

# innovaphone Widgets

## Installation Guide



**WebRTC**  
by innovaphone

**innovaphone**

PURE IP COMMUNICATIONS

# Implementation

- ❖ Requirements
- ❖ innovaphone PBX configuration
- ❖ Installation on the Web server
- ❖ Types of authentication
- ❖ Implementation on a Website and CD adaptation
- ❖ Troubleshooting

# Requirements

- innovaphone PBX Version 12r1 or higher, the myPBX Toolbox JavaScripts are included
- A port license with UC and WebRTC channel license
- Access to your own Web server, preferably with PHP support
- Encrypted connection to the Web server and the PBX with a valid SSL certificate
- Consent of employees whose picture and Presence information is to be displayed on the Web

# innovaphone PBX configuration

- Create a new user on the PBX (screenshot next page)
  - Select the name so that it can be recognised again
  - Telephone number is not necessary, as the user will not be called
  - Assign and remember a secure password
  - Don't forget the licenses, the WebRTC channel license is a dynamic license and is not tied to specific users.
- Create filters and assign to the new users
  - The trunk line for external calls should be blocked
  - Any number of black or white lists can be additionally defined

# New PBX user configuration

**General** | User | License | DECT | WebRTC

Type:

Description:   Hide from LDAP

Long Name:  Display Name:

Name:  Number:   Critical

E-Mail:

Password:  retype Password:

Node:   Local:

PBX:

Send Number:  URL:

Group Indications:

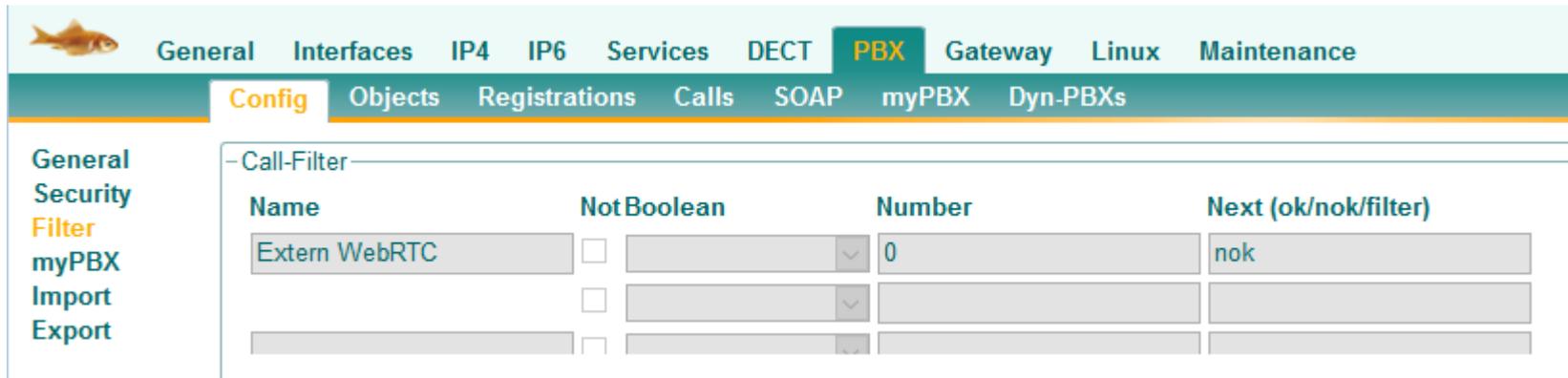
Config Template:

- Devices -

Hardware Id	Name	PBX Pwd	No IP Filter	TLS only	No Mobility	Config VOIP	Reverse Proxy
<input type="text" value="extern-web"/>	<input type="text" value="WebRTC"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Example configuration for the user "extern-web"

# Call filter configuration and assignment

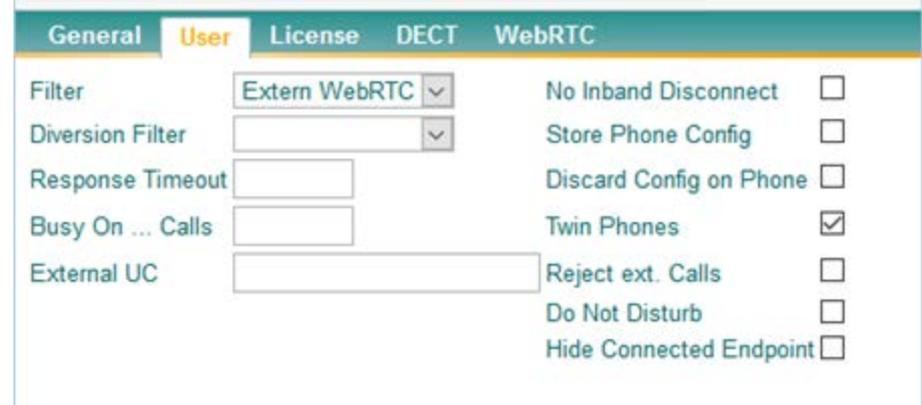


The screenshot shows the PBX configuration interface. The top navigation bar includes: General, Interfaces, IP4, IP6, Services, DECT, **PBX**, Gateway, Linux, Maintenance. The sub-navigation bar includes: **Config**, Objects, Registrations, Calls, SOAP, myPBX, Dyn-PBXs. On the left sidebar, the menu items are: General, Security, **Filter**, myPBX, Import, Export. The main content area is titled "Call-Filter" and contains a table with the following columns: Name, Not Boolean, Number, and Next (ok/nok/filter).

Name	Not Boolean	Number	Next (ok/nok/filter)
Extern WebRTC	<input type="checkbox"/>	0	nok
	<input type="checkbox"/>		
	<input type="checkbox"/>		

The new filter is defined under PBX, config, filter. The 'trunk line 0' is deactivated (see above) with the number "0" and "nok".

This filter is assigned to the new PBX user (see right)



The screenshot shows the PBX configuration interface for a user. The top navigation bar includes: General, **User**, License, DECT, WebRTC. The main content area is titled "User" and contains the following configuration options:

Filter	Extern WebRTC	No Inband Disconnect	<input type="checkbox"/>
Diversion Filter		Store Phone Config	<input type="checkbox"/>
Response Timeout		Discard Config on Phone	<input type="checkbox"/>
Busy On ... Calls		Twin Phones	<input checked="" type="checkbox"/>
External UC		Reject ext. Calls	<input type="checkbox"/>
		Do Not Disturb	<input type="checkbox"/>
		Hide Connected Endpoint	<input type="checkbox"/>



# Configuration of the subscriber who is presented online

Group Name	Online	Presence	On the phone	Presence note	Calls	Calls with Number
<input checked="" type="checkbox"/> extern-web	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Subscribers who are presented on the Web page should restrict their visibility for the new user

- Can be set by the administrator in PBX Administration (see above)
- Can be set by the subscriber in the myPBX interface (see right)
- Recommended: online status, presence and on the phone status, all other information is not necessary

Torsten Schulz  
- Deskphone IP232  
Was ich gerade mache...

innovaphone  
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Name oder Nummer eingeben...

Sichtbarkeit

@	<input checked="" type="checkbox"/>				
extern-web	<input checked="" type="checkbox"/>				

Neue URI hinzufügen...

# WebRTC license on the PBX

- is a "floating license", i.e. one license is used per connection
- number of licenses should not exceed the max. number of inbound connections.
- can be seen in the PBX configuration under "PBX - Config - General":

AppSharing12	100	1	1	0
UC12	100	33	33	0
QueueMonitor12	10	0	0	0
G729Channel	10	0	0	0
WebRTC12	5	5	5	0

OK Cancel

- once licenses have been imported, they have to be assigned to the PBX - on the same configuration page, slightly higher:

Max Call Duration (h)	<input type="text"/>
Max WebRTC calls	<input type="text" value="5"/> - Usage: 0 (max 0)
Group Default Visibility	Online Status <input checked="" type="checkbox"/> Presence <input checked="" type="checkbox"/> On the phone <input type="checkbox"/>

# Installation on the Web server

- Store the JavaScript, CSS, PHP, and other files on the Web server
- If necessary adjust the path
- You can place the files anywhere, but...
- ... if possible leave the files together, because a parameter in the configuration refers to this directory
- PHP file in a directory that is accessible externally, such as "root"
- Create and store images (photos, avatar) for internal subscribers
- Extend HTML page with JavaScript
- For business card view: Create a container for positioning
- Adjust to corporate design
- Test and share

# Directory structure

/js/\*.css

/js/\*.js

/js/\*.mp3

/js/\*.svg

/img/avatar\*.png

/WebRtcAuth.php

/index.html

If the path *js/* is changed, the value *pathPrefix* can be adjusted under *parameters*.

# Initialization

**File: index.html**

**Include required CSS files in the header**

**js files to be loaded preferably at the end of the HTML**

```
<script>
var parameters = {
    urlPbx: "wss://pbx.example.com/PBX0/WEBSOCKET/websocket",
    urlAuth: "https://www.example.com/WebRtcAuth.php",
    pathPrefix: "js/",
    companyName: 'Example AG',
    companyStreet: 'Str. 99',
    companyCity: '1234 City',
    companyTel: '0321/ 4444- 0',
    companyTrunk: '0321 / 4444',
    companyFax: '0321 / 4444- 9',
    companyEmail: 'info@example.com',
    supporters: [
        {name: 'Dummy 1', shortcut: 'd1', phone: '210', img: 'img/avatar1.jpg', email: 'dummy1@innovaphone.com', department: 'Development'},
        {name: 'Dummy 2', shortcut: 'd2', phone: '211', img: 'img/avatar2.jpg', email: 'dummy2@innovaphone.com', department: 'Sales'}
    ]
};
new innovaphone.widget.SideBarWidget(parameters);
new innovaphone.widget.CardWidget(parameters);
</script>
```

# Initialization

## *var parameters*

**urlPBX**: Secure Websocket connection to the PBX, adapt domain name, no IP address, SSL certificate on domain name

**urlAuth**: Adjust the authentication connection, domain name

**pathPrefix**: Directory in which the files are stored - with / at the end

**companyName, street, city**: is only displayed

**companyTel, fax**: is displayed in the SidebarWidget

**companyEmail** : is displayed in the SidebarWidget with link

**companyTrunk**: is displayed in the business card widget together with *supporters.phone*

## **supporters**:

**name**: is displayed

**shortcut**: is used for authentication to the PBX

**phone**: Internal telephone extension number is dialled

**img**: Link to avatar-image, 240 x 240 pixels, .png or .jpg

**email**: is linked with the button

**Department**: is only displayed

# Translations (optional)

## *var parameters*

```
,  
translations: {  
  available: 'Available',  
  unavailable: 'Not available',  
  call: "Call",  
  VideoCall: "Video call",  
  Email "E-Mail",  
  confirm: "The connection is cut off if you leave this Website. Please right click with the option open link in new tab. "  
  unsupported: "This browser does not support WebRTC"  
}
```

The text in inverted commas can be modified and translated.  
If there are no ***translations*** in place, English texts are shown.

Please note: When making changes to ***parameters***, a comma must be placed after the closing ] from ***supporters***.

# Positioning the business cards

```
<!-- CONTAINER WITH SUPPORTERS -->  
<div id="supporters-card-container">  
  
</div>  
<!-- // -->
```

An empty DIV-container is inserted in HTML code where the business card is to be displayed.

Responsive web design is used to display the business cards. The number of business cards that appear side by side is determined by the amount of space the browser has. This also works also for Web designs that have a fixed width.

# Types of authentication

- Authentication with SHA (recommended)
  - Password is not transmitted and can not be traced
  - Requires a PHP script on the server, which generates a key
  - The key is compared against the key on the PBX
  - The algorithm is modified upon each request
- Authentication with user name and password (not recommended)
  - Password is transmitted over the Internet and can be hacked
  - Does not require a PHP script
  - Is entered in `innovaphone.widget.BusinessCards.js` or `SideBar.js`

# Authentication with WebRtcAuth.php

```
<?php

// customer edit
$username= "extern-web";
$password= "pwd";
$realm= "innovaphone.com";

// get parameter
$sessionID= $_GET['SID'];
$serverNonce= $_GET['SNO'];

// random
$clientNonce= strval(mt_rand(1, mt_getrandmax()));

// PHP hash^function
$input = "innovaphonePbxWebsocket:ClientAuth:" . $realm . ":" . $sessionID . ":" . $username . ":" . $password . ":" . $clientNonce . ":" . $serverNonce;
$digest = hash("sha256", $input);

// output
echo '<?xml version="1.0"?>';
echo '<authentication>';
echo '<username>' . $username . '</username>';
echo '<clientNonce>' . $clientNonce . '</clientNonce>';
echo '<digest>' . $digest . '</digest>';
echo '</authentication>';

?>
```

# Authentication with WebRtcAuth.php

The variables ***\$username*** and ***\$password*** in WebRtcAuth.php must correspond to the specifications in the innovaphone PBX.



The screenshot shows the configuration interface for the PBX. The 'PBX' tab is selected. The 'Config' sub-tab is active. The 'System Name' field is highlighted with a red circle and contains the value 'innovaphone.com'. The 'PBX Name' field contains the value 'sifi'. The 'DNS' field contains the value 'pbx.innovaphone.com'. The 'Use as Domain' checkbox is checked.

PBX Mode	Master	
System Name	innovaphone.com	Use as Domain <input checked="" type="checkbox"/>
PBX Name	sifi	DNS pbx.innovaphone.com

The variable ***\$realm*** must correspond to the ***system name*** of the innovaphone PBX.

The information remains protected if the WebRtcAuth.php file source code cannot be seen externally. Both the PBX and the JavaScript generate the same hash for authentication. The next authentication uses another new hash, so that the process can not be resolved.

# Troubleshooting

- Use Firefox with the Firebug extension
- Open console and reload this page
- The following output is displayed if authentication is valid:

```
<?xml version="1.0"?>
<authentication>
<username>extern-web</username>
<clientNonce>1997851125</clientNonce>
<digest>c8c637dee5e09ce87d0954e337470c6b31015ec8f316e71cf177e3fd76e842b1</digest>
</authentication>
```

- Otherwise take account of the error messages displayed
- Let logging be shown on the console by re-activating the commented log-function in the... widget.\*.js file.

```
function logFunction(text) {
    //console.log("WebRTC demo: " + text);
}
```

# Good luck!

