will not work correctly.

Battery Optimization

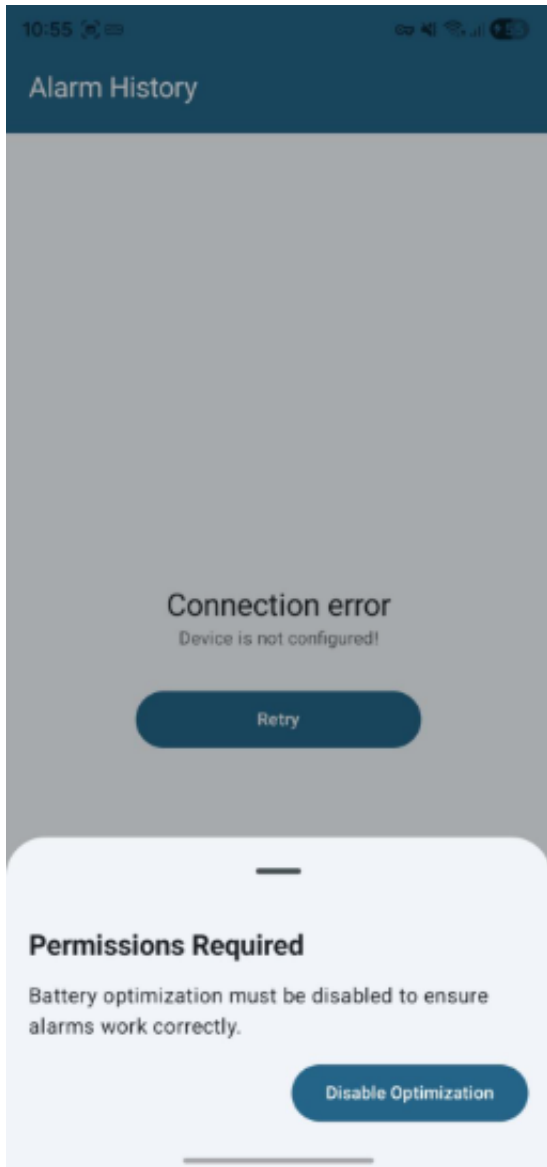


Figure 6: Battery Optimization Dialog

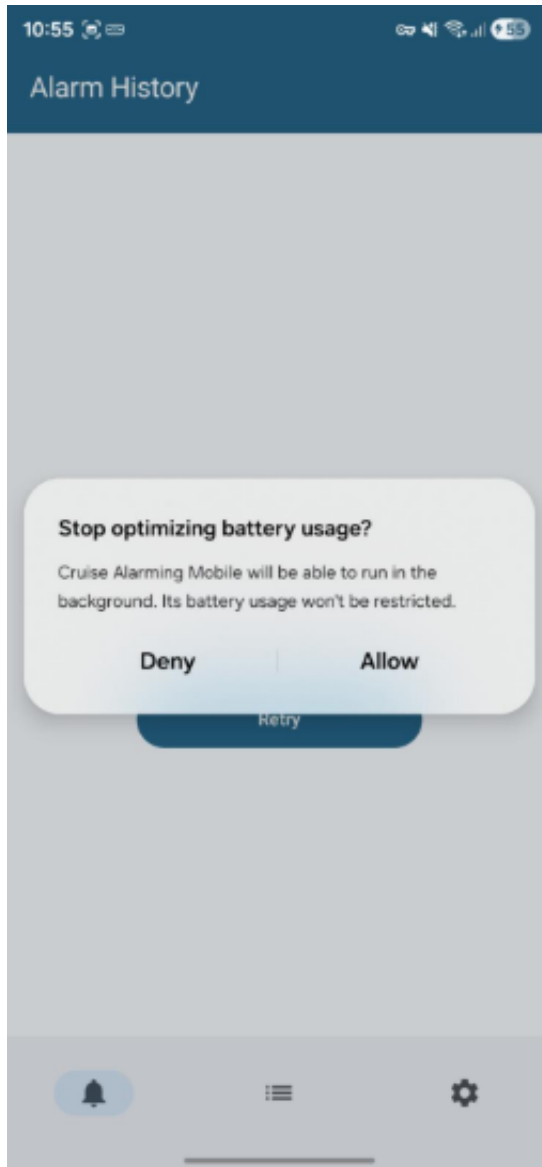


Figure 7: Stop optimizing battery usage dialog

Attribute
 Type
 Action
 Impact if denied

Detail
 Special Permission
 Tap **Allow** (Disable Optimization).
 The OS may restrict background operation,
 preventing timely alarm reception.

Background Service Behavior

The Cruise Alarming Mobile service starts automatically when the app is launched for the first time and remains active even after device reboot. The service is only stopped if the application is forcefully closed via **Force Stop** in phone settings.

UI overview

This chapter provides a high-level guide to the layout of the Cruise Alarming Mobile application. The design focuses on clarity and immediate accessibility — critical for an onboard alarming system where quick access to information is vital for safety and effective operation.

Main Screens

The application interface is structured around three main screens, accessible via the bottom navigation bar:

Screen	Icon	Description
Alarm History	Bell	A chronological log of all received messages and alerts.
Group Overview	List	Management and status view of different alarm groups.
App Settings	Gear	Configuration options for application behavior and notifications.

Bottom Navigation Bar

The bottom navigation bar is always visible across the three main screens, providing one-tap access to each section:

- **Alarms (Bell icon)** — Navigate to Alarm History.
- **Groups (List icon)** — Navigate to Group Overview.
- **Settings (Gear icon)** — Navigate to App Settings.

Alarm history

The Alarm History screen displays a chronological log of all received notifications and alarms within the application. It provides a quick reference for reviewing past events and their details.

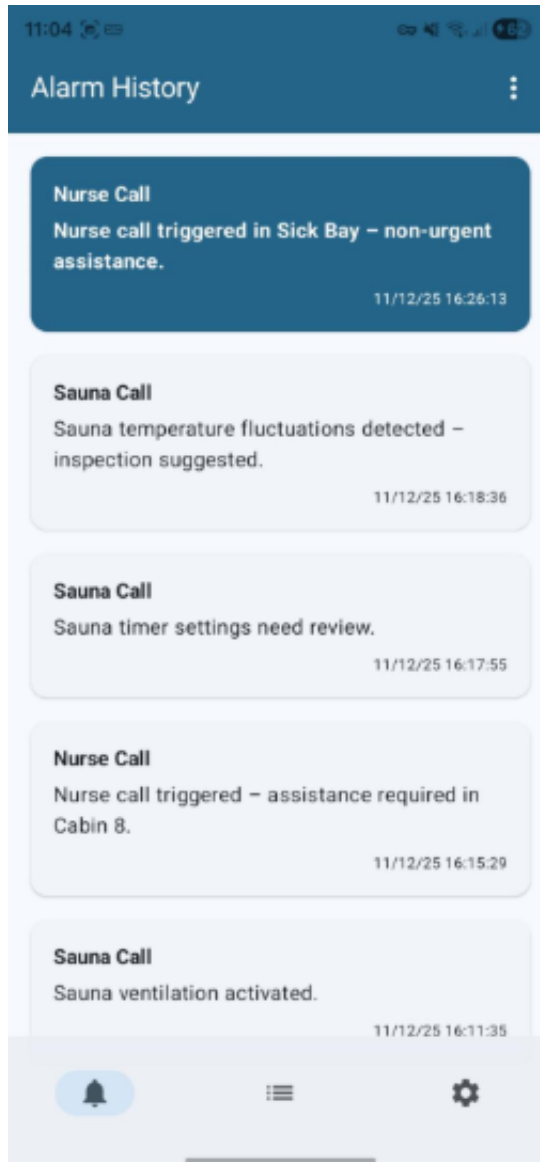


Figure 8: Alarm History screen

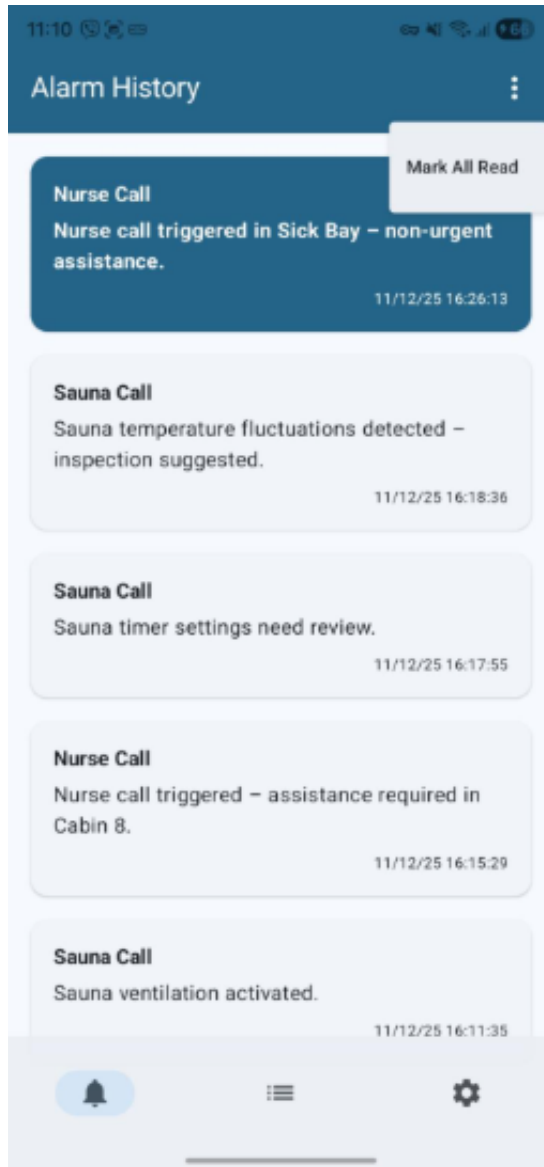


Figure 8: Alarm History with options menu open

Header Area

Element

Title

Options Menu (?)

Description

"Alarm History" displayed at the top of the screen.

Three vertical dots in the top-right corner open an overflow menu.

Options Menu

Action

Mark All Read

Description

Marks every active alarm in the list as read, clearing the blue unread highlight on all cards.

Event List Area

The central part of the screen contains alarm cards ordered chronologically, with the most recent event at the top.

Card Element

Group name

Description

Bolded text indicating the alarm source (e.g., *Sauna*

Card Element	Description
Description	<i>Call, Nurse Call</i> . A brief description of the alarm event.
Timestamp	Date and time the event occurred, shown in the bottom-right of the card.
Unread indicator	Blue card background denotes an unread alarm.

User Flow

Tapping on any alarm card performs two actions simultaneously:

1. Opens the **Alarm Details** screen with full information about the event.
2. Marks that specific message as **Read** in the list.

Alarm groups

The Alarm Groups screen allows users to manage and monitor different categories of alarms. It provides a quick overview of group statuses and allows for global status management through menu options.

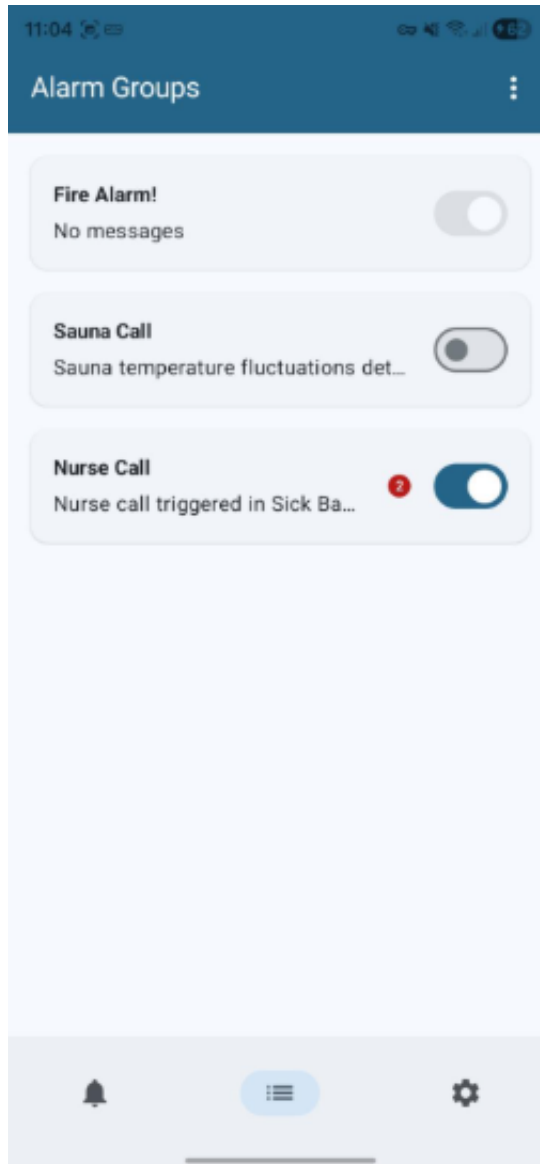


Figure 9: Alarm Groups screen

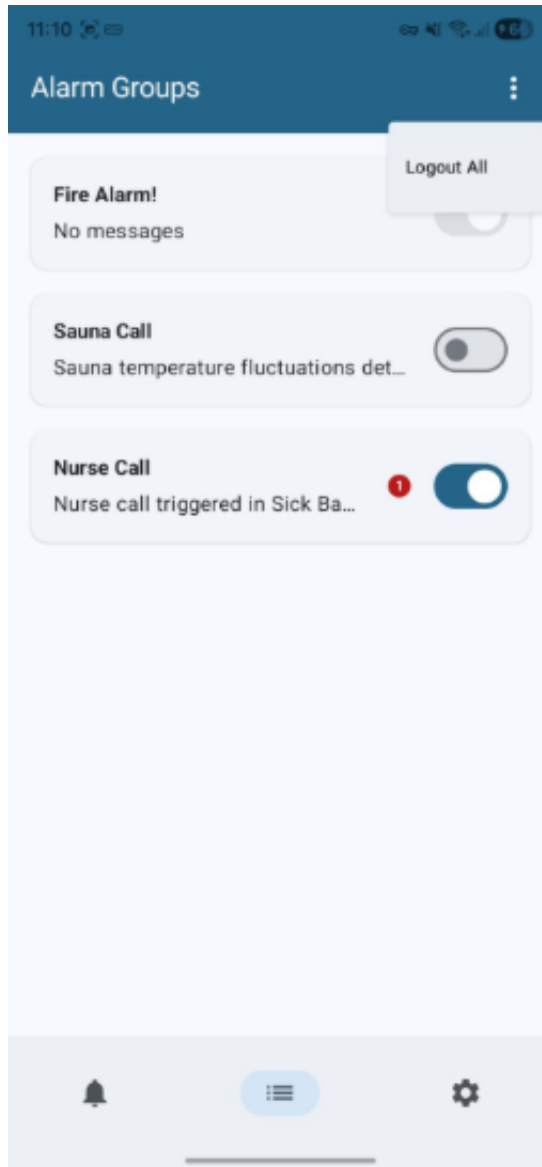


Figure 9: Alarm Groups with options menu open

Header Area

Element

Title

Options Menu (?)

Description

"Alarm Groups" displayed at the top.

Dynamic overflow menu — content depends on the user's current login state.

Options Menu

Action

Logout All

Login Last

Description

Logs the user out from all groups, except those configured as "Always Logged In" (e.g., Fire Alarm!). Reverts the status of all modifiable groups to the state they were in before the last mass logout.

Groups List Area

Card Element

Group Type

Description

Bolded group name (e.g., Fire Alarm!, Nurse Call, Sauna Call).

Card Element	Description
Description	Brief status or last message below the group name (e.g., "No messages").
Status Switch	Toggle switch indicating whether the group is active (receiving notifications). Grayed out for "Always Logged In" groups.
Unread Indicator	Red bubble showing the count of unread notifications for that group.

User Flow

- **Tapping a group card** opens a separate Group Details screen showing all alarms and notifications within that group.
- **Pull to refresh** — pull down on the list to fetch the latest statuses and messages from the server.

Settings

The Settings screen allows users to configure application behavior, including network information, appearance, debug options, server connection details, and sound preferences.

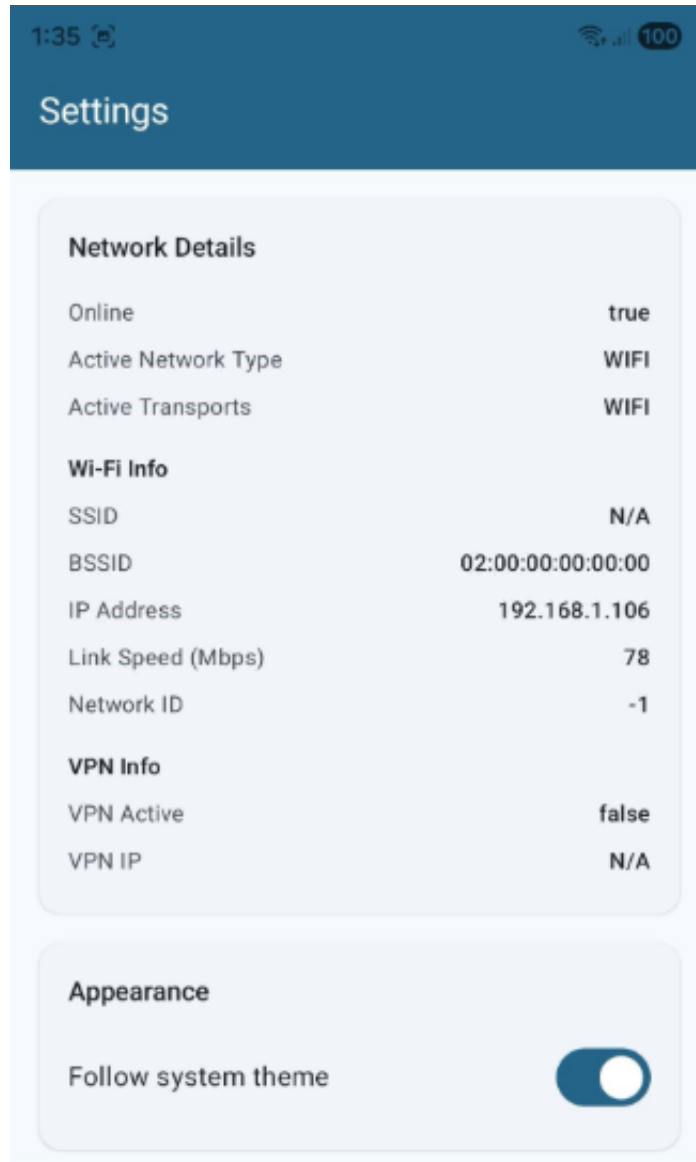


Figure 10: Settings screen

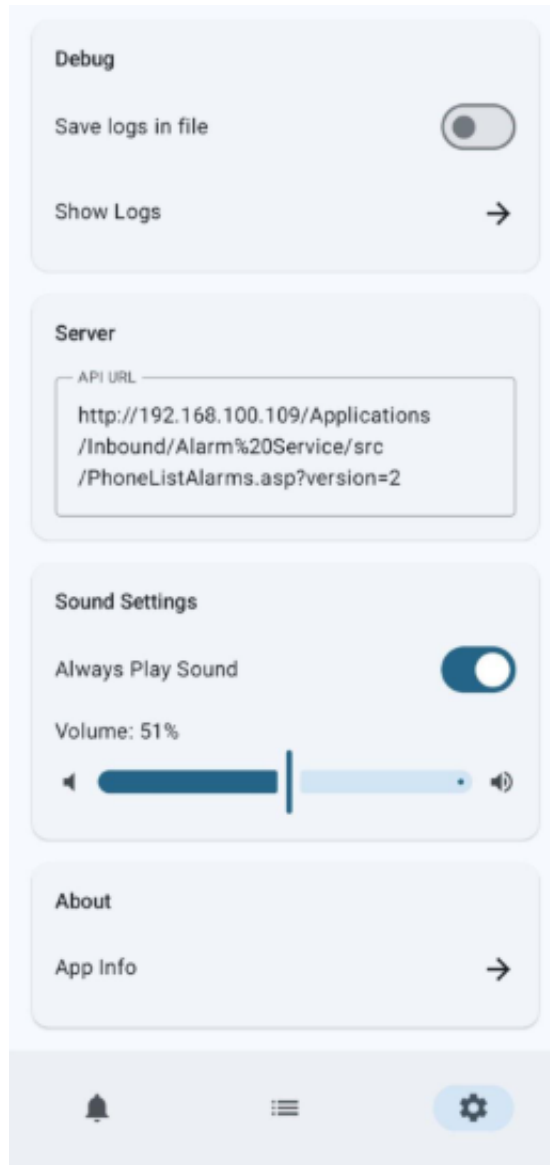


Figure 10: Settings screen (continued)

Network Details

This read-only section provides current network status and configuration information, including online status, active network type, active transports, Wi-Fi info (SSID, BSSID, IP address, link speed, network ID), and VPN info.

Appearance

Setting	Description
Follow system theme	Toggle to synchronize the app's theme (light/dark) with the operating system settings.
Dark Mode	Toggle to manually enable or disable dark mode.

Debug

Setting	Description
Save logs in file	Toggle to enable or disable saving application logs locally to the device.
Show Logs ?	Navigation link to the Log screen.
Share Logs ?	Navigation link to share log files via the standard

Setting

Description
system sharing sheet.

Server

Setting
Server URL

Description
Displays the HTTPS endpoint used to connect to the backend service (CALLISTO_IP_ADDRESS). This value is set via MDM or manually during setup.

Sound Settings

Setting
Always Play Sound

Description
Toggle to ensure notification sounds are always played, even in silent/vibrate mode (subject to DND and notification permissions).

Volume

Horizontal slider to adjust notification volume. Displayed as a percentage; internally maps to values 0–15.

About

Setting
App Info ?

Description
Navigation link to the [About](#) screen with version info, licenses, and copyright details.

Group details

The Group Details screen provides a chronological log of all received notifications and alarms belonging to a specific alarm group (e.g., "Nurse Call"). Events are ordered with the most recent at the top.

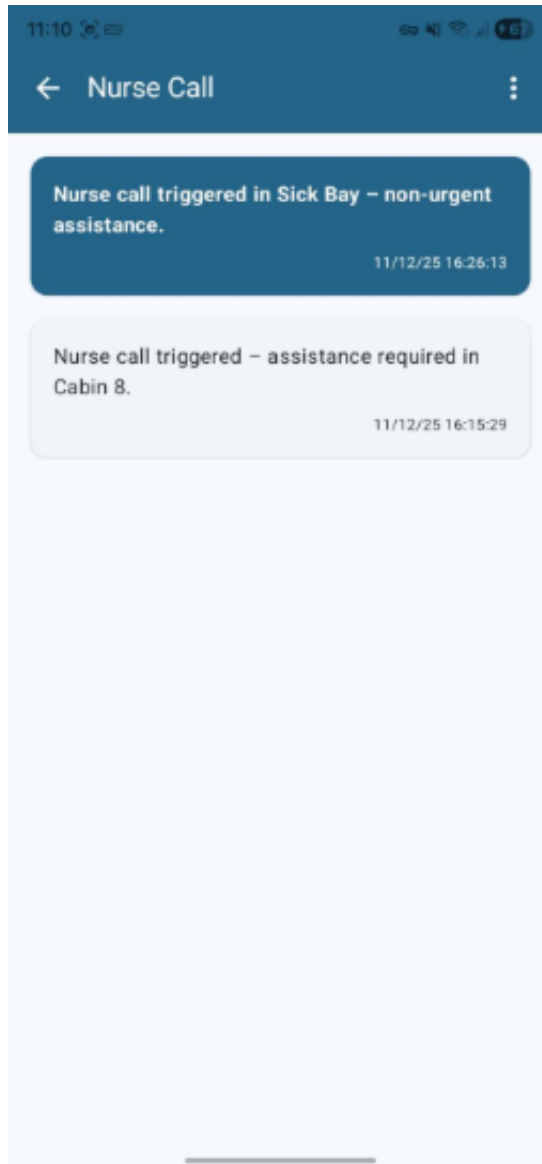


Figure 11: Group Details screen

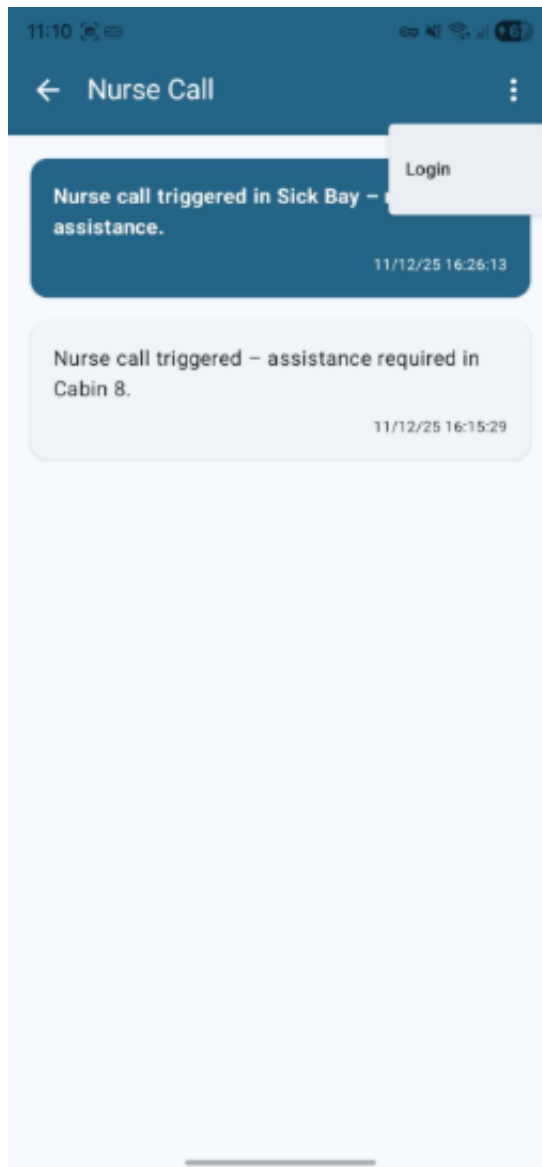


Figure 11: Group Details with options menu open

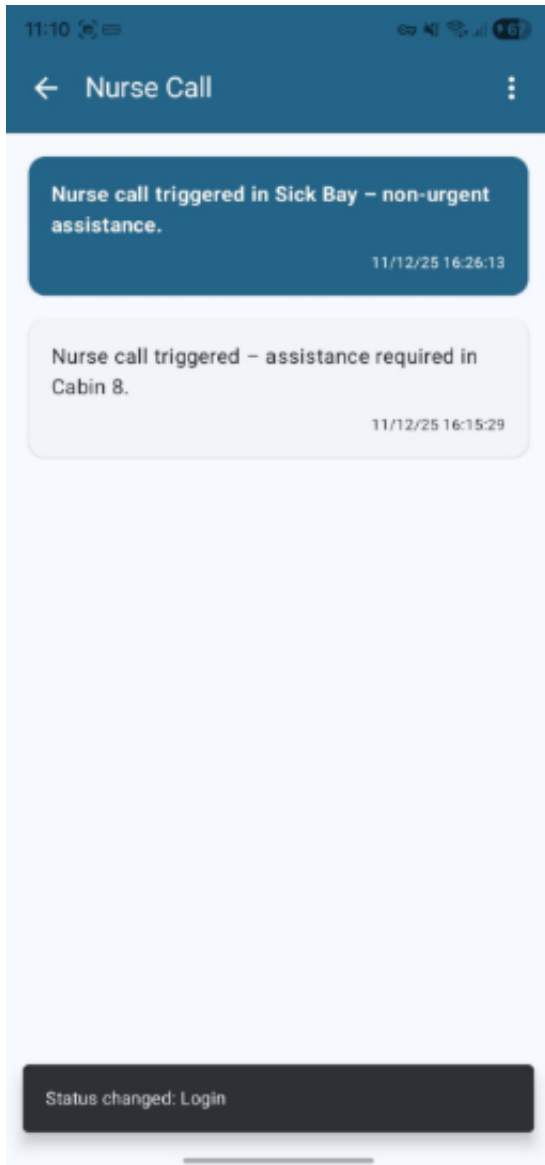


Figure 11: Login confirmation snack bar

Header Area

Element	Description
Title	Displays the name of the selected event group (e.g., "Nurse Call").
Back Button (?)	Returns to the previous screen or the main application dashboard.
Options Menu (?)	Overflow menu with Login/Logout actions for this specific group.

Options Menu

Action	Description
Login	Subscribes the user to alarms from this group. New alarms will be received for this category.
Logout	Unsubscribes the user from this group. No new alarms will be received for this category.

Upon successful login or logout, a temporary **snack bar** notification appears at the bottom of the screen to confirm the action.

Event List Area

Card Element	Description
Description	Brief alarm description (e.g., "assistance required in Cabin 8").
Timestamp	Date and time of the event in format DD/MM/YY HH:MM:SS, shown in the bottom-right of the card.
Status Indicator	Blue card background indicates an unread alarm.

User Flow

- **Tapping an event card** navigates to the Alarm Details screen for comprehensive information.
- **Pull to refresh** — pull down on the list to fetch the latest statuses and messages from the server.

Alarm details

The Alarm Details screen provides a detailed view of a specific alarm incident. It presents all relevant information about a single triggered event and guides the user toward an appropriate response or inspection.

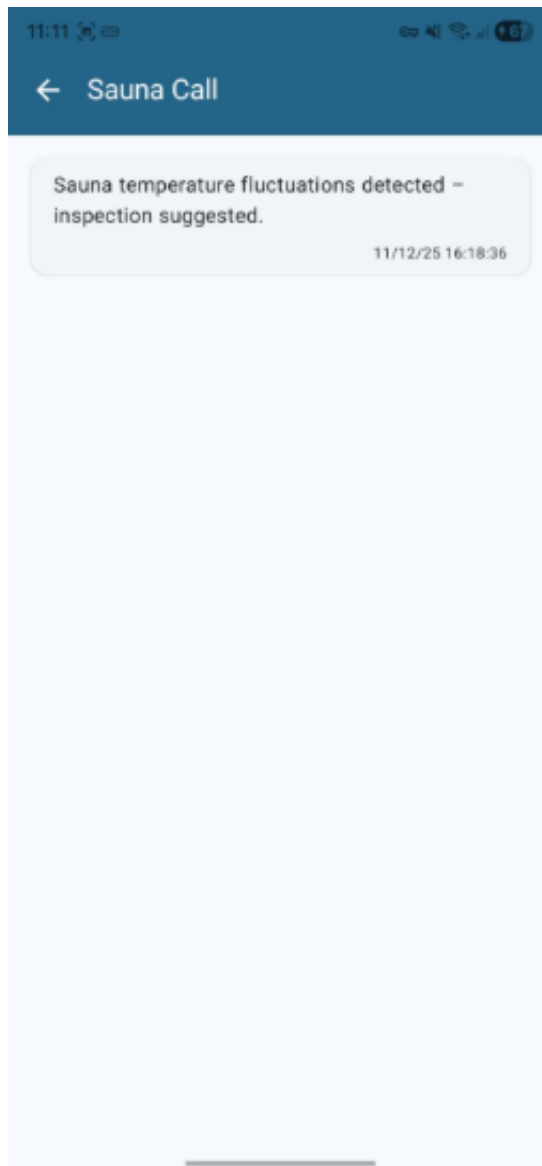


Figure 12: Alarm Details screen

Header Area

Element
Title

Description

Displays the event group source (e.g., "Sauna Call", "Nurse Call").

Back Button (?)

Returns to the previous screen or the main application dashboard.

Event Details Area

The central part of the screen contains a single card with the following details:

Element	Description
Description	A clear, action-oriented message specific to the event (e.g., "Sauna temperature fluctuations detected – inspection suggested").
Timestamp	Date and time of the event in format DD/MM/YY HH:MM:SS, shown in the bottom-right of the card.

“About” screen

The About screen provides general application information including the version number, legal disclaimers, and an interactive viewer for open-source software licenses.

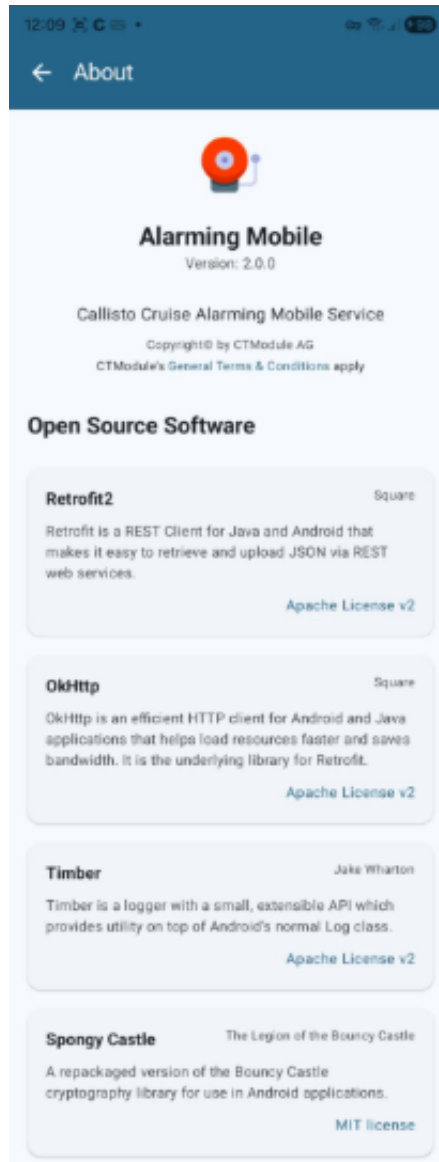


Figure 13: About screen



Figure 14: License details bottom sheet

Application Information

Field	Value
App Name	Cruise Alarming Mobile
Version	2.0.0
Service Name	Callisto Cruise Alarming Mobile Service
Copyright	Copyright © CTModule AG — General Terms & Conditions apply.

Open Source Software

This section lists the third-party libraries used in the application. Each entry shows the library name, author/organisation, a short description, and its license type.

Tapping on any license entry opens a **bottom sheet dialog** displaying the full text of the corresponding license agreement (e.g., the full Apache License Version 2.0 text).

Logs

The Log screen displays a real-time activity log for the Alarming Mobile application. It serves as a debugging and administration tool, providing a detailed, chronological record of internal events, setting changes, network requests, and navigation within the app.

This screen is accessed from [Settings](#) ? Debug ? Show Logs.



Figure 15: Real-time log screen

Header Area

Element	Description
Title	"Log"
Back Button (?)	Returns to Settings.

Auto-Scroll Control

Control	Description
AUTO_SCROLL_ENABLED	Displays and controls the auto-scroll status . When ON, the screen automatically scrolls to the newest log entry as messages are generated.

Log Entries Area

Log entries are listed chronologically from oldest (top) to newest (bottom). Each entry contains:

Field	Example	Description
Timestamp	10:56:30	Exact time of the event.
Source/Module		The module or class responsible for the event.
Event Message	Server URL changed – restarting socket server	Detailed description of the action or status.

Sharing Logs

Log files can be shared via the standard system sharing sheet. Access this from [Settings](#) ? Debug ? Share Logs. Log file saving must be enabled via the **Save logs in file** toggle in Debug settings, or via the MDM save_logs attribute.

Fullscreen alarm

The Fullscreen Alarm is an interrupt-style full-screen alert view designed to notify the user of a triggered alarm regardless of what is currently displayed on their device. It is shown even when the app is in the background or the screen is locked, provided the Overlay permission has been granted.

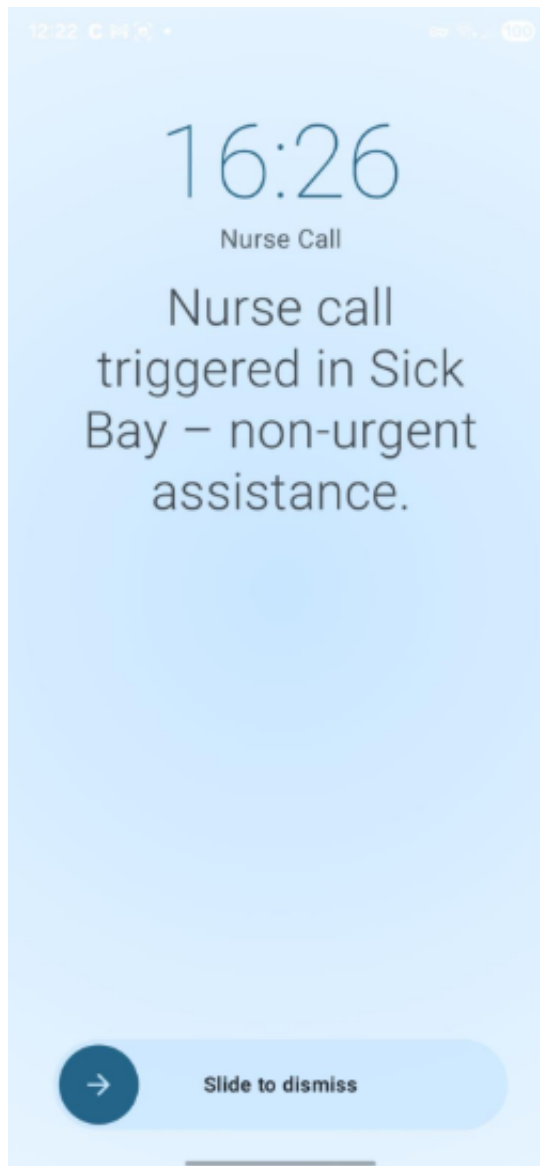


Figure 16: Fullscreen alarm

Screen Components

Element	Description
Timestamp	The time of the alert displayed prominently in large font (e.g., 16:26).
Group name	The alarm group labeled directly below the time (e.g., <i>Nurse Call</i>).
Message	A clear alarm message (e.g., "Nurse call triggered in Sick Bay – non-urgent assistance").

Element	Description
Slide to dismiss	A slide gesture at the bottom of the screen dismisses the fullscreen alarm.

Note: The Fullscreen Alarm requires the [Overlay Permission](#) to be granted. Without it, critical alarms may not be displayed over other apps.

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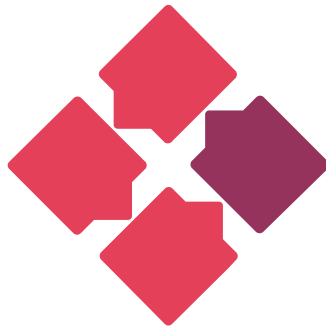
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