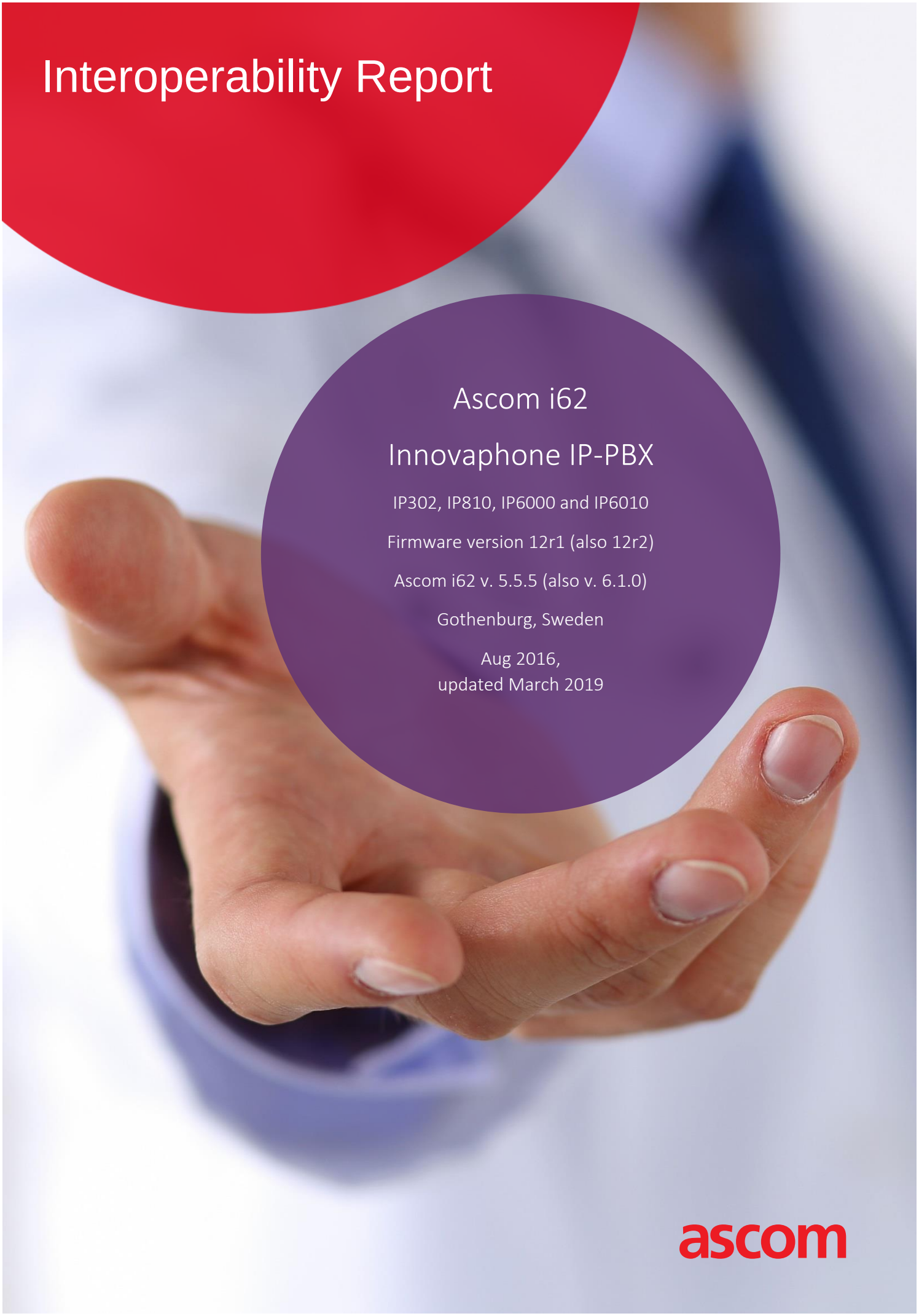
Interoperability Report



Ascom i62

Innovaphone IP-PBX

IP302, IP810, IP6000 and IP6010

Firmware version 12r1 (also 12r2)

Ascom i62 v. 5.5.5 (also v. 6.1.0)

Gothenburg, Sweden

Aug 2016,
updated March 2019

ascom

TABLE OF CONTENT:

INTRODUCTION

This interoperability report describes test results and optimal configuration of Ascom i62 towards the Innovaphone IP-PBXs. The document should be used in conjunction with configuration guide(s) from Innovaphone and Ascom.

Ascom

Ascom is a global solutions provider focused on healthcare ICT and mobile workflow solutions. The vision of Ascom is to close digital information gaps allowing for the best possible decisions – anytime and anywhere. Ascom's mission is to provide mission-critical, real-time solutions for highly mobile, ad hoc, and time-sensitive environments. Ascom uses its unique product and solutions portfolio and software architecture capabilities to devise integration and mobilization solutions that provide truly smooth, complete and efficient workflows for healthcare as well as for industry, security and retail sectors.

Ascom is headquartered in Baar (Switzerland), has subsidiaries in 15 countries and employs around 1,300 people worldwide. Ascom registered shares (ASCN) are listed on the SIX Swiss Exchange in Zurich.

Innovaphone

Innovaphone develops pure IP telephone systems under the name of "innovaphone PBX", uniting security and high availability with the flexibility and scalability of IP. The innovaphone PBX hardware comprises gateways and a series of IP telephones which are developed entirely in Germany and manufactured to a large extent in Europe. The entire product range is based on the unified hardware and software platform which is the core of the innovaphone product philosophy. The number of activated licenses can be determined as required which renders the solution suitable for companies of any size: from small companies over medium size companies with several branch offices to large enterprises. The innovaphone IP telephone systems are available exclusively through authorized distributors and resellers.

Innovaphone has been playing a decisive role in the development of IP telephony ever since the company was founded in 1997. Head office is located in Sindelfingen, South Germany.
For further information, see the following URL: http://www.innovaphone.com/

SITE INFORMATION

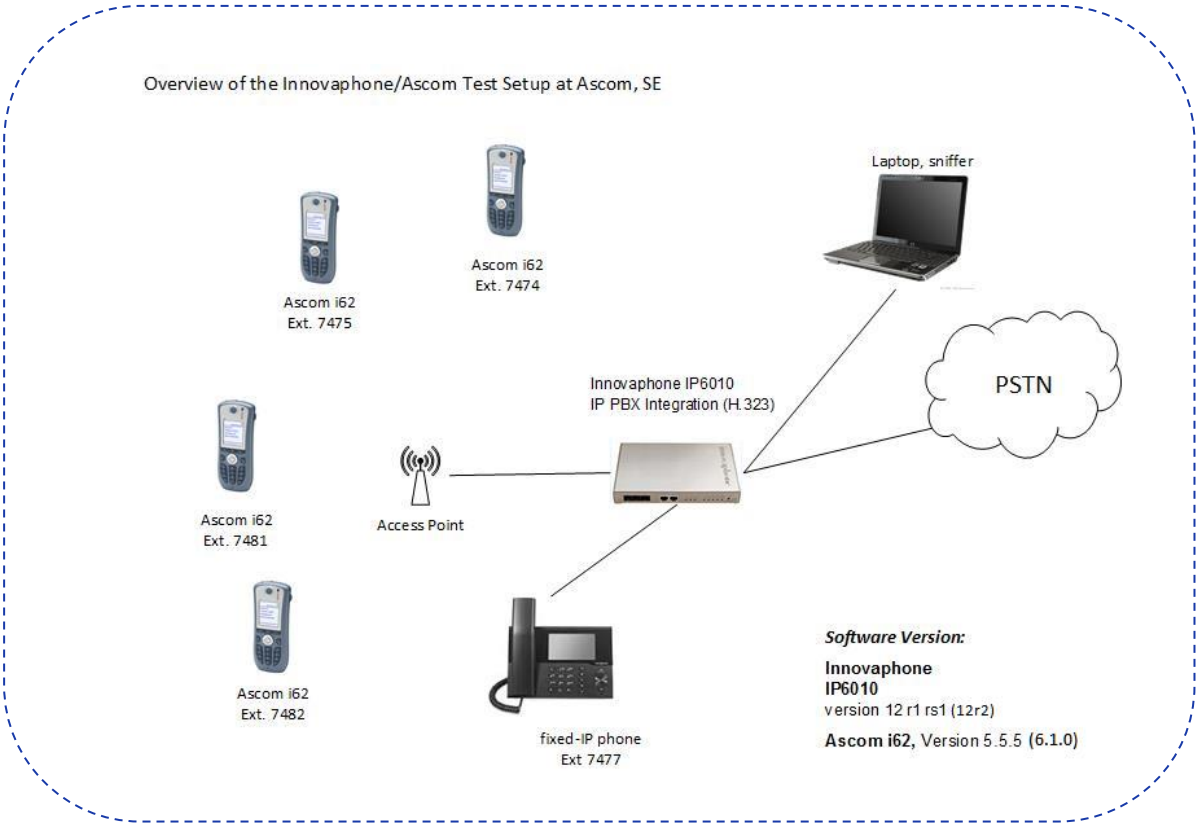
Test Site: Ascom HQ
Gothenburg
Sweden

Participant(s):

Johan Andrén (Ascom HQ, SE)

Regression testing done by R&D on April 17th, 2018.

Test Topology



SUMMARY

Test overview

Test cases in nearly all areas with regard to Ascom i62 and Innovaphone IP-PBX passed successfully. Overall, the conclusion has to be that the H.323 integration of Ascom i62 with IP6010 is very good.

Queries about licensing should be directed to Innovaphone.
Please also see "

APPENDIX A: TEST CONFIGURATIONS" for further details.

High Level Functionality	Results
Basic Call	OK
DTMF	OK
Hold, Retrieve, Enquiry and Brokering	OK
Attended Transfer	OK
Blind-transfer	OK
Semi-attended Transfer	Not Supported
Call Forward Unconditional	OK*
Call Forward No Reply	OK*
Call Forward Busy	OK*
Call Waiting	OK
Message Waiting Indication	OK
Do Not Disturb	OK
Calling Line/Name Identification	OK
Connected Line/Name Identification	OK

*When you use feature access codes you will get the message Call failed in the display even if the feature access code works well (fixed in v. 6.1.0).

General conclusions

Ascom interoperability verification produced good results towards Innovaphone IP6010 version 12r1 with a few exceptions, refer to "*Known Issue(s)*" section on page 6**.**

This report also applies to Ascom i62 version 6.1.0. Regression testing of that version towards Innovaphone version 12r2 was carried out by R&D on April 17th, 2018, with similar results.

Ascom i62 handsets were configured to register at the IP-PBX using endpoint numbers. The codec of choice for these tests was G.711A/20ms, while DTMF signaling was transmitted according RFC 2833.

TEST RESULTS

Innovaphone IP-PBX Integration – Ascom i62

- Innovaphone IP-PBX version 12r1sr1 (regression test: 12r2)
- Ascom i62, 5.5.5 (regression test: 6.1.0)

Signaling Protocol:

- H.323

Innovaphone IP6010 (results also valid for 302, IP810 and IP6000):

- Settings are based on ”Ascom VoIP Gateway: Installation and Operation Manual” (TD 92326GB), pp. 62-100

Ascom i62:

- Endpoint ID” and “Endpoint Number” corresponds to name and number in the user object
- Default H323 settings

Known Issue(s)

- Message “Call Failed” are shown in the display when using FAC (feature access codes) even if the function works fine. For example *21*number# for CFU will work but show Call failed in the display during activation/deactivation. Handled in Jira WX-4043
    - Fixed in Ascom i62 software v. 6.1.0: “Done” shown on display.
- No timeout when i62 calls another i62 that does not answer both during basic call and call waiting active. This is a PBX issue and per design.
    - Same behavior with Ascom i62 software v. 6.1.0.
- Possible to divert call to “diverter”, calling party hears busy. Considered as a minor issue and filed into the backlog.
    - Same behavior with Ascom i62 software v. 6.1.0.

Test Areas

Basic Call, DTMF:

- Good results overall

Basic Call, Portable Unavailable:

- Good results overall

Basic Call, Stability:

- Good results overall

Three-party Services:

- Good results overall

Call Diversion:

- Good results overall, except call failed message when using FAC (fixed in v. 6.1.0) and you can divert to diverter see known issue's for more information

Telephony Feature

- Good results overall, except there are no timeout when one i62 calls another i62 that doesn't answer. See know issue's for more information.

Detailed test records

Ascom i62 v.5.5.5 with Innovaphone v.12r1

Pass	75
Fail	0
Not Tested	16
Not Supported	2
See Comments	11
Total	104

Ascom i62 v.6.1.0 with Innovaphone v.12r2

Pass	23
Fail	0
Not Tested	79
Not Supported	0
See Comments	2
Total	104

Miscellaneous

Please refer to IP Telephony Services (IP-DECT/VoWiFi) available on the Ascom Extranet for detailed Information regarding each test case.

See URL (requires login):
https://www.ascom-ws.com/AscomPartnerWeb/en/startpage/Sales-tools/Interoperability

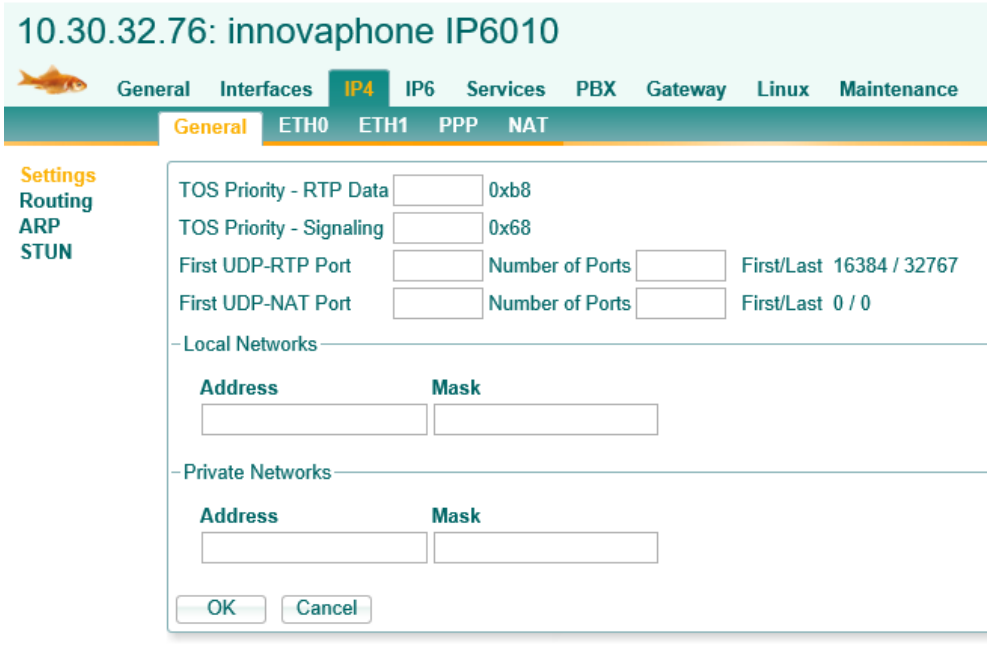
APPENDIX A: TEST CONFIGURATIONS

Innovaphone IP6010, 12r1 (also 12r2)

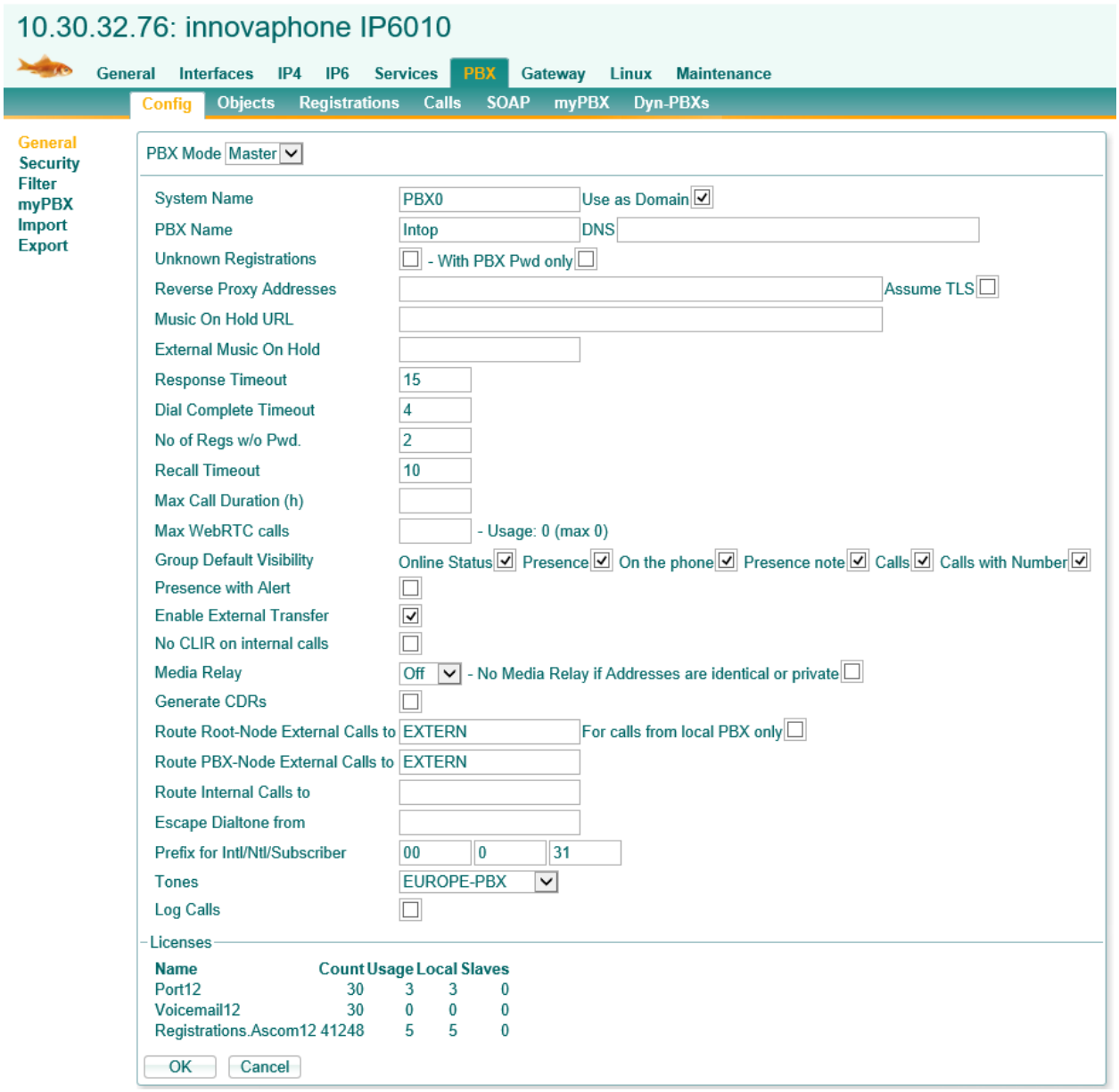
Please find the screen shots reflecting the management interface and some aspects of setting up the PBX application on the IP6000.

General -> info

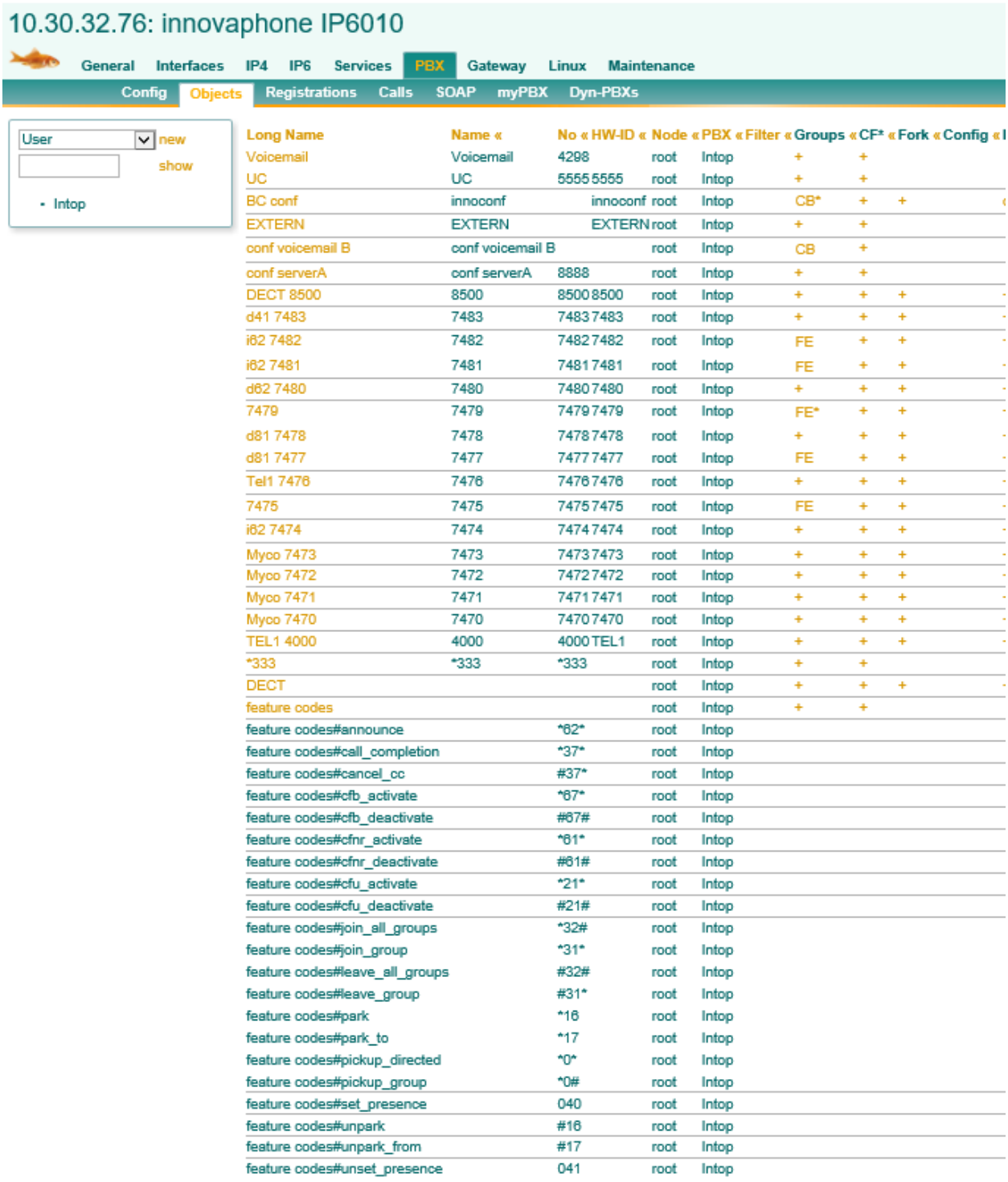
IP->Settings: DSCP markings used for signaling and RTP



PBX->General: General Settings

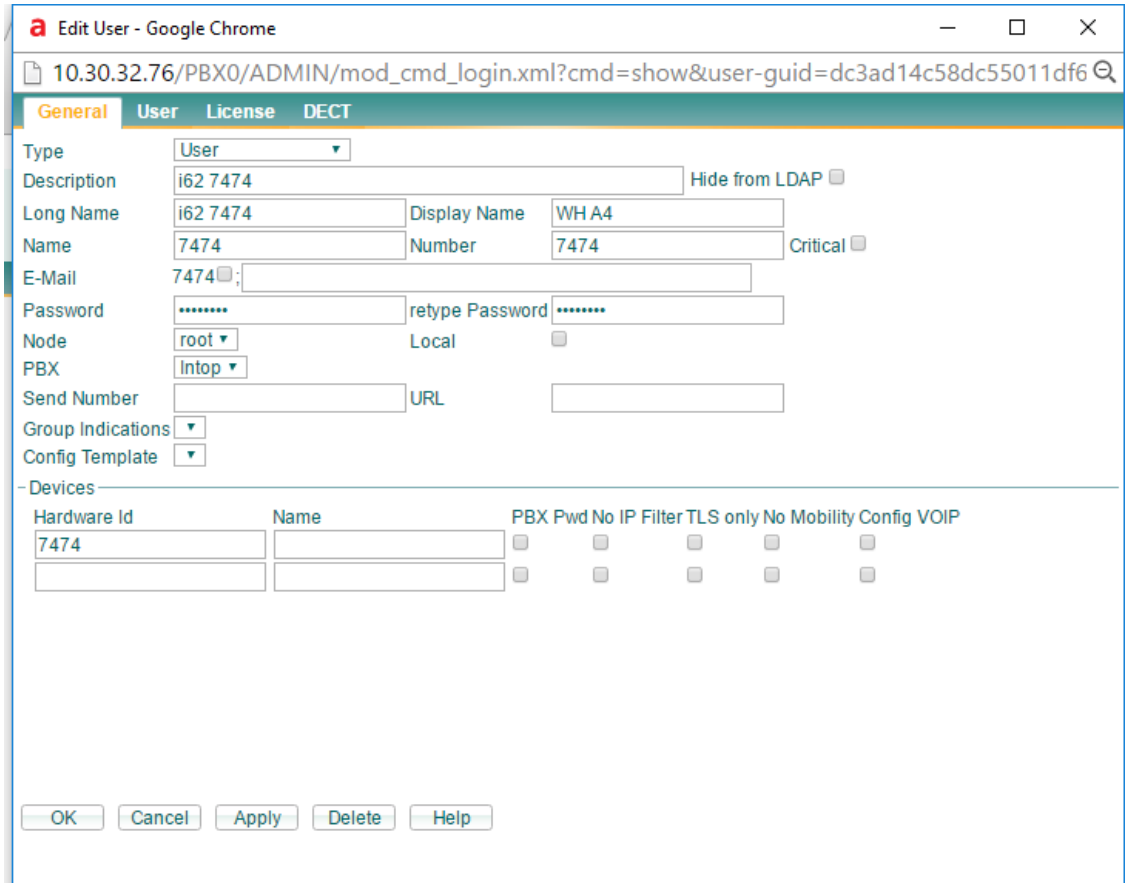


PBX->Objects: PBX objects added to PBX application

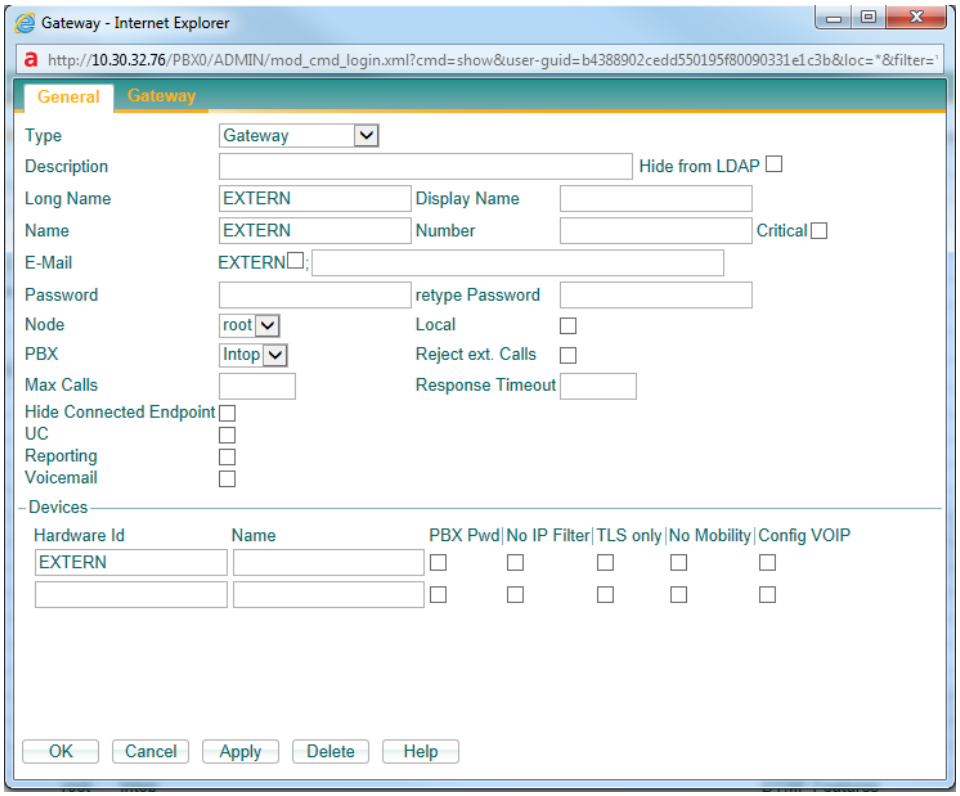


Long Name	Name «	No «	HW-ID «	Node «	PBX «	Filter «	Groups «	CF* «	Fork «	Config «
Voicemail	Voicemail	4298		root	Intop		+	+		
UC	UC	5555	5555	root	Intop		+	+		
BC conf	innoconf		innoconf	root	Intop		CB*	+	+	
EXTERN	EXTERN		EXTERN	root	Intop		+	+		
conf voicemail B	conf voicemail B			root	Intop		CB	+		
conf serverA	conf serverA	8888		root	Intop		+	+		
DECT 8500	8500	8500	8500	root	Intop		+	+	+	
d41 7483	7483	7483	7483	root	Intop		+	+	+	
i62 7482	7482	7482	7482	root	Intop		FE	+	+	
i62 7481	7481	7481	7481	root	Intop		FE	+	+	
d62 7480	7480	7480	7480	root	Intop		+	+	+	
7479	7479	7479	7479	root	Intop		FE*	+	+	
d81 7478	7478	7478	7478	root	Intop		+	+	+	
d81 7477	7477	7477	7477	root	Intop		FE	+	+	
Tel1 7476	7476	7476	7476	root	Intop		+	+	+	
7475	7475	7475	7475	root	Intop		FE	+	+	
i62 7474	7474	7474	7474	root	Intop		+	+	+	
Myco 7473	7473	7473	7473	root	Intop		+	+	+	
Myco 7472	7472	7472	7472	root	Intop		+	+	+	
Myco 7471	7471	7471	7471	root	Intop		+	+	+	
Myco 7470	7470	7470	7470	root	Intop		+	+	+	
TEL1 4000	4000	4000	TEL1	root	Intop		+	+	+	
*333	*333	*333		root	Intop		+	+		
DECT				root	Intop		+	+	+	
feature codes				root	Intop		+	+		
feature codes#announce		*62*		root	Intop					
feature codes#call_completion		*37*		root	Intop					
feature codes#cancel_cc		#37*		root	Intop					
feature codes#cfb_activate		*67*		root	Intop					
feature codes#cfb_deactivate		#67#		root	Intop					
feature codes#cfnr_activate		*61*		root	Intop					
feature codes#cfnr_deactivate		#61#		root	Intop					
feature codes#cfu_activate		*21*		root	Intop					
feature codes#cfu_deactivate		#21#		root	Intop					
feature codes#join_all_groups		*32#		root	Intop					
feature codes#join_group		*31*		root	Intop					
feature codes#leave_all_groups		#32#		root	Intop					
feature codes#leave_group		#31*		root	Intop					
feature codes#park		*16		root	Intop					
feature codes#park_to		*17		root	Intop					
feature codes#pickup_directed		*0*		root	Intop					
feature codes#pickup_group		*0#		root	Intop					
feature codes#set_presence		040		root	Intop					
feature codes#unpark		#16		root	Intop					
feature codes#unpark_from		#17		root	Intop					
feature codes#unset_presence		041		root	Intop					

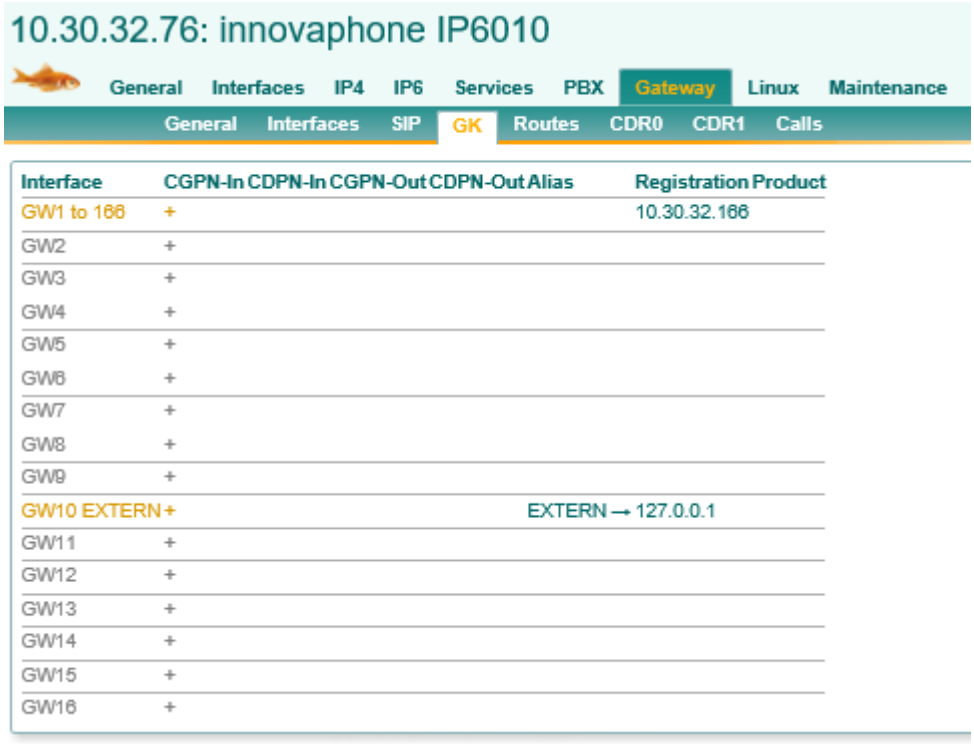
PBX->Objects: Adding a new user object



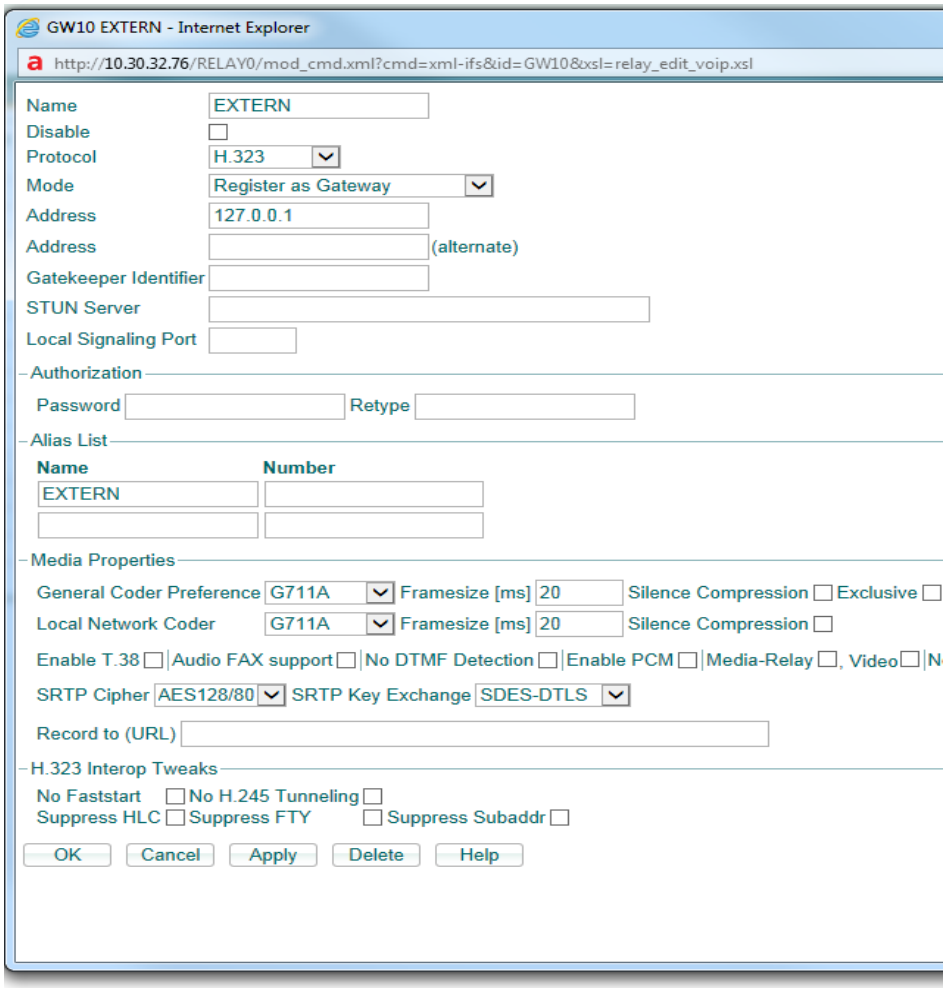
PBX->Objects: Adding a gateway object (“EXTERN”)



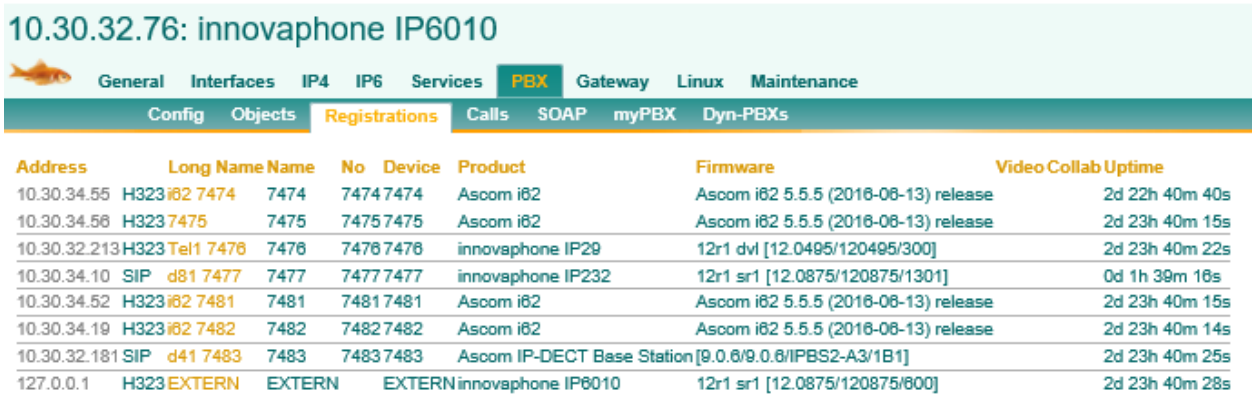
Gateway->GK: Binding an interface to the gateway object (“EXTERN”)



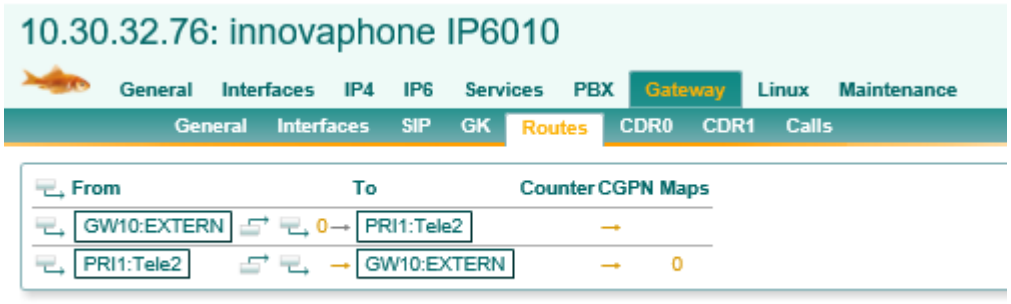
Gateway->GK: Registering the gateway using H323



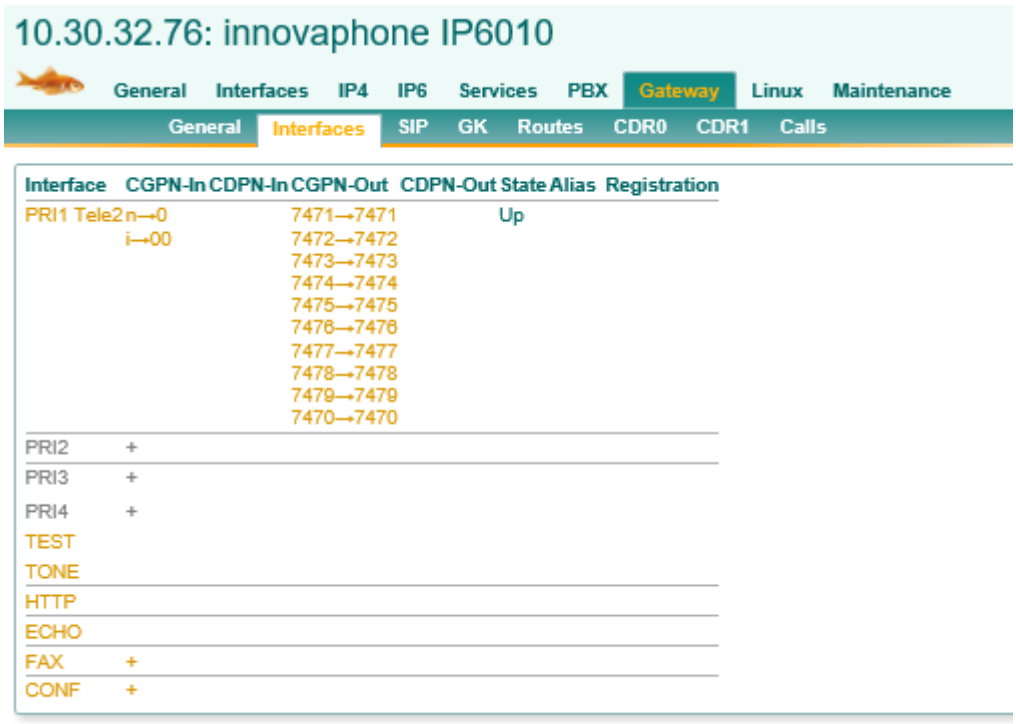
PBX->Registrations: Overview of PBX registrations



Gateway->Routes: Routing of incoming and outgoing calls



PBX->Registrations: Calling and called party number formats for incoming and outgoing calls

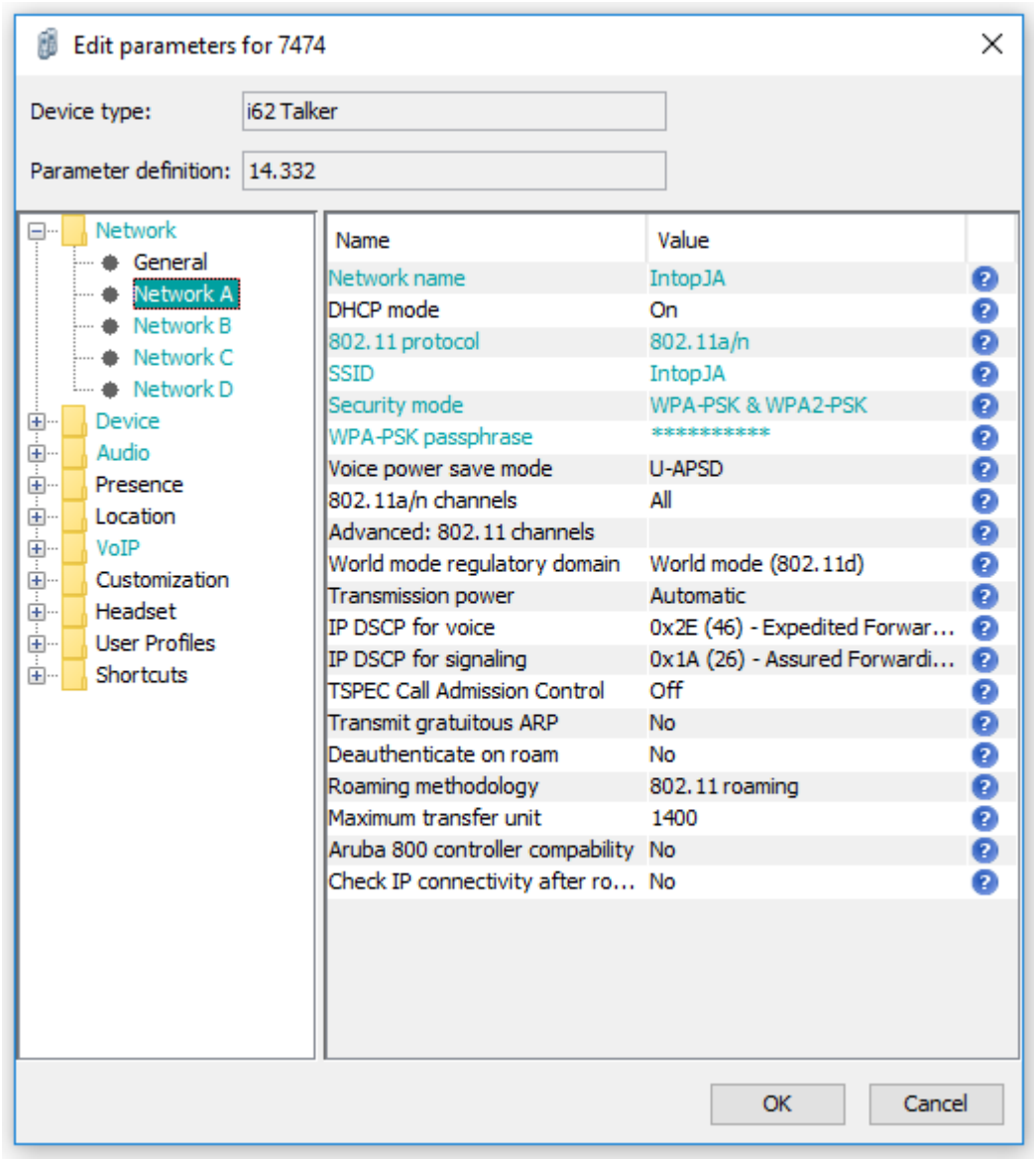


Note: Screenshots from Innovaphone IP6010 version r12r1, no changes to configuration in version r12r2.

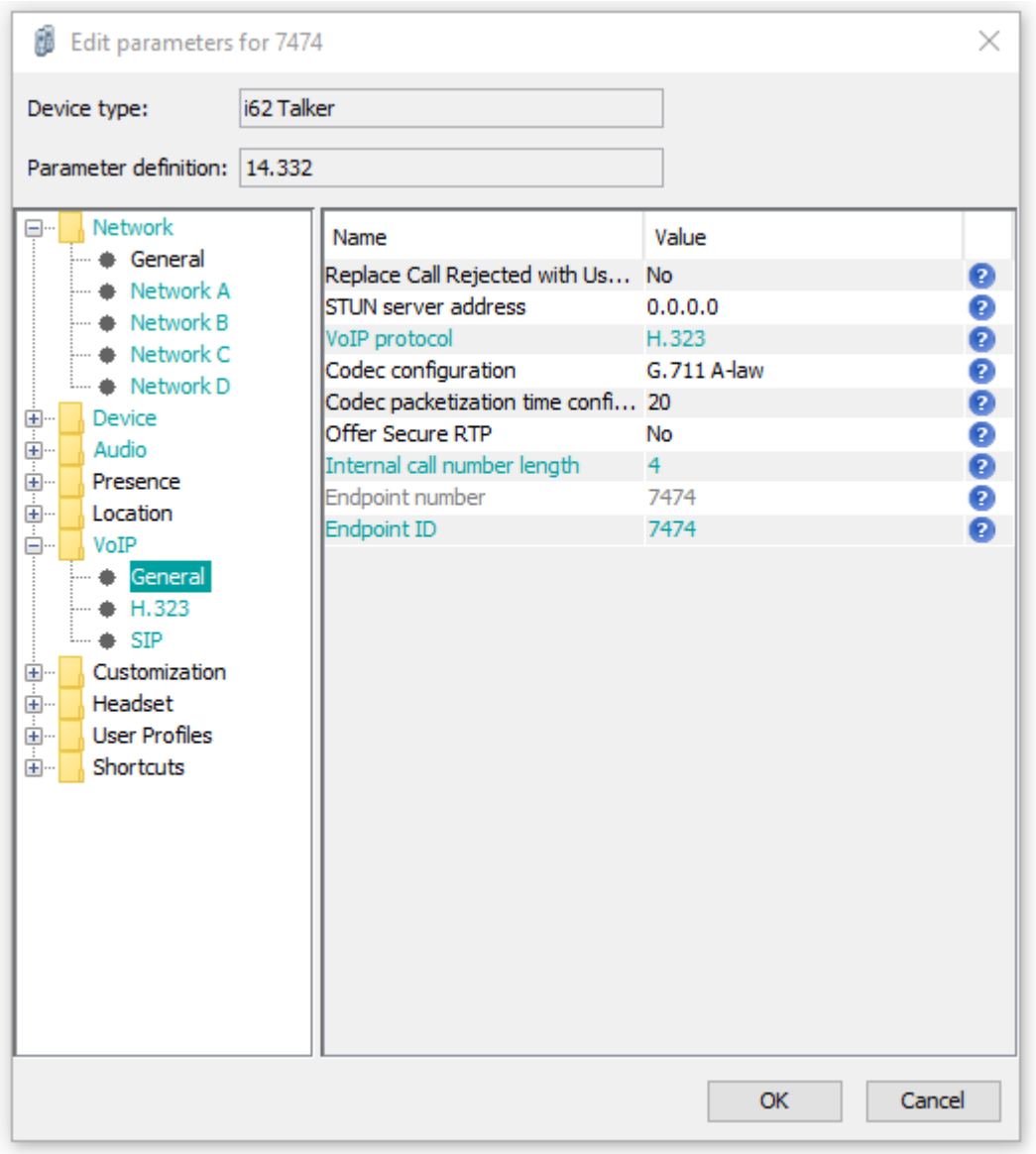
Please refer to Innovaphone's documentation for further details about Innovaphone IP-PBX configuration and licensing.

Ascom i62 configuration

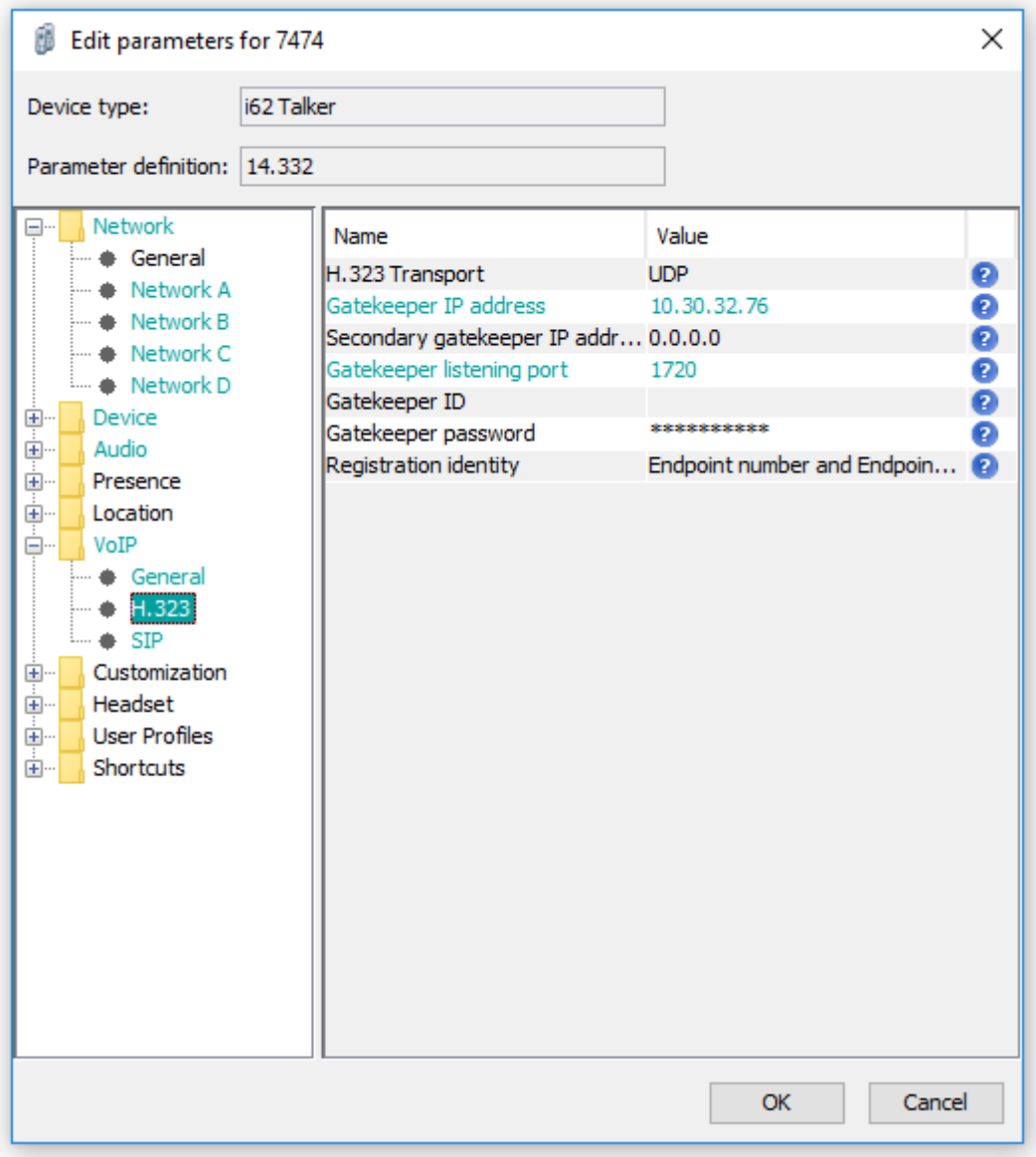
Ascom i62 WiFi network settings



VoIP parameter settings

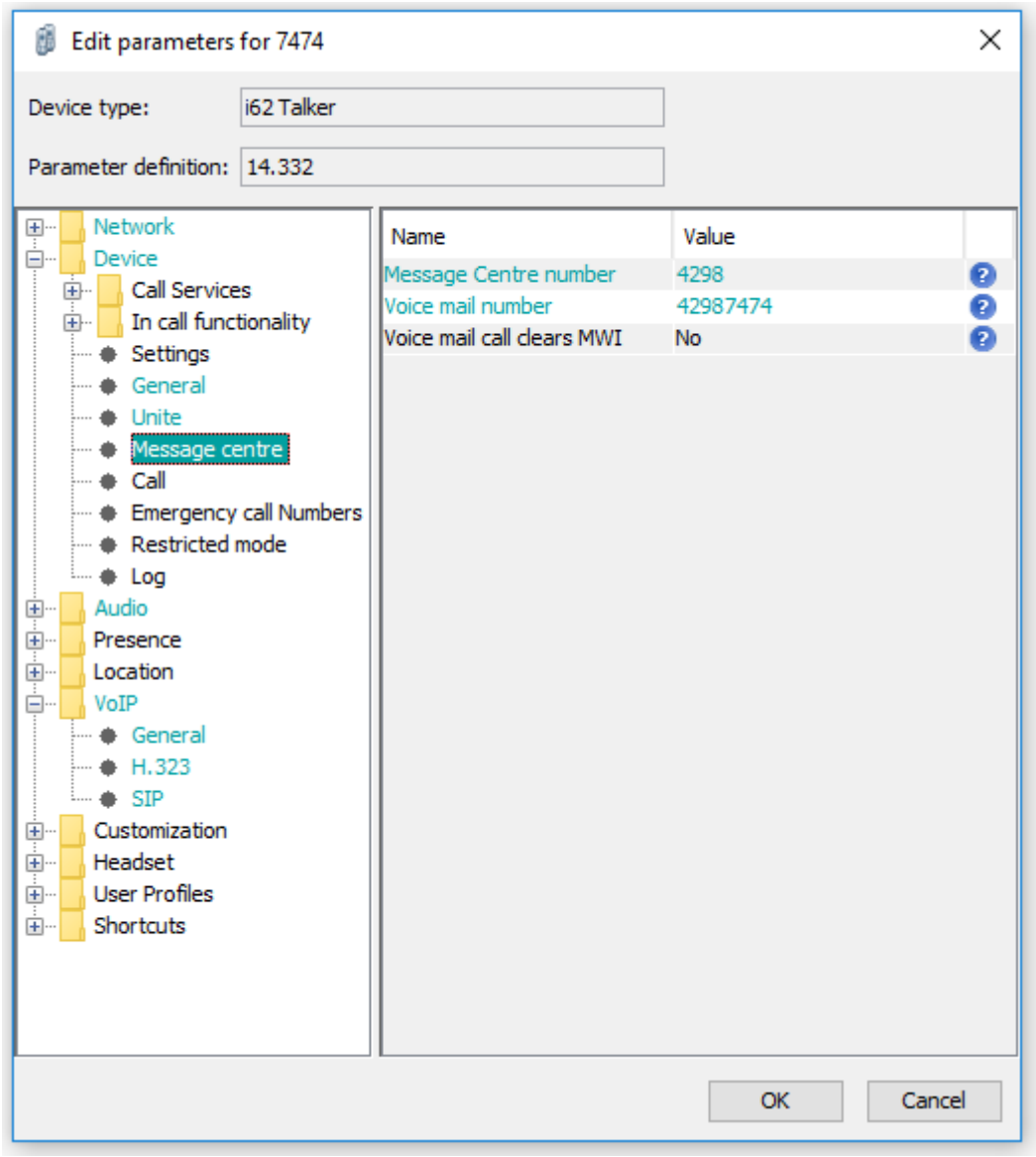


H.323 settings



- H.323 Transport UDP are used for the RAS signaling. For the call control signaling TCP are used as long as TLS aren't configured.

Message Waiting Indication settings



Note: Screenshots from Ascom i62 version 5.5.5, no changes to configuration in version 6.1.0.

DOCUMENT HISTORY

Rev	Date	Author	Description
PA1	2016-08-17	SEJAn	Draft version
R1	2016-06-29	SEJAN	Final version
PB1	2019-03-15	SEMW	Draft version, added regression test i62 v6.1.0
PB2	2019-03-19	SEMW	Draft version, minor adjustments
R2	2019-03-20	SEMW	Final version