Unify Ready

Technology connectivity certification

The connectivity of

Konftel 300 IP

developed by Konftel AB has been certified at the SIP Interface of OpenScape 4000 V7 in accordance with the respective test report.

Konftel AB is now entitled to label the above mentioned product with the Unify Ready emblem.

The test was conducted conforming to DIN EN ISO 9001. This certificate is only valid in conjunction with the full test report and the notes contained therein. **Please consider that the test report only covers the functionality of the interface. The certificate and test report are not good for a statement of end-to-end functionality.**

Munich, November 24th 2016

Luzia Stephan

Director Technology Partner Program

UNIFY READY

UNIFY Harmonize your enterprise

Test Report of Certification

Konftel
300IP

with

OpenScape 4000 Version 7

Test Status: Released
Release Date: 24/11/2016

Owner: Eddy Debraekeleer
Department: SER CM BELUX
Document: Certification_Konftel_300IP_OS4K_V7_rev1.0

Contents:

History of Change

Date	***Description***	***Name***
May 2016	Initial Version	Eddy Sterckx Email: eddy.sterckx@unify.com Phone: +32 2 406 7179
19-20 May 2016	Certification tests	Eddy Sterckx Email: eddy.sterckx@unify.com Phone: +32 2 406 7179
24 May 2016 14 June 2016	Review test document & update results Review test document	Eddy Sterckx Email: eddy.sterckx@unify.com Phone: +32 2 406 7179 Eddy Sterckx Email: eddy.sterckx@unify.com Phone: +32 2 406 7179
24 November 2016	Final review	Eddy De Braekeleer UNIFY Service PS E-Mail: eddy.debraekeleer@unify.com Phone: +32.2.406 7316
24 November 2016	Release	Eddy De Braekeleer UNIFY Service PS E-Mail: eddy.debraekeleer@unify.com Phone: +32.2.406 7316

1 Overview

1.1 Test Object

1.1.1 Basic Equipment

Test system: **OpenScape 4000**

Software Version:
- Platform V7 R2.23.3
- RMX V7 R2.23.10
- Assistant V7 R2.20.2
- CSTA V7 R2.220.2

Gateways HG3540

1.1.2 Konftel

Certification: Test the functionality of the Konftel 300IP with the OpenScape 4000

Test Equipment: OpenScape 4000 CPCI, gateway Q2316-X, Openstage HFA/SIP, Konftel 300IP

Software Release: 2.5.13

HW / FW Release: Konftel 300IP

Manufacturer: Konftel

Description: Konftel 300IP functions as a SIP device registered on the HG3540 gateway.

Documentation: Installation Guide

Test Network: Test network of OpenScape Ready Lab Brussels

Test Configuration: See section 2.3

1.2 Test Strategy

This certification test for the **Konftel** 300IP with the **Unify OpenScape 4000** focused on the verification of the SIP interface in the following scenarios:

- Basic phone configuration and registration
- Basic calls
- Telephony feature verification
- Multi account support
- Audio features, including codec's and DTMF

Following topics were not part of the certification:

- security/encryption (802.1x)
- 802.1q (vlan tagging)
- Factory reset

1.2.1 Test Intensity

Scope of the tests is to execute and verify the solution performs within the limits of the system requirements, targeting the end product. To accomplish this, feature and solution based test cases are created, inspected, and executed under a real system environment (mirroring as close as possible a real customer's environment).

Note:
The testing of the product with regard to compliance to requirements for Product Safety, EMV, Network Access Interfaces and Radiation Protection were not performed.
Unify Communications therefore assumes no responsibility for the compliance to these requirements.

1.2.2 Measuring / Test Instruments

No special hardware for tracing. Tracing was done on the switch equipment (mirroring ports, Wireshark) and on the OpenScape 4K server.

1.3 Realisation Data

Test Preparation: May 19th 2016

Test Duration: May 19-20th 2016

Test Location: Unify Communications
Demeurslaan 134
1654 Huizingen
International Solution Lab

Test Personnel: Unify:
Eddy Sterckx
Email: eddy.sterckx@unify.com

Coordination: Eddy De Braekeleer
E-Mail: eddy.debraekeleer@unify.com

1.4 Test Results Summary

For the details please have a look at the test results.

1.4.1 Problems

1 Test case 3.3.1 & 3.3.5 In the SIP/SDP invite from OS4K to DUT a “Sendonly” is send, DUT replays with a 200 ok SIP/SDP “reconly” but no MOH is played on DUT. DUT on the other hand indicates “HELD” on the display.

2 Test case 3.3.3 & 3.3.7 In the SIP/SDP invite from DUT to OS4K a “Sendonly” is send, OS4K replays with a 200 ok SIP/SDP “reconly” but DUT does (can)not stream MOH (here “inactive” should be send). This results in silence on the OS4K phone (In the case “inactive” is send OS4K phone would receive MOH from OS4K). DUT indicates “HOLD” on the display.

3

4

1.4.2 Restrictions

1 Test case 3.2.1&2 Functionality is OK but only the extension number and not the name is shown in ringing and connects state.

2 Test case 3.2.5&6 Functionality is OK but in ringing state only the extension name is shown and in connected state only the extension number.

3 Test case 3.2.10 Functionality is OK but in ringing state only the trunk name is shown and in connected state only the external extension number.

4 Test case 3.3.16&19 Functionality is OK but no display update on DUT

5 Test case 3.3.23 Functionality is OK but no display update in ringing nor connected state on DUT

1.4.3 Remarks

1 Test case 3.3.13 and 3.3.15 only on the Master conference device shows ‘Active Conference’ on display. W.a.d. on OS4K.

2

3

4

2 Configuration

2.1 Konftel 300IP

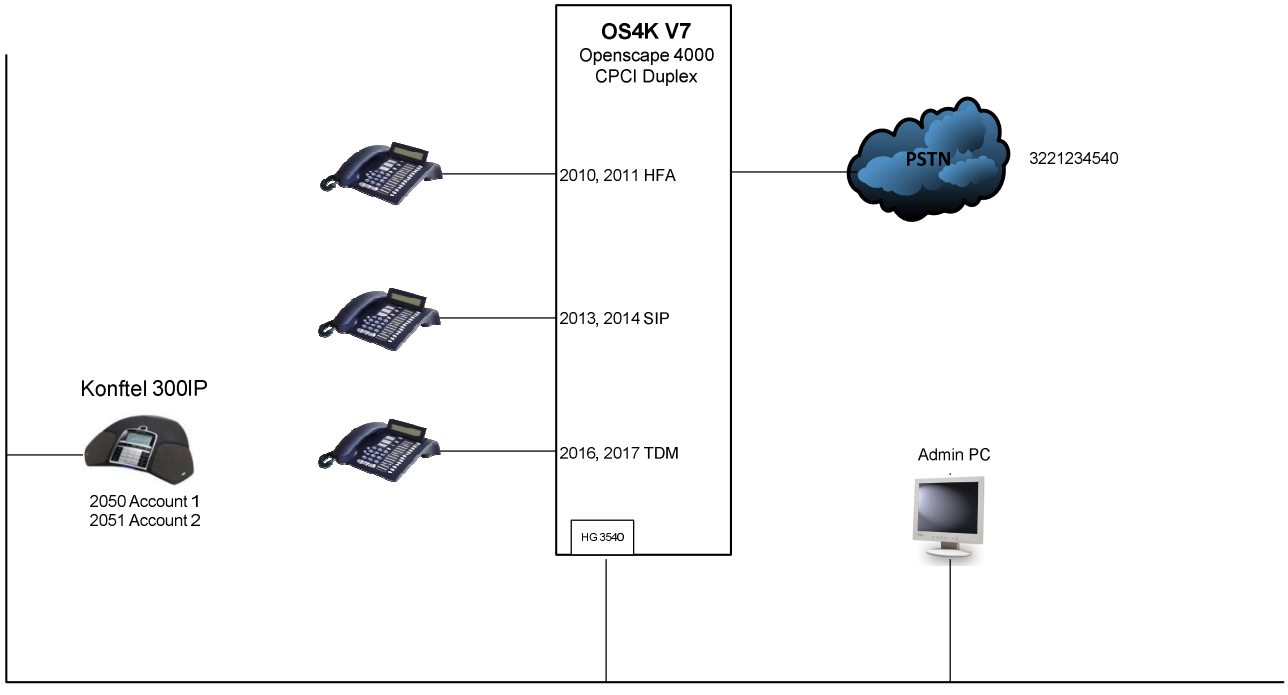
The Konftel 300IP device has been configured by Unify.

2.2 OpenScape 4000

- HW Version: CPCI
- SW Version RMX: V7 R2.23.10
- IP phones
  - Openstage HFA V3 R0.33.1
    Openstage SIP V3 R4.8.0

- HG3500
  - LW pzksti40.A4.002-004

2.3 Configuration Block Diagram



3 Test Results in Detail

3.1 Connectivity and Basic Operation

The following table shows the list of test cases and the associated results for the verification of basic phone connectivity via the SIP interface.

Test Case	Test Description	Result	Comment
		300IP	
3.1.1	Connect the test phone to its AC power supply and the LAN. Verify that the phone obtains a valid IP address from the **DHCP** server.	OK	
3.1.2	Connect the test phone to a **PoE** source and verify that it powers up correctly and obtains a valid IP address from the **DHCP** server.	OK	
3.1.3	Connect a PC to the lab LAN and verify that access to the web GUI of the test phone is possible. **User ID=** '**Admin'**, **password=** '**1234'**.	OK	Use http://
3.1.4	Program the phone via web GUI with the OpenScape 4000 **registrar** information and verify that the phone registers.	OK	
3.1.5	Change the OpenScape 4000 subscriber settings so that **Digest Authentication** is required for the registration. Verify that the phone does not register.	OK	
3.1.6	Add the information for **Digest Authentication** to the test phone settings via web GUI and verify that the phone registers.	OK	
3.1.7	Verify that the test phone displays the local date and time correctly that is provided by the SNTP server.	OK	

3.2 Basic call

The following table shows the list of test cases and the associated results for the verification of basic calls. All tests are executed with G.711A codec setting and without DMC.

Test Case	Test Description	Result	Comment
		300IP	
3.2.1	Initiate a call from the DUT to **internal** subscriber 2010. Verify that 2010 is ringing (DUT receives ring back) and that the displays on the DUT and 2010 show the correct called/calling number/name information.	NOK	See 1 in section 1.4.2
3.2.2	From the previous test case answer the call at 2010 and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	NOK	See 1 in section 1.4.2
3.2.3	From the previous test case **disconnect** the call at the DUT and verify that both phones return to idle state.	OK	
3.2.4	Repeat the previous call, but disconnect the DUT before 2010 answers. Verify that the DUT returns to idle state.	OK	
3.2.5	Initiate a call from 2010 to the DUT. Verify that the DUT is ringing (2010 receives ring back) and that the displays on the DUT and 2010 show the correct called/calling number/name information.	NOK	See 2 in section 1.4.2
3.2.6	From the previous test case answer the call at the DUT and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	NOK	See 2 in section 1.4.2
3.2.7	From the previous test case disconnect the call at the DUT and verify that both phones return to idle state.	OK	
3.2.8	Initiate a call from the DUT to an **external number**. Verify that the external phone is ringing (DUT receives ring back) and that the displays on the DUT and the external phone show the correct called/calling number.	OK	
3.2.9	From the previous test case answer the call at the external phone and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	OK	
3.2.10	Initiate a call from an **external number** to the DUT. Verify that the DUT is ringing (external phone receives ring back) and that the displays on the DUT and the external phone show the correct called/calling number.	NOK	See 3 in section 1.4.2
3.2.11	From the previous test case answer the call at the DUT and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	OK	

3.3 Telephony features

The following table shows the list of test cases and the associated results for the verification of telephony features in various call situations. All tests are executed with G.711A codec setting and no DMC.

Test Case	Test Description	Result	Comment
		300IP	
3.3.1	Initiate a call from the DUT to internal subscriber 2013. Answer the call at 2013. Put the DUT **on hold** and verify that it receives Music-on-hold.	NOK	DUT indicates 'HELD" on display See 1 section 1.4.1
3.3.2	From the previous test case retrieve the DUT from hold and verify speech path between the DUT and 2013.	OK	
3.3.3	Initiate a call from internal subscriber 2013 to the DUT. Answer the call at the DUT. From the DUT put 2013 **on hold** and verify that it receives Music-on-hold.	NOK	DUT indicates 'HOLD" on display See 2 section 1.4.1
3.3.4	From the previous test case retrieve 2013 from hold and verify speech path between the DUT and 2013.	OK	
3.3.5	Initiate a call from the DUT to internal subscriber 2013. Answer the call and initiate **consultation** at 2013. Verify that the DUT receives Music-on-hold.	NOK	DUT indicates 'HELD" on display See 1 section 1.4.1
3.3.6	From the previous test case return from consultation and verify speech path between the DUT and 2013.	OK	
3.3.7	Initiate a call from internal subscriber 2010 to the DUT. Answer the call and initiate **consultation** at the DUT. Verify that 2010 receives Music-on-hold while the DUT receives dial tone.	NOK	DUT indicates 'HOLD" on display See 2 section 1.4.1
3.3.8	From the previous test case dial 2011 at the DUT. Answer the call at 2011. Verify that the DUT can **toggle** between 2010 and 2011.	NA	No toggle function on DUT
3.3.9	From the previous test case initiate a **supervised transfer** at the DUT so that 2010 and 2011 are connected. Verify that 2010 and 2011 have speech path, the displays are correct, and that the DUT returns to idle state.	NA	No supervised transfer function on DUT
3.3.10	Initiate a call from the DUT to internal subscriber 2010. Answer the call and initiate consultation at the DUT. Dial 2011 and perform a **blind transfer** from 2010 to 2011. Answer 2011 and verify that 2010 and 2011 have speech path, the displays are correct, and that the DUT returns to idle state.	NA	Blind transfer not supported on OS4K
3.3.11	From the previous test case (3.3.6) invoke the **last number redial** function on the DUT and verify that it calls 2013.	OK	
3.3.12	Initiate a call to the DUT from an external number. Answer the call, then disconnect. Verify that the external number can be called from the call history list.	OK	
3.3.13	Initiate a call from the DUT to internal subscriber 2010. Answer the call and initiate a **three-way conference** from the DUT with 2011. Verify that all parties have speech path and that the displays on the phones indicate the conference.	OK	Only the DUT display shows 'Active Conference'. See 1 section 1.4.3

Test Case	Test Description	Result	Comment
		300IP	
3.3.14	From the previous test case go on-hook at 2010. Verify that the DUT and 2011 are in two-party talk and the displays are updated accordingly.	OK	
3.3.15	Call an external number from 2010. Once connected use 2010 to add the DUT to a **three-way conference**. Verify that all parties have speech path and that the displays on the phones indicate the conference.	OK	Only 2010 display shows 'Active Conference'. See 1 section 1.4.3
3.3.16	From the previous test case **release the conference master** 2010. Verify that the DUT and the external phone are in two-party talk and the displays are updated accordingly.	NOK	See 4 in section 1.4.2
3.3.17	Call the DUT from 2010 after the **Do-Not-Disturb** function was activated. Verify that the call is rejected.	NA	No DND function on DUT
3.3.18	Activate **call forwarding** on the DUT to 2011. Call the DUT from 2010 and verify that the call is forwarded to 2011.	NA	No call forwarding function on DUT
3.3.19	Put the DUT and 2010 in the same pickup group. Call 2010 from 2011. While 2010 is ringing, dial the **Pick-up** code (##) from the DUT and verify that speech path to 2011 is established and the display shows correct caller information.	NOK	See 4 in section 1.4.2
3.3.20	Call the DUT from 2010. While connected, call the DUT from 2011 and verify that a **call waiting** indication is presented on the DUT that shows the calling party information.	OK	
3.3.21	From the previous test case accept the waiting call and verify that speech path is established between the DUT and 2011. Verify that 2010 is put on hold.	OK	
3.3.22	Call 2013 from the DUT and **reject** the call at 2013.	OK	
3.3.23	Call 2013 from the DUT and **deflect** the call to 2014. Verify that the DUT indicates the call deflection.	NOK	See 5 in section 1.4.2
3.3.24	Make the DUT busy and then call it from 2010. Verify that the call is forwarded to the voicemail system (Xpressions) and that the **message waiting indication** (**MWI**) on the DUT is turned on.	NA	No MWI function on DUT
3.3.25	From the previous test case retrieve the voicemail message and verify that the MWI is turned off.	NA	
3.3.26	While the MWI is lit on the DUT, disconnect the DUT from power and force a reboot. Verify that after the reboot is complete, the MWI is turned on.	NA	
3.3.27	While the MWI is lit on the DUT, reboot the Xpressions server. Verify that after the reboot is complete, the MWI is turned on.	NA	

3.4 Multi-account Support

The following table shows the list of test cases and the associated results for the verification of multi account support of the **Konftel** SIP phones.

Test Case	Test Description	Result	Comment
		300IP	
3.4.1	Program the second phone (account) via web GUI with the OpenScape 4000 **registrar** information and verify that the phone registers.	OK	
3.4.2	Change the OpenScape 4000 subscriber settings so that **Digest Authentication** is required for the registration. Verify that the phone does not register.	OK	
3.4.3	Add the information for **Digest Authentication** to the test phone settings via web GUI and verify that the phone registers.	OK	
3.4.4	Set the second account as “default account”, check if DUT indicates that this account is active.	OK	
3.4.5	Initiate a call from the DUT to **internal** subscriber 2010. Verify that 2010 is ringing (DUT receives ring back) and that the displays on 2010 show the correct called/calling number/name information.	OK	
3.4.6	From the previous test case answer the call at 2010 and verify speech path between both phones	OK	
3.4.7	Initiate a call from 2010 to the DUT account 1. Verify that the DUT is ringing (2010 receives ring back). Answer the call and verify speech path between both phones.	OK	
3.4.8	From DUT, setup a five-way conference, two outgoing call from account 2 and two incoming calls to account 1. Verify that the conference can be established	OK	

3.5 Audio features

The following table shows the list of test cases and the associated results for the verification of various audio features, including codec settings and DTMF transmission.

Test Case	Test Description	Result	Comment
		300IP	
3.5.1	Configure STMI to use the G.729 codec only. Call the DUT and verify that the connection is established with G.729 (use Wireshark).	OK	
3.5.2	Configure STMI to use the G.729 codec preferably. Call the DUT and verify that the connection is established with the first matching codec supported by the DUT or rejected if no match is found. DUT G711 only	OK	STMI G.729 only, call rejected STMI G.729 and G.711, call G.711
3.5.3	Configure STMI to use the G.722 codec preferably. Call the DUT and verify that the connection is established with G.722 (use Wireshark).	NA	STMI does not support G.722
3.5.4	Configure the DUT for DTMF transmission via RFC 2833. Call the Auto Attendant (Conf bridge) from the DUT. Verify that the Auto Attendant responds to the phone's DTMF keys (also use Wireshark).	OK	
3.5.5	Configure the DUT for DTMF transmission via inband tones. Call the Auto Attendant (Conf bridge) from the DUT. Verify that the Auto Attendant responds to the phone's DTMF keys.	OK	

3.6 Remarks

Meanings of Abbreviations:

OK	Testcase successful
NOK	Testcase NOT successful
NA	Testcase not applicable
NP	Testcase not processed
NS	Situation not supplied
N *X	Error / restriction with description
* X	Remark to Functionality
DUT	Device Under Test
CFU	Call Forwarding Unconditional
CFNR	Call Forwarding on No Reply
CFB	Call Forwarding on Busy
MLHG	Multi Line Hunt Group
moH	music-on-hold
DND	Do Not Disturb

4 Configuration Data

4.1 OpenScape 4000

4.1.1 System Basics

The OpenScape configuration.

DUT, Subscriber 2050 account 1, with digest authentication.

```
ADD-SBCSU:STNO=2050,OPT=FPP,CONN=SIP,PEN=1-1-8-32,DVCFIG=S0PP,COS1=175,COS2=175,
LCOSV1=7,LCOSV2=7,LCOSD1=7,LCOSD2=7,DPLN=0,ITR=0,SSTNO=N,COSX=0,SPDI=0,PROT="SBD
SS1",PERMACT=Y,INS=Y,ALARMNO=0,OPTIDX=10,RCBKB=N,RCBKNA=N,CBKBMAX=5,HMUSIC=0,PAS
SWD="123456",USERID="2050",AUTHREQ=Y,DTMFCTRD=Y;

ADD-PERSI:TYPE=STN,STNO=2050,NAME="konftel 2050*";
```

DUT, Subscriber 2051 account 1, without digest authentication.

```
ADD-SBCSU:STNO=2051,OPT=FPP,CONN=SIP,PEN=1-1-8-34,DVCFIG=S0PP,COS1=175,COS2=175,
LCOSV1=7,LCOSV2=7,LCOSD1=7,LCOSD2=7,DPLN=0,ITR=0,SSTNO=N,COSX=0,SPDI=0,PROT="SBD
SS1",PERMACT=Y,INS=Y,ALARMNO=0,OPTIDX=10,RCBKB=N,RCBKNA=N,CBKBMAX=5,HMUSIC=0,DTMFCTRD=Y
;

ADD-PERSI:TYPE=STN,STNO=2051,NAME="konftel 2051*";
```

Openstage, Subscriber 2010

```
ADD-SBCSU:STNO=2010,OPT=OPTI,CONN=IP2,PEN=1-1-8-5,DVCFIG=OPTIIP&API,TSI=1&2,COS1
=175,COS2=175,LCOSV1=32,LCOSV2=32,LCOSD1=7,LCOSD2=7,DPLN=0,ITR=0,SSTNO=N,COSX=0,
SPDI=10,SPDC1=8,SPDC2=1,IDCR=N,REP=0,STD=57,SECR=N,INS=Y,ALARMNO=0,RCBKB=N,RCBKN
A=N,DSSTNA=Y,DSSTNB=N,DIGNODIS=N,CBKBMAX=5,HEADSET=N,HSKEY=NORMAL,CBKNAMB=Y,TEXT
SEL=ENGLISH,HMUSIC=0,CALLOG=ALL,PMIDX=5,COMGRP=0,APICLASS=TSX,DTMFCTRD=Y,IPCODEC
=G711P;

ADD-PERSI:TYPE=STN,STNO=2010,NAME="hfa hhs 2010*";
```

Openstage , Subscriber 2013

```
ADD-SBCSU:STNO=2013,OPT=FPP,CONN=SIP,PEN=1-1-8-28,DVCFIG=S0PP,COS1=175,COS2=175,
LCOSV1=7,LCOSV2=7,LCOSD1=7,LCOSD2=7,DPLN=0,ITR=0,SSTNO=N,COSX=0,SPDI=0,PROT="SBD
SS1",PERMACT=Y,INS=Y,ALARMNO=0,OPTIDX=10,RCBKB=N,RCBKNA=N,CBKBMAX=5,HMUSIC=0,DTM
FCTRD=Y;

ADD-PERSI:TYPE=STN,STNO=2013,NAME="sip hhs 2013*";
```

4.2 Konftel

4.2.1 Documentation

*www.**konftel**.com*

4.2.2 Basic Configuration

Konftel 300IP configuration (screenshots):


Config.zip

5 Confirmation

Testing personnel confirms that all the test cases were performed and that the results were as described in this document.

Konftel

Eddy Sterckx
Unify Belgium