

# Innovaphone Cloud PBX

## Background

The Innovaphone Cloud PBX uses a reverse proxy setup.

Registrations are used in each direction - one registration to jtel and one registration from jtel, to connect the two systems together.

## Compatibility

REQUIRES JTEL TELEPHONY SERVER V9

## Firewall Rules (jtel Side)

The following firewall rules are required on the jtel side. These will be configured on request by jtel.

IP Range	Destination	Protocol	Comments
85.115.9.96/27	jtel Cloud Instance Telephony IP Address	TCP and UDP	Allow in / out to innovaphone cloud. ufw allow from 85.115.9.96/27

## Users (jtel Side)

One user will be required for the connection.

The password on the jtel side can be set in the file:

```
<configuration_directory>/directory/default/<user>.xml
```

## Connection from Innovaphone PBX to jtel System

### SIP Connection

Create a SIP connection in the PBX:

General	Interfaces	SIP	GK	Routes	CDR0	CDR1	Calls
Interface	CGPN-In	CDPN-In	CGPN-Out	CDPN-Out	State	Alias	Registration
SIP1	jtelacd+						jtelacd:9 → 127.0.0.1

The following settings will be required:

Setting	Value	Comments
Name	jtelacd	For example.
Type	Provider	
Transport	TCP	
AOR	<user>@<jtel_cloud_telephony_ip_address>	The user on the jtel side AT the jtel system public IP address for telephony.
Local Hostname	The FQDN for the PBX.	For example 01234-pbx.innovaphone.com
Proxy	<jtel_cloud_telephony_ip_address>	The jtel system public IP address for telephony.
STUN Server	stun.innovaphone.com	
Authorization Username	<user>	The user on the jtel side.
Password	<password>	The password on the jtel side.
Media-Relay	On	
SRTP Keyx Exchange	No encryption.	Encryption will be supported in a future release.
No ICE	Set to ON (checked).	
No RTCP-MUX	Set to ON (checked).	
To Header when Sending INVITE	Called Party	
From Header when Sending INVITE	CGPN in user part of URI	
Identity Header when Sending INVITE	CGPN in user part of URI	
Internal Registration Protocol	H.323/TLS	
Gatekeeper Address	127.0.0.1	
Name	jtelacd	For example. Must be same as object created in PBX (see below).
Number	9	For example. Is the number used to route to the jtel system.
Password	<password_in_pbx>	The password of the object created in the PBX (see below).

## PBX Object

Create a PBX object as follows:

[Long Name](#)
[Name](#) «
 [No](#) « [HW-ID](#) «
 [Node](#) « [PBX](#) « [Filter](#) « [Groups](#) « [CF\\*](#) « [Fork](#) « [Config](#) « [Phone](#) « [Profile](#) « [Visibility](#) « [Rights](#) « [Type](#) « [Presence](#) « [Wakeup](#) «
   
 jtelacd    jtelacd    9    jtelacd    root    master    +    +    Gateway    +    127.0.0.1\*

The following settings will be required:

Setting	Value	Comments
Type	Gateway	
Name, Long Name, Display Name	jteldcd	For example. Needs to be the same as the name used to register internally above.
Password	<password_in_pbx>	

With these settings, it will be now possible to route calls TO the jtel system using the number 9 as a prefix.

## Routes

The following routes will be required. These are examples only:

From	To	Counter	CGPN Maps
SIP1:jteldcd	RS1:jteldcd	→	→
RS1:jteldcd	9 → SIP1:jteldcd	→	→

## Connection from jtel System to Innovaphone PBX

In the reverse direction, a registration from jtel to Innovaphone is required. This can be done directly with a second object in the PBX, by including the relevant profile either in the internal or external sip profile settings.

### jtel Configuration

Here is an example configuration:

```
<include>
  <gateway name="12345.innovaphone.com">

  <!--// account username *required* //-->
  <param name="username" value="jteldcd2"/>

  <!--// auth realm: *optional* same as gateway name, if blank //-->
  <param name="realm" value="12345.innovaphone.com"/>

  <!--// username to use in from: *optional* same as username, if blank //-->
  <param name="from-user" value="jteldcd2"/>

  <!--// domain to use in from: *optional* same as realm, if blank //-->
  <param name="from-domain" value="12345.innovaphone.com"/>

  <!--// account password *required* //-->
  <param name="password" value="jteldcd2"/>
```

```

<param name="gw-auth-acl" value="domains"/>

<!--// extension for inbound calls: *optional* same as username, if blank ///-->
<param name="extension" value="1000"/>

<!--// proxy host: *optional* same as realm, if blank ///-->
<param name="proxy" value="12345-pbx.innovaphone.com;transport=tcp"/>

<!--// send register to this proxy: *optional* same as proxy, if blank ///-->
<param name="register-proxy" value="12345-pbx.innovaphone.com;transport=tcp"/>

<!--// expire in seconds: *optional* 3600, if blank ///-->
<param name="expire-seconds" value="60"/>

<!--// do not register ///-->
<param name="register" value="true"/>

<!-- which transport to use for register -->
<param name="register-transport" value="tcp"/>

<!--How many seconds before a retry when a failure or timeout occurs -->
<param name="retry-seconds" value="30"/>

<!--Use the callerid of an inbound call in the from field on outbound calls via this gateway -->
<param name="caller-id-in-from" value="true"/>

<!--extra sip params to send in the contact-->
<!--<param name="contact-params" value="" />-->

<!-- Put the extension in the contact -->
<!--<param name="extension-in-contact" value="true" />-->

<!--send an options ping every x seconds, failure will unregister and/or mark it down-->
<!-- <param name="ping" value="25" /> -->

<param name="cid-type" value="rpid"/>

<!--rfc5626 : Enable rfc5626 ///-->
<!--<param name="rfc-5626" value="true" />-->

<!--rfc5626 : extra sip params to send in the contact-->
<!--<param name="reg-id" value="1" />-->
</gateway>
</include>

```

## PBX Object

Create a PBX object, in the same way as above, for the second user.

## jtel Portal Settings

The following settings will be needed in the jtel portal, to enable the trunk:

Setting	Value	Comments
Name	Innovaphone Cloud	
Country Code	49	For example
Area Code	199	For example
Internal Number Length	2	For example
Outgoing Trunk Selection Incoming Trunk Selection	Set to same trunk group	
Incoming Caller	E.164 incoming	
Incoming Called	E.164 incoming	
Outgoing Caller	Universal Formatter	
Converter Parameter	`\${NUM.X164}@12345.innovaphone.com`	For example. Replace with the DOMAIN of the PBX, not the FQDN of the PBX instance.
Outgoing Called	Universal Formatter	
Converter Parameter	sofia/gateway/internal::12345.innovaphone.com/`\${NUM.X164}@12345.innovaphone.com;fs_path=sip:12345-pbx.innovaphone.com;transport=tcp`	Note, in two places the DOMAIN is required, in the last place, which forms the route, the FQDN is required.
Outgoing send P-Preferred-Identity	Set to on (checked).	
P-Preferred-Identity (Dialler / click to dial - leg to agent)	<sip:%P.Asserted.Identity.Number%@12345.innovaphone.com>	Use the DOMAIN of the PBX, not the FQDN.
P-Preferred-Identity (All other cases)	<sip:%IFEQUALSTR(%CALLDIRECTION%,0,%CALLER%,%Service.ServiceNumbersRootNumber_%)%@12345.innovaphone.com>	Use the DOMAIN of the PBX, not the FQDN.

## Monitoring the PBX

The PBX is monitored using a SOAP connection and the FQDN of the PBX as in standard Innovaphone installations.