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Document History

Introduction

This document describes a summary of the interoperability test results of the Ascom's and the Partner's platforms, necessary steps and guidelines to optimally configure the platforms and support contact details. The report should be used in conjunction with both the Partner's and Ascom's platform configuration guides.

About 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 operating businesses in 18 countries and employs around 1,300 people worldwide. Ascom registered shares (ASCN) are listed on the SIX Swiss Exchange in Zurich.

About 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

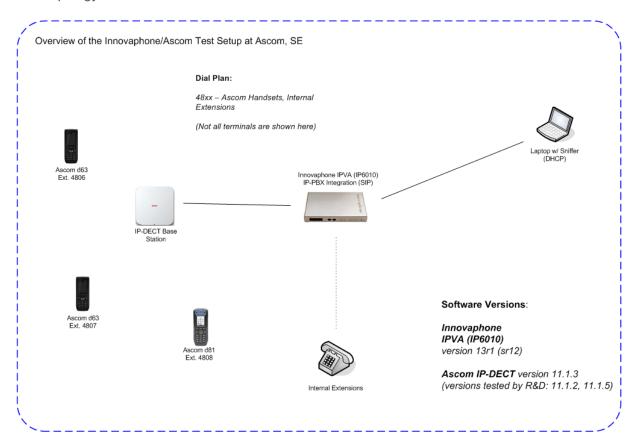
Ascom Gothenburg Sweden

Participants

Testing done by R&D on April 27th and June 24th 2020. Spot-check by Matthew Williams, Ascom, Gothenburg (May 2020).

R&D tested IP-DECT software beta version 11.1.2 and general availability (GA) release version 11.1.5, while the interoperability team validated release candidate version 11.1.3.

Test topology



<u>Note</u>: Tested Ascom IP-DECT software version 11.1.3 by the interoperability team was a release candidate. As minimal changes were made to the H.323 stack afterwards, this validation is also applicable for GA version 11.1.5.

Summary

General conclusions

Ascom interoperability testing in all areas in regard to Ascom IP-DECT and Innovaphone IP-PBX produced excellent results with very few exceptions. For the latter, please refer to "**Known Issues**" on page 6.

Compatibility information

All tests were carried out using H.323 as the signalling protocol towards Innovaphone IPVA (Innovaphone Virtual Appliance). We ensure compatibility/interoperability with Innovaphone IP-PBX:es given they run tested software.

Please note for the following hardware the PBX functionality is no more supported by V12r2 or later due to performance issues: IP38, IP302, IP305, IP800, IP2000, IP6000.

Supported Partner UC/IP-PBX models with SW version 13r1:

IP810, IP6010 and IPVA, with version 13r1

For more information about supported hardware, please contact Innovaphone.

Interoperability overview

IP-PBX Features

High Level Functionality	Result	Comments
Basic Call	OK	
DTMF	OK	
Hold, Retrieve, Enquiry and Brokering	OK	
Attended Transfer	OK	
Blind-transfer	OK	
Semi-attended Transfer	OK	
Call Forward Unconditional	OK	
Call Forward No Reply	OK	
Call Forward Busy	OK	
Call Waiting	OK	
Message Waiting Indication	OK	Known IP-PBX issue reported while all test cases passed
Do Not Disturb	OK	Tested using IP-PBX GUI
Calling Line/Name Identification	OK	
Connected Line/Name Identification	OK	
Conference Call	Not tested	Conference bridge not available in test environment; three-party conference not supported

Known issues

Description	Consequence	Workaround	Ticket(s) raised
Innovaphone: MWI removed after	MWI works, but there	Make sure that you have	N/A;
listening to only one of several	might be messages	listened to all messages in	(see MRS-385
messages (1 of 3)	remaining in the voice	the voice mail inbox before	for analysis)
	mail inbox when listening	hanging up.	
	to only the first one and	Note: IP-PBX/VM issue, not	
	then directly hanging up.	Ascom	

For additional information regarding the known limitations please contact $\underline{interop@ascom.com}$ or $\underline{support@ascom.com}$.

For detailed test results, refer to "Appendix B: Detailed Test Records".

Appendix A: Test Configurations

Innovaphone IP6010, IPVA, 13r1

IP-PBX configuration

These screen shots reflect some aspects of managing subscribers and setting up the PBX application on the IPVA

General -> Info

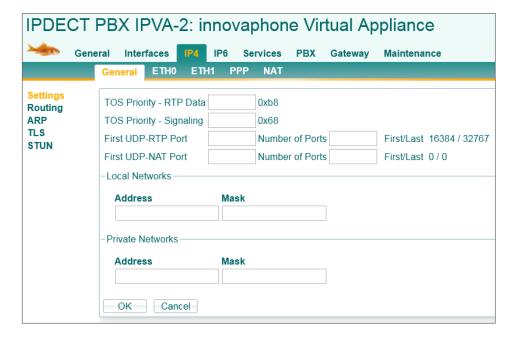


IP4 -> ETH0 -> IP: IP address of management and the H.323 interface

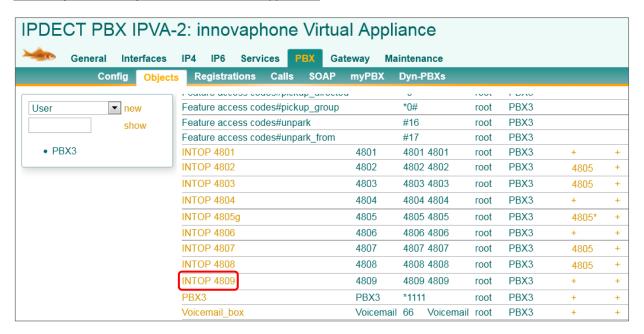


Note: The IP address on the right is the active one provided by DHCP.

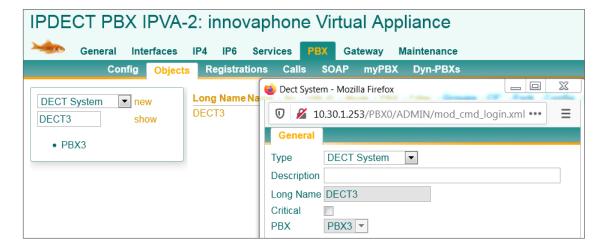
IP4-> General -> Settings: DSCP markings used for signaling and RTP



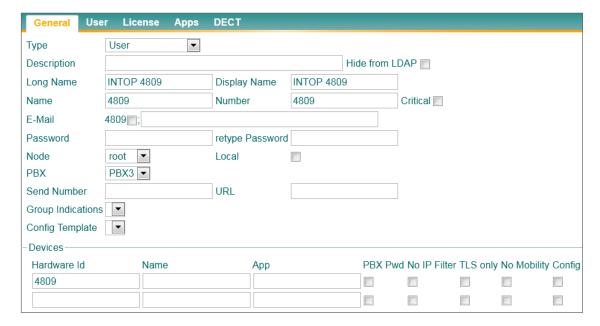
PBX->Objects: PBX objects added to the PBX application



PBX->Objects: Adding a new DECT system object



PBX->Objects: Adding a new user object



PBX->Objects: Defining the DECT system of a user object



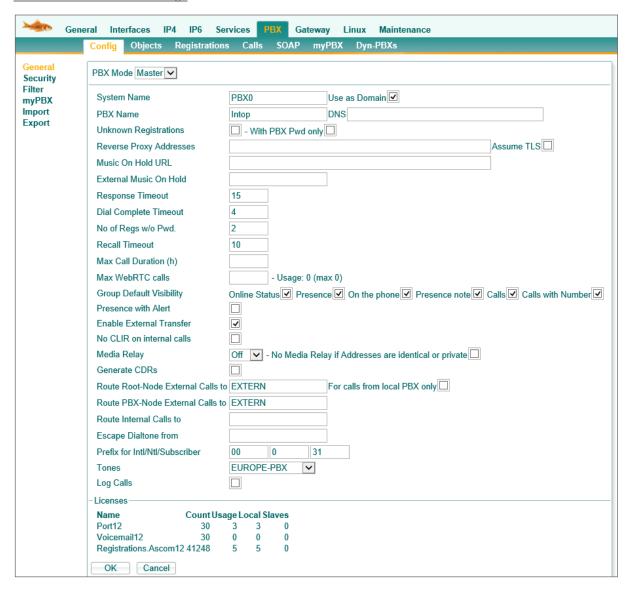
PBX -> Registrations: Verifying registrations



External Call Routing (PRI)

These screen shots from <u>another reference system</u> provide guidance as to how to set up external call routing. See Innovaphone's documentation for further details.

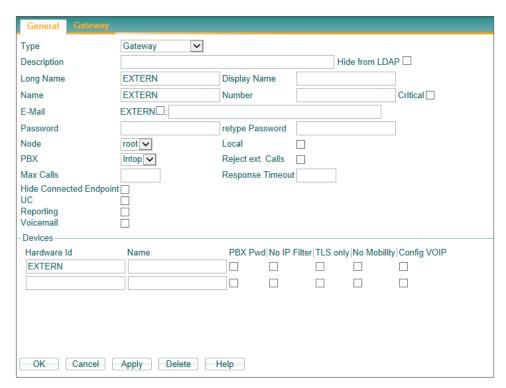
PBX->General: General Settings



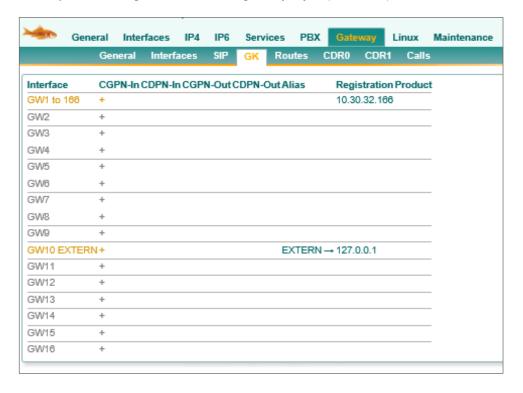
PBX->Objects: PBX objects added to PBX application



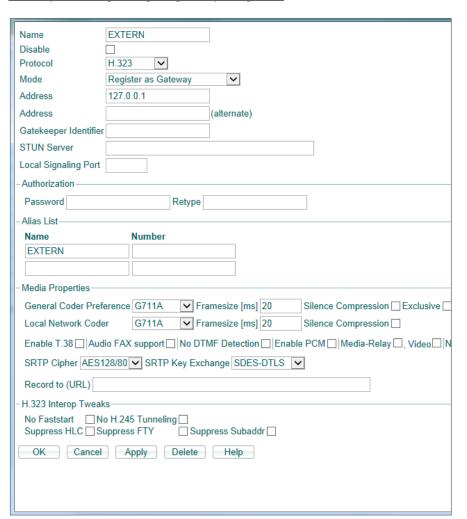
PBX->Objects: Adding a gateway object ("EXTERN")



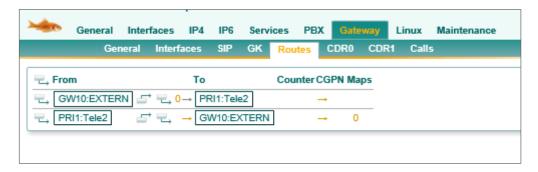
Gateway->GK: Binding an interface to the gateway object ("EXTERN")



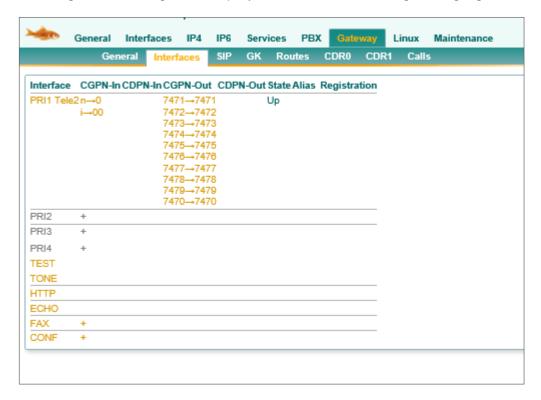
Gateway->GK: Registering the gateway using H323



Gateway->Routes: Routing of incoming and outgoing calls



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



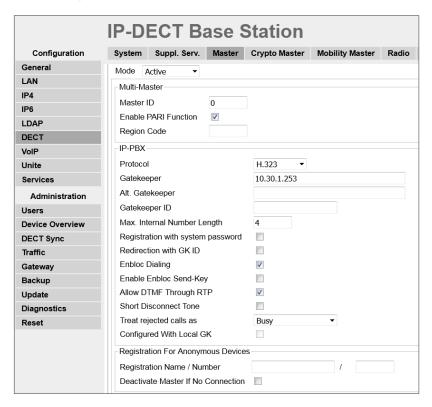
The guidelines for configuring the IP-PBX are based on chapters eleven and twelve of the "Ascom VoIP Gateway: Installation and Operation Manual" (TD 92326GB), pp. 62-100.

For further guidance, please refer to Innovaphone's documentation about configuration and licensing.

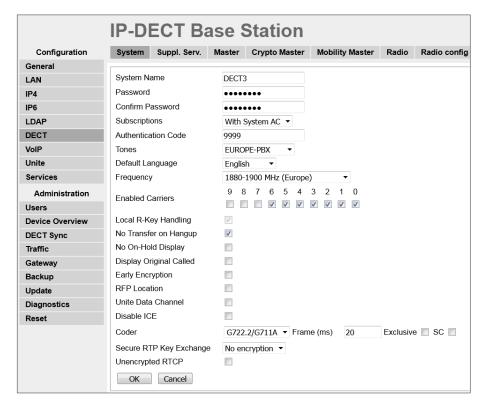
Ascom IP-DECT, v. 11.1.5 (tested 11.1.3)

VoIP Configuration

H.323 settings are found under **DECT > Master**.



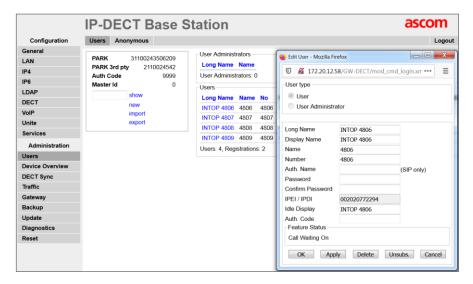
Configure codec settings by going to **DECT > System**.



Note: The actual codec used during a call is dependent on negotiation between endpoints.

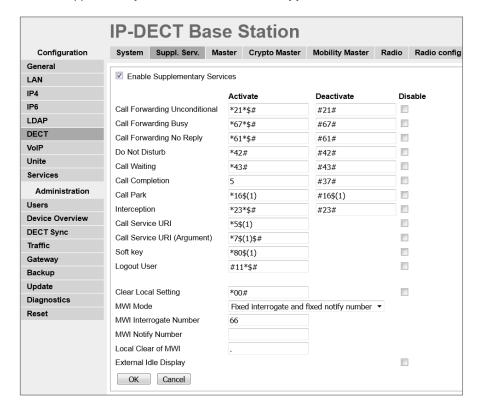
User Configuration

User details and settings can be found under Users > Users.



Configuration of Supplementary Services and Message Waiting Indication (MWI)

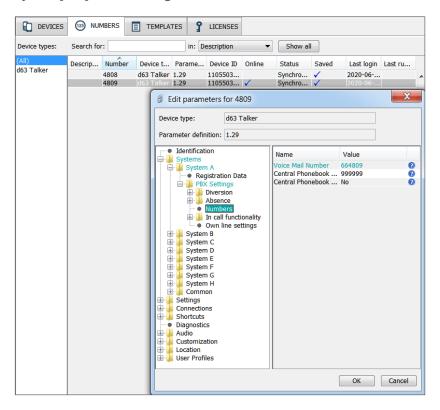
Enable Supplementary Services under DECT > Suppl. Serv.



Note1: The MWI Interrogate Number ("66") corresponds to the Voicemail object on the IP-PBX.

Note2: Configuration of the Voicemail object ("66") on the IP-PBX is system-dependent.

The voice mail number for an extension can be specified in the Ascom Device Manager under Systems > System [A-H] > PBX Settings > Numbers > Voice Mail Number.



These settings were used in the test environment. For further information about Ascom IP-DECT settings, please refer to our documentation.

Appendix B: Detailed Test Records

Pass	36
Fail	1
Comments	7
Not verified	63
Total	107

Please see the attached Excel file for detailed test results.

Refer to the verification specification for explicit information regarding each test case.

The specification can be found here (requires login):

https://www.ascom-ws.com/AscomPartnerWeb/en/startpage/Sales-tools/Interoperability/Templates/

Document History

Rev	Date	Author	Description
PA1	2020-06-09	SEMW	Initial draft
PA2	2020-07-01	SEMW	Updates after release of GA v. 11.1.5
RevA	2020-07-02	SEMW	Final version