

# TeamCall Telephony Access Platform

## TeamCall CA Innovaphone

### Admin Guide

---

#### Document version

0.9                      December 19, 2024

See section 6 for an overview over the major changes in this document version.

**Note:** The Word change tracking mode only displays the major changes since the previous version of this document. Older changes (as well as minor changes like formatting, typo fixes or small rephrasings) have already been “accepted”.

# Contents

1	Overview .....	2
2	Setup of the innovaphone access app .....	3
2.1	Create the app object .....	3
2.2	Configure the app object .....	4
2.3	Review the app object .....	5
2.4	Grant access to innovaphone extensions .....	5
2.5	Use config templates to grant access .....	5
3	Installation of TeamCall CA Innovaphone.....	6
3.1	Run the installer.....	6
3.2	Installed files .....	7
3.2.1	Linux.....	7
3.2.2	macOS .....	7
3.2.3	Windows.....	7
4	Starting and stopping the service.....	7
4.1	Linux.....	7
4.2	macOS .....	7
4.2.1	Starting the service .....	7
4.2.2	Test if the service is running .....	8
4.2.3	Stopping the service .....	8
4.2.4	Restarting the running service .....	8
4.3	Windows.....	8
5	Configuring TeamCall CSTA Server .....	9
6	Change log.....	9

## 1 Overview

The TeamCall Telephony Access Platform (TAP) is a CTI solution to connect computer systems with telephone systems.

TeamCall CA Innovaphone is the TeamCall component that provides a connection to innovaphone systems.

TeamCall CA Innovaphone runs on Linux, macOS, and Windows.

This document describes the setup, configuration, and administration of TeamCall CA Innovaphone.

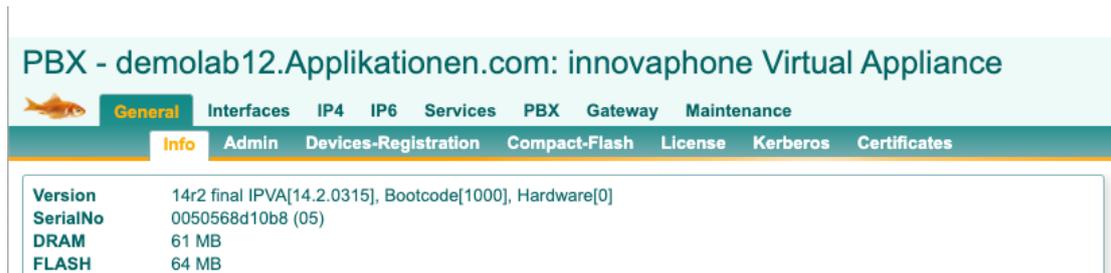
## 2 Setup of the innovaphone access app

The innovaphone system uses an app to control access to the APIs that are used by TeamCall CA Innovaphone. The access app is also used to configure which phone extensions shall be visible to TeamCall CA Innovaphone.

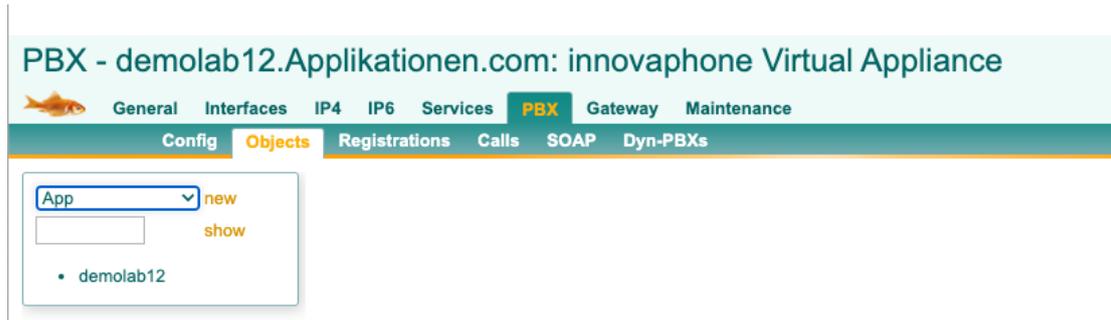
### 2.1 Create the app object

Open the innovaphone system's admin GUI in a web browser (using the actual hostname instead of <hostname>):

```
https://<hostname>/admin.xml?xsl=admin.xsl
```



Select the *PBX* tab, authenticate if asked, and select the *Objects* sub tab:



In the dropdown, select *App* and click *new*. This creates an app object in the phone system.

## 2.2 Configure the app object

A new window opens to configure the new app object. Start in the *General* tab:

The screenshot shows the 'General' tab of the app configuration window. The 'Description' field is empty, and the 'Hide from LDAP' checkbox is checked. The 'Long Name' field contains 'TeamCall'. The 'Display Name' field is empty. The 'Name' field contains 'TeamCall'. The 'Password' field contains six asterisks, and the 'retype Password' field also contains six asterisks. The 'Critical' checkbox is unchecked. Below these fields is a section for devices, with a table header: Hardware Id, Name, App, PBX Pwd, No IP Filter, TLS only, No Mobility, Config VOIP, and Re. The table has one empty row.

These three fields are mandatory:

- **Long Name**  
This name will be used to display the new app object in the list of objects in the innovaphone system.  
We suggest using the name *TeamCall* to indicate this app's purpose in the system's app list.
- **Name**  
CA Innovaphone will use this name to connect to the innovaphone system.
- **Password**  
This is the password that CA Innovaphone will use to access the innovaphone system.

The other fields are optional.

Next, switch to the *App* tab:

The screenshot shows the 'App' tab of the app configuration window. The 'URL' field is empty. The 'Icon URL (optional)' field is empty. The 'Modes' field contains 'mode1,mode2,...'. The 'Licenses' field is empty. The 'Plain website', 'Hidden', and 'Websocket' checkboxes are unchecked. Below these fields is a section for 'Grant access to APIs' with a list of APIs and checkboxes: PbxSignal, EpSignal, Messages, TableUsers, Admin, PbxApi (checked), Services, RCC (checked), and Impersonation (unchecked).

Grant access to the APIs *PbxApi* and *RCC*. These are the two innovaphone APIs used by TeamCall CA Innovaphone.

Click *OK* to create the app object with the specified configuration. The app configuration window closes and you're back in the main window.

## 2.3 Review the app object

To review the new app object, use the *show* link to list all objects in the innovaphone systems (users, apps, ...). The list includes the new app *TeamCall*.

To limit the displayed list, use the filter field to the left before clicking the *show* link:

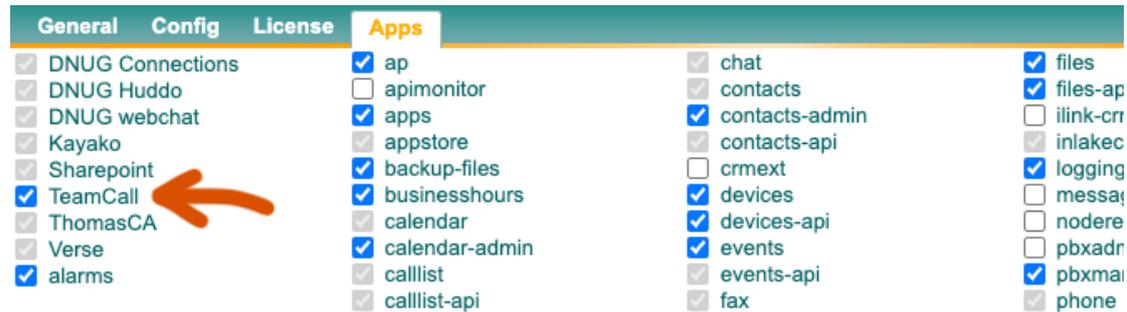


## 2.4 Grant access to innovaphone extensions

TeamCall CA Innovaphone can only access an innovaphone extension if this has been allowed in the configuration of the extension's user.

Each user object in the innovaphone system has a list of associated apps. These are the apps that are available to the user. Making the new app (*TeamCall*) available to a user allows TeamCall CA Innovaphone to access the user's telephone extension.

To do so, search for the user in the list of innovaphone objects, open the user, and switch to the *Apps* tab. Activate the *TeamCall* app by setting the check mark:



Please note that the list of apps is sorted so that it starts with upper case app names, followed by lower case app names.

## 2.5 Use config templates to grant access

The innovaphone system uses config templates to allow to configure groups of users instead of having to do so individually for each user.

Typically, the system contains at least the two config templates *Config Admin* and *Config User* (respectively containing the administrators and the regular users).

To grant TeamCall CA Innovaphone access to the whole user group, open the group object, switch to the *Apps* tab and activate the *TeamCall* app there.

For example, doing this in the *Config User* object will grant TeamCall CA Innovaphone access to the extensions of all users.

## 3 Installation of TeamCall CA Innovaphone

### 3.1 Run the installer

The product zip file contains command line scripts for installation on Linux, macOS, and Windows.

Use a bash shell to start the installation scripts on Linux and macOS, use the Windows command prompt to start the installation script on Windows.

The script needs to run as administrator. Start the Windows command prompt as administrator before running the script or use `sudo` on Linux and macOS.

The script needs to run from the installation folder. Use the `cd` command to switch to the unpacked zip folder before starting the installation script.

The installer will ask for six configuration values. In each case you can use the enter or return key to use the default value that is being displayed.

- **Innovaphone App URL**  
This is the URL used by TeamCall CA Innovaphone to connect to the innovaphone system. It should be set as follows:  
`ws://<hostname>/PBX0/APPS/websocket`  
(using the actual hostname instead of `<hostname>`)
- **Innovaphone App name**  
This is the app name that was configured as the *Name* (not the *Long Name* or the *Display Name*)  
Example: TeamCall
- **Innovaphone App password**  
This is the password that was configured for the app.
- **CA service port**  
This is the TCP port that CA Innovaphone provides for connections from TeamCall CSTAServer. You will need to enter this port number in the TeamCall configuration (*Default.conf*).  
Example: 26002
- **CA node suffix**  
This is a suffix that is used to differentiate between multiple instances of CA Innovaphone (for cases where you need to set up multiple instances to connect to more than one innovaphone system).  
Use the default value 1 unless you need multiple instances.  
Note: multiple instances of CA Innovaphone are currently not supported on macOS.
- **CA installation path**  
This is the path of the folder into which CA Innovaphone will be installed.  
Use the default value unless you know what you are doing.

You will be asked to confirm your input before the actual installation takes place.

## 3.2 Installed files

### 3.2.1 Linux

*<documentation missing>*

### 3.2.2 macOS

The installer installs the following folders and files:

For TeamCall CA Innovaphone:

```
/Applications/TeamCall/CA Innovaphone/
```

For starting and stopping of the CA Innovaphone service:

```
/Library/LaunchDaemons/de.ilink.TeamCall.CA-Innovaphone.plist
```

By default, the folder `/Library` is not visible in Finder. You can access this folder as follows:

Select the Finder menu option *Go > Go to Folder...*

A small input window will open. Please enter the path `/Library` and click *Go*.

### 3.2.3 Windows

*<documentation missing>*

## 4 Starting and stopping the service

### 4.1 Linux

*<documentation missing>*

### 4.2 macOS

#### 4.2.1 Starting the service

The following command registers the TeamCall CA Innovaphone service as macOS launch daemon, so that it will be started automatically when the computer is restarted (it also starts TeamCall CA Innovaphone right away):

```
sudo launchctl load /Library/LaunchDaemons/de.ilink.TeamCall.CA-Innovaphone.plist
```

If the following message appears, the service had probably already been registered as a launch daemon (the service will still be started if it was only registered, but did not run):

```
Unload failed: 5: Input/output error
```

### 4.2.2 Test if the service is running

The following command shows a list of all running processes whose name contains the string `ca_innovaphone.jar`:

```
ps auxww | head -1; ps auxww | grep -v grep | grep -i
ca_innovaphone.jar
```

If TeamCall CA Innovaphone is running, you'll see an appropriate line below the header line (spread over four lines in the following example due to lack of space):

```
USER          PID  %CPU %MEM    VSZ   RSS  TT  STAT  STARTED      TIME  COMMAND
root          19156  0,0  0,3 413702272 101712  ??  Ss    11:56pm    0:00.79 /usr/bin/java
-Xmx300m -Dinnovaphone_ca_config=config/ca_config.properties -Dlog4j1.compatibility=true
-Dlog4j2.configurationFile=config/ca_innovaphone_log4j-config.xml -jar
/Applications/TeamCall/CA Innovaphone/lib/ca_innovaphone.jar
```

If however, the only output is the header line, the service is not running:

```
USER          PID  %CPU %MEM    VSZ   RSS  TT  STAT  STARTED      TIME  COMMAND
```

### 4.2.3 Stopping the service

The following command stops TeamCall CA Innovaphone und also deregisters the service as a macOS launch daemon, so that it will no longer be started automatically when the computer is restarted:

```
sudo launchctl unload /Library/LaunchDaemons/de.ilink.TeamCall.CA-
Innovaphone.plist
```

If the following message appears, the service had probably already been deregistered as a launch daemon:

```
Unload failed: 5: Input/output error
```

### 4.2.4 Restarting the running service

If you would like to restart the running TeamCall CA Innovaphone service (for example after the configuration has changed) just run both commands:

```
sudo launchctl unload /Library/LaunchDaemons/de.ilink.TeamCall.CA-
Innovaphone.plist
sudo launchctl load /Library/LaunchDaemons/de.ilink.TeamCall.CA-
Innovaphone.plist
```

## 4.3 Windows

*<documentation missing>*

## 5 Configuring TeamCall CSTA Server

From the point of view of TeamCall CSTA Server, TeamCall CA Innovaphone serves as a stand-in for the actual innovaphone system.

So, you'll configure CSTA Server to connect to CA Innovaphone instead of to the phone system.

To do so, configure the following settings in the TeamCall CSTA Server configuration file *Default.conf*:

```
# -----  
# Phone system type  
# -----  
  
pbxType = hipath8000          ← this is not a typo – DO NOT use pbxType innovaphone  
  
# -----  
# TCP/IP address and port of phone system's CTI interface ← in this case: CA Innovaphone  
# -----  
  
cstaLinkAddress = 127.0.0.1  ← assuming that CA Innovaphone runs on the same host as CSTA Server  
cstaLinkPort = 26002        ← the CA service port specified during installation of CA Innovaphone
```

## 6 Change log

This is an overview of the highlights of the changes that have been made in this document. The latest changes are on top.

The numbers in parentheses reference section numbers.

Document rev. 0.9 (2024-12-19)

- First version of this document, focusing on the setup on macOS.