

innovaphone

V12

RELEASE 1



NEW DEVICES.
NEW SERVICES.
MORE SECURITY.



INNOVAPHONE PBX HIGHLIGHTS

VERSION 12 RELEASE 1 (12R1)

The telecommunications market is changing, the trend is moving towards All IP. At the same time, the traditional office workplace is moving towards modern Anywhere Workplace concepts, thus allowing the integration of mobile workers, which is becoming increasingly important. WebRTC offers unprecedented application possibilities such as, for example, the “Call Me button”. Cloud solutions are gaining increasing acceptance on the market, providing above all a lot of flexibility. With Version 12r1 of the innovaphone PBX, innovaphone is one of the first European manufacturers to introduce a Unified Communications cloud solution, in which the entire solution including hardware can be rented.

The cloud enables customers to outsource resources. However, Version 12r1 also ensures maximum security for All IP or Anywhere Workplace scenarios when using the on-site Unified Communications solution or the UC cloud solution.

In order to better meet the market’s new demands, innovaphone is combining the new software developments with an almost completely new generation of gateways. Faster VoIP gateways with more memory ensure the necessary power and the highest quality and security ‘made in Germany’.

NEW DEVICES.
NEW SERVICES.
MORE SECURITY.



IP112
PHONE



NEW GATEWAYS &
ANALOGUE ADAPTERS



MYPBX
MOBILE



VIDEO
CONFERENCES



WEBRTC



CALL ME
BUTTON



CONFERENCES
WITH WEBRTC



MYPBX
TOOLBOX



CLOUD



SIP PROFILES



SECURITY

IP112 IP PHONE

NEW DEVICES.



The IP112 all-round phone will be launched with Version 12r1. In terms of performance, the IP112 is equivalent to the IP222 and IP232 design phones.

The IP112 is perfect for telephony and unified communications usage. The intuitive innovaphone operating concept comes into play perfectly thanks to the large colour screen and the 16 dynamically assigned function keys. The user is conveniently guided through the various functions and apps.

In comparison to the IP111 entry-level model, the IP112 phone has an additional USB interface for headsets and a Gigabit Ethernet port. Both phones have the same housing with colour display and the standard innovaphone interface.

The integrated power supply via the Gigabit Ethernet cable (PoE) means that only one cable is required for operation, which is simply integrated in the base. An integrated Ethernet switch allows a computer or other network device to be connected to the local network.

The IP112 is designed to be both a desk phone and is suitable for wall mounting. The base ensures the phone is stable and at an optimal angle for use on the desk. The same base can be attached to the wall with two screws. The phone is attached to the base back-to-front and the cable is fed elegantly from below. A tab ensures the handset does not slip off.



At a glance

- Powerful all-round phone
- True-colour colour display
- 16 function keys
- 32 Partner keys
- Gigabit Ethernet network port
- Opus codec for HD voice quality
- USB headset port
- Loop-through in front of the PC
- Suitable for wall mounting

VoIP GATEWAYS

NEW DEVICES.



The new generation of VoIP gateways has much more power. With the powerful CPU and significantly increased memory, along with the software tailored specifically to this hardware, they fulfill all necessary tasks in record time.

The gradation of the gateways has been further adapted to customer needs. The IP311 is the only innovaphone gateway with analogue trunk channels and provides additional internal analogue ports. The IP411 replaces the IP302 and the IP305 with two BRI interfaces to the trunk and also has internal analogue ports. These two new gateways already comprise all interface licenses. The IP811, which replaces both the old IP800 and the IP810 with five BRI interface and ten conference channels, is a powerful mid-range gateway that meets all the requirements placed on a modern

PBX and Unified Communications platform. With the new IP0011 gateway, innovaphone now also offers a well-priced and powerful platform for known and new applications, such as for example the innovaphone SBC or the innovaphone Reverse Proxy (see from page 17) as well as the innovaphone PBX.

All new gateways include the option of running Linux AP as an application platform. The traditional Compact Flash card has been replaced with a slot for a mini SSD, and thus has a huge amount of space for optional Linux applications.

Last but not least, the new innovaphone gateways provide for even more brilliant HD voice quality, even with low-bandwidth thanks to the integration of two modern voice codecs: Opus and G.722.



IP311

PBX and UC in one box for analogue trunk connections or ALL IP

- Recommended for “all in one box” - PBX and UC installations up to 50 users
- 4 voice channels (FXO)
- 2 analogue subscribers (FXS)
- All hardware licenses included
- No conferences



IP411

PBX and UC in one box for ISDN connections or ALL IP

- Successor of the IP302 and IP305
- Combines the advantages of IP302 and IP305
- Recommended for “all in one box” - PBX and UC installations up to 50 users
- 4 voice channels (2 BRI)
- 2 analogue subscribers (FXS)
- All hardware licenses included
- No conferences



IP811

Future proof hardware concept including conferencing channels

- Successor of the IP800 and IP810
- Recommended for “all in one box” - PBX and UC installations up to 200 users
- Powerful processor and large memory
- 10 voice channels (5 BRI)
- 10 conference channels possible



IP3011

New top model for ISDN connections or All IP

- Successor of the IP3010
- Recommended for “all in one box” - PBX and UC installations up to 500 users
- 30 voice channels (1 PRI)
- 30 conference channels possible



IP0011

The “secret weapon” SBC, Reverse Proxy, Media Relay and PBX

- Successor of IP0010 with advanced application possibilities
- Recommended for structured PBX and UC installations up to 25,000 subscribers (possibly in combination with other gateways)
- Ideal as a platform for SBC or Reverse Proxy
- No conferences



IP1130

New powerful media gateway

- Successor of the IP1060
- Media gateway
- No PBX
- 30 voice channels (1 PRI)
- 30 conference channels possible

At a glance

- Linux AP included on each gateway
- 400 or 800 MHz CPU
- Larger memory
- Standard with Gigabit Ethernet
- Customer-oriented gradation
- mSATA slot for SSD hard drive
- Opus and G.722 voice codecs

IP29 ANALOGUE ADAPTER

NEW DEVICES.



The compact analogue adapter for eight analogue connections has been raised to the high-performance hardware platform of the new gateway series. It replaces the IP28 analogue adapter and is also available as a combi-pack with two IP29 including installation frame.

The new IP29 analogue adapter's 400 MHz processor and 256 MB RAM now provides more than enough power. In addition, the IP29 analogue adapter supports the Opus and G.722 voice codecs. Opus supports HD voice with low bandwidth, so that the bandwidth can be further reduced without reducing the voice quality even with analogue connections.



At a glance

- Eight analogue connections
- 400 MHz CPU with 256 MB memory
- Opus and G. 722 voice codec
- Powered by PoE

MYPBX MOBILE

NEW SERVICES.



The innovaphone UC client myPBX can be used as a web application on all browsers and operating systems. That's why myPBX can be used from any mobile device, regardless of whether it is an iPhone, iPad, Android phone, Windows phone or BlackBerry etc.

The mobility module allows mobile phones to be integrated in the innovaphone PBX. It recognizes you as an internal PBX subscriber so you can also take advantage of the features of the PBX. A separate server is not required because the Mobility solution is fully integrated in the innovaphone PBX.

innovaphone myPBX mobile is a combination of innovaphone Mobility and the innovaphone UC client myPBX, as well as apps like myPBX for Android or iOS (iOS presumably available in 12r2).

Since the innovaphone UC client myPBX is a browser solution, the PBX must be accessible via a public IP address for mobile access. For this purpose, the innovaphone PBX offers sufficient safeguards (see from page 18 "Anywhere Workplace"). As soon as the PBX is available, myPBX can log on from any mobile browser.

The combination of smartphone and myPBX mobile brings flexibility in all directions whilst offering the full functionality of an extension on the innovaphone IP

PBX. Once the innovaphone myPBX mobile is running, all favourites are visible, centrally managed contacts can be accessed and custom settings can be made. Set your own Presence whilst on the road to create more transparency in the team. Detailed call lists are also available for inbound and outbound calls. If a call is made using myPBX mobile, the call list synchronizes with the smartphone call list and the myPBX client on the computer. If a call is made using myPBX, the call list is compared to myPBX mobile, but not with the smartphone call list.

Every browser conveniently remembers the user's account and preferred device (for example, the smartphone).



At a glance

- One Number Concept
- Access to all contacts of the central PBX
- myPBX chat
- Can be used on any mobile device
- Presence, Favourites and Federation while out and about
- Use all of the advantages of a GSM mobile at the same time
- Synchronize call lists
- Integrate smartphones as business phones

VIDEO CONFERENCES

NEW SERVICES.



Get visual with innovaphone Version 12r1 conference calls. Conferencing is now possible via video telephony.

Video Conference features speaker recognition: if a conference is set up with several video telephony participants, the conference participant who is talking is shown on the screen. If you are speaking, you will see your own video image on the screen. Conference participants, who are connected without video are depicted with a blank placeholder on the screen. The innovaphone PBX saves computing power by only transmitting one video image, thus it requires no additional hardware resources.

The number of available channels depends on the number of licensed conference channels of the respective innovaphone VoIP gateway. At innovaphone, Conferencing takes place with the highest level of security and still remains very lean.

Furthermore, both innovaphone Application Sharing and Video are now possible for all conferences even with external parties thanks to WebRTC (see p. 10 "WebRTC - Conferences").

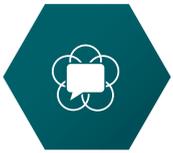


At a glance

- Conferencing now also with video
- The speaker is shown on the screen
- Integration of external parties via WebRTC

WEBRTC

NEW SERVICES.



All devices on the innovaphone PBX have been compatible with the browsers that support WebRTC technology since Version 11. Version 12r1 now brings completely new opportunities for WebRTC with the innovaphone PBX.

In addition to real time connections for voice, it is now also possible to make video calls to external parties. In addition, one click is all it needs to use Application Sharing without further authentication of the person on the other end of the line. The WebRTC solution by innovaphone is an uncomplicated and powerful alternative to the communications solutions that have been available on the market to date, especially for support scenarios or for joint work on a document beyond company boundaries.

A PC with an appropriate webcam and a compatible headset are the only things required. If a call is initiated via WebRTC, the system first questions whether the existing webcam and microphone may be accessed, the call is then set up directly via the Web browser. Video telephony or even Application Sharing sessions are also available for selection, simply click on the mouse from within the application to start them.

This simple way makes it possible for every customer, employee and interested party to temporarily become a fully-fledged subscriber to the innovaphone PBX via websites or portals, thus being able to use the different applications easily and intuitively - with maximum security and absolutely no call charges.

As from 12r1, Apple users and users of other operating systems will also benefit from the Unified Communications functionalities of the platform-independent innovaphone WebRTC solution. The security aspect continues to be fully met: DTLS-SRTP ensures that the WebRTC connections, no matter whether voice, video or application sharing, always correspond with the highest security requirements.

It still applies: innovaphone supports WebRTC consistently on all units. A WebRTC gateway is not needed for implementation, in contrast to most of the other solutions currently available on the market. Thus, the innovaphone solution is again a particularly lean and smart implementation and does not require a server.



At a glance

- New: Video and Application Sharing via WebRTC
- Platform-independent
- Web browser-based
- DTLS-SRTP Security Protocol
- Smart innovaphone implementation - without server
- Available on all innovaphone devices

WEBRTC - CONFERENCES

NEW SERVICES.



With the innovaphone PBX, conference calls with Video and Application Sharing are also possible via WebRTC from Version 12r1. External parties connected via WebRTC also benefit from these additional functionalities.

Internal subscribers (with myPBX launcher) can even share and view content. It is also possible that more than one internal subscriber shares multiple applications at the same time. The shared content is visible for each party - internal and external. The fact that external parties can be integrated is a big advantage

for conference calls with WebRTC. These parties get access via WebRTC from outside the innovaphone PBX and can now also be connected via video and use Application Sharing to see the shared applications of the internal PBX subscribers. Thus, for example, webinars, training courses, and similar meetings can also be set up with external parties. This is always done with the highest level of security over DTLS-SRTP encryption and secure authentication.



At a glance

- Video and Application Sharing via WebRTC
- Secured connection over DTLS-SRTP
- Integration of external parties
- Ideal for webinars and training courses

WEBRTC - CALL ME BUTTON

NEW SERVICES.

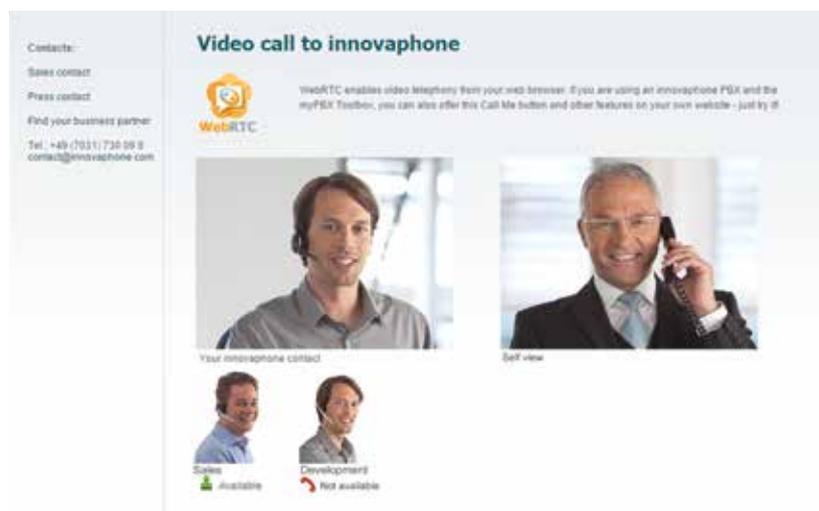


WebRTC can be used in many different areas. It is not only possible to communicate via telephony, video telephony or application sharing, it is also possible to implement Web applications such as the “Call Me button” with Presence status.

The “Call Me button” consists of a JavaScript of the innovaphone myPBX Toolbox (see p. 12 “myPBX Toolbox”) and can be fitted to your own website with just a little programming knowledge. The design of the “Call Me button” on the site is completely up to the customer. Thus, the “Call Me button” can be integrated perfectly in the company’s own corporate

design. The presence status of the employees whose phone number is stored in the “Call Me button” can be seen in real time on the website. The customer sees instantly who is currently free.

The call is initiated by a simple click on the “Call Me button”. When it is accessed the first time, the user is also asked whether the system may access the camera and the microphone. After confirmation, the call to the stored extension of the innovaphone PBX is initiated. This simplicity makes it possible for every customer, employee and interested party to temporarily become a fully-fledged subscriber to the innovaphone PBX via websites or portals - with maximum security and absolutely no call charges.



At a glance

- Customer contact with just one mouse click
- Integrated Presence display possible
- Simple integration to your own site
- No calling costs

myPBX TOOLBOX

NEW SERVICES.



Website designers and application developers have unlimited possibilities with the myPBX Toolbox. It consists of a JavaScript library that allows users to use communication features of the innovaphone PBX in their own Web applications. Thus, voice, video, desktop sharing and presence information can be easily adapted to the company's needs with very little programming knowledge and incorporated on all conceivable platforms.

Typical application examples:

- A "Call Me button" is embedded on a website so that interested parties can go directly to a certain contact person at the click of the mouse (e.g. switchboard, marketing).
- A webinar invitation is placed on a website making participation simple at the click of the mouse. Eliminates the need to dial-in or install software.
- Specific contact persons of a company will be presented on a website with their contact information and Presence status. Depending on availability, they can be contacted directly via a "Call Me button".

```
// dependencies
var WebRtcEndpoint = innovaphone.pbxwebsocket.WebRtc.Endpoint;

var endpoint = null;
var config = {
  url: "wss://.../PBX0/WEBSOCKET/websocket",
  username: "...",
  password: "...",
  device: "...",
  physicalLocation: null
};
var tonepath = "/js";

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

function onCall(event, call) {
  if (event == "added") {
    document.dial.src="/img/handset-green-grey.png";
    document.hangup.src="/img/handset-red.png";
  }
  if (event == "removed") {
    document.dial.src="/img/handset-green.png";
    document.hangup.src="/img/handset-red-grey.png";
  }
  console.log("Call " + event + ": " + JSON.stringify(call));
}

function initCall(number, video) {
  if (endpoint) endpoint.initCall(null, number, video);
}
```

At a glance

- Access to innovaphone PBX functions via JavaScripts
- Wide range of integration possibilities for application programmers
- Secured connection over DTLS-SRTP

INNOVAPHONE CLOUD

NEW SERVICES.



Cloud solutions are now here to stay in the business world. The innovaphone PBX is a powerful and extremely flexible telephony and Unified Communications solution and can be obtained from the cloud. It offers an alternative to bought systems. The innovaphone PBX is ideally suited as a platform. With the innovaphone PBX, you are always technologically one step ahead whether you have a “virtual Unified Communications”, a “Hosted PBX” or an “IP Centrex” solution.

With its Version 12r1, innovaphone now offers the Cloud infrastructure as an operator, providing customers with this infrastructure. The innovaphone Cloud offering is one of the first Unified Communications cloud solutions by a European manufacturer, which also rents the complete hardware including phones.

The well-known Unified Communications features can be used in the innovaphone Cloud and it also offers the most recent features such as WebRTC and mobile worker integration. The advantage of the innovaphone Cloud is its flexibility. There are individual choices on features and devices for each workstation. The innovaphone Cloud is freely scalable and offers seamless integration in business processes.

Each cloud customer has its own innovaphone PBX set up in one of innovaphone’s data centres. This means, each customer has its own exclusive innovaphone PBX in the cloud. Customer data is only stored on one’s own IPVA and is not centrally stored. Updates can be rolled out individually per customer on its innovaphone Cloud PBX. The leased PBX is protected by the innovaphone V12 security concept.



At a glance

- Unified Communications Cloud solution
- Flexible and individual configuration
- No maintenance efforts, the provider operates everything
- Future-safe through continuous updates
- Maximum security through state-of-the-art encryption
- Integrated rental model for phones

SIP PROFILES

NEW SERVICES.

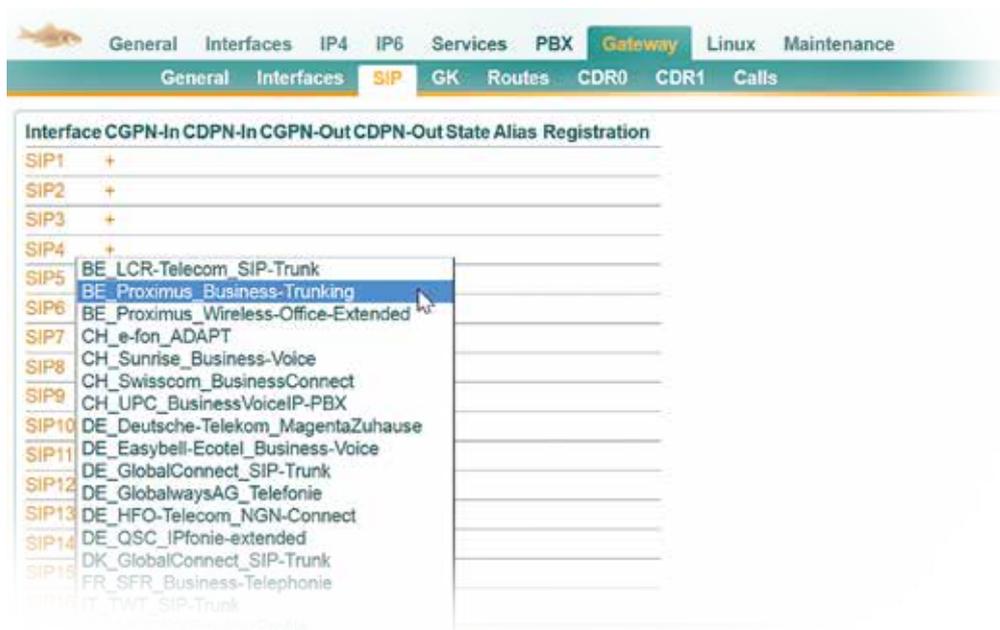


The switch from analogue and ISDN networks to standard Internet Protocol (IP) is underway across Europe. All IP is on the rise. There is no longer just one SIP connection, now there is a wide range of SIP connections and SIP providers to choose from. It is therefore becoming increasingly important for IP telephone solutions to be compatible with many SIP providers. That's why innovaphone is consistently testing the compatibility of new SIP connections, which are to be certified on the innovaphone PBX.

innovaphone will in future store the profiles of selected SIP providers who are certified to the innovaphone PBX directly in the user interface of the innovaphone

PBX. The user can select the appropriate provider and the respective SIP connection in the configuration interface and automatically gets all necessary login information in the input mask. The input mask is generated individually for each SIP connection and asks for information with provider-specific terminology. This simplifies and increases the convenience of registration with a provider because information can be assigned faster.

innovaphone is testing already certified SIP connections at regular intervals again to ensure this compatibility in the long term. Sometimes, this also takes place as all-night tests. innovaphone is glad to take suggestions from customers and resellers for further compatibility testing of SIP connections.



At a glance

- Easier, faster and more convenient configuration of the innovaphone PBX
 - Safest connection is automatically assigned
- Individually adapted to SIP connection through integration of provider-specific terminology

SECURITY

MORE SECURITY.



Systematic spying of data and numerous hacker attacks on company networks have given rise for uncertainty in many companies. Therefore, innovaphone has always placed and continues to place great emphasis on the issue of security.

The innovaphone PBX has a lot of different security mechanisms providing the best possible protection against a wide variety of attacks. In this context, innovaphone is permitted, for example, to carry the quality seal "IT security made in Germany" from TeleTrust, the German IT security association (Bundesverband IT-Sicherheit e.V.). The seal is awarded exclusively to German IT companies, which develop their products in Germany and meet strict criteria on IT security and data protection.

The innovaphone PBX runs on a very lean and fast operating system that has been developed especially. There are no known viruses, worms and Trojans for this operating system. The different ways of communicating from establishing connections, over voice

and data connections to administration and address data access can be controlled via a variety of standardized security protocols. The DTLS-SRTP protocol allows device-to-device encryption. This high degree of security is available for all connections of the innovaphone PBX, if necessary.

The increased prevalence of SIP connections caused by the Europe-wide changeover to All IP is accompanied by uncertainty and new security requirements, because All IP makes it necessary for every PBX to be open to the internet.

One special challenge for security is caused by the additional demands of borderless communication and mobility (Anywhere Workplace) such as exists in unified communications solutions that can also use WebRTC.

Within the framework of the Version 12r1, new security mechanisms have been developed especially for All IP and Anywhere Workplace scenarios, such as the innovaphone SBC and the innovaphone Reverse Proxy, which together provide maximum security.



At a glance

- IT security made in Germany
- End-to-end encryption
- innovaphone SBC
- innovaphone Reverse Proxy
- Security on board the innovaphone PBX

ALL IP

MORE SECURITY.



Demand for All IP is increasing as analogue and ISDN networks throughout Europe are currently being switched over to standard Internet Protocol (IP).

In some countries, the conversion to All IP is already almost finished everywhere and the ISDN switch-off is thus almost fully completed. Telephony, television, video or mobile communication: soon all communication channels across Europe will only be operated via Internet Protocol.

In an All IP installation, the innovaphone PBX is exclusively open to the SIP provider. Session Border

Controllers are often used to secure this open point. innovaphone has integrated its own developed SBC in the Unified Communications solution and VoIP phone system, innovaphone PBX, and only recommends the innovaphone SBC in conjunction with the innovaphone PBX.

Company internal calls run entirely on the company's intranet and are encrypted via DTLS. If the connection to the SIP provider fails, internal calls are still possible. Redundancy can be established through another connection, which in turn increases the availability.



INNOVAPHONE SBC

MORE SECURITY.



Session Border Controller (SBC) functionalities are necessary in order to secure SIP trunks in the course of All IP. The required opening of the PBX to the SIP provider must be designed with SBC as securely as possible.

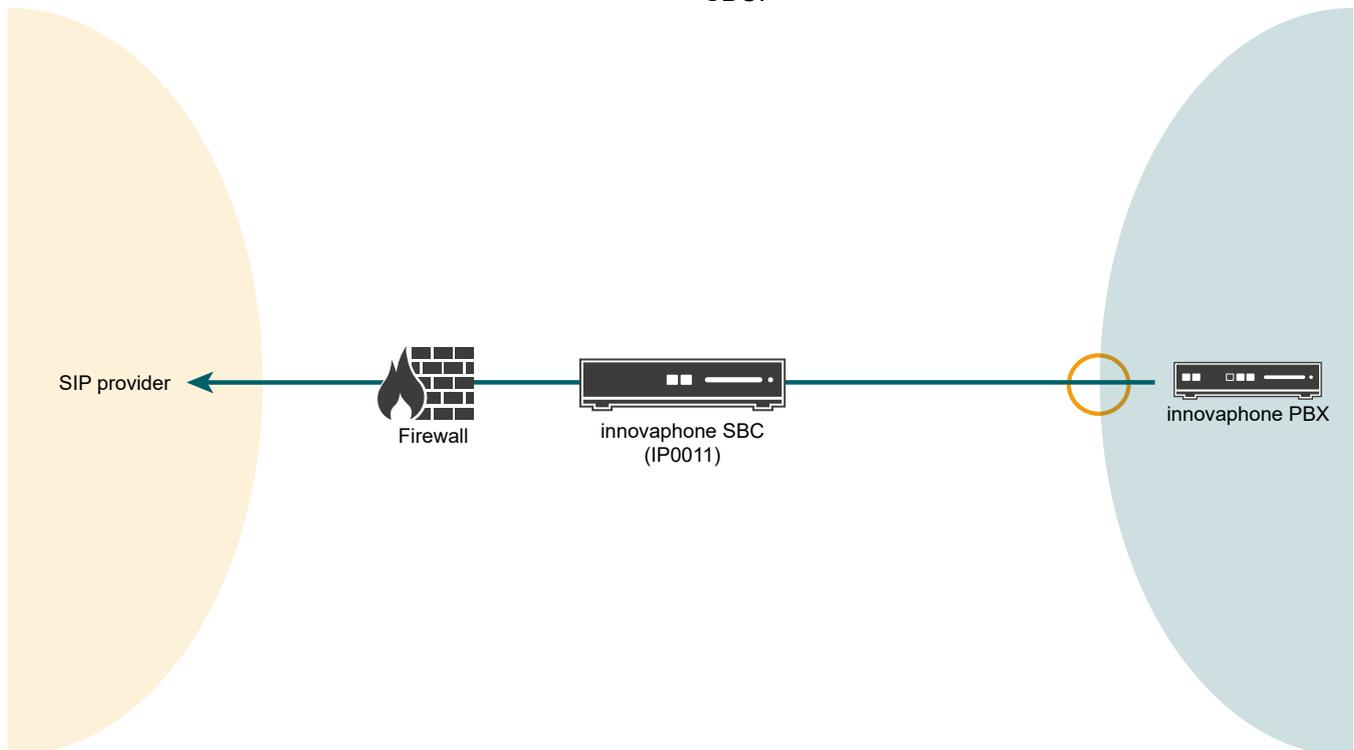
SBC functionalities:

- Internal encryption is decrypted to the provider due to the fact that most providers cannot read encryption
- ICE, STUN and TURN mechanisms for secure transfer of voice data through NAT routers / firewalls
- Protocol translation to the translate internal and external VoIP protocols
- Adaptation of telephone numbers etc.
- Forwarding the media data to the correct internal endpoints (Media Relay)

In its V12 security concept, innovaphone has implemented the SBC functionalities and has integrated the SBC into the innovaphone PBX.

The Session Border Controller from innovaphone supports all relevant security mechanisms and thus reliably secures the innovaphone PBX from attacks from the Internet. No further external SBC is required. This simplifies installation and is a cost advantage for the customer. The connection to a SIP provider is the typical usage scenario of the innovaphone SBC.

Configuration options of the SBC depend on security needs. Any architecture is conceivable - from the dedicated device in the demilitarized zone (DMZ) to the "all-in-one box", i.e. innovaphone SBC, innovaphone PBX and innovaphone Reverse Proxy on one and the same device, but with separate software. The IP0011 is perfectly suitable as a platform for the innovaphone SBC.



At a glance

- To secure the innovaphone PBX in scenarios with SIP trunks and other installations
- Integrated directly in the innovaphone software
- No further external SBC required
- Configuration options according to security needs
- IP0011 ideal as a platform for innovaphone SBC

ANYWHERE WORKPLACE

MORE SECURITY.



More and more companies notice the change from traditional office working places to more modern and flexible workplace concepts. Secure communications technology provides the basis for all conceivable Anywhere Workplace concepts enabling you to contact colleagues and customers as and when needed.

In such an Anywhere Workplace scenario, the innovaphone PBX must be accessible externally. To do this, the private internal network where the innovaphone

PBX is located, is opened to the Internet. Mobile integration of smartphones, for example, via myPBX mobile has only just become possible. The internal network must also be opened to enable communication via WebRTC. The same also applies to employees who work from home.

Despite opening the innovaphone PBX externally, the innovaphone solution guarantees the highest security by using innovaphone Reverse Proxy.



INNOVAPHONE REVERSE PROXY

MORE SECURITY.



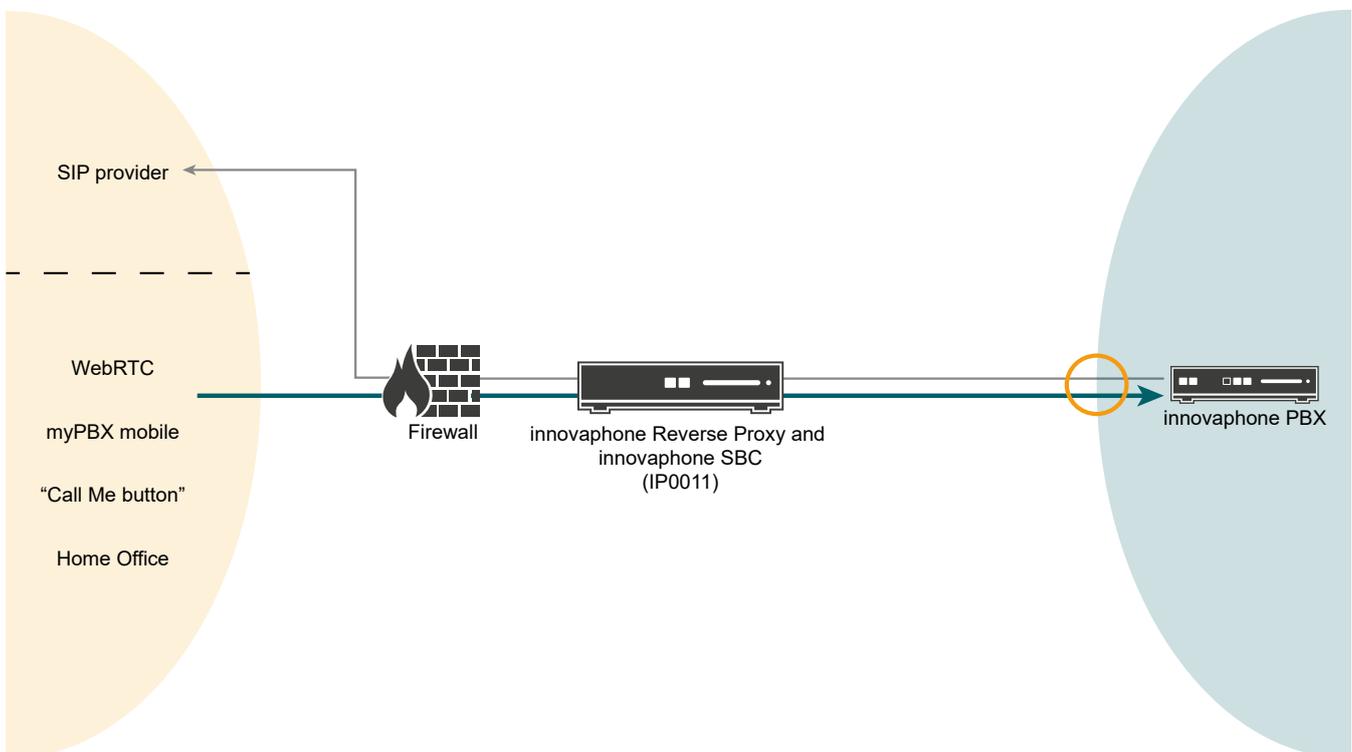
innovaphone Reverse Proxy is the answer to security issues in Anywhere Workplace scenarios. It represents an important element of the innovaphone security concept in this context and is an independent part of the innovaphone PBX.

The innovaphone Reverse Proxy serves as a central authority for all inbound connections from the Internet. By decoding the protocol used, it can forward the external requests to the internal devices thanks to other protocol-specific information.

Because all external requests enter on the innovaphone Reverse Proxy, it is possible to see details of attacks that have been detected.

innovaphone Reverse Proxy features:

- Configuration of different forwardings for each protocol
- Intrusion detection based on the frequency of unsuccessful connection attempts
- Successful and unsuccessful connection attempts are counted and displayed
- IP address is automatically added to a blacklist when an attack is detected
- Accessible blacklist
- Manual removal and addition of an IP address from or to the blacklist by the administrator
- Manual addition of a trusted IP address to a whitelist
- Limitation on special IP networks can be configured



At a glance

- Facilitates secure access to the innovaphone PBX from anywhere
- Supports mobile working scenarios
- Central authority for all inbound connections from the Internet
- Attack detection
- Configurable forwarding of data packets
- Blacklist and whitelist



innovaphone

PURE IP COMMUNICATIONS



innovaphone AG | Böblinger Straße 76
71065 Sindelfingen | Germany
Phone +49 7031 7 30 09-0
Fax +49 7031 7 30 09-9
www.innovaphone.com
E-mail: info@innovaphone.com