



Developer and Solution Partner Program Inter-Working Report

Partner: Aurenz
Solution name: AlwinPro Hotel
Alcatel-Lucent Enterprise Platform:
OmniPCX Enterprise



February 2020

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Document history

Revision	Date	Author	Details
1	February 2020	Karthik Padmarajan Durgadevi Subash	Creation

Tests Overview

Date	February 2020
ALE representative	Thierry CHEVERT
Partner representative	Ralf Kloth
ALE platform	OmniPCX Enterprise
ALE release	R 12.3.1 (M4 501 10f)
Partner solution	AlwinPro Hotel
Partner release	12.0
Solution categories	Property Management System (PMS)

Tests results

☒ Passed ☐ Passed with restriction ☐ Postponed ☐ Refused

Refer to the section 4 for a summary of the test results.

IWR validity extension

None

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1.1 Definition

This document is the result of the certification tests performed between the DSPP member's solution and Alcatel-Lucent Enterprise's platform.

It certifies proper inter-working with the DSPP member's solution.

Information contained in this document is believed to be accurate and reliable at the time of printing. However, due to ongoing product improvements and revisions, ALE cannot guarantee accuracy of printed material after the date of certification nor can it accept responsibility for errors or omissions. Updates to this document can be viewed on:

- the Technical Support page of the Enterprise Business Portal (<https://businessportal.alcatel-lucent.com>) in the Interworking Reports corner (access is restricted to Business Partners and DSPP members)

1.2 Validity of the InterWorking Report

This InterWorking report specifies the products and releases which have been certified.

This inter-working report is valid unless specified until the DSPP member issues a new major release of such product (incorporating new features or functionalities), or until ALE issues a new major release of such Alcatel-Lucent Enterprise product (incorporating new features or functionalities), whichever first occurs.

A new release is identified as following:

- a "Major Release" is any x. enumerated release. Example Product 1.0 is a major product release.
- a "Minor Release" is any x.y enumerated release. Example Product 1.1 is a minor product release

The validity of the InterWorking report can be extended to upper major releases, if for example the interface didn't evolve, or to other products of the same family range. Please refer to the "IWR validity extension" chapter at the beginning of the report.

Note 1: *The InterWorking report becomes automatically obsolete when the mentioned product releases are end of life.*

Note 2: The renewal of the interoperability test (certification) is under the responsibility of the partner

Note 3: ALE usually generate a major release every 18 or 24 months. Therefore the IWR is implicitly valid for two year after the publication.

1.3 Limit of the technical support

For certified DSPP solutions, Technical support will be provided within the scope of the features which have been certified in the InterWorking report. The scope is defined by the InterWorking report via the tests cases which have been performed, the conditions and the perimeter of the testing and identified limitations. All those details are documented in the IWR. The Business Partner must verify an InterWorking Report (see above “Validity of the InterWorking Report”) is valid and that the deployment follows all recommendations and prerequisites described in the InterWorking Report.

The certification does not verify the functional achievement of the DSPP member’s solution as well as it does not cover load capacity checks, race conditions and generally speaking any real customer's site conditions.

Access to technical support by the ALE Business Partner requires a valid ALE maintenance contract

For details on all cases (3rd party application certified or not, request outside the scope of this IWR, etc.), please refer to Appendix “DSPP Escalation Process”.

1.3.1 Case of additional Third-party applications

In case at a customer site an additional third-party application NOT provided by ALE is included in the solution between the certified Alcatel-Lucent Enterprise and DSPP member products such as a Session Border Controller or a firewall for example, ALE will consider that situation as to that where no IWR exists. ALE will handle this situation accordingly (for more details, please refer to Appendix “DSPP Escalation Process”).

Solution name	AlwinPro Hotel
Solution version	12.0
Interface/API	AHL – TCP/IP Hotel Link
Interface/API version if relevant	

Brief Solution description:

AlwinPro Hotel can be integrated into existing telecommunications systems and IT landscapes. AlwinPro Hotel acts as middleware between the PBX and the hotel management system. Services such as telephone connection, Internet and TV are easy and comfortable to calculate and bill. This reduces the administrative burden and saves resources. All data is guest-related and processed in accordance with data protection laws. In addition, AlwinPro Hotel offers the full scope of a modern call accounting solution. The integrated guest management also allows check-in and check-out directly which should be extra interesting for bed and breakfasts and small guesthouses.. Easy to calculate internal costs or UC services to third parties as a service provider.

AlwinPro Hotel is the reliable and cost-saving option for today's requirements when it comes to billing of entertainment services. Patients are becoming demanding customers who expect more than good medical treatment and care. Web access via WLAN, using a laptop, tablet or smartphone is a must for patients of today. Telephone and TV must also be at hand in order to make the hospital-stay as comfortable as possible.

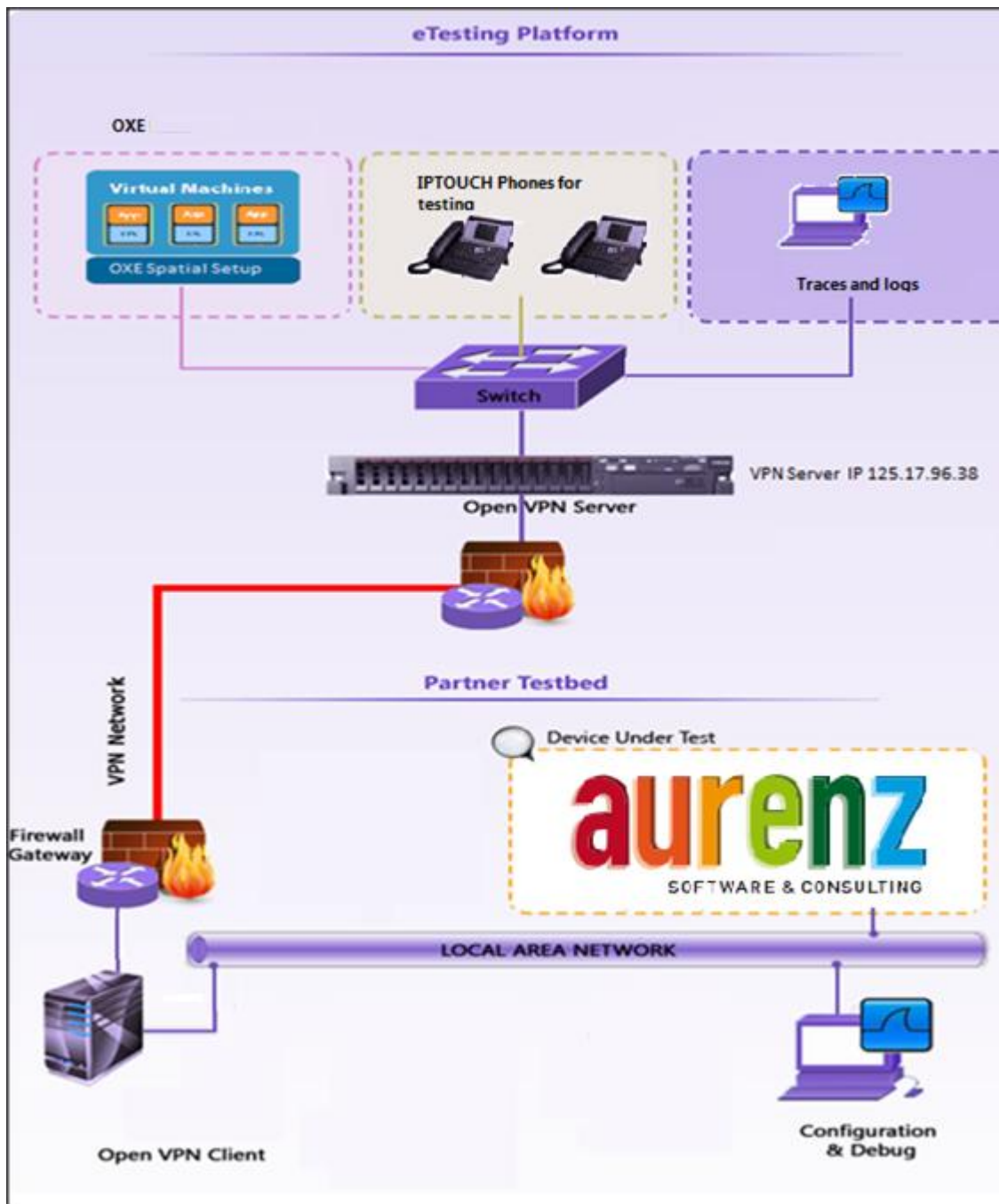


Figure 1 Test environment

3.1 Hardware configuration

One server for PMS application
One PC for Interface connection

- **OmniPCX Enterprise:**
 - CS (Call Server Processing Unit)
 - GD (Gateway driver processing Unit)
 - PRA T2 (ISDN Access)
 - MIX 2/4/4 (ISDN T0, digital & analog interfaces)

- **AHL interface:** TCP/IP

3.2 Software configuration

- **Alcatel-Lucent Enterprise Communication Platform:** OmniPCX Enterprise R12.3.1 (M4.501.10f)
- **Partner Application :** Aurenz Alwin proHotel

SUMMARY OF TESTS

4.1 Summary of main functions supported

Features	Implemented & tested	Comments
TCP/IP connection and Keep-alive	OK	Keep alive is sent every 20 seconds
Frame Sequencing	OK	
GUEST MANAGEMENT	NA	Done by AlwinPro Care
ROOM MANAGEMENT	OK	
ROOM STATUS	OK	
MODIFICATION (Room or Guest)	OK	
WAKE-UP events	OK	
CALL TICKETS (SMDR)	OK	
DATA TRANSFER	NA	
VOICE MAIL attribution	OK	
VOICE MAIL events	OK	
Database Re-Initialization	OK	
SPATIAL REDUNDANCY	OK	Spatial redundancy is supported only if FQDN is given. There is no option to give two IP addresses. Keep alive is sent every 20 seconds

4.2 Summary of problems

- None

4.3 Summary of limitations

- The language id is not implemented by AlwinPro applications.

- No VIP feature available
- No room share feature (Multi-Occupation) available.
- The application will send database re-initialization request, in case of bad synchronization, but it does not fully check the values received from PBX to synchronize its database first then update the PBX. There are corrections in progress in their data collector module.
- Password changing: For every password change, a complete process of Check-out and then Check-in is initiated. Afterwards the guests retrieve his settings but loses his voice mailbox (F...P0 frame sent).
- The application does not have option to give two IP address so to support spatial redundancy

4.4 Notes, remarks

- None

5.1 Template

The results are presented as indicated in the example below:

Test Case Id	Test Case	N/A	OK	NOK	Comment
1	Test case 1 <ul style="list-style-type: none"> Action Expected result 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	Test case 2 <ul style="list-style-type: none"> Action Expected result 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The application waits for PBX timer or phone set hangs up
3	Test case 3 <ul style="list-style-type: none"> Action Expected result 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relevant only if the CTI interface is a direct CSTA link
4	Test case 4 <ul style="list-style-type: none"> Action Expected result 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No indication, no error message
...	...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Test Case Id: a feature testing may comprise multiple steps depending on its complexity. Each step has to be completed successfully in order to conform to the test.

Test Case: describes the test case with the detail of the main steps to be executed the and the expected result

N/A: when checked, means the test case is not applicable in the scope of the application

OK: when checked, means the test case performs as expected

NOK: when checked, means the test case has failed. In that case, describe in the field "Comment" the reason for the failure and the reference number of the issue either on ALE side or on partner side

Comment: to be filled in with any relevant comment. Mandatory in case a test has failed especially the reference number of the issue.

5.2 TCP/IP connection and Keep-alive mechanism

5.2.1 Test Objectives

To check the keep alive is properly maintained between application and OXE

5.2.2 Test Results

Test Case Id	Test Case	N/A	OK	NOK	Comment
CNX101	PMS connects to PBX over TCP/IP <ul style="list-style-type: none"> ➤ PMS send TCP packet containing @FFFF ➤ PBX send back ACK 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CNX102	PMS sends keep-alive to PBX <ul style="list-style-type: none"> ➤ PMS sends frame \$FFFF every 30 seconds ➤ PBX do not answer with Ack 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Keep alive from the PMS server is configured for every 20 seconds.
CNX103	PBX send keep-alive to PMS <ul style="list-style-type: none"> ➤ PBX sends frame \$xxxx to PMS, with xxxx equal to node number, every 30 seconds ➤ PMS do not answer with Ack 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Result	Connection and Supervision of TCP/IP link.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

To check the correct connection and supervision of link, you have to trace it on the Pbx side using the following procedure:

- Modify the management of computer link
 - a. use mgr or 8770
 - b. go to Application/Hotel/down/computer link
 - c. for parameter "LINF Parameter" set the value "-a" (minus and a)
 - d. Then on mtcl prompt > enter the command "traced".
- In tracing, you'll find the following "sentences" to show the connection from PMS and the keep-alive from both sides:
 - Connection from PMS (acked by Pbx)
 - > **MASTER: read from EXT APP "(STX) @FFFF (ETX)"** // Pbx read from computer link the connection frame.
 - > **MASTER write to node FFFFFFFF "(ACK)"** // Pbx write to computer link the Ack frame to send to PMS.
 - Keep-alive from Pbx to PMS (not to be acked)
 - > **MASTER write to node FFFFFFFF "(STX) \$0002(ETX)"** // Pbx write to computer link the frame for keep-alive, here this PBX is node 0002.
 - Keep-alive from PMS to PBX (not to be acked)
 - > **MASTER: read from EXT APP "(STX)\$FFFF(ETX)"** // PBX read the keep-alive of PMS.

5.3 Frame Sequencing and use of Reply frame

5.3.1 Test Objectives

This test will check that the frames are properly sent by the PMS or PMS gateway following the sequencing that help to make it work better.

The “**ACK**” frame sent back by PBX to PMS as an answer to a received request frame, should not be seen as an agreement for the frame content but only as an **agreement for the frame format** (frame type → number of characters + checksum). The “ACK” is used to validate the Link/layer level but not the hotel and telephone application layer.

5.3.2 Test Results

Test Case Id	Test Case	N/A	OK	NOK	Comment
FSC 101	PMS or PMS Gateway sends a Check-in followed by Modification. The PMS should wait for Reply Message from PBX then send next frame.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
FSC102	PMS or PMS Gateway sends multiple check-in to simulate a Bus check-in. The sequencing with Reply messages should be well organized.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PMS waits for reply messages from OXE to send the consecutive frames
FSC103	PMS or PMS Gateway sends check-in for a wrong Room number. The Reply with “Refuse” code has to be taken into account, logged and notified to the Application interface.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refusal code is processed and a pop is displayed for the user.
Result	Frame Sequencing and Reply frame	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.4 PMS → PBX - Check in with Room Extension

5.4.1 Test objectives

Below test cases are mandatory for room management. Room management related tests are extensively tested.

5.4.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
CIR101	Generate a check-in without PWD	Reply= I with Room extension and PWD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The Check-in is done but AlwinProCare doesn't take the password sent by the OXE into account and could not display it. It's better to do a check-in with a password generated by AlwinPro Care application.
CIR102	Generate a check-in with PWD (PWD sent by the PMS)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Passwords are always handled by the PMS (basically settings into application)
CIR103	Generate a check-in with an invalid Room Extension	Reply=INV JG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Popup into application that operation not accepted.
CIR104	Generate a check-in with an already checked-in Room extension	Reply=INV JA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Popup into application that operation not accepted. Basically this case is not possible by design of application. Application cannot send checkin for same extension twice.
CIR105	Generate a check-in with deposit	Reply=I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Deposit is sent by application into an M frame.
CIR106	Generate a check-in with V.I. P. status		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VIP not supported by application.
CIR107	Generate a check-in with language parameter		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The language is not customizable. PMS always send code 0 for first language.
CIR108	Generate a check-in with wake-up call time		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wakeup sent modification.
CIR109	Generate a check-in with Direct Output Restrictions		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DOD is sent by application into an M frame.
Result	CHECK-IN with ROOM EXTENSION		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.5 PMS ← PBX - Check-in with Guest Number (allocation on PBX)

5.5.1 Test objectives

Below tests are done to test GPIN management. GPIN management has two types 5 digit and 8 digit. It is up to application partner to select which type to support. The arrival frame is tested extensively in below test cases.

5.5.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
CIC201	Generate a check-in without PWD	Reply= I with PWD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Guest management is done in AlwinPro Care.
CIC202	Generate a check-in with PWD (PWD sent by the PMS)	Reply= I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC203	Generate a check-in with an invalid room extension	Reply =INV JG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC204	Generate a check-in with Status PBX : No DID Number available	Reply=INV JG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC205	Generate a check-in with deposit	Reply= I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC206	Generate a check-in with V.I. P. status	Reply= I R 20092343I 3E	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC207	Generate a check-in with language parameter	Reply= I R 20097780I 37	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC208	Generate a check-in with wake-up call time	Reply= I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC209	Generate a check-in with Direct Output Restrictions (Class of service)	Reply= I R 20067780I 37	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC210	Generate a check-in followed by an allocation with an invalid room extension	Reply= BR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CIC211	Generate a check-in with voice mail attribution	Reply= I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Result	CHECK-IN WITH GUEST NUMBER		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5.6 PMS ← PBX - ALLOCATION of room extension to a Guest

5.6.1 Test objectives

Below tests are done to test allocation frame that is sent after the arrival frame. Allocation frame is extensively tested.

5.6.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
ALL101	Allocation of a GUEST to an extension with room state = room cleaned		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ALL102	Allocation of a GUEST to an extension with room state = room to be cleaned for a new guest or the same guest a) Execute (PBX initialization). b) Refuse (PBX initialization).	a) Execute with Reply=INV AO. b) Refuse with Reply=INV BO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ALL103	Allocation of a GUEST to an extension with a GUEST NUMBER out of range (it doesn't exist)	Reply=INV BG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ALL104	Allocation of a GUEST to an extension with a GUEST NUMBER not checked-in.	Reply=INV BA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ALL105	Allocation of a GUEST to an extension with overbooking:a) With overbooking authorization on PBX.B) With no overbooking authorization on PBX.	a) Execute with Reply=INV AO. b) Refuse with Reply=INV BU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ALL106	Allocation of a GUEST to an extension which is out of range (ex: it doesn't exist).	Reply=INV BR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ALL107	Allocation of a GUEST from a ROOM EXTENSION to another ROOM EXTENSION with DID and NONDID Guest numbers affected to both ROOMS.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ALL108	Allocation of a GUEST to a dynamic suite extension.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ALL109	Retire a GUEST of a ROOM EXTENSION		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Result	ALLOCATION of room extension to Guest		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5.7 PMS → PBX - Modification of Guest or Room configuration

5.7.1 Test objectives

Modification frame is tested extensively below test cases. Below cases are common for both Guest and room management mode.

5.7.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
MOC102	Modification of GUEST with NEW PWD (only for Guest)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Application could provide a New password and it send an M frame with the 4 digits password.
MOC103	Modification of GUEST with an invalid GPIN (only for Guest)	Reply=INV NG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MOC104	Modification with an no checked- in GPIN (only for Guest)	Reply=INV NA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Popup into application that operation not accepted.
MOC107	Generate a chek-in with GPIN and an unavailable PWD (only for Guest)	Reply=INV NP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Popup into application that operation not accepted.
MOC108	Modification with deposit		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
MOC109	Modification of V.I. P. status		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
MOC110	Modification of language parameter		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
MOC111	Programmation on wake-up call time		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
MOC112	Modification and delation wake-up call time		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
MOC113	Wake-up call not answered		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
MOC114	Modification of Class of service		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
MOC115	Programation on wake-up call time from phone set		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
MOC116	Modification of message waiting status (Switch on the LED message)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
MOC117	Modification of the name		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
MOC118	Modification in DND state		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Result	MODIFICATION of GUEST/ROOM configuration		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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5.8 PBX → PMS - Room status change (Optional)

5.8.1 Test objectives

Room status change related tests are tested in below scenarios. These tests are not mandatory.

5.8.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
STAT101	Room status message with maid identification code		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Maid Id not taken into account
STAT102	Room status message without maid identification code		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
STAT103	Room status message with different status managed by the PMS: Ex: Maid arrives in the room, room has be cleaned for a new guest or the same guest etc....		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Maid Id not taken into account
Result	ROOM STATUS change		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.9 PBX → PMS - Wake Up events

5.9.1 Test objectives

To check Wake up events sent from the PBX are processed by the application.

5.9.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
WUP101	Wake-up message with normal answer from PMS		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WUP102	Wake-up message with no answer		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WUP103	Wake-up message with busy line		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WUP104	Wake-up message with out of order line		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WUP105	Wake-up message with cancellation		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WUP106	Wake-up message generated by programming from a phone set		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WUP107	Wake-up message generated by modification from a phone set		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WUP108	Wake-up cancellation generated by modification message from a phone set		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Result	WAKE- UP events		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.10 PBX → PMS - Management of Call Tickets (Station Message Detail Recording)

5.10.1 Test objectives

Call accounting and SMDR tickets sent from the PBX are to be stored and processed by the application under guest account and processed during checkout.

5.10.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
CAT101	SMDR message of a charged outgoing call with pulses and costs Call done on room extension		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CAT102	SMDR message of a charged outgoing call with pulses or cost. Call done on booth extension .		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CAT104	SMDR message of a transfered outgoing call from room to room with pulses		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CAT105	SMDR message of a transfered outgoing call from an ADMIN extension to a GUEST with pulses or cost		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CAT106	SMDR message of a non charged outgoing call (Call not answered)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the PBX sends a ticket, this will be processed
CAT107	SMDR message of an incoming call		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the PBX sends a ticket, this will be processed
CAT108	SMDR message of a transfered incoming call		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the PBX sends a ticket, this will be processed
CAT110	Management SMDR messages for a Guest number		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported
CAT110	SMDR message of a transferred outgoing call from ROOM1 to ROOM2 which is forwarded on mail box		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Result	Management of CALL TICKETS:		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.11 PBX → PMS - Data Transfer Management (Mini-Bar)

5.11.1 Test objectives

To check whether the application is able to process the Mini bar messages sent by PBX which is triggered from the guest room extensions.

5.11.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
DAT101	Generates a DATA TRANSFER message by MiniBar prefix and with informations in data field .		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
DAT102	Generates DATA TRANSFER messages by MiniBar prefix with more than 20 characters in data field .It's possible by generating a # character, that permits to send immediatly a first DATA TRANSFER message followed by an other one with the rest of the character		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
DAT103	If more than one code is used, do the same tests for each code.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
Result	DATA TRANSFER Management		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5.12 PMS → PBX - Interrogation management followed by PBX → PMS - Guest Telephone Account

5.12.1 Test objectives

To check whether the application is able to process the interrogation messages sent by PBX which is triggered by the application for verifying the call accounts.

5.12.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
INT101	Asks for the GUEST or ROOM EXTENSION telephone accounts.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
INT102	Asks for the GUEST or ROOM EXTENSION telephone accounts with GUEST Number or ROOM EXTENSION out of range.	Reply=INV RG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
INT103	Asks for the GUEST or ROOM EXTENSION telephone accounts with GUEST Number or ROOM EXTENSION not checked-in.	Reply=INV RA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
INT104	Asks for the GUEST or ROOM EXTENSION telephone accounts. Verify the management of Cost, Total Deposit and Guest balance.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature
Result	INTERROGATION management followed by Guest Telephone Account.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Application does not support this feature

5.13 PMS → PBX - Voice mail attribution (F records)

5.13.1 Test objectives

Voice mail attribution feature is related to internal OXE voicemail 4645. Main motive is to check the support of application for creation and modification of voicemail related features.

5.13.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
VAT101	Open a GUEST voice mail box		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT102	Open a ROOM extension voice mail box		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
VAT103	Open a voice mail box on GUEST number out of range	Reply=INV WG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT104	Open a voice mail box on ROOM extension out of range	Reply=INV WG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Permitted by Application.
VAT105	Open a voice mail box on GUEST number non checked-in	Reply=INV WA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT106	Open a voice mail box on ROOM extension not checked in	Reply=INV WA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Permitted by Application.
VAT107	Open a voice mail box on GUEST number with no more mail box available on PBX (this test is performed after the mail box is full)	Reply=INV WX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT108	Open a voice mail box on ROOM EXTENSION with no more mail box available on PBX (this test is performed after the mail box is full)	Reply=INV WX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Permitted by Application.
VAT109	Open a voice mail box on GUEST with voice mail out of range or not linked on PBX (This test is performed by removing the directory voice mail number from hotel management)	Reply=INV WV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT110	Open a voice mail box on ROOM EXTENSION with voice mail out of range or not linked on PBX (This test is performed by removing the directory voice mail number from hotel management)	Reply=INV WV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Permitted by Application.
VAT111	Open a voice mail box on GUEST number which already owns a mail box	Reply=INV WZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.

VAT112	Open a voice mail box on ROOM extension which already owns a mail box	Reply=INV WZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Permitted by Application.
VAT113	Open a voice mail box on GUEST number by generating a false code in action field.	Reply=INV WJ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT114	Open a voice mail box on ROOM EXTENSION by generating a false code in action field.	Reply=INV WJ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Permitted by Application.
VAT115	Open a voice mail box on GUEST number by generating a false code identification in the message	Reply=INV WK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT116	Open a voice mail box on ROOM EXTENSION by generating a false code identification in the message	Reply=INV WK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Permitted by Application.
VAT117	Close a GUEST voice mail box		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT118	Close a ROOM extension voice mail box		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Only with Check-out process
VAT119	Close a GUEST voice mail box which is working at this moment	Reply=INV WW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT120	Close a ROOM extension voice mail box which is working at the moment	Reply=INV WW	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
VAT121	Close a GUEST voice mail box which has not consulted messages	Reply=INV WM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by application AlwinProHotel.
VAT122	Close a ROOM extension voice mail box which has not consulted messages. (The PBX must always Execute (Check-out if voice mail = True) because the PMS does not take account the Reply record)	Reply=WM	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Result	VOICE MAIL Attribution		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.14 PBX → PMS Voice mail events

5.14.1 Test objectives

To check whether the application is able to process the voicemail events triggered when there is a change in the guest voicemail.

5.14.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
VEV101	Voice mail event after box is becoming empty.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
VEV102	Voice mail event after a message has been deposited in an empty mail box.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
VEV103	Voice mail event after a message has been deposited in an non empty mail box.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
VEV104	Voice mail event after a message deposit generates an overflow state.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
VEV105	Voice mail event on a non-allocated GUEST Number after a message has been deposited in an empty mail box.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VEV106	Voice mail event on a non-allocated GUEST Number after a message has been deposited in an non empty mail box..		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VEV107	Voice mail event on a non allocated GUEST: - Allocate the GUEST. - Listen messages and remove them.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VEV108	Listen messages on a non empty mail box after checking out the Room extension		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
VEV109	Check-in a guest or room extension which mail box isn't empty.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Result	VOICE MAIL events		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.15PMS → PBX - DYNAMIC SUITES

5.15.1 Test objectives

To check whether the application is able to create Suite and mange existing Suites.

5.15.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
SUI101	Create a suite with managing extension and moved slave extension		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
SUI102	Create a suite with managing extension and moved first level suite extension		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
SUI103	Create a suite with an out of range managing extension and moved slave extension	Reply INV SG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
SUI104	Create a suite with a managing extension and a moved slave extension out of range	Reply INV SR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
SUI105	Create a suite with managing extension already in a suite	Reply INV SU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
SUI106	Allocate GUEST number to a suite		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
SUI107	Substract a slaved extension from the suite		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
SUI108	Substract a slaved extension which doesn't belong to the suite from the suite	Reply INV SU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
SUI109	Allocate a guest to a slave extension	Reply INV SU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported by the application
Result	DYNAMIC SUITES		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by Application.

5.16PMS → PBX - Check-out with Guest Management

(Mandatory in case of Guest management)

5.16.1 Test objectives

To check whether the application is able to process the check-out features properly. This feature needs to be mandatorily supported in guest management.

5.16.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
COC101	Check-out of a guest Number		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC102	Check-out of a guest which room line is busy . PBX configuration: execute the command.	Reply = OL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC103	Check-out of a guest which room line is busy . PBX configuration: refuse the command.	Reply = PL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC104	Check-out of a guest with not consulted messages in the associated voice mail box . PBX configuration: execute the command.	Reply = OM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC105	Check-out of a guest with not consulted messages in the associated voice mail box . PBX configuration: refuse the command.	Reply = PM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC106	Check Out of an invalid guest Number	Reply = PG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC107	Check-out of a Not checked in guest Number	Reply = PA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC108	Check out with no guest in room	Reply = PU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC109	Verify metering bills by checking out a guest number		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC110	Verify metering bills by checking out a guest number which was transferred from one room to another room and called from each of them.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC111	Verify metering bills by checking out a guest number which called from a booth extension		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC112	Check Out of a GUEST which is not allocated to a ROOM.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Result	CHECK-OUT OF GUEST NUMBER		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5.17 PMS → PBX - Check out with Room Management

5.17.1 Test objectives

To check whether the application is able to process the check-out features properly. This feature needs to be mandatorily supported in room management.

5.17.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
COR101	Check Out of ROOM extension		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
COR102	Check Out of a extension which room line is busy. PBX configuration: execute the command.	Reply = OL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
COR103	Check Out of a room extension which room line is busy . PBX configuration: refuse the command.	Reply = PL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Popup into application that operation not accepted.
COR104	Check Out of a room extension with not consulted messages in the associated voice mail box. PBX configuration: execute the command.	Reply = OM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Popup into application that operation not accepted.
COR105	Check Out of a room extension with not consulted messages in the associated voice mail box. PBX configuration: refuse the command.	Reply = PM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Popup into application that operation not accepted.
COR106	Check Out of an invalid room extension	Reply = PG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not possible by design of the application
COR107	Check Out of a Not checked in room extension	Reply = PA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not possible by design of the application
COR108	Verify metering bills by checking out a room extension		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Result	CHECK OUT WITH ROOM NUMBER MANAGEMENT		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.18 PMS → PBX - Night Audit Request (Optional)

5.18.1 Test objectives

To check whether the application is supporting Night Audit

5.18.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
NAU101	Generate a NightAudit		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Result	NIGHT AUDIT REQUEST		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not supported by Application.

5.19 PMS → PBX – Re-initialization Request // PBX --> PMS - Re-initialization Database

(Recommended)

5.19.1 Test objectives

To check whether the application is supporting re-initialization.

This feature is needed to avoid database synch between PBX database and PMS database.

5.19.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
REI101	Generate a re-init request for a Guest or a Room extension - Full guest re-initialization		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The application can send multiple" Z Number F" for all room extensions in its database. The result is not used to re-synchronize with Pbx (check-in/out).
REI102	Generate a re-init request for a Guest or a Room extension - Partial guest re-init		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported in the current version
REI103	Generate a re-init request for a Guest or a Room extension out of range	Reply = INV TG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported in the current version
REI104	Generate a re-init request for a Guest or a Room extension not checked in	Reply = T	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This feature is not supported in the current version
REI105	Generate a re-init request for every GUESTS or ROOM extensions checked-in...:- Full		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Z F3c The application can send multiple" Z

	guest re-init.					Number F” for all room extensions in its database.
REI106	Generate a re-init request for every GUESTS or ROOM extensions checked-in...: - Partial guest re-init.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Result	RE-INITIALIZATION REQUEST		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Note : the strings send back are the same for a Full guest or a Partial guest re-init.

5.20 Spatial Redundancy Com Server (Optional)

5.20.1 Test objectives

To check whether the application is supporting OXE redundancy.

5.20.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
SRC101	Check that management is correct for Spatial Redundancy Com Server configuration. Update should be done on Main and Stand-By Com Server.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	This scenario tested by giving FQDN of the OXE address. The alternate IP address is not supported by partner application.
SRC102	Running on MAIN 1 Com Server, switch over to second one by using command “bascul” and check that PMS and PBX still communicate over AHL Link.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The application is connecting to the active IP address based on the DNS resolution. The alternate IP address is not supported by partner application.
SRC103	Running on MAIN, cut the ethernet link of that Main Com Server and system should switch-over then check correct operation of Hotel Link.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SRC104	Check that when second com server become Stand-By, the Hotel link is still active and messages are properly processed by PBX.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Result	Spatial Redundancy Com Server		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

5.21 Disruption of AHL Link

(Mandatory)

5.21.1 Test objectives

To check whether the application is able to buffer commands and process multiple commands at the time of disconnection.

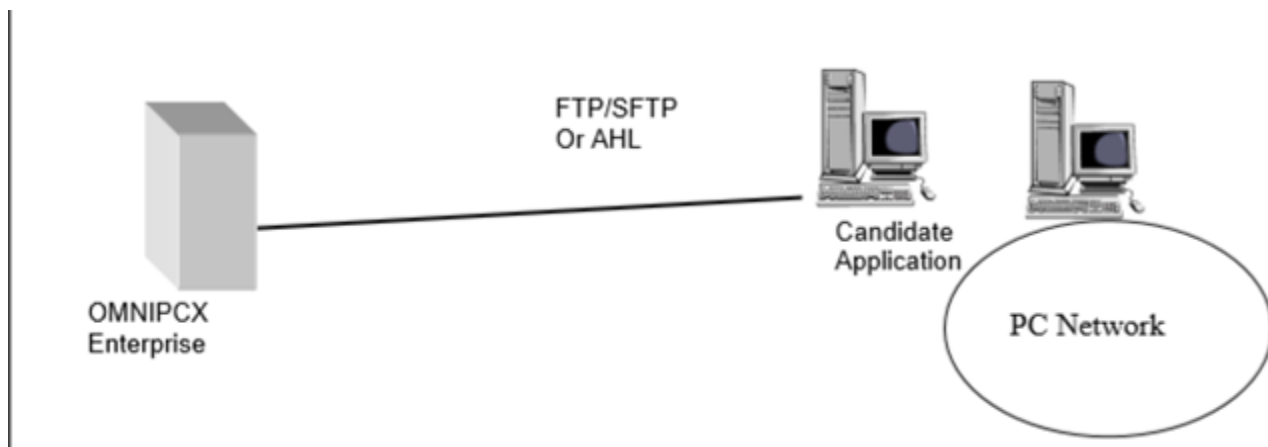
5.21.2 Test results

Test Case Id	Test Case	REPLY message expected from PBX	N/A	OK	NOK	Comment
DIS101	Cut the link between PMS interface and the PBX: Generate some events like wake-up and call-tickets on PBX side. Establish the link and verify that the events are taken into consideration on PMS side.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
DIS102	Cut the link between PMS interface and the PBX: Generate some events like check-in, allocations on PMS side. Establish the link and verify that the events are sent to the PBX.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
DIS103	Cut the link between PMS interface and the PBX: Generate some events like wake-up and call-tickets on PBX side until the buffer is full. Establish the link and verify that the events are taken into consideration on PMS side.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
DIS104	Power off the PMS interface and generate some events on PBX side. Restart the interface and verify that the events are sent and taken in consideration on the PMS side.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DIS105	If the PMS is composed with several devices, the same tests has to be done by powering off and restarting separately the different devices.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Result	DISRUPTION OF AHL LINK		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

The AlwinPro Application is a 32-bit Windows application for recording and reporting data. The main functionalities are call accounting. Connecting AlwinPro to the OmniPCX Enterprise is possible like shown in figure 1.

6.1 General Architecture

Diagram 1: Setup with FTP/SFTP or AHL



Specific Details

The portfolio of Aurenz GmbH consists of the products - "AlwinPro", AlwinPro Hotel, AlwinPro Care and "UC-Analytics". The AlwinPro Application is a 32-bit Windows application for recording and reporting call data. The main functionalities are call accounting. The new application AlwinPro Hotel/Care uses specific features necessary for patient management but still uses the same data retrieval module as AlwinPro and UC-Analytics. AlwinPro Hotel/Care uses the AHL protocol to allow additional features. An overview of the Products can be found on Aurenz web site.

Application Features are:

Features of AlwinPro

- Controlling-Software
- Precise cost-calculation using detailed tariff-information from the provider/carrier
- Multi-faceted data-assessment platform, as well as incomparable security

- Completely automatic, unnoticed running in background
- Modular construction, flexible and individually configurable
- Connection to PABX using protocol-interfaces
- Networking capability
- Multi-user
- Implementation of mobile call data (EDIFACT)
- Send reports as pdf attachment
- Self configuring tool for new scripts

The Software UC-Analytics extends the product for call analyzing and quality statistics. In general the tool allows you to analyze the costs of telecommunications and the telephone usage and behaviour of the staff. The results are displayed in statistical diagrams, tables and ranking lists. The UC-Analytics makes the telecommunication network transparent and allows optimizing the cost structure in a company.

The maximum number of calls to be processed by the application is mainly limited by the client Hardware.

Features of UC-Analytics

This is a companion application which purpose is to offer statistics and performance analysis on the customer telephony system by deeply parsing the call tickets as collected by AlwinPro or AlwinPro Hotel.

The details are:

1. Cost management

- Total phone-costs
- Phone-costs of wired network
- Phone-costs of mobile network
- Comparison of different carrier
- Hitlists (ranking of the most expensive calls, or long duration calls etc.)

2. Quality management

- Phone-behaviour (how many calls are lost due to no answer or occupied)
- Ring-time assumed calls.
- Ring-time lost calls
- Time dependently comparison of phone-behaviour
- Monthly comparison (total and percentage)
- Annually comparison (total and percentage)
- Comparison of the ring-time
- Ranking of the Top 7 extensions
- Analysis of customer contacts
- Successful and lost customer contacts
- Successful contacts (number of calls to be successful)
- Lost calls (how many tries to get a contact)
- Geographic distribution of calls
- Customer contacts (time dependent comparison)
- Monthly comparison (total and percentage)
- Annually comparison (total and percentage)
- Daily comparison (total and percentage)
- Evaluation of groups
- Successful contacts
- Lost contacts

3. Traffic analysis

- Total traffic (inbound and outbound)
- Traffic outbound/inbound per day/week/month
- Traffic official/private per day/week/month
- Performance of telephone lines (daily/weekly/monthly)
- Average and maximum number of used lines
- Time at the phone daily/weekly/monthly

4. XML statistics

- Telephone behaviour
- Development of Telephone behaviour
- Cost development
- Number of calls
- Time at the phone

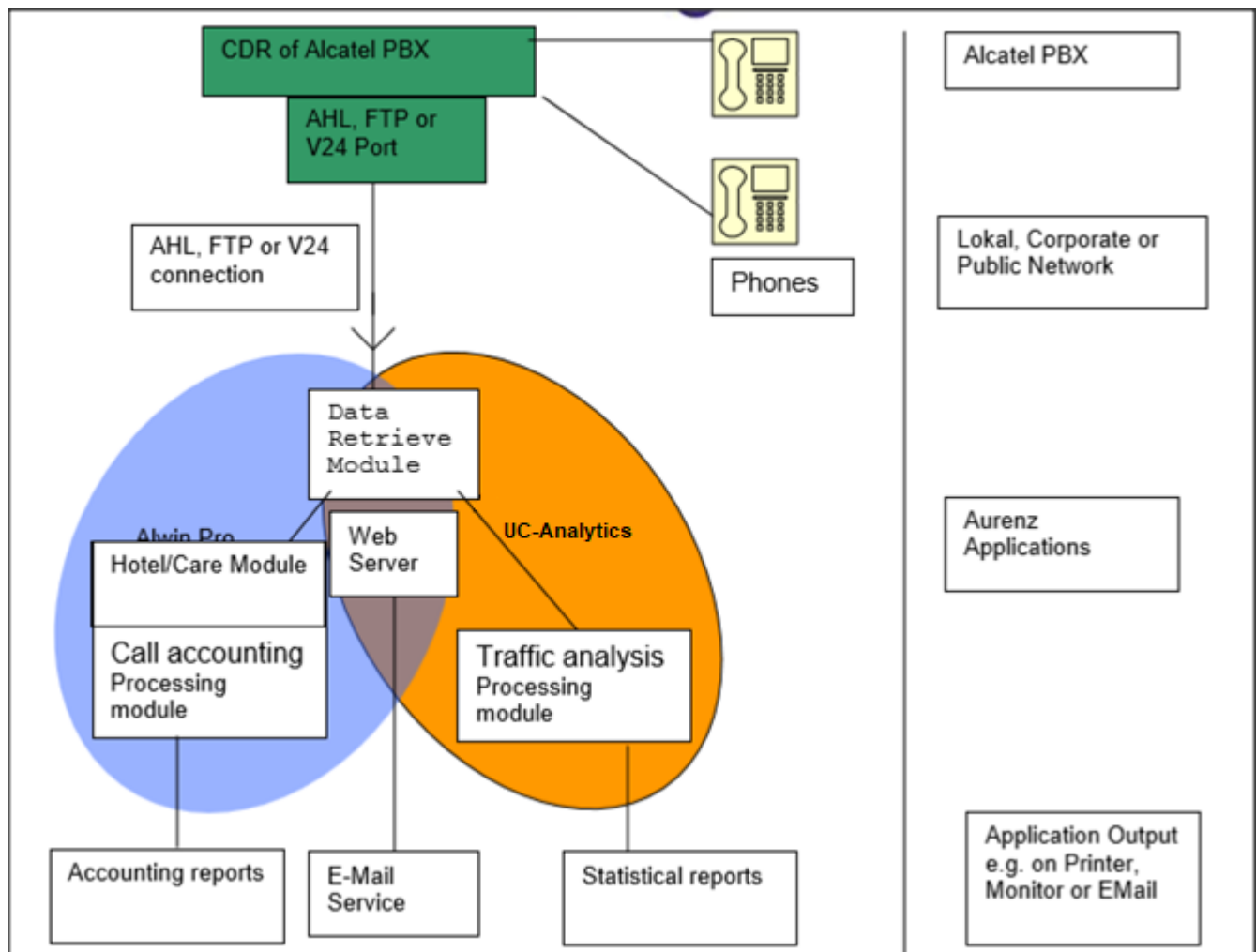
Features of AlwinPro Hotel

- Customer check in check out
- Group check in
- Room status for cleaning staff
- Wakeup call setting
- Guest phone cost accounting and billing
- Change phone status (close lines if no allowance)
- Deposit amount
- Visual and audible alarm messages
- Account balancing

Additional Features of AlwinPro Care

- Audio Deposit amount statement
- Room change feature (GPIN necessary)
- Guest identification with health insurance card

The maximum number of calls to be processed by the application is mainly limited by the client Hardware.

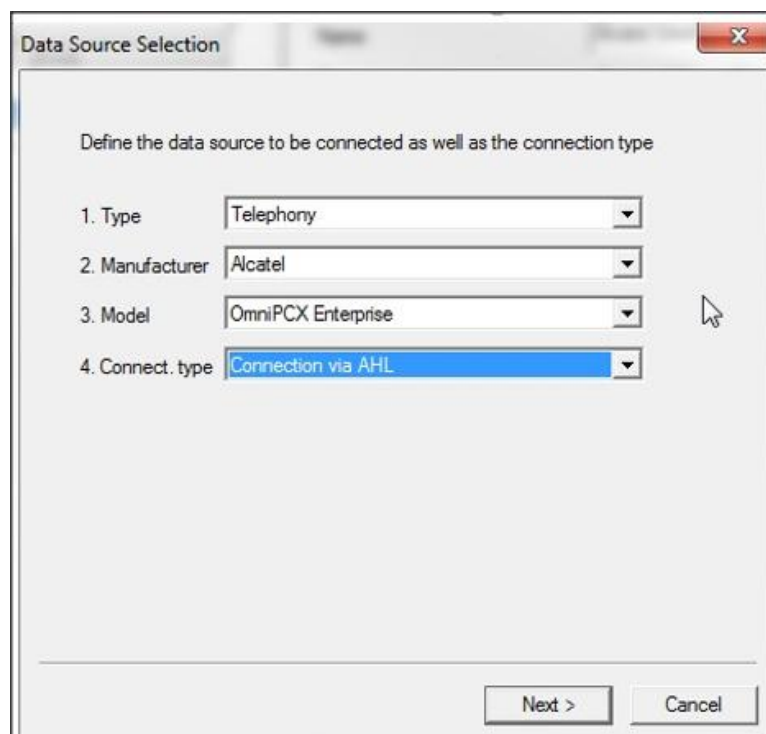


The Data retrieval module is storing all call information and supplies it to the different applications.

Appendix B: PARTNER side CONFIGURATION

Application setup – Link and general settings configuration.

Here is the selection to perform for AHL operation



Data Source Selection

Define the data source to be connected as well as the connection type

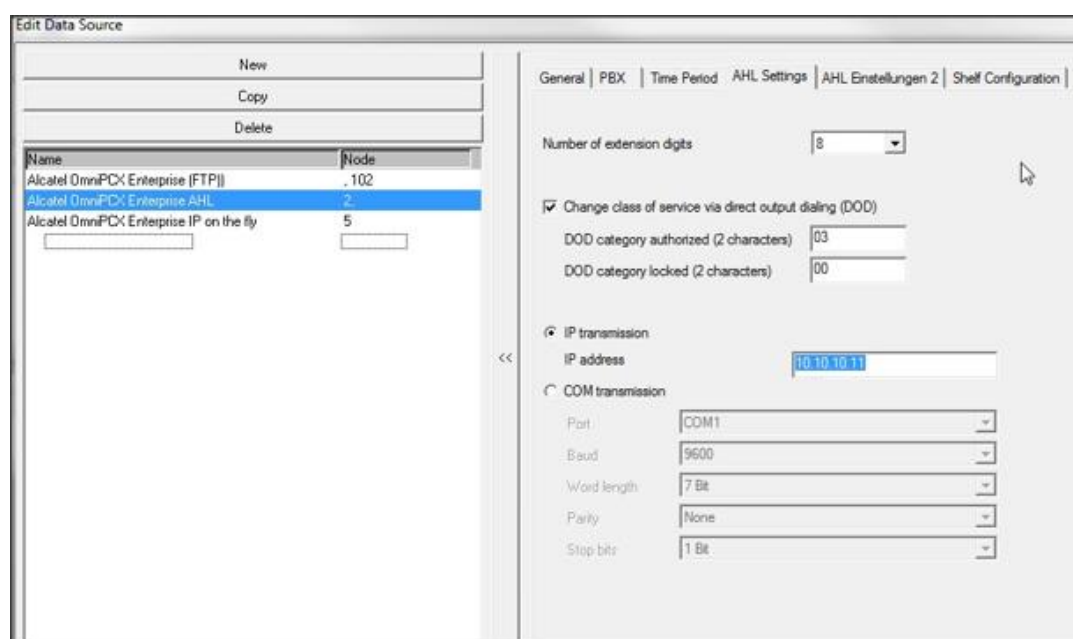
1. Type: Telephony

2. Manufacturer: Alcatel

3. Model: OmniPCX Enterprise

4. Connect. type: Connection via AHL

Next > Cancel



Edit Data Source

New Copy Delete

Name	Node
Alcatel OmniPCX Enterprise (FTP)	102
Alcatel OmniPCX Enterprise AHL	2
Alcatel OmniPCX Enterprise IP on the fly	5

General PBX Time Period AHL Settings AHL Einstellungen 2 Shelf Configuration

Number of extension digits: 8

☒ Change class of service via direct output dialing (DOD)

DOD category authorized (2 characters): 03

DOD category locked (2 characters): 00

☒ IP transmission

IP address: 10.10.10.11

☐ COM transmission

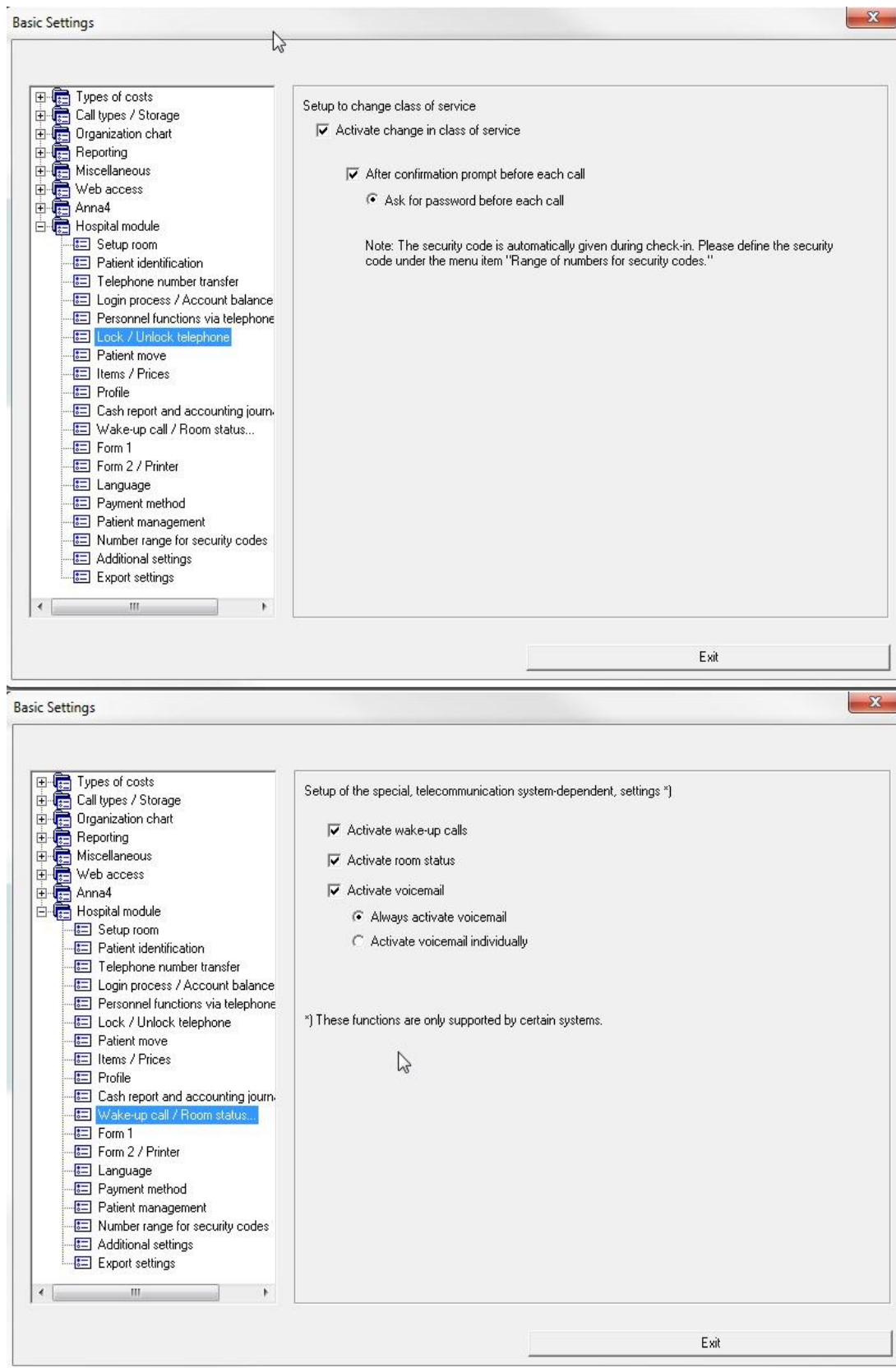
Port: COM1

Baud: 9600

Word length: 7 Bit

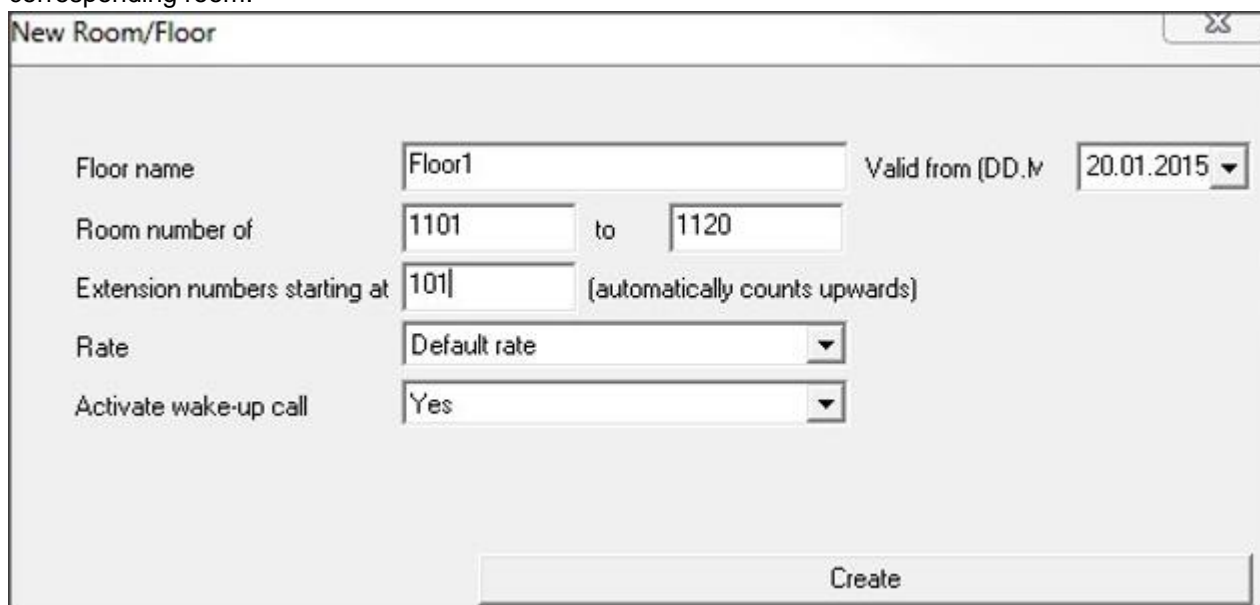
Parity: None

Stop bits: 1 Bit

How to setup barring parameters

Application usage – Room settings

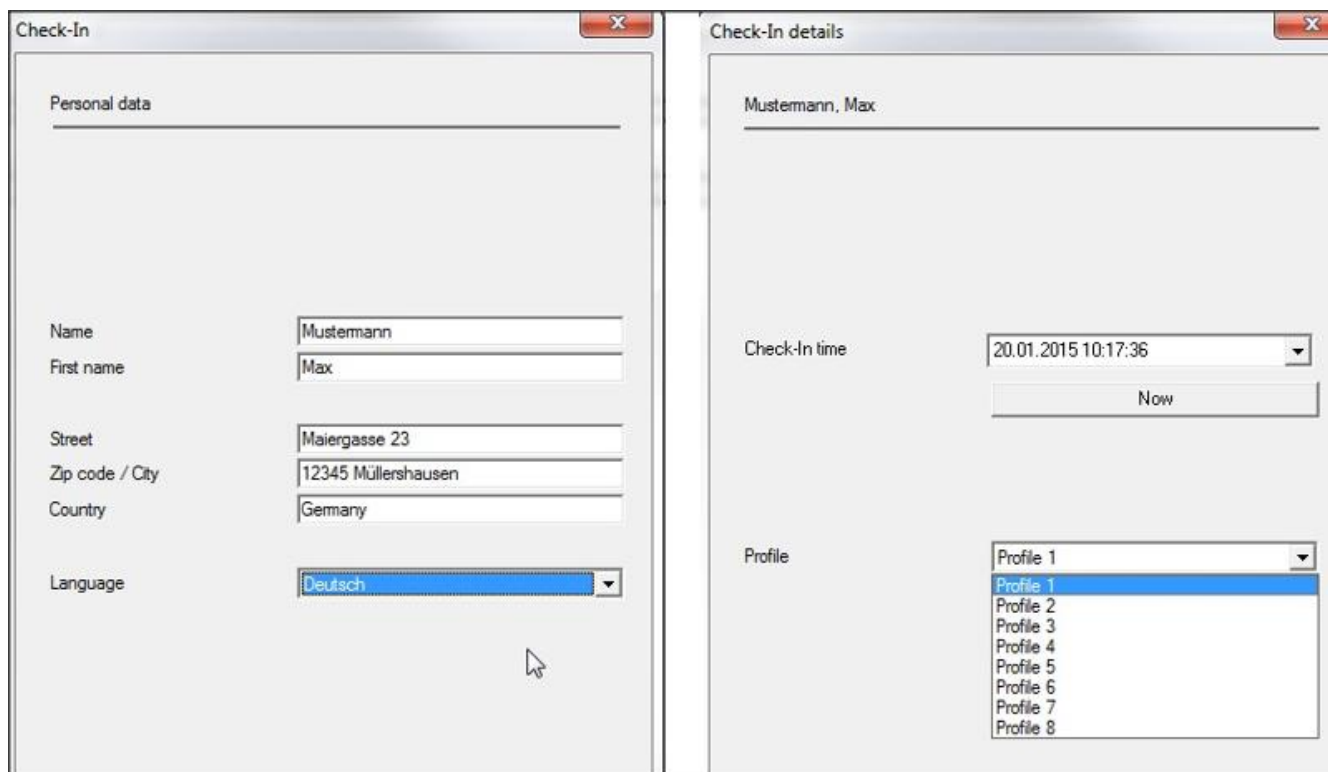
A room directory entry is built automatically as soon as a new extension number is found in call data records. It is up to the operator to classify the entry into the hotel organization and bring additional information for the corresponding room.



The 'New Room/Floor' window contains the following fields and controls:

- Floor name:** Text input field with 'Floor1' entered.
- Valid from (DD.MM):** Date dropdown menu showing '20.01.2015'.
- Room number of:** Two text input fields, the first containing '1101' and the second '1120', separated by the word 'to'.
- Extension numbers starting at:** Text input field with '101' entered, followed by the text '(automatically counts upwards)'.
- Rate:** Dropdown menu showing 'Default rate'.
- Activate wake-up call:** Dropdown menu showing 'Yes'.
- Create:** A button at the bottom right of the window.

Application usage – Check-in



The 'Check-In' window is divided into two panes:

- Left Pane (Personal data):**
 - Name:** Text input field with 'Mustermann' entered.
 - First name:** Text input field with 'Max' entered.
 - Street:** Text input field with 'Maiergasse 23' entered.
 - Zip code / City:** Text input field with '12345 Müllershausen' entered.
 - Country:** Text input field with 'Germany' entered.
 - Language:** Dropdown menu showing 'Deutsch'.
- Right Pane (Check-In details):**
 - Mustermann, Max:** Text label at the top.
 - Check-In time:** Date and time dropdown menu showing '20.01.2015 10:17:36', with a 'Now' button below it.
 - Profile:** Dropdown menu showing a list of profiles: Profile 1, Profile 2, Profile 3, Profile 4, Profile 5, Profile 6, Profile 7, and Profile 8. 'Profile 1' is currently selected.

Application usage – Guest call status report

AlwinPro - [Bildschirmvorschau [Einzelnachweis]]

Datei Anzeigen Auswertung Einrichten Mobilfunk Vorschau Ansicht Fenster ?

100% Seite 6 1 2 3 4 5 6 7 8 9 10 11 12

Dienstliche Auswertungen
Private Auswertungen
Projekt Auswertungen
Erweiterte Auswertungen

Bildschirmauswertung
Einzelnachweis
Gesamtübersicht Kostenstellen
Gesamtübersicht Abteilungen
Gesamtübersicht Teilnehmer
Pro Abteilung Teilnehmersummen
Pro Kostenstelle Abteilungssummen
Pro Kostenstelle Teilnehmersummen
Rechnungsstellung
Netzanbieterkontrolle
Organigrammausdruck

Datenexport
Datenlöschung

Einzelnachweis der Verbindungen Projekt <1065>

Auswertungszeitraum 01.01.1980 00:00:00 - 31.12.2035 23:59:59

AlwinPro
26.10.2004

Datum/Uhrzeit	NSL	Art	R	Zielnummer	Ortsname	Dauer	Geb.	Betrag K
26.10.2004 15:25:39	101	Pro	G	0156052913	Mobilcom	00:00:10	1	0,27 O
26.10.2004 15:34:18	101	Pro	G	0156052913	Mobilcom	00:00:10	0	0,27 O
26.10.2004 15:34:28	103	Pro	G	0156052913	Mobilcom	00:00:54	2	0,27 U
Summe						00:01:14	3	0,81

Zusammenfassung	Anzahl	Gesamtbetrag (EUR)
Projektgespräch	3	0,81
Summe	3	0,81

Nettobetrag	0,81 EUR
Umsatzsteuer 16,00 %	0,13 EUR
Bruttobetrag	0,94 EUR

Taste F1: Hilfe

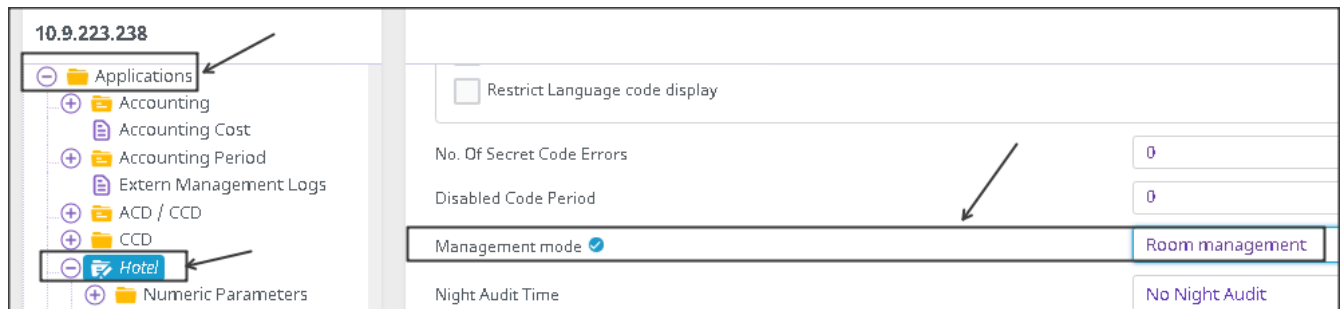
Berechnung abgeschlossen NUM

8.1 Communication platform configuration

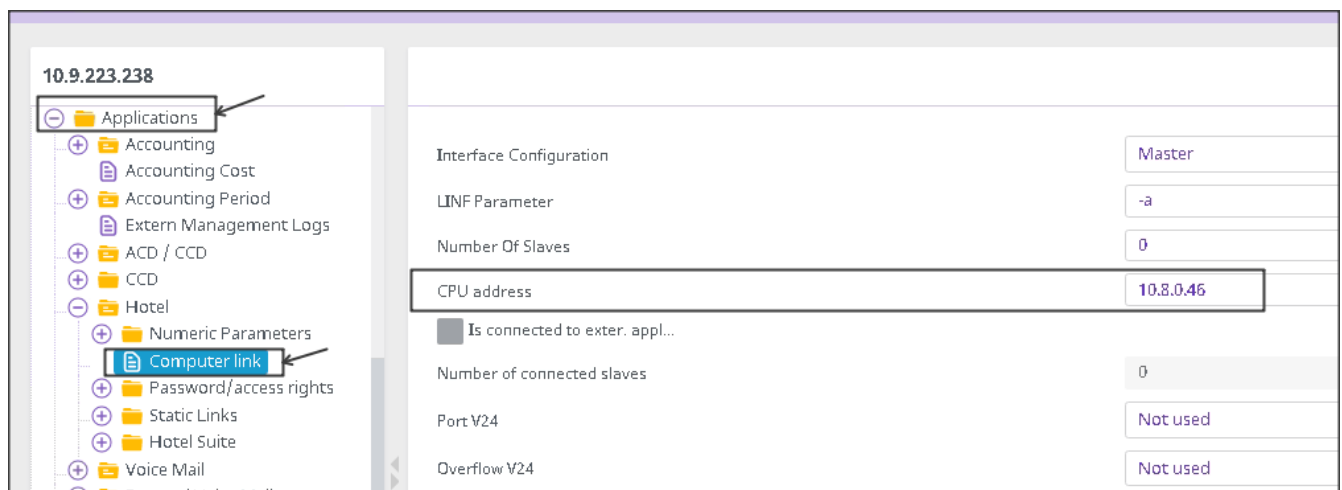
The Management can be done with our unified network management tool called OmniVista 8770 using a graphical user interface.

Application→Hotel

Select Room Management.

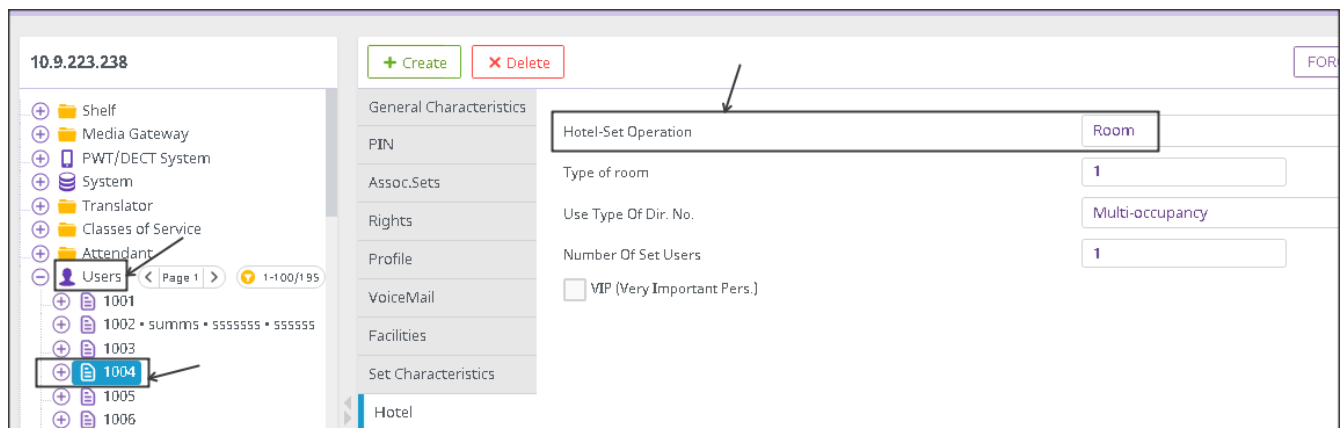


Application→Hotel→Computer Link

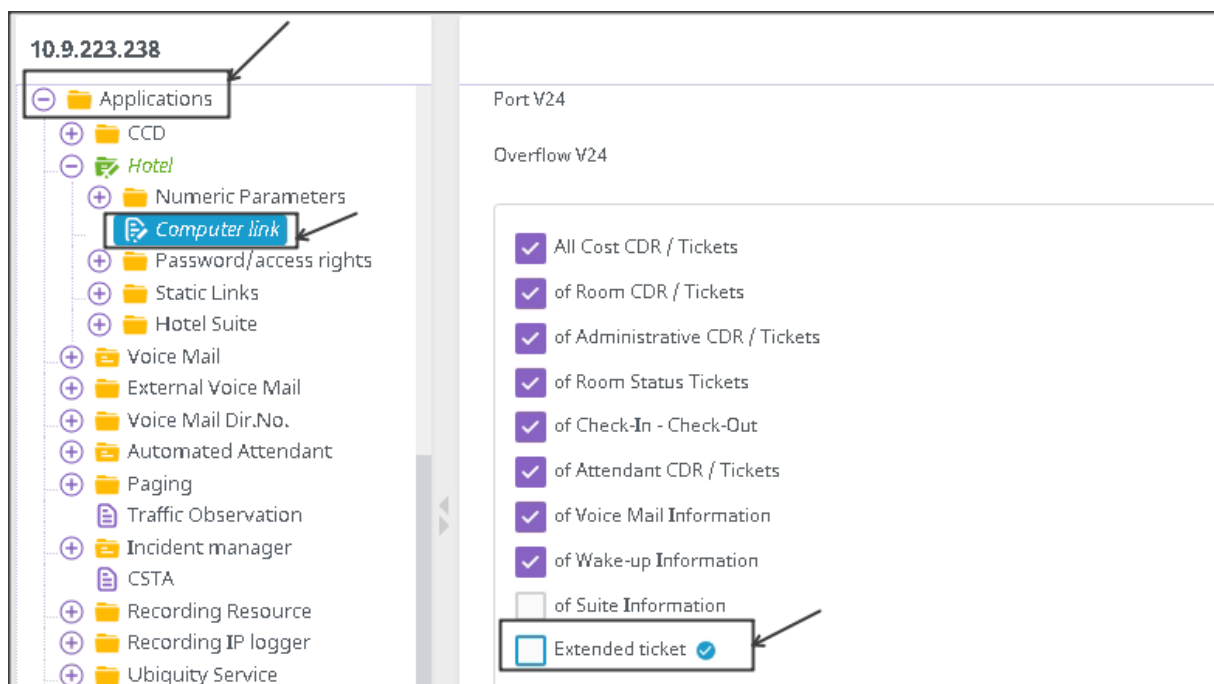


The CPU address has to be the IP address of the PC in which PMS application is running

User creation during Hotel management



SMDR Tickets management.



Voicemail Creation under Applications → Hotel

10.9.223.238

- Set Profile
- Groups
- Speed Dialing
- Phone Book
- Entities
- Trunk Groups
- External Services
- Inter-Node Links
- X25
- DATA
- Applications
 - Accounting
 - Accounting Cost
 - Accounting Period
 - Extern Management Logs
 - ACD / CCD
 - CCD
 - Hotel

Thank You Message	Thank you come again
Length of Room Maid ID Code	0
Messages deposit dir. No.	31300
Public Network COS	2
Suite Waiting File	0
Guest Voice Mail MCDU	31300
Check Out Tickets	Not used
Room Status Tickets	Not used
Booth Ticket	Not used

8.2 AHL Link configuration tips

- To take into account the modifications made to the AHL configuration, ahltcp has to be restarted. To do this, use the command “dhs3-init -R AHLTCP”
- If the AHL Computer Link uses IP protocol, it has to be configured as Master and the CPU address that has to be defined is the Call Server Main IP address.
- If the management mode has to be changed from “Guest” to “Room” :
 - Check out every guests (possibility to have the list with the *hotmenu* command)
 - Delete every guests declared in the Users
 - Change all the Room Users for “Administrative” and “Normal” (this has to be done at the same time)
 - Change the management mode in Application / Hotel
 - Then change back the users to “room”.

Appendix D: PARTNER SUPPORT PROCESS

9.1 Aurenz GmbH General Contacts

Aurenz GmbH
Hans Boeckler Str. 29
73230 Kirchheim u. Teck
Germany

Phone: +49 7021 73888-0
Fax: +49 7021 73888-30

Name	Role	Phone	Email
Mrs Petra Weikamp	Sales Assistant	+49 (0)7021 73888-0	info@arenz.de
Mr Stephan reber	Support	+49 (0)7021 73888-33	support@arenz.de

9.2 Aurenz GmbH Support Contact Information

Team	Main Location
Phone	+49 (0)7021 73888-33
Fax	+49 (0) 7021 73888-30
E-mail	support@arenz.de
Hours	5x9 support

Service and Support Levels

Support Level	Description
1 st	Only available at Aurenz with additional service contract. Otherwise responsibility of our business partners
2 nd	Any technical problems of end users and business partners that can not be resolved by the business partner themselves
3 rd	Anything not resolved by 2 nd level

There is no 1st level support but on request of our business partners or end users a additional software update and/or maintenance contract can be agreed.

In most cases the 2nd level support is contacted by e-mail. In general a reply can be expected

the following day. If a support request arrives before noon (12:00 CET) there is a high possibility that the reply is send out the same day. Additionally Aurenz GmbH provides phone support (hotline) between 8:00am and 5:00pm from Monday to Friday. The hotline gives only support for technical problems that obviously are not part of the product documentation. Services that are not part of the support contract need to be ordered with the regular conditions and according to our latest price lists.

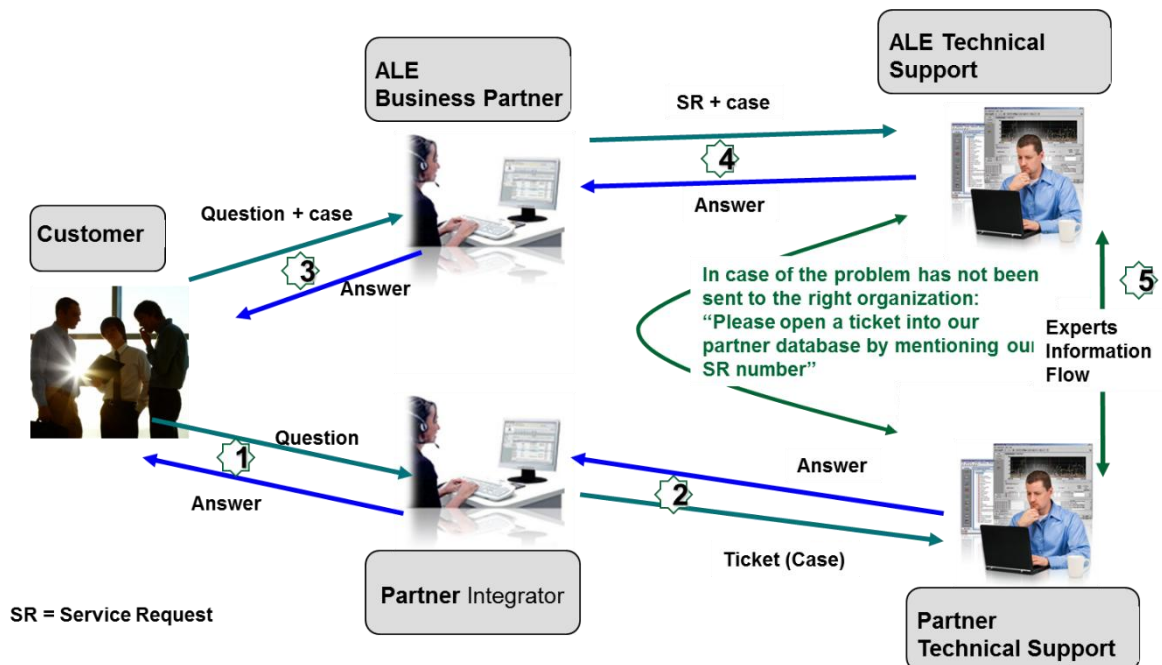
Problems that can not be resolved by second level support are submitted to technical group (internal escalation to development department) of Aurenz GmbH.

10.1 Introduction

The purpose of this appendix is to define the escalation process to be applied by the ALE Business Partners when facing a problem with the solution certified in this document.

The principle is that ALE Technical Support will be subject to the existence of a valid InterWorking Report within the limits defined in the chapter "Limits of the Technical support".

In case technical support is granted, ALE and the Application Partner, are engaged as following:



(*) The Partner Integrator can be a Third-Party company or the ALE Business Partner itself

10.2 Escalation in case of a valid Inter-Working Report

The InterWorking Report describes the test cases which have been performed, the conditions of the testing and the observed limitations.

This defines the scope of what has been certified.

If the issue is in the scope of the IWR, both parties, ALE and the Solution or Developer Partner, are engaged:

Case 1: the responsibility can be established 100% on ALE side.

In that case, the problem must be escalated by the ALE Business Partner to the ALE Support Center using the standard process: open a ticket (eService Request –eSR)

Case 2: the responsibility can be established 100% on Solution or Developer Partner side.

In that case, the problem must be escalated directly to the Solution or Developer Partner by opening a ticket through the Partner Hotline. In general, the process to be applied for the Solution Partner is described in the IWR.

Case 3: the responsibility cannot be established.

In that case the following process applies:

- The Solution or Developer Partner shall be contacted first by the ALE Business Partner (responsible for the application, see figure in previous page) for an analysis of the problem.
- The ALE Business Partner will escalate the problem to the ALE Support Center only if the Solution or Developer Partner has demonstrated with traces a problem on the ALE side or if the Solution or Developer Partner (not the Business Partner) needs the involvement of ALE

In that case, the ALE Business Partner must provide the reference of the Case Number on the Solution or Developer Partner side. The Solution or Developer Partner must provide to ALE the results of its investigations, traces, etc, related to this Case Number.

ALE reserves the right to close the case opened on his side if the investigations made on the Solution or Developer Partner side are insufficient or do not exist.

Note: Known problems or remarks mentioned in the IWR will not be taken into account.

For any issue reported by a Business Partner outside the scope of the IWR, ALE offers the “On Demand Diagnostic” service where ALE will provide 8 hours assistance against payment.

IMPORTANT NOTE 1: The possibility to configure the Alcatel-Lucent Enterprise PBX with ACTIS quotation tool in order to interwork with an external application is not the guarantee of the availability and the support of the solution. The reference remains the existence of a valid InterWorking Report.

Please check the availability of the Inter-Working Report on DSPP (URL: <https://www.al-enterprise.com/en/partners/dspp>) or Enterprise Business Portal (Url: [Enterprise Business Portal](#)) web sites.

IMPORTANT NOTE 2: Involvement of the ALE Business Partner is mandatory, the access to the Alcatel-Lucent Enterprise platform (remote access, login/password) being the Business Partner responsibility.

10.3 Escalation in all other cases

For non-certified solutions, no valid InterWorking Report is available and the integrator is expected to troubleshoot the issue. If the ALE Business Partner finds out the reported issue is maybe due to one of the Alcatel-Lucent Enterprise solutions, the ALE Business Partner opens a ticket with ALE Support and shares all trouble shooting information and conclusions that shows a need for ALE to analyse.

Access to technical support requires a valid ALE maintenance contract and the most recent maintenance software revision deployed on site. The resolution of those non-DSPP solutions cases is based on best effort and there is no commitment to fix or enhance the licensed Alcatel-Lucent Enterprise software.

For information, for non-certified solution and if the ALE Business Partner is not able to find out the issues, ALE offers an "On Demand Diagnostic" service where assistance will be provided for a fee.

10.4 Technical support access

The ALE **Support Center** is open 24 hours a day; 7 days a week:

- e-Support from the DSPP Web site (if registered as Solution or Developer Partner): <https://www.al-enterprise.com/en/partners/dspp>
- e-Support from the ALE Business Partners Web site (if registered Alcatel-Lucent Enterprise Business Partners): <https://businessportal2.alcatel-lucent.com> click under "Contact us" the eService Request link
- e-mail: Ebg_Global_Supportcenter@al-enterprise.com
- Fax number: +33(0)3 69 20 85 85
- Telephone numbers:

ALE Business Partners Support Center for countries:

Country	Supported language	Toll free number
France	French	+800-00200100
Belgium		
Luxembourg		
Germany	German	
Austria		
Switzerland		
United Kingdom	English	
Italy		
Australia		
Denmark		
Ireland		
Netherlands		
South Africa		
Norway		
Poland		
Sweden		
Czech Republic		
Estonia		
Finland		
Greece		
Slovakia		
Portugal		
Spain	Spanish	

For other countries:

English answer: + 1 650 385 2193
 French answer: + 1 650 385 2196
 German answer: + 1 650 385 2197
 Spanish answer: + 1 650 385 2198

END OF DOCUMENT