Release Note	OmniPCX Enterprise

TC3001 ed.05 Release 100.1

Release Note & Installation procedure for OmniPCX Enterprise R100.1 Released version N2.514.23.c

This release note is an update of the N2.514.11.a patch for the released version of OmniPCX Enterprise release 100.1.
This patch .23.c is available on MyPortal. Always update to the latest patch to take advantage of the more advanced software corrections.
Patch .23.c is an addon to the already released MD1 patch of N2 version that was bringing fixes, new features and new firmwares.

The GAS product "GAS 10.05" is built upon the N2.514.23.b – There is no new GAS for this dynamic patch ".c"

Technical modes for migration, new features, registered restrictions and controlled features are described in that document.

IMPORTANT:

- **Migration of an oxe network from ANY release to OXE R12.4, R100.0 & R100.1: consult TC2853**
- **Minimum CCS update is mandatory**
- **GD4/GA4: read the section "before starting/ check to perform": risk of boards to be returned to factory**
-
- **For the systems that were previously patched in N2.514.23.b please install this .c (refer to chap. "PATCH.23.c")**

Revision History

Edition 01: September 19, 2022	New edition. Consult TC3005 for features explanation & details in OXE R100.1
Edition 02: November 14, 2022	Edition 02. Patch .12 update
Edition 03: November 30, 2022	Edition 03. Patch .23.b update – MD1 patch – new features – adding restrictions
Edition 04: December 27, 2022	Edition 04. Patch .23.c update – MD1 patch addon – new sub-chapter on "installing software"
Edition 05: January 4, 2023	Adding a precision on SIP sets network supervision with a ref. onTC2992 ed.02 (chap. Restrictions/ telephonic features)

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1 GENERALITIES

This document describes:
- The installation method with compatibilities & eventual warnings
- Some restrictions and remarks
- The list of new features brought by that release
- Features that are mentioned with "RQOXE-xxxx": it is an internal ALE reference number

You will also find the steps necessary for installing version N2.xxx.xx for:
- A new installation,
- Evolution from releases R5.0 Lx, R5.x, R6.x, R7.x, R8.x, R9.x, R10.0, R10.1, R11.0, R11.0.1, R11.1, R11.2.x, R12.0, R12.1, R12.2, R12.3.x, R12.4, R100.0 & R100.1
- A migration from OmniPCX 4400 to OmniPCX Enterprise R100.1

Release R100.1 is a version WITH a change in software locks. See chap. 5.3

2 USEFUL DOCUMENTS

All documents located at My Portal (do a search on titles listed below)
https://myportal.al-enterprise.com/

OXE
- OmniPCX Enterprise Features List and Provisioning Level
- TC3005 New features in OXE Purple Release R100.1
- tftp
- Synthesis of IP flows for the OmniPCX Enterprise solution
- OXE Purple R100.1 mgr Configurations Management Evolution (ed.16)
- TC1854 OmniPCX Enterprise patch alignment procedure ed55

OT
- TBE088 OpenTouch R2.6 Overview
- TBE037 OpenTouch architecture and network design principles
- TC2921en Release_Note_for_OpenTouch_Release_2.6.1 (ed03)
- OpenTouch Enterprise Cloud - R - Reference Architecture - Ed21

OV 8770
- OV 8770 R5.1 Release presentation
- TC2988 Release Note Omnivista 8770 R5.1

S.O.T. release note
- TC2456 Release Note SOT (Software Orchestration Tool)

Virtualization
- TBE031 OpenTouch Suite for MLE in virtualized environment, overview (Pre-Sales presentation describing the MLE products virtualization capabilities and the main principles regarding license control deployment)

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- TBE043 OpenTouch Suite for MLE virtualization design guide (Pre-Sales design guide related to the deployment in virtualized environment of products part of OpenTouch Suite for MLE offer)
- TC2431 Virtualization: OXE configuration related to OXE releases and ESXi infrastructure versions
- TC2432 Mandatory installation of VMware tools from OXE release R12

Other

- OpenTouch Suite for Small and Medium Business Release Policy
- CROSS COMPATIBILITY DOCUMENT - Applications / Hardware compatibility - October 2021 offer
- TBE119 OmniPCX Enterprise Purple R100.1 & OmniVista 8770 R5.1 overview - Ed01a
- phase-in-OpenTouch-Enterprise-Cloud-Release-100.1-EF-C199-EN

Hardware / Applications Compatibilities

- TC0418 Compatibilities between OmniPCX Enterprise software releases and Alcatel-Lucent Enterprise Hardware and applications

System documentation

- Documentation note : OmniPCX Enterprise R100.1 + OXE R100.1 Documentation package (All languages)
- Documentation Note : OmniVista 8770 5.1 + 8770 R5.1 Documentation package (All languages)

Related Technical Communications

Note: Most of the old technical communications are not mentioned anymore. Refer to previous release notes same section if needed.

TC related to the features introduced in release OXE Purple R100.1

TC3005	New features in OXE Purple Release R100.1
TC2918	Deployment of Native Encryption for WRG
TC2886	OXE Device Management configuration guide for SIP DeskPhone and SoftPhone
TC2885	Migration from Hybrid IP Link to Direct IP Link for OXE networking
TC2954	Quick steps deployment guide for ALE SoftPhone with OmniVista 8770 ldap server
TC2955	Quick steps deployment with Active directory for ALE SoftPhone
TC2956	Quick steps integration with Teams for ALE SoftPhone
TC2957	Quick step deployment for ALE SoftPhone remote worker

Release Notes of OXE ecosystem & services

TC2988	Installation Procedure for 8770 version 5.1.13.00b - Release 5.1
TC2950	Release Note for 4059 EE 2.4.1 on OmniPCX Enterprise
TC2481	Release Note for Base Station 8378 DECT IP-xBS Release R100
TC2308	Technical Release Notes For 8028S, 8058S, 8068S, 8078S Premium Deskphones
TC2181	Release_Note_for_8088_Smart_DeskPhone_Release_302_in_Business_mode
TC2347	Technical Release Notes For 8088 R301 Smart Deskphone

Configuration guides

TC2462	OXE_configuration_guide_for_Rainbow_PBX_Integration.pdf
TC2431	Virtualization: Configuration of OXE following releases and ESXi infra version
TC1676	messages CONNECT, management Burst size & Burst delay

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Installation & migration

TC2312 "OXE mgr Configurations Management Evolution". This document describes the new parameters and the modified parameters introduced in all the releases starting from k1.520 Document also present under the download software section.

TC1854 OXE patch alignment (patches alignment + database translation table)

TC1271 Checks for integrity and authenticity of downloaded software

TC0779 Synchronization of the system after migration to OmniPCX Enterprise with Appliance Server

TC0778 Migration OmniPCX 4400 to OmniPCX Enterprise

TC2400 PCS upgrade to R12.x improvement

TC2338 R12 Remote installation of PCS

TC1868 Multicodec evolutions in OXE Release 11.0: Database translation

For Remote worker sip sets on internet/noe on vpn consult document:
Server_deployment_guide_for_remote_workers_8AL90345ENAA

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Phase-in / Phase-out products

Always check for latest phase-in/out products on the Business Portal (EF-Phase-in / EF-Phase-out)

Most significant & related communications:
EF-Phase-in C196: Phase-in | OpenTouch Suite for MLE: H2 2022 offer preview
eFlash C195: Phase-out | OpenTouch Suite for Medium and Large Enterprises for H2 2022

3 CONTENT OF RELEASE 100.1

3.1 Status, translation & binaries

Version N2.514.23.b/c - MAO DataBase Software Version: N2.514.8
No translation from previous N2 released

DataBase version (seen in "siteid" command)	Level of fixes (synchro from other oxe patches)	DB version Compatible up to latest patch
N2.514.23.b	N2.514.12	N2.514.23
N1.291.70	N1.291.68#3	N1.291.70
M5.204.86	M5.204.87	M5.204.90
M4.501.15	M4.501.22	M4.501.22
M3.402.26	M3.402.35	M3.402.35
M2.300.25	M2.300.29	M2.300.29
M1.403.26	M1.403.27	M1.403.27

Following is the list of binaries & components with their corresponding version.
It is also possible to consult the "read.me" file included in every static & dynamic patch to find this kind of information. Do a text search with the binary name requested. One read.me file contains all the precedent patches.
For instance:

- For the dynamic patch: read.me file of patch ".M" will contain all data from patch ".A" to ".M". No information related to static patches.
- For the static patch: read.me file of patch ".35" will contain all data from patch ".1" to ".35"

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Version of components deliveries for N2.514.11
For a list of MD1 components updated consult the chapter "22 PATCH .23.b" & "23 PATCH .23.C"

Binaries	Version 100.1 released version **N2.514.11**
System binaries	
bios CPU6 Step2	3BA24095AAAB08_4.8
bios CPU7	3.02 replaced by bios CPU7 Step2
bios CPU7 Step2	3BA24115AAFC19_4.3
bios CS	10.14
bios GD	10.14
bios CS-2 (ami)	3EU24009AAAD_12.0
firmware_CPU8	2.0
io1n	17
io2	4.6
io2n	5.17
linux	**183.000**
linux_patch	**r_linux26_patch_183.010**
rainbowagent	**6.0.1**
obca	1.5
pc_install	
swinst	**3.65.0**
DECT binaries	
dect8	1.26
rbsng	53.00
ibs_appli_ng	53.02
ibs_boot_ng	71
IPxBS	**0072.0005**
dect8212	0013.0003
dect8232	**4683.0003**
dect8242	**6682.0004**
dect8262	**5082.0004**
dect8262_EX	**7082.0004**
dect8244	6184.0002
dect8254/8234	**4185.0001**
Compression Boards binaries	
bootintip	6.13
binintip_appli	16.25
bindspintip	4.37.2
bindspintip2	3.45

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mg_appli	46.29
binmcv	3.9.0
binmcv2	3.45
ioip	4.19
lio_comp2	3.40
rlio_comp2	3.27
dsp_lio_comp2	3.09
r_mg3	4.01, replaced by ngp
r_intip3	4.01, replaced by ngp
r_ngp3	**12.04**
r_mg4	**1.16**
oms	**11.10**
ost	**6.13**
egw	**3.06**
Sets binaries	
noeip	4.33.81
noeip Gigabit	4.34.21
noe3gip	4.53.22
noe80x8S	**5.45.70**
noe8018	**5.45.70**
noe8008	**5.45.70**
noe8082	4.51.03
noe8088	**5.06.36**
noe3guax9	4.11.32
noeuax9	3.81.80
noeua19	3.81.00
noe84x9P	**1.00.15**
noe84x9T	**1.00.20**
noe86x8P	**1.00.20**
noesip	2.12.40
noe3gsip	3.00.50
sip80x8S	**1.51.52**
sip8018	**1.51.52**
sip8008	**1.51.52**
sipH3_6X	**2.12.00.002.1095**
jpn_4068	1.00.01
jpn_40x8	1.00.00
jpn_40x9	1.00.01
kor_4068	2.01.00
kor_40x8	2.01.00
kor_40x9	2.01.00

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chi_4068	2.01.00
chi_40x8	2.01.01
chi_40x9	2.01.01
ipphone	2.31
tscip	5.2
tscipvS	3.0
VoWLAN sets binaries	
noemipt_r2	109.025
noemipt_r3	120.028
noemipt8_r100	6.1.2
wlan81x8s	**2.2.17**
Secured binaries	
noeip	4.38.81
noeip Gigabit	4.39.21
noe3gip	4.58.22
noe80x8S (same)	**5.45.70**
noe8018	**5.45.70**
noe8008	**5.45.70**
SM modules (Thales) - V4 (bin_SM) - V5 (bin_SM2) - V5M (bin_SM3)	4.1.03: 3.3.05 3.6.03 4.1.03
mg_appli	46.29
Thales library (mg_appli)	1.1.02
mg3	4.51, replaced by ngp
intip3	4.51, replaced by ngp
ngp3	**12.04**
Thales SRTP client (intip3/mg3)	1.0.06
Thales VPN client (intip3/mg3)	1.1.03
Boards binaries	
brapra	2.06
c1nvgpa2	3.4
c1nvua	**5.3**
c1nvz32	3.13
cpl2dpnss	1.11
dpnss_v2	2.3
dpnss_nv	2.3
dpt1-2	**2.06**
dsp_emtl_24021	3.01

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dsp_gpa	2.01
dsp_vgu	1.5
dsp0Z32	1.05
dsp1nddi2	2.01
gpa2tns	1.11
gpa	2.24
int2_rt2	2.20
intof	1.25
intofsync	1.05
intof2	3.5
ivrZ24	2
lia	4.18
lioebbc2	3.05
lio	3.25
mic2	2.31
nddi	2.5
nddi_in	2.7
nddi2	2.25
nprae	2.06
pcm2_ru	1.6
pra	2.06
pra2	2.26
rma	3.04.04
tonesnv	2.19
ua	13.9
uasim	8.14

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Patch MD1 :

Component Name	Component Version
r_linux	r_linux26_197.000
r_linux_patch	r_linux26_patch 197.016
r_glibc-4400	r_glibc-4400_003.003
r_ramdisk26	ramdisk26_patch 197.000.001
r_lnxswinst	r_lnxswinst_3.83.0
Rainbowagent	6.0.1
r_Imsagent	lmsagent-1.2.14
r_firmware_CPU8	r_firmware_CPU8_2.0
r_bios_cs2	r_bios_cs2_ami_patch_3EU24009AAAD_12.0
r_egw	r_egw_4.10
r_c1nvz32	r_c1nvz32_3.13
r_c1nvUA	r_c1nvUA_5.5
r_nddi2	r_nddi2_2.25
r_tones	r_tones_2.19
r_intof	r_intof_1.25
r_intof2	r_intof2_3.5
r_ioip	r_ioip_4.19
r_intip	r_intip_16.25
r_mg_appli	r_mg_appli_46.29
r_ngp3	r_ngp3_13.02
r_mg4	r_mg4_2.03
r_oms	r_oms_12.02
r_ost	r_ost_7.11
r_noeip	r_noeip_4.33.81 (A (4018) , Z (4008) binaries) / r_noeip_4.33.40 (B (4028), C (4038), D (4068) binaries)
r_noeipg	r_noeipg_4.34.21
r_noesip	r_noesip_2.12.40
r_noeuax9	r_noeuax9_3.81.80
r_noe3guax9	r_noe3guax9_4.11.32
r_noe8082	r_noe8082_4.51.03
r_noe3gip	r_noe3gip_4.53.22
r_noe3gsip	r_noe3gsip_3.00.50
r_noemipt8_r100	r_noemipt8_r100_6.1.2
r_noemipt_r2	r_noemipt_r2_109.025
r_noemipt_r3	r_noemipt_r3_120.028

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r_IPxBS	r_IPxBS_0073.0006
r_noe8008	r_noe8008_5.45.80
r_noe8018	r_noe8018_5.45.80
r_noe80x8S	r_noe80x8S_5.45.80
r_wbmappli	r_wbmappli_1204.2202
r_noe8088	r_noe8088_5.06.47
r_sip8008	r_sip8008_1.55.08
r_sip8018	r_sip8018_1.55.08
r_sip80x8S	r_sip80x8S_1.55.08
r_sip86x8P	r_sip86x8P_1.00.07
r_ibs_appli_ng	r_ibs_appli_ng_53.02
r_dect8212	r_dect8212_0015.0003
r_dect8232	r_dect8232_4683.0003
r_dect8242	r_dect8242_6682.0004
r_dect8262	r_dect8262_5582.0002
r_dect8262EX	r_dect8262EX_7582.0002
r_wlan81x8s	r_wlan81x8s_3.1.0
r_dect8254	r_dect8254_4185.0007
r_dect8244	r_dect8244_6184.0003
r_noe84x9P	r_noe84x9P_1.20.10
r_noe84x9T	r_noe84x9T_1.20.10
r_noe86x8P	r_noe86x8P_1.20.17
aom_EM200	r_aom_EM200 2.10.07
aom_ALE-120	r_aom_ALE-120 1.15.32
r_mgxl	r_mgxl_1.04
r_sipH3_6X	r_sipH3_6X_2.12.54.000.2199
r_dpt1	r_dpt1_2.06

3.2 New hardware

- New sip phone ALE-3
- New aom module ALE-120 usable for sets ALE-x00
- Take into account new and more powerful HP Appliance Server for GAS purpose
- Take into account new Lenovo Appliance Server SR250 for GAS purpose

3.3 List of new features/ interoperability in R100.1

See details of those features in document TC3005: **New features in OXE Purple Release R100.1** available at the Business Portal

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Features to appear in MDx are all tagged the same way (***MDx***) below at the end of the line

Details about those features can also be found in system documentation.

3.3.1 ARCHITECTURE

- Purple On Demand (aka "PoD"): centralized and simplified software locks program (Cloud). "swk" file does no more contain those software locks.

3.3.2 DECT

- Dect set 8262 firmware R250 (look & feel synchronized with 8242 sets …)
- ALE DECT-sets /// Display of internal DECT phonebook name on incoming call – ***available in MD1 patch***

3.3.3 MAINTENANCE/TOOLS/SERVICEABILITY

- GAS systems:
    - new command to display the versions of each software components (GAS/OMS/WRG) – already delivered in N1 MD5
    - possibility to start a customer database on lab by excluding Cloud services
    - save/backup of VMs (with secured protocols only like "ssh") – ***available in MD1 patch***
- Possibility to start a customer database on lab by excluding Cloud services
- Integration of new infocollect 6.9
- "swinst": check of application files is now only done in sha512 (menu: "Software identity display/ Application software validity checking")

3.3.4 OXE MANAGEMENT

- Inform the admin of the last access with his identity in WBM management
- DECT set registration/ de-registration with WBM or OV8770 instead of using maintenance tools
- New menu in netadmin for domain name and translator name modification

3.3.5 SECURITY/ ENCRYPTION

- New certificates signing (FQDN – see above: "OXE management")
- Secure Alternative to TFTP for obtaining terminal configuration file for IPDSP – ***postponed in MD3 patch***
- Secure Alternative to TFTP for obtaining device configuration file – ***postponed in MD3 patch***

3.3.6 SIP/SIP TRUNKING

- Caller geolocation transmission on SIP trunk for emergency calls

3.3.7 SYSTEM/INFRA

- SEPLOS adaptations : multi-codec (codecs g711/g722)
- Support of Hyper-V 2022 (previously Windows server 2019)

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3.3.8 TERMINALS/ TELEPHONY

- Support of EM-200 Add-On Module on ALE 20 and ALE 20H. Upgrade aom firmware is done locally on the OXE
- Support of ALE-120 Add-On Module on ALE-x00. Upgrade of the Android firmware is done through the Cloud
- Multipage on aom modules ALE-120 & EM-200
- Called number transformation on SIP trunk based on IP domain of caller
- Software Customization of Essential and Enterprise DeskPhones (only "readiness": oxe part)
- Support of ALE-3 set (sip phone) – ***available in MD1 patch***
- Support of ALE-300 in sip mode with switch possibility noe-sip/sip-noe – ***available in MD1 patch – restriction with 8770 deployment (R5.1).***

3.3.9 TERMINALS: ALE-S Android R1.5

New client SIP ALE SoftPhone Android R1.5 is now available from OXE R100.0 MD5 and R100.1 Technical Release. See also TC2887 ed06 (R100.0) & TC3005 ed01 for more details.

3.3.10 TERMINALS: NOE R200 FIRMWARE

- New skin "Antares" for ALE-x00 sets
- Audio hub: Bluetooth AudioHub, use the DeskPhone as a Bluetooth Speaker Phone for a Mobile device.
- Audio environment: provide special tunings of the audio to predefined environments
- Screensaver UI evolution: display date and time with a more comfortable font size
- QWERTZ / QWERTY mini keyboard: automatically change charmap according to country code received by system. (Y<->Z). Apply on following languages: German / German (Swiss) / Italian (Swiss) / Czech / Hungarian / Slovak / German (Austria) / Polish)

3.3.11 FEATURES UNDER PCS PROCESS

- No features under PCS

PCS = Premium Customer Support. The Premium Customer Support process allows the Partner Businesses to profit of an assistance on features or products whose marketing was announced (DR3) but which are not launched yet on the market. The PCS process replaces the SDP (Specific Deal Process) previous process; refer to the eFlash EF_Marketing_003_260704.

4 SOFTWARE CONTENT & OTHER COMPONENTS

From the Technical Released version

Delivery from Business Partner Web Site:

Technical Release

==========

- **N2.514.23.b**
  - Full version N2.514

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- Static patch N2.514.23
- Dynamic patch N2.514.23.b
- Security patch SN2.514.23.b

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- **GAS 10.04 & new version 10.05**

Components	1rst Technical Release	MD1 patch
Software Server Version	r_oxesws_10.04	r_oxesws_10.05
OXE Version	N2.514.11	N2.514.23.b
OMS Version	12.01	12.02
WebRTC Version	2.1.0-215	2.2.1-361
BootDVD version used for OMS VM	12.5.023.000	12.5.024.000
FlexLM Version	11.19.0.0-006.104-IP0002	11.19.0.0-006.104-IP0002
This OXE Sw Server is compatible with Bootdvd Version	12.5.022.000	12.5.024.000

It is STRONGLY recommended to check on the Business Portal if a new OXE patch is present to take advantage of the latest fixes. Boot DVD update can also be updated to take advantage of latest security updates.

MyPortal > Products > Communication products > Communication systems > OmniPCX Enterprise

Note

The access to secured patch is only given on request after filing the appropriate template.
For systems using *Full Software Native Encryption*, secured patch **MUST NOT be installed**

Components related to R100.1

Product/ Component	Type of product	Misc
OMNIPCX ENTERPRISE R100.1 Version N2.514.23.b (available on My Portal)	OXE	System documentation is available on the My Portal, in the section Technical Documentation Library
OMNIPCX ENTERPRISE R100.1 **Secured Version** SN2.514.23.b	OXE	Use *ONLY* for secured systems with SSM/MSM boxes
vmWare esx lower to 5.5: CentOS 5 --- VMware ESXi's version upper or equal to 5.5 (VM version 10) --- KVM --- Mandatory version in presence of new dongle. Compatible with previous dongle version.	vmflex centOS CentOS 7 64 bits is compatible only from VMware ESXi 5.5; the VM version is in hardware 10 **/!\ warning** if presence of new dongle	2.1.000.092 CentOS 5.11 - 32 bits --- 2.5.000.002 CentOS 7.7 - 64 bits --- 2.5.000.002 CentOS 7.7 - 64 bits --- 2.5.000.002 CentOS 7.7 - 64 bits

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OST - OXE IPV6-IPV4 translator - OXE External Encryption Gateway	ipv4/v6 translator/ EEGW	OST.iso 6.13 (iso file), to be used with bootDVD 12.5.022.000 See *NOTE* hereafter
OXE-MS Software Version 12.02	OMS	OXE binary 11.10-xxx (updated along with the OXE patches) File "oms-11.10-xxx.iso" To be used with bootDVD Suse ***SP5*** (latest version: bootdvd-12.5.024.000)
GAS/ OXE Software Server	GAS/ Oxe Software Server	OXE SW Server 10.05 (oxe version N2.514.23.b) to be used with bootDVD Suse ***SP5*** 12.5.024.000
OmniVista 8770 R5.1 Software (technical released version 8770.5.1.13.00b + patches A-F)	OmniVista 8770	At technical release: OmniVista 8770 8770.5.1.13.00b patches A-F System documentation is available on the My Portal, in the section Technical Documentation Library
OmniPCX Open Gateway (O2G)	O2G R2.3 DVD-R SW MEDIA KIT	O2G-R2.3-14.3.000.000 to be used with bootdvd-12.5.011.000 (reinstallation if previously bootDVD was 12.3)

Before installing any software, we strongly advise you to check the integrity and authenticity of the software.
All software delivered in the Business contain a SHA512 checksum information (MD5 not used anymore).
For detailed information about checksums, please refer to the technical communication TC1271 Checks for integrity and authenticity of downloaded software.
(*) That Sip DM is not usable for 8002/8012 sets in hotel environment

Note

PSP software is available on MyPortal (*https://myportal.al-enterprise.com)* in section *Products > Communication products > Communication systems > OmniPCX Enterprise > All Releases*. This version is compatible with OmniPCX Enterprise RELEASE 100.1

Component OST:
"OST" is a component that is a merge of OST64 (ipv6/4 translator) & new External Encryption Gateway. OST64 & Eegw cannot be started simultaneously. Eegw is installed by SOT version: choice to start ost64 or eegw has to be done at installation time.

List of binaries of version N2.514.11.a
Version of all components is in section Status, translation & binaries

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5 BEFORE STARTING

5.1 Checks to perform

- New VM OMS and OST must be installed from scratch with Suse 12 SP5 Boot DVD. Then reconfigured to connect to OXE system.

Warning

The OST & OMS VMs from OXE R12.x will not start with OXE R100.0 or higher. You must deploy the new VM before the OXE system upgrade into R100.x

SOT: use the latest version available at myPortal

Perform new installation from scratch with the latest Suse 12 SP5 Boot DVD. Do not try to install the oxe on a Suse 12.3.xx.yy (major upgrade from 12.3 to 12.5)

- Case of migrating an OXE network from ANY release to R100.0 (or higher): it is mandatory to consult TC2853 (specific management & precautions to take before starting that migration)

- ***GD4/GA4:*** *due to operating system change some precautions must be taken before upgrading to N2 if there is a presence of one of those boards. Notice that this concerns systems that*

  mg4_2.01 or higher will be upgraded only from firmware **mg4_1.19** (which is delivered with beta versions N2.510 and N2.500.3)
  if your OXE has a version < N1.291.66 (N1 MD4) you must first migrate to N1 version N1.291.66 (N1 MD4) or install temporarily the firmware 1.19 before installing the new N2 version
  The firmware 1.19 is present under myPortal, located at the N2 software place.

  Backup the corresponding files (all named "binmg4…") & place the new files under "/usr2/downbin". Make sure the Linux rights are the same. Reboot the GD4/GA4. Once the new firmware is installed the N2 version can be started.

If this process is not applied, the board upgrade will fail & will get corrupted. A factory return will be necessary

- Compatibilities/ Product Limits
  Consult document about CROSS-COMPATIBILITY/ PRODUCT LIMITS (see chap. 2 DOCUMENTS)

- Hardware: phased-out boards
  Check for phase-out boards in the Alcatel-Lucent business portal documents (Eflash Phase out) or in the Technical Knowledge Center database (Applications/ Hardware/ Terminals Cross compatibility)

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- Conditions for installation in ABC network
  Conditions for Installation of RELEASE 100.1 in network is detailed in the last "MLE CrossCompatibility" document available on Business Portal.

  For broadcast & remote installation purposes it is mandatory that all nodes have their host table updated. Meaning that each system has all the remote ip addresses in its host table (physical and role addresses)

- Reminder on applications & functionalities
  The table below shows all the applications and functionalities which are no longer provided by OmniPCX Enterprise R100.1, whatever hardware used.

Family	Type of application	Migration to	Compulsory deletion/ modification before migrating to R100.1	Documentation
47xx	OmniVista 4760i	"mgr" or OmniVista 8770 or WBM (from R12.0)	Yes	System Documentation
	4715, 4730, 4740 or 4740 PTP	OmniVista 8770	No	TC1479
	4730i	mgr or OmniVista 8770	Not applicable	System Documentation
	4755	OmniVista 8770	No	TCV010 TCV017 TC1479
	4000 Directory Server	8770 LDAP Server		
	Directory PC Client for 4755/4000	8770 Directory Client		
Voice mail systems	4630, 4620 or VPS35 4635 VPCPU, 4635 or VPCPU-1	4645 or OT MediaCenter		
ACT migration	4300, 2600, 4600 or 5400	Manage the equipment in a new crystal ACT or common hw rack	Yes	No
ACD-V1	ACD-V1	CCD or OTCCSE	Yes	TC0487 (CCD)
	4735 & 4736	CCS		
	4961 first party TAPI middleware	No migration – Not supported	Not applicable	No
	4973 Telephony Assistant	Not supported (Replaced by OmniTouch UC My Phone)	Not applicable	
CCS	CCS	CCS version evolution	***UPGRADE to version 10.12.94 minimum***	
VoWLAN	VoWLAN R1.x	VoWLAN R5.x	No	TC1596
Others	Alcatel Unified Messaging	OTMC	Not applicable	

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Family	Type of application	Migration to	Compulsory deletion/ modification before migrating to R100.1	Documentation
	Daughter board SPB	Moxa box IP/V24 module	No	System Documentation
	Overflow on QoS (VoIP)	Not supported	No	No
	CPU2, CPU3, CPU5 Step1/Step2/ Step3, CPU6, CPU7s1, All Appl. Servers except Lenovo M6 & HP G8v1/v2	Replaced by CPU7-2 – with 512 MB memory change or CS-2 or Appliance Server or vmWare virtualisation (depends on the Actis configuration) or new cpus CS-3/CPU8	No	No
	LIOE & TSC-LIOE	INTIP3	Yes	No
	INT1/INT2	INTOF-2	Yes	No

- Applications and functionalities dependent on CPUs and hardware platform used

Depending on the type of CPU (crystal CPU, Appliance Server, Call Server in rack, virtualization) and the hardware platform used (Crystal, common hardware), some applications or functionalities are not authorized.

		Crystal CPU (7s2 or 8)	**Call Server (CS-2/3)**	**Appliance Server or virtualization**	
				Common hardware	**Crystal hardware**
Voice mail	4645	No	Yes	Yes	No
	4615 / VMU-OBCA 4615/VMU-OBCA2 (1)	Yes (only CPU6)	No	No	No
Various	Campus DECT	Yes	No	No	No (4)
	DTM for DECT on CPU6	Yes	No ⇨ DECT8	No ⇨ DECT8	No ⇨ DECT8 (2)
	VG on CPU6	Yes	No	No	No ⇨ GPA2 (2)
	DTMF	Yes (on CPU6 & CPU7)	No	No	No ⇨ GPA2 (2)
	V24	Yes	No	No	No ⇨ V24-IP module (3)
	Music on hold on CPU	Yes	Yes	No ⇨ Z port	No ⇨ Z port (3)
	IO2/OBCA (5)	Yes (only with CPU6)	No	No	No (5)
	IO2N	Yes	No	No	No (5)
	SPB	No ⇨ IO2	No	No	No ⇨ V24-IP module (3)
	3 ACT levels	Yes	No	No	No (3)
	eRMA	No	Yes	Yes	No

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(2) Replacement is carried out by Actis.
The DECT8 board is not compatible with DECT2/DECT4 boards. If DECT2/DECT4 boards are present, ACTIS will replace them.

Warning

REMINDER
DECT2/DECT4 and DECT4 HB boards are phase-out. They are still supported by RELEASE 12.4 but can no more be configured for addition or for new installation.
They are **NOT** compatible with SUOTA functionality

(3) Manual modifications are required.
(4) No alternative possible.
(5) Boards of IO2/OBCA type do not exist in common hardware. A certain number of applications and functionalities are therefore no more supported, such as:

- Extension of V24 physical ports via SPB board => use the Moxa box
- Direct management of data applications in V120 accessible from a terminal adapter (TA in V120) locally or from the outside (appli login, SLIP, hotel management, etc.).

– Data transmission in the B channel of a digital support (T2, PCM, etc.)

- Link in a B channel of a T2 (switched or not switched)
- Link in a B channel of a PCM board (often encountered in South America where T2s are less common)
- Link via TA/Modems
- No more back-up signaling via ISDN
- X25 in a B channel (Tunnel operation in T2 and Centrex operation for centralized network management via 4740)
- Frame Relay in the case of saturation of the signaling channel in D

In this case, the Tunnel, Broadcast and network incident type X25 applications pass through a B channel (application of over-reservation coefficient 15 in the D channel of a link allows Frame Relay not to be carried out, but the mechanism still exists).

▪ Installation on second partition

Coming from ANY version <12.0 the cpu MUST be reformatted: no possible use of unactive partition (partitions are resized + multipartition process NOK). Coming from R12.0 second partition installation can be used

▪ VoIP network conformity check

The OmniPCX Enterprise R12.4 is a native IP product when using a dedicated cpu hardware or virtualization and in the case of hardware mixing. All signaling exchanged between the Call Server and the Media Gateways or ACT Media Gateways is transported over IP. It guarantees a reliable IP connection and respects the VoIP criteria (delay, jitter, packet loss) for VoIP configurations.

VoIP conformity tests are compulsory before deploying the VoIP solution; consult the VoIP Engineering section on My Portal for the methodology, recommendations and tools to secure the

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VoIP installation. In particular, the VoIP Assessment tool for VoIP Audit and diagnostic help guide are strongly recommended (available in the Brest training catalog).

CAUTION
With the "Modem, Fax, Data transparency over IP" feature, it is mandatory that the IP network is almost perfect; see technical communication **TC0712 Modem, Fax, Data transparency over IP.**

5.2 Getting the software

Virtualization requires extra DVDs or tools like Operating Systems, firmwares …

Virtualized OXE:
- Suse 12.5.xx.yy boot DVD and OXE iso file : use the bootDVD version delivered under myPortal

Flex server (if not connected to Cloud):
- OVF file (image of CentOS OpSyst + Flex server binary: vmware solution) or separate CentOS ISO image + flex server binary (for the KVM solution)

OMS:
- Suse Boot DVD and OXE-MS iso file – use the bootDVD version delivered under myPortal

OST64/EEGW:
- Suse Boot DVD and OST iso file – use the bootDVD version delivered under myPortal

SOT:
- S.O.T. 3.1.009.006 or upper plus vmware player (free download & use) or workstation on a user PC. Download S.O.T. on myPortal at product versions level. Some virtualization features may require extra virtualization software or licenses. Always use the latest SOT version.

Note: ALEDS & PC Installer tools are *no more supported* & are replaced by S.O.T.

5.3 ACTIS, eLP & software locks

Release 100.1 change software locks (use of swk of release 100.1)
Actis 24.1 is requested
- *Oxe version lock: lock 165: value 51*
- *Oxe Beta lock 87: value 31*
- *New OXE Lock 431: Offer type - value 0/1 - 0: Capex or OTEC - 1: OPEX*
- *Product catalog OXE: E40-Ed49*

Like in previous versions to prepare any system to the Cloud connection a new CC-suite id is inserted by eLP or Actis. This data stands before the CPUids in the swk file constitution.

CAUTION
An add-on via Actis is only possible if the current Actis offer includes the "*. swk"* file (generated by eLP then imported into Actis).

When you make a configuration request four or five OPS files will be generated:

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- <offer_id>.zip
- <offer_id>.swk (this file results from the eLP)
- <offer_id>.hw
- hardware.mao
- <offer_id>.sw8770 (if 8770 is present)

In the case of the migration of an OmniPCX 4400, the lock files of the site (photoconfig) should be put in Actis. Actis will then allow you migrating these locks (in "Migration to OXE" Offer) by proposing migration packages for the functionalities and hardware that are not supported by R100.1

5.4 Before saving the database

The following operation *may be* necessary coming from an old release:
In the current version, carry out the following commands.

5.4.1 Rebuilding the database before saving

Login:	mtcl	
Directory:	/DHS3data/mao	
Command:	/DHS3bin/fab/fichges recover all	(if R ≤ 1.5.2)
	fichges force_recover_dico	(if R > 1.5.2)

This operation may be long (over 30mn depending on the database & cpu type) and it is essential not to interrupt it while running.
Carry out the back-up in swinst and transfer it to disk or PC.

CAUTION

- Do not choose the save option "Save for rebuilt" (index files will not be saved).
- Do not use a database saved in "Automatic save" (same reason).

5.4.2 Tickets

REMARKS: On the saving of charging tickets.
Sites going from A9.5xx to R100.1 who wants to retain client tickets (hotel or hospital type) in the 'TABJUSTIF' files should "empty" the administrative tickets before saving as these are no more processed as of R3.0. As of R3.0, administrative tickets are stored in compressed files.
Sites going from R1.5.2 to R100.1 which already have compressed files should save them as they will be compatible.

5.4.3 From crystal to GAS or vm or common hardware

CAUTION:
The shelves already created in position 18 and 19 must be moved before the translation. If this is not done, they will not start. When migrating to OXE R12.2 with change of CPU 4400 by a VM or a CS or GAS, there is an automatic translation of shelves created in these 2 positions. This automatic translation does not exist if the CPU of type 4400 is retained.

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5.5 Call Server compatibilities

Warning **FOLLOW CAREFULY THE RULES OF THIS SUB-CHAPTER (same rules as those from R12.0)**

Only the following CPUs are compatible:

- CPU7s2 with a change of memory bank to 512Mb
- CS-2
- CS-3
  - Appliance servers to be used now in GAS mode only for new installations (appliance servers cannot be used anymore in legacy mode!)
  - Check for compatibility with Suse 12.5 & KVM (white lists manufacturer)
  - Memory: 4GB minimum (1 oxe vm, 1 OMS)
- VM with following characteristics
  - Memory size from 1Gb to 4Gb
  - OS: other Linux or CentOS
  - Hard drive size: 46 Gb minimum
  - Network card:
    - E1000
    - VMNETX3 ***IF*** CentOS is selected
  - S.O.T. R3.1.009.006 minimum, will generate VM with following characteristics:
    - 500 Users – 1 vCPU – 1024 MB RAM – 46 GB disk
    - 3000 users – 1 vCPU – 1024 MB RAM – 61 GB disk
    - 7000 users – 1 vCPU – 1024 MB RAM – 81 GB disk
    - 15000 users – 1 vCPU – 2048 MB RAM – 81 GB disk

!! The CPUs ***not*** mentioned above ARE NOT compatible and most of them will not be able to be installed

For installing a CPU7s2 the bios must be at a minimum version. Follow the chapter 19.2.2 from oxe R12.x Release Note.
Thus the menu "boot Alizee" is no more available to load this cpu => use the "A4400" boot method.

From M1.401.x (included) the disk must be reformatted meaning that remote download feature cannot be used to go to R100.1 from lower versions than M1.
This concerns main & standby CPUs as well as PCS cpus.
From M1.403.x to any other version remote download is operational.
A system running in L2 for instance can remote load & install a M4 to a cpu *already installed* in M1 or above

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5.6 Firmware upgrade

Going from any version up to this release:

- IP Phone sets will upgrade their firmware if they are authorized. Take this time into account before upgrading. Chapter 5 shows all the components & firmware versions (in bold: new).

  8088 Android sets will do the upgrade on the Cloud if correct management is performed (see dedicated chapter on system documentation/ terminals

- TDM phone follow the **Download Policy** defined in their **Phone feature COS**
  - **Only on demand**: the set is only downloaded on request by the administrator, using the command "downstat t"
  - **As soon as Possible**: the set is downloaded automatically after the restart of the system. If several sets are connected on a board, one set is upgraded at a time. Once the first upgrade is completed the second set is restarted for upgrade.
  - **Before starting the application**: the set is downloaded as a priority to authorized phones (be careful not to assign this policy to all sets...)
  - **Delayed**: the set is downloaded during the period of time defined in the parameters **Start of download** and **Stop of download**

5.7 Voice guides

Ensure that you have the voice guides required in RELEASE 100.0 (no change from previous version)

5.7.1 System voice guides

The version of system voice guides compatible with the OmniPCX Enterprise R100.1 is v6.0

The following files are provided on the CD-ROM:
- Voice guide transfer tool.
- Business generic voice guides in language 1.
- Business standard voice guides in language 1.
- Hotel generic voice guides in languages 2&3.
- Hotel standard voice guides in languages 2&3.
- Alcatel music on hold.
- Voice guide documentation.

They can be downloaded from the Business Portal section *Products > Communication products > Communication systems > OmniPCX Enterprise > All Releases*

5.7.2 Alcatel 4645 voice guides

The version of the Alcatel 4645 voice guides is v1.10. CD-ROM reference: 3BA 27588 AAAH

Version details:

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09	07.16.10	e-Va voice guides CD-ROM – v1.8 Corrected fault reports: crms00197618 – New voice prompts 1071, 1091, 1608, 1626, 1628 & 1646 in Cantonese
10	12.28.12	e-Va voice guides CD-ROM – v1.9 New Swedish voice prompts. Add of Hebrew language.
11	06.27.16	e-Va voice guides CD-ROM – v1.10 New voice prompt 1911 "Your account is locked" in all languages

The following files are provided on the CD-ROM:

- Voice guide transfer tool.
- Voice guides in 40 languages in law A.
- Voice guides in 20 languages in law µ.
- Voice guide documentation.

They can be downloaded from the My Portal section: *Products > Communication products > Communication systems > Messaging and on-premise UC > 4645 VMS*

The following languages are available:

Country	Code	Law A	Law µ
Arabic female	AR1	x	
Arabic male	AR0	x	
Cantonese	CA0	x	x
Catalan	ES1	x	
Croat	HR0	x	
Czech	CS0	x	
Danish	DA0	x	
Dutch	NL0	x	x
English	EN0	x	x
English Australia	AS0	x	
English United States	US0	x	x
Finnish	FI0	x	x
Flemish	NL1	x	
French	FR0	x	
French Canada	FR2	x	x
German	DE0	x	x
Greek	GR0	x	
Hungarian	HU0	x	
Icelandic	IS0	x	
Italian	IT0	x	x

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Country	Code	Law A	Law µ
Japanese	JP0	x	x
Korean	KR0	x	x
Latvian	LV0	x	
Lithuanian	LT0	x	
Mandarin China	CN0	x	x
Mandarin Taiwan	CN1	x	x
Norwegian	NO0	x	x
Polish	PL0	x	x
Portuguese	PT0	x	x
Portuguese Brazil	PT1	x	x
Romanian	RO0	x	
Russian	RU0	x	x
Slovak	SK0	x	
Slovenian	SI0	x	
Spanish	ES0	x	
Spanish United States	ES2	x	x
Spanish Latin America	ES3	x	x
Swedish	SV0	x	x
Turkish	TR0	x	

5.8 4645

Issue is detected in case of backing up/restoring big files bigger than 2Gb: the file does not have the right size (issue related in both os & client tool).
the size of /tmpd (usr4) increased to 25 GB. This change will reflect only for HD size >=80 GB. For other disk size, there is no change.

5.9 Recommendations about security

The security rules and recommendations for securing the access and using the system are described in the System Documentation "Security" section.
The IP services and port numbers used by the system are also available in this section.
It is strongly advised to have full network security managed & change regularly the account passwords.
Consult also the security news alerts.
You can use the embedded oxe tool **`securitystatustool`** to perform a check of the OXE. Those controls are described at chapter 15 in the release note of OXE R12.2

ssh-v2 configured is strongly recommended & will be soon mandatory in oxe as well as trusted hosts.

5.10 Translations

DO NOT USE **THE "mao for rebuild"** type of database backup to translate to a release <R12 to R12.0: the rebuild tool always included in that backup is NOT compatible with the Linux OS coming from R12.0

Things to know …

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Consult TC1854 *for database translation compatibilities to see if an intermediate translation is needed (for chorus/linux netadmin as well as database)*

- There is no automatic translation of Chorus data of Releases below R3.0. You should not restore the Chorus data of Releases below R3.0 but perform manually a complete **netadmin** management.
- There is no automatic translation from the Custom Release 3.0C (C1.580.1) to RELEASE 12.3.1 It is essential to carry out an intermediate translation with Custom Release 3.2-C2 (C1.762.18 minimum).
- As of Release 8.0.1, the translation creates automatically a fictive shelf in which the virtual UA boards of ACT 19 (intended for the assignment of IP sets) will be migrated.
  This fictive shelf is created automatically with the first free shelf number in the translated database.
  In XL configuration, the number of fictive shelves dedicated to IP sets allocation can go up to 3.
- When migrating (use of photoconfig), Actis takes into account the creation of fictive shelves dedicated to IP sets allocation.
- all standard SIP sets must be declared with the *SIP Extension* type. Standard SIP sets are no longer supported with the former "SIP Device" mode (formerly called "External set"). Only items other than standard sets (Nokia sets in Dual mode, 4135 IP Conference Phones, fax, video, etc.) should remain with the former "SIP Device" mode.
  When migrating a system with "SIP Device" / "External set" to R9.0, the system moves these sets into the new mode (SIP extension) automatically.

Warning

It is mandatory to declare OT4135 IP Conference Phones with type "SIP device".

Procedure to follow:

- Export the SIP entities which are not standard SIP sets (OT4135 IP Conference Phones, fax, video, etc.) by OmniVista 4760(i) by using ".prg" as export format.
- **Remove these entities then migrate to R9.0.**
- Import again the items which have been previously exported: standard SIP sets are in "SIP Extension" and the other SIP entities in "SIP Device".

Note

Fictive shelves dedicated to IP sets allocation created automatically by the system must in no way be changed by the management.

- As of RELEASE 11.0, the Direct RTP mode (in network) is automatically enabled and the relative parameter removed. The same is done for "H323 Internode Protocol" system parameter.
- When creating a new Media Gateway or an A4645 voicemail after the upgrade to RELEASE 12.1, a GD3 board will be automatically created and no more a GD one. The already created Media Gateways and A4645 are of course not modified and will remain with a GD board. For the A4645 voicemail, absolutely no functional difference exists depending a fictive GD or GD3 is used.

Check if translation performed correctly: operation & error messages are located in a file that can be displayed by "swinst":

7 Database tools

then

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5 About last database operation

Translation log file is located under "/usr3/mao/TRANSLATE.dat" and is also included in the infocollect result file.

5.11 Specificities about migration in OXE R100.1

Important

- ❖ OXE networks: read carefully **TC2853 Migration process for upgrade to R12.4 MD4 and beyond EN**
- ❖ CCS: new CCS version to update. Minimum version is **10.12.94.0** Lower versions will NOT be able to connect to the OXE.
- ❖ OMS and OST: New VM must be **installed from scratch** with Suse 12 SP5 Boot DVD. Then reconfigured to connect to OXE system using command "*omsconfig*".
- ❖ GAS: New **installation from scratch** is required if coming from a version lower than R100.0/N1. After new wizard installation, restore the OXE backup from database.

CCS *must* be upgraded to version **10.12.94.0.**

5.12 Migrating old versions

- Sometimes there is no automatic translation between 2 releases. An intermediate translation has to be done. For that you need to use the document "TC1854en-Ed25_OmniPCX_Enterprise_patch_aligment_procedure.xlsm" in the business portal.
- As the IP addressing plan has changed since Release 3, it is not possible to reuse the Chorus data from a previous version in its current state.
- The restoration of Chorus data from a release lower than 3.0 is possible only in the case of a intermediate translation in Release ≤ R5.0.1 Ux. A translation is then carried out including the names and addresses of the CPU and its twin, addressing by role, the local tunnel, SLIP management and "trusted hosts".
- There is no automatic translation of Chorus data of Releases below R3.0. You should not restore the Chorus data of Releases below R3.0 but perform manually a complete **`netadmin`**.
- The translation of the tunnel creates static LCNs. For a network where all nodes are in R7.1, the static LCNs must be deleted.
- It is essential to save the site OPS files (photoconfig). They will be required to be able to carry out a migration to R12.0
- If the *lanpbx.cfg* file was used in Release 3.2, it is essential to save it before passing to RELEASE 12.x (*usr2/downbin/lanpbx.cfg*). It should be restored after the translations in *usr3/mao*. If forgotten, this file should be recreated. For more information, refer to the System documentation (Functional documentation/IP-PCX networks/IP Phones section).

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Warning **Migrating from a CPU7S1/2 to CPU8:** if the embedded ethernet was used a new cable has to be installed on the cpu that lacks this connection to the external switch.
This internal interface is not present anymore.

5.13 Dect

Each system equipped with DECT needs a unique PARI configured in the system. To obtain the PARI, refer to articles in TKC : 000007973, 000011120 on Business Portal.

Information about DECT licenses in case of migration.

If you have an OmniPCX 4400 with DECT, you will find the number of DECT sets in the lock 82 (no lock 175 and no lock 200).

If you make a migration to OmniPCX Enterprise, you will be able to see locks 82, 175 and 200. During this migration, if you update the number of DECT sets, only locks 82 and 175 will change, the lock 200 will keep the value of the number of DECT sets present in OmniPCX Enterprise configuration.

Example:
OmniPCX 4400 with 50 DECT sets:
Lock 82 = 50.
Migration to OmniPCX Enterprise:
Lock 82 = Lock 175 = 50
Lock 200 = 50.
If you change the number of DECT sets from 50 to 60:
=> Lock 82 = Lock 175 = 60
=> Lock 200 = 50.
In that case the maximum declarable of DECT sets is the value of the lock 82 (or 175) but not the sum of locks 82 and 200 or the sum of locks 175 and 200.

Concerning the new solution ip dect on xBS there is no change on software locks.

Warning Before upgrade, make sure that the value of the licenses matches the number of DECT users. So, if you have more DECT users than the value of the license you have to make an add-on with Actis to increase the license.

Dect migration to xBS

- "old" sets are not considered in new ip dect solution (no support, no firmware fix)
- Autoreg feature needs a minimum version on each set. Make sure to perform a SUOTA operation before.
- SUOTA is not yet automatically set to TRUE. This has to be done manually.

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5.14 Updating the PCSs

Coming from versions lower than R12.0 there is no possibility to use the second partition. Disk must be re-installed from scratch.
S.O.T. R3.1 can be used for that in environments where telnet/ftp protocols are filtered or NOT.
Method described in TC2338 can be forgotten.

5.15 OmniPCX 4400 migration to R100.1

Two possibilities are provided for migration to R100.1:

- Migration to R100.1, keeping the 4400 type CPU: only CPU7s2 with new memory bank (512Mb) or new CP8 are compatible
- Migration to R100.1, changing the 4400 type CPU to vm (or Generic Appliance Server) or CS-2/3. This operation is done automatically as a translation.

The migration to R100.1 offers the same level of functionalities as the R5.0 Ux, except for three restrictions:

- As of Release 5.1, certain applications, hardware or functionalities are no more supported; see paragraph 5.1.
- The replacing of 4400 CPUs with CD/vm or Generic Appliance Server leads to restrictions on the use of certain functionalities.
- In ISO migration, the shelves already created in position 18 and 19 must be moved before the translation. If this is not done, they will not start. In fact, when migrating from OmniPCX 4400 to OmniPCX Enterprise R100.1 with change of CPU 4400 by an Appliance Server, there is an automatic translation of shelves created in these 2 positions. This automatic translation does not exist if the CPU of type 4400 is retained.

5.15.1 Use of the hardware key

Hardware key is no more used on CPU7s2 since it is no more proposed by Actis.
Hardware key is not available on CPU8.

5.15.2 Crystal hardware compatibility with an Appliance Server

See also phase-out & compatibility documents
Technical communication **TC0778 Migration OmniPCX 4400 to OmniPCX Enterprise** describes the steps necessary for transition to Release 9.1 but is not updated to R12.0 and above

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6 INSTALLING THE SOFTWARE

6.1 Principles to follow in case of full reboot, switchover, rollback & firmware updates

6.1.1 When changing a release, the system should be fully rebooted

and no switchover must be done mostly due to memory changes in the data that could cause perturbations in the twincpu. Full reboot means a complete cut of the telephony.

Switchover can be done in the case of:

- Update of static patch
- Update of dynamic patch

In case of rollback in a previous version or previous patch (static or dynamic) the same principal should be applied.

To ease and secure the migration, use the second partition.
Migration rules are the following:

Release	**Compatible with use of second partition**
Release < to R12.0	***NO***: reformatting the disk is mandatory
Release FROM R12.0 until R100.1	YES

6.1.2 Case of PCS cpus

In case of PCS cpus, install the version on PCS, boot on that new version then continue with MAIN & STDB cpus.

6.1.3 Case of network of OXE

Consult the compatibilities in network: cross compatibility document, TC2853 (Migration_process_for_upgrade_to_R12.4_MD4_and_beyond) to see how the migration could be done according to who has external accesses or not …
Forbid broadcast: in case of users having to move from a node to another one use the export/import method with the management tools.
Remember that it is also NOT POSSIBLE to mix nodes managed as direct RTP & nodes managed with X25.

6.1.4 Method to use

- ISO installation when compatible with the feature (from oxe R12.4 MD4: M5.204.80.f) followed by a programmed switchover in "swinst" (copy of Linux & Database is automatic)
- Or SOT (use the latest version)

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6.1.5 Firmware & components update

After a full reboot of both cpus main & standby all equipment like sets & boards will update their software. Suse version is not subjected to tat so if there is such an update to do it has to be done manually (using SOT or manual method in case of Suse from 12.5.xx to 12.5.yy – From 12.3.xx to 12.5.yy a reinstallation of the system must be done)

6.2 Rules on installation of N2 patches

Starting from full delivery N2.514.12

- Patches ".23" + ".23.b": cpu switch over ("bascul") or full reboot. Reset of most of eqts (GDs, ip phones, sip sets)
- Patch ".23.c": cpu switch over is not necessary coming from patch ".23.b". Installation is dynamic. Wifi sets need reset for new firmware installation.

6.3 OMS and OST/eEGW Virtual Machines preparation

Warning

The existing VM from OXE R12.x will not start with OXE R100.0 or R100.1. You must deploy the new VM before the OXE system upgrade into R100.0 or R100.1

SOT version 3.1.009.006 or higher is required to install the new versions. New vDisk size of 7 GB is mandatory

From R100.0, new OS Suse 12 SP5 and a new partitioning are introduced that requires a new installation from the VM.

The binary also has a new signature which prevent the upgrade of the new binary on old VM.

At next installation of OXE patch on the Call Server, the binaries will be automatically upgraded with the new signature.

Warning

New OMS and OST installation with Suse 12 SP5 under Hyper-V 2019 hypervisor is not supported with SOT, it must be installed from BOOT DVD and ISO from OMS/OST

- CROXE-22052 - SUSE 12 SP5: OMS OST and EGW installation on Hyper-V 2019 using SOT 3.1.009 fails

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6.4 Virtualization

vm recommendations about installation: consult **TC2431 Virtualization: OXE configuration related to OXE releases and ESXi infrastructure versions**.

Notice that minimum disk size is now 46Gb

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6.5 Tools to use on virtualization – Hyper-V warning

Installation with SOT is possible on:	VMWare	Hyper-V	Kvm	Nutanix
OXE	Y	Y	Y	Y
OMS	Y	***N****	Y	Y
OST	Y	***N****	Y	Y
eEGW	Y	***N****	Y	Y
8770	Y	***N****	Y	Y
SOT is running on:	Y	**N**	**N**	**N**

N* : IMPORTANT: installing OMS/OST/eEGW in Hyper-V environment is NOT possible.

6.6 S.O.T. for installation

Always use the latest S.O.T. version (today's version is 3.1.009.006)
- includes installation of OMS, OST, GAS … and update of GAS Suse OS (only security patches)
- installation of PCS in secured environment! new from R2.2 (with cpu reformatting)

Reminder:

- Flex server installation does not need any 3rd party tool (vmware or kvm solution)
- PC Installer is no more supported. Installing old versions will be not available as well as boards firmware reload.
- PC Installer is no more present from OXE R12.3 delivery. For those who still want to use it, install & use the latest version 5.5 No support will be provided for that product.

6.7 Installation of PCS (OXE secured or *not* by ssh)

Update PCS systems then update Main & Stdb CPUs
The issue when using "pcscopy" where PCS become unreachable after reset is fixed on this version.

Coming from a release up to L2 the PCS needs to be reformatted (new Linux M1/R12.0 constraint). Upgrade of a PCS without being physically at the PCS location is now done with S.O.T. version R2.2 minimum.

6.8 Using the Remote Download

Remote download is *NOT operational* when coming from ANY version to R12.0 patch M1.403.x
But it is operational FROM M1.403.x to M1.403.x & above

Tip!

Remote download allows to perform programmed & scheduled operations (load, installation).
Switch back to inactive partition is possible through a specific question & guaranties a more secured upgrade. If answered yes, ANY kind of reboot will switch back to the other partition. This behavior can b Cancelled if system seems stable.

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Remote download operations can be programmed, sequenced & executed at a specific time.
Switch to the new version (from active to inactive partition) can be programmed at a specific time: in that case the copies of database & Linux data will be performed automatically from active to inactive partition.
Consult system documentation for operational details.

Notice that this operation even if still working is replaced using S.O.T.

6.9 Using the "easy installation" menu

Feature operational from first delivered from release R12.4.

This feature does not use any other external tool like SOT or PC Installer. Installation that would need a cpu reformatting is not possible.

Installation of full version, static patch, dynamic patch & secured patch is possible. Check System Documentation **8AL91032ENBA** in chapter **Updating Communication Servers remotely** for further details.

6.10 Secured systems

6.10.1 Security activated by default during an installation

At the first standard installation, a list of security levels is displayed before any other configuration is possible. This list proposed in a menu on the first login on Call Server, makes it possible to sensitize the Partner Business on the policy of security which he will have chosen for the system.
The absence of security on the system, which remains always possible, will be *under the whole responsibility of the customer*.

Description
On the first login after the standard installation of a Call Server, the question **Do you want to activate server security high level (Y/N)?** is displayed.
An answer (Y or N) is mandatory to quit the menu.
Answer N
The following menu appears:

```
Select server security level:

R) Configuration to be restored
0) Level_0 = no security feature activated
1) Level_1 = password/aging
2) Level_2 = password/aging + trusted hosts/TCP wrapper
3) Level_3 = password/aging + trusted hosts/TCP wrapper + SSH
```

Choice R is used to restore Linux data of the system (and thus to retain its levels of security)
Choice 0 is used to initialize the system with no default level of security ***NOT RECOMMENDED***

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Choices 1, 2 & 3 are used to set the various levels of security by mixing between them if necessary:

- Choice 1: Modification of passwords of root, swinst, mtcl and adfexc accounts and enabling of the aging password function
- Choice 2: Choice 1 + enabling of the trusted hosts and TCP wrapper
- Choice 3: Choice 2 + enabling of the SSH service

Answer Y
The level of security 3 is automatically set. It is *highly recommended* to use this level.

6.10.2 Installation of a secured system for VoIP encryption ("IP Touch Security" solution)

IPTouch security encryption: for reasons of export control of encryption technology, a patch called patch of security is provided in addition to the generic version.
This patch of security contains only the secured binaries for IP Touch sets and the binaries of "IP Touch Security Modules".

There is no need of this kind of patch for Full Software Native Encryption feature.

Installation process
The installation of security on a system in M4.302.5.H must be carried in two steps:

1. Installation of system with generic version i.e.:
   Installation generic version M4.302, installation of static patch M4.302.5 and then installation of dynamic patch M4.302.5.H
2. Installation of the latest patch of security in addition of the previous installation i.e.:
   Installation of the security patch SM4.302.5.H called also containing the latest secured binaries.

6.11 Reading the hardware key, CPU-id, CCS-ID

On a label on the CPU
For all types of CPU (CS-2, AS, CPU7s2), a label is visible indicating the CPU-Id number.
For virtualized systems, the equivalent of the cpuid is the dongle (reference written on it).

Through a command to read the CPU-Id or CCS-id
For all types of CPU (including virtualized but not valid: no cpu-id in that env.), telephone started or not, execute the command "spadmin", option 5: "Read the system CPUID"

CCS-id used in Cloud Connect belongs to the swk file
"spadmin" choice "Display active file". CCS-id is displayed as CPU0
Ex: "Cpu Id 0 = CCSID:3834-5945-xxxx-xxxx-xxxx"

6.12 Restoring Chorus/Linux data, to main & twincpu

It is possible that the Chorus data of certain old releases cannot be reused automatically: manage "netadmin" by hand in that case.
All modifications in netadmin must be carried on twin cpu (netadmin menu: copy to or from twincpu)

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7 INSTALLING & CHECKING Actis files

The procedure for installing OPS files puts together the following steps: RUNMAO, translation of the database and installation of the OPS files.

7.1 Procedure

Copy the OPS files using "ftp" in the directory /usr4/BACKUP/OPS.
Use the menu swinst/OPS configuration.
The progress of the different translations is not visible on the screen.
At the end of the procedure, the operator is asked whether they wish to start the telephone. Answer NO.
Reboot the Call server.

Tip!

From R100.0, the new feature from Cloud Connect **Push ACTIS file** will copy the new files generated from eBuy directly on the Call Server directory /usr4/BACKUP/OPS in case of add-on from licenses.

7.2 Checks on physical CPUs

Check the coherence of the lock file compared to the database using the command spadmin:

- Select 1 Display current counters. The "Panic flag" should be at zero.
- Select 2 Display active file if System CPU-Id not found is displayed. This means that the CPU_ID of the CPU used does not correspond to the CPU_ID defined in the *software.mao* license file. This situation is normal if you have chosen to prepare the migration on a laboratory CPU.
- Select 3 Check active file coherency. The test should reply File OK.

7.3 Checks on virtualization

Important documents:
TBE043 - OT Suite for MLE - Virtualization Design Guide
TC2431 Virtualization: OXE configuration related to OXE releases and ESXi infrastructure versions

In case the cpu is installed in an esx or KVM environment the check of the cpu-id gives back "Your System CPU-Id: -no-hard-key-"
The "swk" file contains a "K…." value instead that is the name of the file installed on the flex server. That file on the flex server will contain the identification of the dongle. So, it is not possible to do this kind of check.
In spadmin, menu "Display current counters" verify that the first info is:

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```
 (SP) Software Protection counters :
 PANIC Flag                  : 0
-------------------------------------
 Panic Flex                  : 0
 Panic SWK Check             : 0
 Panic RTR Check             : 0
-------------------------------------
```

Meaning that everything is ok:

Flex server is reached & dongle is controlled

"**Panic RTR Check**" relates to the Cloud Connect feature appeared in R12.0)

Checks when a remote dongle is configured:
It is not possible to see if the system is equipped with a remote dongle. Checks must be done on the flex server itself. Flex has a very specific way of handling dongle disconnections & extractions: look at the pre-sales documentation for more details.

7.4 Checks on Cloud Connected system

See above in "spadmin" tool: **Panic RTR Check** should be 0 as well as "**PANIC Flag**"
FTR & RTR status can be checked in tool "CCTool" (new menu from OXE M5)

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8 USER INFORMATION

The purpose of this section is to specify the changes in ergonomics or operation that will be visible or available to users after changing version.

New ergonomics and operations

8.1 Changes that appeared in Release R100.1

New firmware R200 for ALE-x00 Pleiades sets (enterprise business):

- brings a new skin "Antares"
- screensaver's UI evolution: display date and time with a more comfortable font size
- Bluetooth AudioHub feature: like NOE-3G EE Bluetooth AudioHub, use the DeskPhone as a Bluetooth SpeakerPhone for a Mobile device. Once the mobile has been paired to the DeskPhone, audio is transmitted to the DeskPhone via Bluetooth for Voice Call and for Music with similar user experience than Audioffice 8125 product.
- Audio environment: provide special tunings of the audio to predefined environments. (difference is perceived in "noisy" environment currently)
- QWERTZ / QWERTY mini keyboard: Automatically change charmap according to country code received by system. (Y ßàZ). Apply on following languages: German / German (Swiss) / Italian (Swiss) / Czech / Hungarian / Slovak / German (Austria) / Polish). When pressing the "Y" key the phone will display "Z", and when pressing "Z" it will display "Y".

New firmware R250 for Dect sets 8262 will bring new GUI identical to last range of Dects.
New sip set ALE-3
Possibility to have *new ergonomics on ALE-x00 sets* through a change in sip mode
Display of internal DECT phonebook name on incoming call

8.2 Changes that appeared in Release R100.0

New **ALE DeskPhones Range** in NOE mode: **Essential Business Phone** and **Enterprise Business Phone**.

There are some restrictions compared to NOE features available on NOE3G-EE: no support of IPtouch Security encryption with SSM box, nor SIP survivability in NOE mode.

In addition, some feature from NOE3G-EE binary are not yet reported on new ranges: Customization of display and tones, IP-Multicast for VNA notification, Audio hub, …

See corresponding Release Notes for further details:

- TC2907 Release Note for ALE Deskphones ESSENTIAL ALE-20 ALE-20H ALE-30H
- Release Note for ALE Deskphones ENTERPRISE ALE-300 ALE-400 ALE-500

New **SIP SoftPhone client ALE-S** is introduced from the OXE R100.0 MD1. It supported by the new component OXE Device Management from the Call server. Check the deployment guide for technical aspects:

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New **DeskPhone SIP ALE-2** will be supported from version R100.0 Post MD1.

8.3 Reminder of changes appeared in Release R12.4

- Noe sets 3Gs ringing tones.

A change in firmware (version 5.45.05 introduced in patch M4.501.10.F) made the ringing melodies change. The 8th firt melodies were replaced by new ones (increased quality). After that upgrade users noticed a change when the set is ringing.

	Upgrade		Ring melody	
OXE version	Initial version	Target version (this patch)	Initial ring melody	Target ring melody
OXE ≥ 12.3	≤R410	R510 5.45.20	16 original	16 original + 16 new
	R500	R510 5.45.20	16 original + 8 new	16 original + 16 new
	R510	R510 5.45.20	16 new + 16 original	16 new + 16 original
OXE < 12.3	≤R410	R510 5.45.20	16 original	16 original
	R500	R510 5.45.20	16 original	16 original
	R510	R510 5.45.20	16 new melodies with original names.	16 new melodies with original names.

- Desk Sharing

3GEE NOE sets will not reboot after logon/logoff (see compatibilities in corresponding TC)

8.4 Reminder of changes appeared in Release R12.3.1

WMI LED synchronization (see also chap.15.2.1 – call handling features):
The message icon is now in synchronization with call log. For a NOE device if the call log access rights are false then the internal/external unanswered calls list will be available. The message icon is now in synchronization with internal/external unanswered calls.
New Codec OPUS (superwideband) if validated produces a much clearer voice communication (restrictions: only P2P local comm.) Need of a new wired handset.

8.5 Reminder of changes appeared in Release R12.3

OXE Integrated Call Log also for CCD agents
4059EE attendant: possibility to disable OXE phonebook ldap overflow when the 4059EE performs a call by name query (management to do)
Users: greeting guide when calling a hunt group. Local feature (management to do)
Users: "no multi-line call in PCX" (a huntgroup should take care of "busy camp-on" setting of user in multiline configuration: management to do)

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8.6 Reminder of changes appeared in Release R12.2

Applications support on 8088 Android. Today only ALE specific applications are compatible due to specific developments related to the screen size.
Possibility to use an 8058S phone as a 8068S: virtual keys removing. Phone will still not benefit of the Blue Tooth due to hardware design.
Dect sets can be pro-ACD agents now.
Disable loudspeaker on IP phones.
DECT set should be seen available during "busy" states (MD1 patch)
DECT: long press on green call button (redial feature): behavior can be changed

8.7 Reminder of changes appeared in Release R12.1

New sets available: 8008 & 8088 Android/noe (no app support)
OXE native call log for calls on busy sets
Support of alarm button on ASCOM MIPT dect sets

8.8 Reminder of changes appeared in Release R12.0

New 4059EE (directory research)
Increase ABCA queue length on 4059 EE
New range of sets (8058S/ 8078S)
Call duration enhancement
Deleting alarms on DECT
Multi-device
New Rainbow application
Security enhancement of A4645

8.9 Reminder of changes appeared in Release R11.2.x

Shortcut to missed calls on DECT
New 4059EE look & feel
Acces to the outgoing calls list via the green touch
Phone user password management
Extended Rapid Call Shift (no more tandem needed, network ABC)

8.10 Reminder of changes appeared in Release R11.1

Call log on all IP/TDM & Dect sets
Rapid call shift & NFC feature on Android cell phones

8.11 Reminder of changes appeared in Release R11.0.1

Attendant on 8082 sets (same ergonomics as 4068 sets)
Introduce new dect set 8242 (Note the 8242 MD1 is expected end December 2015)
Introduce new TDM & IP Phones: NOE3G (Premium sets)

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8.12 Reminder of changes appeared in Release R11.0

- Don't display OXE call log counters when ICS/OT call log is deployed for the IP Touch 8 series EE
- Increase the number of personal directory entries on Dect Hansets
- A4645 security enhancements:
  - Access to the voice mail can be blocked after a number of specified failed attempts
  - Callback sender via public network
  - Notification via public network
  - Users connecting from outside the system cannot access their voice mail with the default password
  - users connecting from outside the system cannot access the voice mail system
- Desk Sharing Users will be prompted to change their Secret code at first login if they have the Default one

8.13 Reminder of changes appeared in Release 10.1.1

A new ergonomics appears for the IP Touch 8 series EE.
- Visual SIP Voice Mail Access from IP Touch Mail key

8.14 Reminder of changes appeared in Release 10.1

- Transparent reboot on IP Touch 8 series sets Extended Edition
- Call restriction management for 4068 attendant
- Desk Sharing for IP Touch 8 series sets Extended Edition

8.15 Reminder of changes appeared in Release 10.0

A new ergonomics appears for the 4059 application.
- Localization: Japanese on 4059 (Windows 7)
- Localization: Hebrew for 4029/4039 TDM sets from J1.410.38

8.16 Reminder of changes appeared in Release 9.1

A new ergonomics appears for some features of 40x8 sets and MIPT.
- Localization: Hebrew (only for 4028/4038/4068 sets).
- Localization: Arabic (only for 4028/4038/4068 sets), from patch I1.605.14.e.
- PERSO page displaying after a time-out.
- MIPT alarm display.
- Translation improvement (Korean language) in IP Touch, from I1.605.24
- Search in internal phone book with several results for internal numbers and abbreviated numbers, from I1.605.31

8.17 Reminder of changes appeared in Release 9.0

- External called number display after call answer (managed by a system boolean).
- Localization: Valenciano language.
- Local time display on sets located in a time zone different of CS as well as in mini-messages, the list of non-answered calls, Wake-up/Appointment requests.

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- It concerns voice messages time/date stamp only for OT8440 (not 4635 and 4645).

8.18 Reminder of changes appeared in Release 8.0 and 8.0.1

- Dial by name with IME (Input Method Editor) on 40x8 and 40x9 sets.
- Localization of softkeys on 40x8 and 40x9 sets.
- Display of Perso page on hang-up on IP Touch sets in Hotel configuration.

8.19 Reminder of changes appeared in Release 7.1

- Japanese on IP Touch 40x8 and 40x9 sets.
- Display of the names in UTF-8 format on Alcatel 4059 application.
- Applicative softkey integration on IP Touch 40x8 sets.

8.20 Reminder of changes appeared in Release 7.0

- VoWLAN Release 2.0: New ergonomics of VoWLAN sets using the NOE set protocol.
- Local name UTF-8 (Unicode Transformation Format 8) for users (25 characters).
- Support of traditional Chinese (Hong Kong, Taiwan), Korean, Japanese languages.
- Caller name extracted from personal directory.
- Back to the top of Perso page by default.

8.21 Reminder of changes appeared in Release 6.1.1

From Release 6.1.1, new icons of supervisions are available regarding the IP Touch sets.

8.22 Reminder of changes appeared with R4.2

- Check management of the ringing melody on digital sets.
  If you migrate from a release below 4.2, you should change the ringing melodies of internal/external calls; see the technical communication TC0297 Change of external/internal ringing melodies in Release 4.2.

8.23 Reminder of changes appeared with R4.1

- **Twin set (Tandem)**
  - Management of "Partial Busy of the set".
  - Enhancement of supervision function.

8.24 Reminder of changes appeared with R3.0

- **Digital** sets
  - Storage of no replied local/internal calls (consulting using the message key).
  - Storage of no replied ISDN calls on all sets with display: 4011, 4012, 4023, 4034, 4010, 4020, 4035.
- **Attendants**
  - Call between attendants.
  - New call statistic distribution.
- **4040** set
  - This set is no more supported from Release 3.

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- **UA** 3G sets
  - Following a translation, the existing 3G sets remain in 2G mode emulation. Their change (where appropriate) to 3G mode is done by management (Users). The UA 3G sets created from Release 3.2 are in 3G mode by default.

9 SYSTEM MANAGEMENT

9.1 General

Declare the automatic start-up of the telephone in swinst
Manage date/time in swinst (use "ntp" feature if possible)

In case of virtualization manage the ESX in order to be sure that all VM will restart automatically if the server reboots (vSphere client management)
Make sure that a periodic backup of the database is programmed ("swinst")

X25 networks:
IP routing is handled by the "gated" or "routed" processes and can only operate if the same process is validated for all the nodes. Pay special attention to the nodes in previous versions using the "routed" process. These two processes are not compliant between them. In a network in Release 3.2, manage the same routing protocol (RIP2 or RSL) on all the machines

9.2 Special case of IO2N boards (CPU7s2/ CPU8)

CAUTION

- IO2 boards are phase-out and cannot work from R12.0
- CPU6 & CPU7s1 are no more supported
- On a duplicated installation, if an IO2N is declared in the database, it is essential that it be present when starting up, otherwise the CPU will not restart. In fact, telephone signaling is now processed by the IO2N when present (otherwise it is processed by the IO1 module of the CPU as in previous versions). It is however possible to start without IO2N using the command "**RUNTEL -DNOIO2"** as mtcl user. This should only be a temporary mode.
- If this first start-up is carried out on a model, put in place at least one UA or Z coupler in place of a UA or Z coupler of the site as this will allow the correct operation of the IO1 or the IO2N to be checked.

9.3 Integrated WebBasedManagement

WBM was tested on:

- Windows 10 Enterprise 32 bits, Windows 10 Professional 64-bit, Windows 7 Professional 32-bit and 64-bit versions
- Windows 8.1 Pro 32-bit and 64-bit versions
- Windows XP SP3 and Windows Vista Business Edition
- Windows 2012 R2 (64-bit)
- Compatibility with Win2016 Server (64-bit)

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- compatible with VMware ESXi 5.5

Browsers supported are the following (make sure to always have the latest version):

- Chrome
- Firefox
- Edge (on Windows 8/8.1/10 64bits)

9.4 VMware tools update

Consult TC2432: Mandatory installation of VMware tools.
Make sure to update your VMware tools in OXE when changing VMware version.

Important

This operation must be done on both OXE vm AND ALSO in case of partition switch (VMware tools is installed only in active partition)

10 COMPULSORY MINIMUM ADDITIONAL DATABASE MANAGEMENT

10.1 Help tools

From releases 12.x use the following tools

- "ipcheck" (from R12.4 MD4): use this tool to check correct or incorrect management related mostly to SIP management & SIP licenses
- "checkCloudConfig.sh" to check Cloud Connect configuration & connection
- "securitystatustool" to look at security management and bring modifications to increase the security level of that OXE (like ssh, encryption …) Output format is xml.

10.2 Misc older reminders

Management of the number of transits.
There is a parameter used to define a number of transits for a same call across the network. This is a protection used to avoid call looping.
Procedure:

- Access path : **System**
- Attribute : **Number of transit PABX**
- Manage the parameter with a value identical to the number of network nodes.
  CAUTION: If this parameter is zero, call transit will not work.

Optimizing the routing in network

To optimize a network, you must create a **PABX address in DPNSS** (Local Features) prefix. This prefix must correspond to a directory number that has not been created in the installation.
For each machine, create a **PABX address in DPNSS** prefix and as many network prefixes corresponding to the DPNSS addresses of the other machines as there are remote machines.
Example: System with four nodes.

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Each node has its PABX address prefix and each will have three network prefixes corresponding to the different PABX addresses of the three other machines.

10.3 Reminder for ABC networked sites migrating from Release < 7.x

As of Release 7.0, a new feature is used to display the names with UTF-8 format (long names and for non Latin languages: Chinese, Korean, Japanese).
In ABC-F2 network functioning, from RELEASE 11.0 the name in UTF-8 format is used in the network according to the setting of the **Enable UTF8 in ABCF network** system parameter (default value **True**).

This information is accepted only from the following versions:
- R6.2 : F3.301.16.e (patch for compatibility UTF-8)
- R6.1.1 : F2.502.12.d (patch for compatibility UTF-8)
- R6.0.1 : F1.603.1.aa (patch for compatibility UTF-8)

If RELEASE 12.0 is functioning in ABC-F2 network with nodes the versions of which are lower than those mentioned previously (case of temporary phase of migration with R5.0 Ux, R5.x, R6.x), you must set the **Enable UTF8 in ABCF network** system parameter to **False** on nodes where RELEASE is => 11.0 otherwise the calls through the network don't work.

Warning

In a network, if a node is declared XL ("Large Capacity"), each node of the network must be in Release 8.x. minimum

The system parameter **Direct RTP** must be enabled in all nodes of the sub-network as soon as one node is migrated in RELEASE 11.0

10.4 Important management if IO2N is present

To solve traffic issues on CPU7s2 (issues related to CPUs crash or peripheral racks rebooting, issue that could also be seen in CPU8) the signaling to IO2 must be changed. Notice that this management can be done for any configuration even with very low traffic with no impact on the system.

On ACT0:

2 ways of changing the signaling:

signaling channel for ***ACT0*** only must be as follows:
- Signaling mode = IO2 instead of Nx64
- Signaling Channel N64 Size = 8 instead of 4

Access path
Shelf 0/Signaling mode: IO2
Shelf 0/Signaling Channel N64 Size: 8

Or

signaling channel for ***ACT0*** only must be as follows:
- Signaling mode = Ethernet instead of Nx64

Access path: Shelf 0/Signaling mode: Ethernet

This management must be followed by a reboot of the installation.

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For the remote shelves:

apply the same management: Signaling mode = IO2 with only 4 channels. Don't exceed the 60 channels of the board. Include the 8 channels used for duplication in crystal 0.

Note

The IO2N board must be at the minimal edition 07. Refer to the technical communication TC0567 Reboot of the CPU board after an inopportune shutdown of IO2N board.

10.5 Important management with sets (noe3Gs, 8018)

By default, an OXE with a default database is configured to use G723
But new generation of IP Phones like 8018, 8058s… do not support the G723.
In consequence, the communication gets no audio.
Changing the system compression defaults immediately fixed the problem.

10.6 Synchronization

Warning

The ACT 99 does not allow synchronization to be passed up to the CPU.

In the event of common hardware, one cannot use a T0 board behind a MEX to synchronize the shelf.

Warning

For migration of a Crystal CPU to an Appliance Server, it is compulsory to change synchronization management to IP domain type. The synchro priority value must be between 200 and 254; see technical communication TC0779 Synchronization of the system after migration to OmniPCX Enterprise with Appliance Server.

10.7 Some system parameters to check

Use the command "compvisu" to display some of those parameters.

10.7.1 Direct RTP

Note

In this document, "Direct RTP" corresponds to "Direct RTP in network".

In all nodes of the sub-network the **Direct RTP** parameter must be set to **Yes**.
From OmniPCX Enterprise R11.0, this parameter is removed (validated by default).

10.7.2 Frame VoIP (Enhanced quality voice)

The **Frame VoIP** parameter (**Enhanced quality voice** in previous versions) must be identical on each node of a network.

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It is better to use the Framing 20 ms for G711 or G729.
G723 can only do 30 ms.

10.7.3 Direct RTP for H323 terminals

This parameter must be set to **No** if only one H323 terminal of the installation does not support the direct RTP

10.7.4 Inter-node protocol H323

The "H323 Inter-node protocol" parameter must be set to **Yes** in all nodes of the sub-network. In an OmniPCX Enterprise R11.0 system, this parameter is removed (validated by default).

10.7.5 tftp (oxe)

OXE tftp can be tuned in some circumstances (eg: big files to transfer)
mgr -> IP -> IP Parameters -> Review/Modify: IP Parameters -> TFTP Max Block Size
mgr -> IP -> IP Parameters -> Review/Modify: IP Parameters -> TFTP Retransmission Timer

11 STARTING UP THE CPU IN ITS ENVIRONMENT ON SITE

CAUTION IN DUPLICATION STATE:
Do not proceed by switchover for 2 different releases: *a complete stop of the telephony is required*. It is not recommended also to proceed by "bascul" when installing a static patch though there is no clear rule established. During that time (patch n & patch n+1 on main & stand-by), the command "twin" may return the status "KO" for the "memloader" check.

Complete system start-up: this will allow to download automatically the new firmware of the couplers and to avoid having memory issues (as mentioned above).

11.1 Download of couplers and sets

The first start-up of the CPU in its site environment requires particular attention since the couplers will be downloaded with a new firmware.
To download the INT1B couplers, they must be removed from the secondary ACTs and put in place of the INT1A couplers of the main ACT.
Use the "**`downstat`**" command to monitor the evolution of the coupler downloading. The CPU ensures 25 downloads simultaneously. The state of a coupler during downloading is RUNNING 1.
Use the "**`downstat d`**" command to obtain boards that have to be downloaded
Use the "**`downstat v cr cp`**" command to display 'binaries' version for a coupler
It is possible to program an automatic reset of the couplers with the option 'r'.
Reset manually the UA32 or eUA32 boards of shelf 0 if they do not start (do not concern OmniPCX Enterprise with common hardware or controlled by an Appliance Server).
Use the "**`downstat i`**" command to monitor the evolution of IP Phones (e-Reflexes, IP Touch series 8, NOE3G/EE, Enterprise and Essential DeskPhone) downloading.
Use the "**`downstat t`**" command to monitor the evolution of IP Touch TDM (series 9, Essential DeskPhone) downloading.

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Note

8082 sets in NOE mode & also new noe3G/Premium sets can do upgrades in background mode: once the download is finished the set will reboot. If a communication is already established, the process will wait for the communication to end.

IPV6 feature: sets in pure ipv6 network will get their binaries from the OST64 virtual machine: the OST64 must be rebooted in order to perform the correct download mechanism.

11.2 8088 Android upgrade

Upgrade mechanism through the Cloud is done by management.
Notice that Android 8088 sets cannot be downgraded even if re-installed on a lower OXE version.

11.3 SIP sets upgrade

Operation must be carried by 8770 Device Management (DM). Check on the My Portal for latest versions of SIP sets.

From R100.0, migration to from 8770 DM into OXE DM is detailed in section Migration from OmniVista 8770 DM to OXE DM.

11.4 Systems staying with CPU7s2

Memory bank for CPU7s2 (ONLY for releases *from* R12.0) is mandatory: orderable item is 3BA27056AC (SDRAM 512MB for CPU7-2)

11.5 Moving from CPU7s1/2 to a CPU8

Warning about the embedded ethernet interface that does not exist anymore.

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12 CHECKING CORRECT OPERATION

- Check synchronization.
  Ensure that the real synchronization plan corresponds to the managed synchronization plan. Use the command "**infocs**" or "**clockstat**".
- Check the distribution of calls to attendants.
- Check the ARS & VPN: use "**lookars**" & "**lookvpn**" embedded OXE tools.
- Check that all sets & couplers are correctly in service & downloaded & sets are in service: use the different commands "**downstat**", "**config**", "**listerm**" with the correct arguments (help available)
  - For IP sets use "**downstat i**" & "**tftp_check -c**" tools
  - For TDM sets use "**downstat t**"
- Check the coherence of the files (Suspicion of errors during file transfer: ftp must be set to "binary" mode).

login	**Swinst**
option 8	**Software Identity Display**
option 6	**Application Software Validity Checking**

```
Press 0 for the active version, 1 for the unactive one or q to quit
Please wait .....
Checking mode : 1=size & sum  2=size only  (default is 1) 1
Checking size and sum of all files , please wait ...
file modified (authorized) : /DHS3data/manager/mtcl.adm
The application software is correct
Press return
```

- Check duplication status: use command "**twin**": each line should be in "OK" state. Use also "**twincompat**":

```
(699)xb006099> twincompat
   Same versions of software on local and twin CPU.
   Version is :  DELIVERY m4.302.5.h
```

- Quick check of machine coherency

```
(699)xb006099> syscompat
   Ok, same version of Linux (129.4)
   Ok, all the packages are installed
   Ok, same version of Swinst (3.39.0)
```

- Check of version: use "**siteid**" to know which version/patch is loaded & also to check if it is an encrypted patch (SSM boxes)
- Check encryption (Native or SSM boxes): use "**cryptview**" tool

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```
(699)xb006099> cryptview

Wed Apr 24 16:35:41 CEST 2019

System is DTLS secured.

DTLS server address    : 135.117.104.105 (Internal EGW)

+-----------------+-----------------------------------------+-----+-----+--------+
|    Coupler      |        Secured address                  | Cr  | Cpl | Status |
+-----------------+-----------------------------------------+-----+-----+--------+
|             GD3 |                          135.117.104.45 |   2 |   0 |     UP |
+-----------------+-----------------------------------------+-----+-----+--------+
|             GA3 |                          135.117.104.48 |   2 |   2 |     UP |
+-----------------+-----------------------------------------+-----+-----+--------+
|             GD3 |                          135.117.86.245 |   5 |   0 |     UP |
+-----------------+-----------------------------------------+-----+-----+--------+
Secured link(s):
    - 2001 (n99n1ip): Access 1, up.
    - 2003 (n99n19ip): Access 1, up.


TLS signaling: false.
SRTP offer/answer Mode: false.

No secured SIP gateway.

No secured SIP device or extension.
(699)xb006099>
```

- Check IP ressources restart GD/INTIP/OMS config: use "**`ipcheck`**" tool
- Check start-up of the INTIP used in particular for the remote ACT. Faced with a board initialization problem, check that the value MTU in the IP Parameters is correctly managed at 256.
- The Meet me type relating to the DSP in Add On must be changed via the Modular conference menu. Access path: **mgr/System/Shelves/Gpa Dsp program/Modular conference**
- Check IP-xBS state with "**`dectview xbs`**" & synchronization tree with "**`xbssynchro`**"

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13 CHECKS IN A VIRTUALIZED VMWARE INFRASTRUCTURE

- Consult documents "OpenTouch Suite for Medium and Large Enterprises - Virtualized offers" & "TC2431 Virtualization: OXE configuration related to OXE releases and ESXi infrastructure versions" for more about vm rules configurations in esxi vmware environment.
- Make sure the correct management is done in order to autostart all the vm after a server reboot or power fail
- Flexserver: be sure that connection is ok between OXE & that server(s). Log files in the flex server (check in /opt/Alcatel-Lucent/logs/flexlm/ files: system documentation "Call Server in Virtual Machine" section). Look also for OXE incidents from 640 to 644 (FLEX issues).
- Remote dongle: check the connection to the Raspberry (make a ping from the Flex to the R PI2)
- Remote dongle compatibility: Raspberry Pi 2 Model B or Raspberry Pi 3 Model B.

14 COMPATIBILITIES/ PRODUCT LIMITS/ FEATURE LIST

14.1 Documents

Check documents listed in chapter 2 concerning compatibilities limits before migration.

14.2 Interoperability tests status

Check also document **ENT_MLE_034627 MLE-CROSS COMPATIBILITY DOCUMENT**

14.2.1 OXE compatibilities in ABC network

ABC Interworking tested with **R100.0/R12.4/R12.3/R12.2** with Hybrid Links.

The new feature Direct Links requires an homogeneous network in **R100.0** and beyond**.**

The table below shows the compatibility in ABC network: extract from **CROSS COMPATIBILITY** document.
No patch number is named: always take the latest one.
Grey cells do not mean that is it not compatible.
Table must be read like this: column version compatible with the line version.

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	R12.3.x Phase-out	R12.4 Active	R12.4MD4 Active	R100.0 Active
OXE networking				
ABC-link (in a homogenous network): hybrid link				
OXE R12.2				
OXE R12.3.x	X			
OXE R12.4	X	X	X	X
OXE R100.0	X	X	X	X
ABC Direct IP Link (in a homogenous network)				
OXE R100.0				X

14.2.2 Open Touch solution

OpenTouch Release R2.6/2.6.1
OTC PC version: 2.6.100.016
OpenTouch Fax Center Release R9.0
OpenTouch SBC R7.4
Visual Automated Attendant R4.2
Visual Notification Assistant R2.0

14.2.3 O2G

OmniPCX Open Gateway Release 2.3

14.2.4 OXO interop.

OXO interoperability was tested between OXE R100.1 and OXO version ONE030

14.2.5 4059 EE

Attendant 4059 Extended Edition R2.4.2

14.2.6 IP sets compatibility

Refer to **CROSS COMPATIBILITY** document for ip sets compatibility. Inside that document, check for more details in chapter 7: "Endpoint compatibility".

14.2.7 8770

OXE R100.1 was tested with 8770 5.1.13.00b

14.2.8 Audiocode

Test with the **AudioCode MP114** version 6.60A.360.004

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14.3 Appliance Servers & GAS: compatibilities

The following table shows which servers can be installed in OXE native mode & GAS mode.
Notice that those servers are submitted to phase out scheme: in this case only the concerned servers will be able to be reinstalled in GAS mode. Otherwise a new server will have to be ordered.
For the 4 servers listed below it is possible to make them work with cpuid, dongle/flex or CCS-ID (Cloud operation)
Future servers will ONLY work in GAS mode in dongle/flex or CCS-ID.

Refer to Cross Compatibility document for more details on Appliance Servers characteristics and compatibilities with current OXE releases. Compatibility lists also the native & GAS mode.

14.4 UPS on A.S. & GAS

In the case of a local 110 Volt power supply, the following MGE (now Eaton) UPSs are compatible with the Appliance Server concerning power cuts and battery management:

- Pulsar Evolution (Serial)
- Pulsar ESV+
- Pulsar EX
- Pulsar ES+
- Pulsar EXtreme C
- Pulsar / Comet EXtreme
- Comet / Galaxy (Serial)

The UPSs referenced in the catalog are not compatible for countries using 110/127V.

GAS does support feature of shutdown through USB connection from those UPS models. This is a feature brought in that release!

14.5 Genesys Compact Edition

The "Genesys Compact Edition (GCE)" product is phase out. Previous mentioned patch is not tested anymore & may not operate correctly.
Check with your local presales for a replacement solution.

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15 NEW FEATURES AND NEW HARDWARE IN RELEASE R100.1 (all MDs)

This chapter of the document is now moved to a dedicated technical document available on MyPortal (https://myportal.al-enterprise.com/) with reference **TC3005 New features in OXE Purple Release R100.1**.

You can also refer to the System documentation in **OXE Purple R100.1 Documentation package**.

16 COUNTRIES IN WHICH RELEASE 100.1 IS TECHNICALLY RELEASED

OmniPCX Enterprise Release 100.0 concerns the countries mentioned in the table below.

The availability of IP Touch Security Solution for these countries is mentioned in the Logistic and Customs product information document, which is available on Business Portal, in the right column "Related documents". In this document, specify the market and the product line, then click on "Update item list" button: the columns specific to IP Touch Security solution have a red header (columns from "Main origin" to "CCATS").

Software Installation OmniPCX Enterprise R100.1					
Market			System Software to be used		
	Market Code	Market Label	Installation parameter	Bdd	Parameter code
1		Afganistan			AF
2		ÅLAND ISLANDS			AX
3	BU	Albania	pl	PL	AL
4	GM	Algeria	dz	DZ	DZ
5		American Samoa			AS
6		Andora			AD
7	GY	Angola	pt	PT	AO
8		Anguilla			AI
9		Antartica			AQ
10		Antigua and Barbuda			AG
11	KF	Argentina	ar	AR	AR
12		Armenia	ro	RO	AM
13		Aruba			AW
14	KN	Australia	as	AS	AU
15	CF	Austria	au	AU	AT
16	DE	Azerbaijan	ru	SU	AZ
17		Bahamas			BS
18	FL	Bahrain	bh	BH	BH

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19	EH	Bangladesh	bd	BD	BD
20		Barbados			BB
21	AS	Belgium	be	BE	BE
22	AT	BELGACOM BELGIUM	be	BE	BE
23		Belize			BZ
24	GB	Benin	ci	X1	BJ
25		Bermuda			BM
26		Bhutan			BT
27	DG	Bielorussia	ru	SU	SU
28	JZ	Bolivia	ln	LN	BO
29	DX	Bosnia and Herzegovia	yu	YU	BA
30		Bostwana			BW
31		Bouvet Island			BV
32	KG	Brazil	br	BR	BR
33		British Indian Ocean Territory			IO
34		Brunei Darussalam			BN
35	BV	Bulgaria	bg	BG	BG
36	GA	Burkina Faso	ci	X1	BF
37	GZ	Burundi	ke	X1	BI
38	EN	Cambodia	kh	KH	KH
39	GW	Cameroon	x1	X2	CM
40	JD	Canada	us	US	CA
41		Cape Verde			CV
42		Cayman Islands			KY
43	HA	Central African Republic	x1	X1	CF
44	GR	Chad	x1	X1	TD
45	KH	Chile	cl	CL	CL
46	DZ	China (PRC)	cn	CN	CN
47		Christmas Island			CX
48		Cocos Island			CC
49	KJ	Colombia	co	CO	CO
50	GT	Comoros	fr	FR	KM
51	GU	Comores Rep Isl.	fr	FR	
52	HB	Congo	x1	X1	CG
53	HB	CONGO, THE Dem REP OF THE	x1	X1	CD
54		Cook Islands			CK
55	JJ	Costa Rica	cr	CR	CR
56	GX	Cote D'ivoire	ci	CI	CI
57	DH	Croatia	hr	HR	HR
58	CW	Cyprus	cy	CY	CY
59	BZ	Czech Republic	cz	CZ	CZ
60	AR	Deutsch Telecom	ge	GE	DE
61	AV	Denmark	de	DE	DK
62	GV	Djibouti	x1	X1	DJ
63		Dominica			DM

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64	JV	Dominican Republic	ln	LN	DO
65		East Timor or TIMOR-LESTE			TP
66	KK	Ecuador	ec	EC	EC
67	FD	Egypt	eg	EG	EG
68	JL	El Salvador	se	SE	SV
69		Equatorial Guinea			GQ
70		Eritrea			ER
71	DJ	Estonia	ee	EE	EE
72	HC	Ethiopia	et	ET	ET
73		Falkland Islands			FK
74		Faroe Islands			FO
75		Fiji			FJ
76	CJ	Finland	fi	FI	FI
77	AA	France	fr	FR	FR
78	AK	France	fr	FR	FR
79	ze	France Telecom	fr	FR	FR
80		French Guiana	fr		GF
81	LA	French Polynesia	pf	PF	PF
82		French Southern Territories	fr	FR	TF
83	HD	Gabon	x1	X2	GA
84	GC	Gambia	sn	X1	GM
85		Georgia	ru	SU	GE
86	AP	Germany	ge	GE	DE
87	GD	Ghana	ci	X1	GH
88		Gibraltar			GI
89	BB	Greece	gr	GR	GR
90		Greenland			GL
91		Grenada			GD
92	KV	Guadeloupe	fr	FR	GP
93		Guam			GU
94	JM	Guatemala	ln	LN	GT
95	GE	Guinea	x1	X1	GN
96		Guinea Bissau			GW
97	KW	Guyana	fr	FR	GY
98	JN	Haiti	ln	LN	HT
99		Heard Islands and Mcdonald			HM
100	JP	Honduras	ln	LN	HN
101	ED	Hong Kong	hk	HK	HK
102	BW	Hungary	hu	HU	HU
103	CX	Iceland	de	DE	IS
104	EY	India	in	IN	IN
105	EM	Indonesia	ii	ID	ID
106		Iraq			IQ
107	BD	Ireland	ie	IE	IE
108	FT	Israel	il	IL	IL

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109	BF	Italy	it	IT	IT
110	BG	Italia Telecom	it	IT	IT
111	JR	Jamaica	ln	LN	JM
112	EE	Japan	jp	JP	JP
113	FU	Jordan	x1	X1	JO
114	DL	Kazakhstan	ru	SU	KZ
115	HF	Kenya	ke	KE	KE
116		Kiribati			KI
117	FH	Kuwait	kw	KW	KW
118		Kyrgystan	ru	SU	KG
119	EP	Laos	la	LA	LA
120	XE	Latin America	ln	LN	
121	DN	Latvia	lv	LV	LV
122	FJ	Lebanon	lb	LB	LB
123		Lesotho			LS
124		Liberia			LR
125	FE	Libyan Arab Jamahiriya	x1	X1	LY
126		Liechtenstein			LI
127	DP	Lithuania	lt	LT	LT
128	BK	Luxembourg	lx	LX	LU
129		Macau			MO
130	HG	Madagascar	fr	FR	MG
131	DW	MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	pl	PL	MK
132	HH	Malawi	za	X1	MW
133	ET	Malaysia	my	MY	MY
134	FA	Maldives	mv	MV	MV
135	GH	Mali	sn	X1	ML
136	CZ	Malta	mt	MT	MT
137		Marshall Islands			MH
138	KX	Martinique	fr	FR	MQ
139	GJ	Mauritania	sn	X1	MR
140	HK	Mauritius	fr	FR	MU
141	KY	Mayotte	fr	FR	YT
142	JQ	Mexico	mx	MX	MX
143		Micronesia			FM
144	DQ	Moldavia	pl	PL	MD
145		Monaco	fr	FR	MC
146		Mongolia			MN
147		Montserrat			MS
148	GP	Morocco	ma	MA	MA
149	HL	Mozambique	pt	PT	MZ
150	EJ	Myanmar	mm	MM	MM
151		Nambia			NA
152		Nauru			NR

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153	EV	Nepal	np	NP	NP
154	BL	Netherlands	nl	NL	NL
155	BN	Netherlands KPN	nl	NL	NL
156		Netherland Antilles			AN
157	KZ	New Caledonia	fr	FR	NC
158	KS	New Zealand	nz	NZ	NZ
159	JS	Nicaragua	ln	LN	NI
160	GK	Niger	x1	NG	NE
161	HW	Nigeria	ng	NG	NG
162		Niue			NU
163		Norfolk Island			NF
164		Northern Mariana			MP
165	CM	Norway	no	NO	NO
166	FV	Oman	om	OM	OM
167	FB	Pakistan	pk	PK	PK
168		Palau			PW
169		PALESTINIAN TER, OCC			PS
170	JT	Panama	ln	LN	PA
171		Papua New Guinea			PG
172	KA	Paraguay	ar	AR	PY
173	KL	Peru	pe	PE	PE
174	EG	Philippines	ph	PH	PH
175		Pitcairn			PN
176	BX	Poland	pl	PL	PL
177	BQ	Portugal	pt	PT	PT
178		Puerto Rico			PR
179	FW	Qatar	qa	QA	QA
180	LB	Reunion	fr	FR	RE
181	BY	Romania	ro	RO	RO
182	CC	Russia	ru	SU	RU
183	HP	Rwanda	ke	X1	RW
184		Saint Helena			SH
185		Saint Kitts and Nevis			KN
186		Saint Lucia			LC
187	LH	Saint Martin (Guadeloupe)	fr	FR	
188	LC	Saint Pierre and Miquelon	fr	FR	PM
189		Saint Vincent and the Grenadines			VC
190		Samoa			WS
191		San Marino			SM
192		Sao Tome and Principe			ST
193	FK	Saudi Arabia	sa	SA	SA
194	HJ	Senegal	sn	SN	SN
195	CB	SERBIA AND MONTENEGRO	yu	YU	CS
196	HY	Seychelles	fr	FR	SC
197		Sierra Leone			SL

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198	EQ	Singapore	sg	SG	SG
199	DS	Slovakia	sl	SL	SK
200	DY	Slovenia	si	SI	SI
201		Solomon Islands			SB
202		Somalia			SO
203	HZ	South Africa	za	ZA	ZA
204	EB	South Korea	kr	KR	KR
205		South Georgia			GS
206	AX	Spain	es	SP	ES
207	EW	Sri Lanka	lk	LK	LK
208		Suriname			SR
209		Svalbard and Jan Mayen			SJ
210		Swaziland			SZ
211	CQ	Sweden	sv	SV	SE
212	CS	Switzerland	ch	CH	CH
213	EC	Taiwan	tw	TW	TW
214		Tajikistan	ru	SU	TJ
215	HR	Tanzania	ke	X1	TZ
216	ER	Thailand	th	TH	TH
217		Timore			TL
218	GS	Togo	ci	CI	TG
219		Tokelau			TK
220		Tonga			TO
221		Trinidad and Tobago			TT
222	GQ	Tunisia	tn	TN	TN
223	DC	Turkey	tr	TR	TR
224		Turkmennistan	ru	SU	TM
225		Turks and Caicos Islands			TC
226		TUVALU			TV
227	HN	Uganda	ke	X1	UG
228	DV	Ukraine	ru	SU	UA
229	FM	United Arab Emirates	ae	AE	AE
230	BS	United Kingdom	uk	UK	GB
231	JD	United States of America	us	US	US
232		United States Minor			UM
233	KC	Uruguay	uy	UY	UY
234	DR	Uzbekistan	ru	SU	UZ
235		Vanuatu			VU
236		Vatican			VA
237	KM	Venezuela	ve	VE	VE
238	ES	Viet Nam	vn	VN	VN
239		VIRGIN ISLANDS, BRITISH			VG
240		VIRGIN ISLANDS, U.S.			VI
241	LE	Wallis and Futuna Islands	fr	FR	WF
242		Western Sahara			EH

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243	FY	Yemen	x1	X1	YE
244		Zaire			CD
245		Zambia	za	ZA	ZM
246	HT	Zimbabwe	zb	ZB	ZW
247					
248		export	x1		
249		export franco	x2		
250			x3		
251			x4		
252			x5		
253	CG	Telecom Austria	au	AU	AT

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17 REMARKS, TIPS …

Some old information was removed. Consult document from release 11.2 if needed.

17.1 ABC-F IP TRUNK GROUP

When creating the ABC-F IP trunk group, the **Homogeneous network for direct RTP** parameter must be set to **Yes** if each node of sub-network located behind the ABC-F IP trunk group is in R9.0 or higher. If one of the nodes of remote sub-network is in version less than R9.0, the parameter must be set to **No**.
If the sub-network, located behind the ABC-F IP trunk group, has a QSIG trunk group, the **Homogeneous network for direct RTP** parameter must be set to **No**.
It is not possible to have both on a same node a ABC-F (IP or not) trunk group and a DPNSS trunk group.
The ongoing communications on an ABC-F IP trunk group are not maintained in case of Call Server switch-over. This limitation is removed as of Release 9.1.
There is no encryption of the voice and signaling flows between two sub-networks linked by an ABC-F IP trunk group.
This trunk group doesn't support the transparent fax/modem and cannot be distributed.
Only one ABC-F IP trunk group between two OmniPCX Enterprises. No mixity ABC-F TDM / ABC-F IP between two sub-networks.

17.2 APPLICATIONS

17.2.1 New license management for CSTA User-to-User activation

Parameter **CSTA User-to-User** is now available for the standard SIP External Gateway associated to SIP applications to share with OXE server a correlator data and a global Call-ID.

If Gateway type is Standard type

- Setting SIP parameters "CSTA User-to-User supported" and "SIP Trunk Recording" is allowed only if software lock #429 ≠ 0
  Meaning that use of Correlator Data and GCID on SIP trunks is controlled by software lock #429

If Gateway type is NOT Standard (Rainbow, ICE, OTCS)

- Setting SIP parameters "CSTA User-to-User supported" is allowed whatever the value of software lock #429

Note

In menu SIP External Gateway, the setting "SIP Trunk Recording" is allowed if one of the software locks #428 or #429 is different from 0.

17.2.2 AAS (Audio Station)

Warning

On secured sites (by ssh) the copy of the guides is not working anymore. Use a manual copy by using an ssh client program.

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17.2.3 External Voice Mail

As of Release 10.0, the new parameter Subscription on registration in mgr-> Application ->External Voice Mail object is added.
It must be set to False (Default value) when using external application such as UC R6, ACS, AVST, …
In case of OXE set using Local Storage Mail Box (on OpenTouch Solution), this parameter must be set to True to allow notification on the OXE set when he receives a new voice message. When OXE receives the "Register" from Local Storage Voice Mail, a "Subscribe" is sent for the user to receive notifications.

17.2.4 LDAPs & ABC netw.

In case of heterogeneous network (if all the nodes in the network are not in M4):
Do NOT activate of LDAPS or LDAP over TLS or eventually forbid the broadcast of "LDAP Phone Books" and do not perform any audit. This new management can be done once the whole network is in M4

17.3 BOARDS

- Case of GD/OMS new board or installation: it may take several reboots of the boards to load all the voice guides into that board. Once they are all & completely loaded that process will not start again. Check the incidents to know how many guides are loaded & if it the download is finished.
  Example of messages thrown during the 1rst startup:
  02/10/18 17:42:02 001010M|004/27/-/---|=4:0260=Beginning of downloading /DHS3ext/vgadpcm/flash/std/vgadpcm.FR1
  02/10/18 17:43:18 001010M|004/27/-/---|=5:0261=End of downloading /DHS3ext/vgadpcm/flash/std/vgadpcm.FR1
  02/10/18 17:43:19 001010M|004/27/-/---|=4:0260=Beginning of downloading /DHS3ext/vgadpcm/flash/std/vgadpcm.IT1
  02/10/18 17:44:59 001010M|004/27/-/---|=5:0261=End of downloading /DHS3ext/vgadpcm/flash/std/vgadpcm.IT1
- MIX board.

This board is not supported in a Rack 3U in central area.

- INTOF2 board.

The mixing of various generation boards is allowed in a same rack but:

- the couplers in relation to the link must be of the same type
- the type of INTOF must be of the same type if the link is doubled or tripled

the INTOFS and INTOF2S are not compatible between them. If changing from INTOFS to INTOF2S, you should also change the INTOFS which is faced to this board. No consistency check is possible with the management because each board is part of a different node. Nevertheless, an anomaly will be sent by the INTOFS2 if the remote coupler is not the same.

- DPT1-2 board.

NPRAE and DPT1-2 boards cannot be used together on the same PCX.

17.4 CCS

R100.0 needs CCS version 10.12.94.0 – otherwise CCS will not connect to OXE

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17.5 CLIP

See previous document for more info about CLIP on Z32 feature.

17.6 Cloud Connect

Remote management capabilities via Cloud Connect.

Fleet Dashboard application now provides 5 facilities for remote management of an OXE system available only with the:

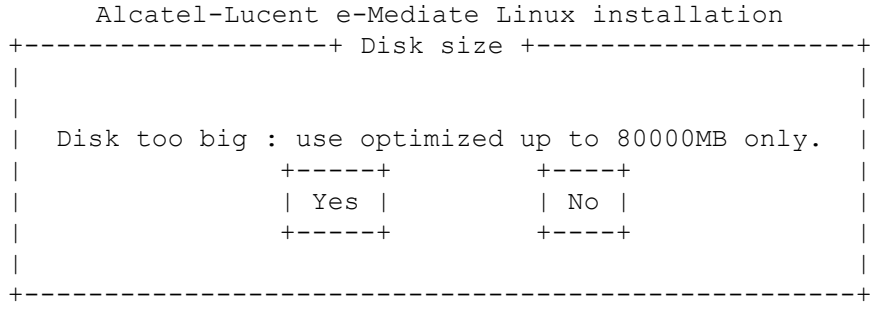
- Remote Console (requires a valid SPS & Technical Advanced privilege)
- Software update (requires a valid SPS & Technical Advanced privilege)
- Push Offer file (requires a valid SPS & Technical Advanced privilege)
- Get Offer file
- Incidents

17.7 COMMUNICATION SERVERS

17.7.1 Call Server CPU

- Direct connectivity of the Ethernet port of the CS-2/3 to a port of a switch is mandatory.
- Only auto-negotiation mode is supported on the CS-2 board => to be able to operate in Full-duplex, the port of the switch used for the connection must be configured in auto-negotiation. Otherwise, if the port of the switch is forced to full-duplex, the CS-2 will be unable to detect the full-duplex capability of the switch port and will operate in half-duplex. Rule: the port of the switch must be in auto-negotiation or forced to half-duplex.
- Protection against high broadcast traffic: available on CPU-CS (an incident is emitted) but it is not manageable.
- As of Release 9.0, CS-2 boards offer Ethernet redundancy with load balancing.
- Hard drive

  In a standard installation, the following message is displayed. It states that any hard disk larger than 80 GB will not be used to its real capacity.



  The installation continues automatically after a timeout.

  Note: this is a case with PC Installer use (product no more maintained)

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CS-3 precaution to extract the board ONLY once the ***POWER*** LED on the CPU is RED.

- power OFF the CPU by action on the button on the stiffener.
- Wait for the ***POWER*** LED to be RED
- Extract the board

CPU8 precaution to extract the board is to wait 10sec max. after cpu led goes to off.

- Shutdown -h now
- Wait for the message "Press any key to reboot" to be displayed on console
- set OFF the Switch ON/OFF located on the front of the board
- Wait for 10 seconds before extracting the board

In case the board is blocked (no boot, no display on v24 terminal) it is possible to reset the CMOS memory: move the jumper near the battery to opposite position & move it back (1 sec. is enough to reset the cmos). Time & date must be set again (tool "swinst"): this information is always lost in case of cmos reset.
Doing a cmos reset by short-circuiting the battery is safe.

Hard disk (CS/CPU 7&8) recommendations: **only the hard disks provided by Alcatel-Lucent** are compliant; manipulation of the hard disks (exchange of the hard disks etc.) is not recommended because of the sensitivity of the hard disks; **use preferably the second partition for software upgrades (limited: from 12.0 to 12.0 & above).**

17.7.2 G.A.S. (Generic Appliance Server)

To reboot the whole server, it is mandatory to stop FIRST the OXE ("shutdown -h now") and then stop or restart the server through Suse.

If the server is not ordered through ALE, check the compatibilities (cross comp. document, Suse & KVM compatibilities in Suse web site).

A Raid server can be used if correct management is performed at bios level.

!! soft RAID does not work! Only hardware RAID is supported

17.7.3 UPS

An UPS is strongly recommended to secure the system against abnormal stops because of power failure. The UPS is used to make up for the short cuts of the power supply. If the UPS arrives at the end of the battery, it tries to notify the Call Server / CPU to which its USB cable is connected. In the event of a long time of power supply cut, it is necessary to stop the Call Server with the **shutdown** command.

Note

GAS does not support feature of shutdown through USB connection from those UPS models. This is planned in a further release

17.7.4 Blade Center & older CPUs

- Blade Servers are no more compatible as well as other CPUs mentioned in this document
- ACTIS behavior

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- Blade: Actis will let people decide what kind of server will be used to migrate to R12.0: Appliance Server or Virtualization.
- CPU5/6/7s1: Actis will propose a CPU7s2 or CPU8
- CS-1: Actis will propose CS-2 or CS-3 or Appliance Server/GAS depending of the traffic

17.7.5 Passive Communication Server

Updating PCS from version <12.0: disk reformatting is mandatory & needs to be considered before migration.
Installation must be done locally or remotely by using S.O.T. tool (version 2.2 minimum)

Passive Call Server as well as main or stand-by CPU must follow the rules of compatibility meaning that CS-1 CPUs are not compatible
If updating the software (patch or complete version) of a system equipped with PCS, it is necessary to update the PCS before updating the version of the Central Com Server (constraint related to database compatibility).
If updating the software of PCS, it is necessary to check that this update does not start in the period of automatic re-synchronization of the database on the PCS (especially if the method used is the scheduled Remote Download) because this re-synchronization involves an automatic reboot of the PCS.
When SIP set switches on PCS:

- It must register again as the Call Server registrar database is not replicated on the PCS.
- If it is in dynamic mode, a local DHCP server is required.
- In case of CS, the Main and Standby Call Server must not be located in the same rack.
- Do not use SLANX4 but an external switch (LANX16-1 or customer switch) in order to be able to unplug a Call Server without disturbing other elements.

This feature is supported by the following IP equipment:

SIP sets
Alcatel series 8 sets
Alcatel-Lucent 8082 My IC Phone
GD
GA
INTIP
OXE-MS
IOIP
"IP Touch Security Module" : SSM, MSM
Attendant IP Softphone
IP CCAgent Softphone
MIPT sets
IP Dect

The applications able to take into account 2 addresses of CPU are:

OmniTouch Contact Center: CCD/CCS/CCA/CCIVR
XML Web services
Application "XML IP Touch"
TSAPI
ACAPI
VoWLAN R2.0

Features not available on AS and CS:

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V1 (4080 RE) - V2 (e-Reflexe IP Phone V2) sets. Only the IP sets of series 8 and SIP sets are able to take into account 2 addresses of CPU.
Genesys applications (CCEmail, CCOutbound, CCWeb)
RSI Synchro Server
TAPI

17.7.6 Appliance Servers/ G.A.S. & Bill Of Material (BOM)

BOM of Appliance Servers is no more provided in this document. If needed, check in cross comp document. Appliance Servers are no more sold in that form but are still supported in migration if compatible with the release. Replacement is done through the Generic Appliance Server (G.A.S.) based on existing platforms.

Note

Notice: in case of migration the ordered server is no more delivered with the software integrated.
If a server is already in an installed OXE version it is possible to migrate to oxe R12.4 (e.g.: a G9 server in oxe R12.1 wants to migrate to oxe R12.4 This operation will be performed through the inactive partition)

Notice: G.A.S. should be upgraded like the appliance servers where before. When a server is received from factory, administrators should look for the most advanced OXE version to put at the right level of software

17.7.7 Virtual Machine creation for Hyper-V

Virtual Machines for Hyper-V deployed in Suse 12 SP3 must be reinstalled.
OMS and OST installation with Suse 12 SP5 under Hyper-V 2019 or 2022 hypervisor is *not supported* with SOT, it must be installed from BOOT DVD and ISO (described in system documentation).

- CROXE-22052 - SUSE 12 SP5: OMS OST and EGW installation on Hyper-V 2019 using SOT 3.1.009 fails

17.8 DECT

Feature ip on xBS is released with following restrictions:

- If a base station was already installed on an oxe node & is transported to be installed on another node of the same network a factory reset has to be done (manual long push on a dedicated button). This reset factory can be done on any case where the update of the xBS takes too long time.
- Dect xBS when more than 253 xBS on the same location (contact Technical Support)
- Duration of the SW download for a handset (Step 1): due to the low bandwidth data channel used, it takes several hours for each handset to download a new SW version.
- Campus: in case a set is away from its location/cpu if that main cpu is switch (main to stand-by) & dect is in communication voice is cut.
- SUOTA is only available from OXE R12.3.1 (no backport in earlier releases)
- Auto-registration: there are minimum versions of firmware to perform the Auto-registration
  8212: v0013b0002
  8232: v4483b0004

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8242: v6382b0003
8262/62Ex : vx681b0006

- SUOTA: consult "TC2600 Ed 02: SUOTA for DECT Handsets in OXE 12.3"

Dect ip xBS: Web Based Management:

Account "engineer" should only be used to view information. Parameters are pushed from the OXE and there is no need to do any management directly on the xBS itself.
Modifying those parameters directly on the WBM is strongly *NOT recommended*

17.9 DIRECTORY

External LDAP Server:

LDAP overflow is available on all sets.
Alcatel-Lucent Premium Deskphones, myIC phone Standart & 40x8/40x9 sets as well as Reflexe/eReflexe have an "Overflow" softkey.
During a phone book search with LDAP overflow setup, the PCX searches its local phone book the corresponding entries to the search.

- If the search in the phone book succeeds, only the sets having a "Overflow" softkey can use the softkey to complete their search in the external LDAP server.
- If the search in the phone book fails, the search overflows towards external LDAP server whatever the type of set.

The search in the external phone book is a "Begin with" search (the similar entries are not displayed).
The result displays the directory number or if it misses the mobile number (both information are not displayed). If no number is available, the entry is ignored even it corresponds to the search.
client_ldap was no more available in R8.0.

- In Release 8.0.1, a new **client_ldap** tool is available. It performs an LDAP search on telnet access. You don't need any more to give LDAP parameters, such tool uses actual OmniPCX Enterprise configuration and requires only to specify the Entity Id.

(611)xa006011> **client_ldap**
Entity of set
54
Entity = 54
0 => Exit
1 => Search by name
2 => Search by initial
3 => Search by name and first name
1
Request Name ...
paris
Request 5 paris
Result reply_count 3
Result 0 PARIS STEPHANE 61234
Result 1 PARIS DELPHINE 72123

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Result 2 PARIS LAURENT 72345
(611)xa006011>

Troubleshooting
You can trace the overflow to external ldap server by phone book process
For the UTF-8 phone book
On OmniPCX Enterprise console launch:
utf8_pbm_tuner output-tty=`tty`
utf8_tuner trace-level=all
For non UTF-8 phone book
On OmniPCX Enterprise console launch:
pbm_tuner output-tty=`tty`
tuner trace-level=all

Search in UTF-8 phone book.
This feature is only available for Premium Deskphones, myIC phone Standart & 40x8/40x9.

Note

If the UTF-8 field is completed in user data with the same information as Latin name, the search of name in the directory, using "Call by name", will give a double result (Latin name + UTF-8 name).

- From R9.1 (I1.605.31), search in internal Phone Book (Call-by-name search) with several results for internal numbers and abbreviated numbers display first internal number before Abbreviated number in case of dual entries for a same Name.

17.10 FSNE

When SRTP is activated on SIP trunk, specific constraints apply to the whole network.
There are only 2 configurations allowed:

1) SRTP is allowed in local node
   In that case, all hybrid links in the subnetwork must be non-encrypted.
   SRTP offer answer mode is true on this node only.
2) SRTP is allowed in all the network
   In that case, all hybrid links in the subnetwork must be encrypted.
   SRTP offer answer mode is true on all nodes.
   In case of several sub-networks, it applies to all.
   No TDM link can be used. No TDM trunk between 2 sub networks can be used.

   ⇨ So be careful when coming from network encryption with SIP in clear mode to SIP trunk with SRTP. Constraints are stronger.

No support for 4645 Voicemail
No IPv6 Support
No compatibility with Thales installed server
No support for GD, GD2 and IOIP3 boards

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No VPN support (Set movement via network is impossible)
IPDSP with encryption support:

- not developed in Mutual Authentication mode
- in case of usage with Plantronics headset it is recommended to install the Plantronics software (https://www.plantronics.com/us/en/support/downloads-apps/hub-desktop) to avoid audio issues.

In Band DTMF is incompatible with SIPTLS-SRTP ***encryption***. In Band ***should not be configured*** if SIPTLS-SRTP encryption is enabled.

Command to print CTL on OXE:
"**openssl crl2pkcs7 -nocrl -certfile /etc/pki/oxe/truststore/trustchain.pem | openssl pkcs7 -print_certs -text -noout**"

Transform pem/crt -> p12:
"**openssl pkcs12 -export -nokeys -in xxx.pem -out xxx.p12**"
In case of mutual authentication, certificates of type client for GD3/INTIP3/OMS/GD4
In case of mutual authentication, certificates of type client for the sets as well.

17.11 IP TOUCH SECURITY FEATURE

The IP Touch Security feature works with a secured patch, delivered in complement of the generic version.
To get this secured patch, a request must be made on Alcatel-Lucent Business Partner Website.
This secured patch has the same name as the generic delivery to which it is referred preceded by the letter S (for Security).
This secured patch contains only:
Secured binaries for IP Touch series 8
Secured GD binaries likely to encrypt the signaling directly
Secured GD3 / GA3 / INTIP3 binaries likely to encrypt both voice and signaling directly
Binaries for IP Touch Security Module.

The installation of this secured patch is carried out in a second step after installation of the generic version and patch.

In multi-SSM duplicated configuration:
The 4645 must be on a dedicated CPU protected by a MSM
The encryption of the OmniTouch UC server cannot be done by one of the two SSM but by the use of a MSM
In multi-SSM spatial redundancy configuration (SSM in blocking mode), it is necessary to define a specific link between IP physical address of each Call Server and main IP address of the other Call Server.
In multi-SSM traditional duplication configuration (only one main address):
During module initialization if the Main address was defined on the plain and cipher port, in established mode the module considers the Main address on its plain port (in normal state, IP element cannot be at the same time on the plain port and cipher port)
In a result of the preceding point, the modules must remain in passing mode
Before moving a set of a secured system towards an unsecured system (moved within a ABC network or changed on another system), unsecured manually the set and remove it from IP network before it recover again the ***lanpbx.cfg*** protected file.

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After each change of mode (secured / unsecured), Call Server must be restarted.
To customize GD3 / INTIP3B board with Soft-MSM feature (PSK_{mg}), the version 1.2.01 of Security Center has to be used. GA3 and INTIP3A boards don't have to be customized and must be configured with Voice MSM type instead of SoftMSM type (to be used only for GD3 and INTIP3B).
Only boards with SoftMSM type (ie GD3, INTIP3B) are taken into account by software lock 348.
Before activating Soft-MSM feature on a NGP board, it is mandatory for the board to perform an initial boot without encryption (MG type selected in "Addresses to protect" MAO object).

17.12 IP CRYSTAL MEDIA GATEWAY

In the document, the name "INTIPA or B" concerns the INTIP board as well as the INTIP2 board.

- The GPA2 is supported in the IP Crystal Media Gateway.
- INTIP board cannot be used with embedded Ethernet (a CBC1 10/100 connector must be used).
- INTIPA board can be used with 100 Mbits. With a VH cabinet you have to use the Patch Panel 10/100Mbits Reference 3BA 23244 AAAA 01.
- 100 Mbits compliance with WM1 and VH cabinets for CPU6 Step2 (not compatible R12.0 & above) and CPU7 (S1/2).

Warning As mentioned previously a CPU7 S1/2 is not allowed in a VH cabinet.

All cabinets are or will be compatible with 10/100BaseT. The VH and WM1 cabinets compatible 10/100BaseT will be available soon with the following references:

Designation	Reference
VH (10/100BaseT) Basic Rack 48V	3BA 56191 AN
VH (10/100BaseT) Basic Rack 48V - USA	3BA 56191 UN
VH (10/100BaseT) Basic Rack 90W	3BA 56193 AN
VH (10/100BaseT) Basic Rack 90W - USA	3BA 56193 UN
VH (10/100BaseT) Extension Rack 48V	3BA 56192 AN
VH (10/100BaseT) Extension Rack 48V - USA	3BA 56192 UN
VH (10/100BaseT) Extension Rack 90W	3BA 56194 AN
VH (10/100BaseT) Extension Rack 90W - USA	3BA 56194 UN
WM1 (10/100BaseT) Basic Packed 110/230V	3BA 27112 AN
WM1 (10/100BaseT) Basic Packed 110/230V - USA	3BA 27112 UN
WM1 (10/100BaseT) Basic Packed 48V	3BA 27113 AN
WM1 (10/100BaseT) Basic Packed 48V - USA	3BA 27113 UN
WM1 Battery package (battery autonomy 1.2 Ah)	3BA 57106 AC
WM1 Battery package (battery autonomy 1.2 Ah)- USA	3BA 57106 UB

Note If the referenced cabinets above are not used, the CPU6 Step2 and CPU7 boards will work at 10 Mbits maximum.

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17.13 MEDIA GATEWAY

17.13.1 GD/GA boards

- Direct connectivity of the Ethernet port of these boards to a port of a switch is mandatory.
- By default, dynamic IP addressing is active (DHCP) on a GD board.
- The GA board does not support DHCP feature.
- If the GD supports H323 links, a static IP address must be assigned to the GD.
- Due to the possibility of the GD to encrypt directly its signaling link, two versions of GD binaries are available from Release 9.0: one containing the encryption mechanisms and one without. As for the IP Touch sets since Release 6.2, the generic OmniPCX Enterprise versions provide the binaries without the encryption mechanisms, whereas the binaries with these mechanisms will be available in the corresponding secured patch.
- GD/GA binaries (secured or not) are systematically signed. This information is verified only on PBX in protect mode.

17.13.2 INTIPB board

In this document, the name "INTIPA or B" concerns the INTIP board as well the INTIP2 board

- Direct connectivity of the Ethernet port of the INTIPB board to a port of a switch is mandatory.
- The INTIPB board supports 10/100Mb/s and Half/Full Duplex mode.
- The mode Full-Duplex or Half-Duplex (default mode) of the INTIPB must be configured via the V24:

If the switch is in auto-negotiation, the switch will operate in the mode configured in the INTIPB.
If the switch is configured in Full-Duplex, the INTIPB must be configured in Full-Duplex too.
If the switch is configured in Half-Duplex, the INTIPB must be configured in Half-Duplex too.

- To configure the INTIPB in static IP addressing mode or Half/Full, you must use the cable 3BA 28112 for INTIP board and the cable 3EH 75003 AAAA for the INTIP2 board.
- The INTIPB board must not be used for H323 links or IP Phones handling.

17.13.3 Remote connection towards GD/GA/INTIP boards

17.13.3.1 Release 9.0 before patch H1.301.38

For safety reasons, telnet access towards GD/GA/INTIP boards has been disabled. The remote access towards INTIP boards remains available using the "**`cpl_online`**" command.

Regarding the GD and GA boards, a mechanism similar to that of IP Touch sets has been implemented.
Activation of telnet service for a specific GD using the "**`ippstat`**" command**.**

Remote access towards GD/GA using the "**`telnet_al <GD/GA_board_address>`**" command.

Note

This command corresponds to "**`telnet <GD/GA_address> -b <CS_real_address>`**", the **b** option allows to force the sender address of the request and in this case not use the main address.

The telnet client of the board GD/GA, which has been suppressed in Release 9.0, was necessary in particular to access the maintenance commands relative to the H323 process (telnet from the GD on its H323 port (4560)). These commands are now available through the "**`ccmonitor`**" command of the GD.

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17.13.4 NGP boards (GD3/GA3/INTIP3)

Find below the different hardware compatibility information related to the use of NGP boards.
NGP boards don't support the following topics:

- Non "Direct RTP mode in network"
- Proprietary H323 inter-nodes protocol (only H323 mode is supported)
- Proprietary fax mode between Media Gateway (only H323 mode is supported)

Contrary to INTIP, the INTIP3 board doesn't support transit function. So with NGP, whatever the board used, the direct RTP mode is the only mode to take into account.
NGP binaries (secured or not) are systematically signed. This signature is verified in all cases by Call Server (mode protect or bypass).
Resources provisioning on Common Hardware NGP boards:

	Armada daughter board	Compressors	N-way conferences	Voice Guide access	3-way conf	DTMF receivers
GD-3 mix	No	15	1x7, 2x7, 3x7, 4x7 or 1x15, 2x15 or 1x30	16	24	30
	No	30	0	16	24	30
	Yes	45	1x7, 2x7, 3x7, 4x7 or 1x15, 2x15 or 1x30	16	24	30
	Yes	60	0	16	24	30
GA-3 N-conf	No	0	4x7 or 2x15 or 1x30	16	3	0
GA-3 mix	No	15	1x7, 2x7, 3x7 or 1x15	16	3	0
	No	30	0	16	3	0
	Yes	30	3x7, 4x7, 2x15 or 1x30	0	0	0
	Yes	45	1x7, 2x7 or 2x15	0	0	0
GA-3 VoIP	Yes	60	0	0	0	0
GA-3 3-conf	No	0	0	0	21	0
PowerMex	N/A	N/A	N/A	0	24	30

The account root has to be used to enter the console of a NGP board. The account admin exists but doesn't allow doing anything.
To reload from scratch a binary in a GD3/GA3/INTIP3 board, just use PC Installer and perform a network boot of the board: it will automatically reformat its flash and then download the various binary files. The LOLA mode, used for GD/GD2 boards is no more necessary as the flash reformat is performed automatically. A reboot of the NGP board is mandatory after the flashing process.
To enter the BIOS of a GD3, GA3 or INTIP3, as for a GD board, the sequence Ctrl-B Ctrl-I has to be done (rather quickly for NGP).

```
U-Boot 1.3.0-rc3 (Apr 15 2009 - 16:37:27) 3EH30350AAAI bootl100/000.008
Reset Status: Software Hard, External/Internal Soft, External/Internal Hard
CPU: e300c4, MPC8377, Rev: 21 at 399.999 MHz, CSB: 266 MHz
I2C: ready
DRAM:
DDR DIMM: data bus width is 64 bit without ECC
DDRC ECC mode: OFF
```


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DDR RAM: 256 MB
FLASH: 2 MB <---------- Press quickly Ctrl-B Ctrl-I immediately after this info
PCI: Bus Dev VenId DevId Class Int
00 17 1064 2102 0000 00
In: serial
Out: serial
Err: serial
Net: TSEC0, TSEC1

17.13.5 OMS (remote access & ESXi configuration rules)

Several modifications were done in relation to secure the access of the OMS. Refer to the precedent document for more details on older versions. Remember that it is now the « admin » user that should be used to connect on OMS (ssh -2 command).

Virtualization rules (extract from doc "OT suite –hosting – virtualization")

… this solution is built with one or several OXE Media Services Base and optional access ports (up to 120 per Base).
Hardware pre-requisites for OXE MS depends on the number of ports and coding/compression algorithm:

- One dedicated core processing (via "affinity rules", from vShpere client management) per OXE MS requiring 100 MHz for the Base.
- Hyperthreading has to be disabled on the OXE MS Virtual Machine
- Processing per port:
  - With G711 coding only: 5 MHz with a maximum of 120 ports per OXE MS Base
  - When G729 compression is used: 25 MHz with a maximum of 90 ports per OXE MS Base
- Virtual Hard disk per OXE MS Base: 7 GB (New value from R100.0)

Dedicated and reserved memory PER OXE MS Base: 512 MB of RAM … *END of extract*

17.13.6 GD4/GA4

Same rules of configuration than NGP boards apply on GD4/GA4.

PowerMEX is replaced by new EvolMEX. It is not possible to mix old boards GD3/GA3/PoweMEX with new boards GD4/GA4/EvolMEX within a rack or its extensions. As a result, in case of upgrade all boards needs to be changed at the same time.

Warning

V24 Console settings changed compared to other boards: speed of connection increased to **115200**/8/N/1.

New accounts have been introduced for security evolutions:

- Login **admin** with password **letacla1** for remote SSH connection and log consultations
- Login **root** with password **mg4.ale** for board configuration using command "**`mgconfig`**"

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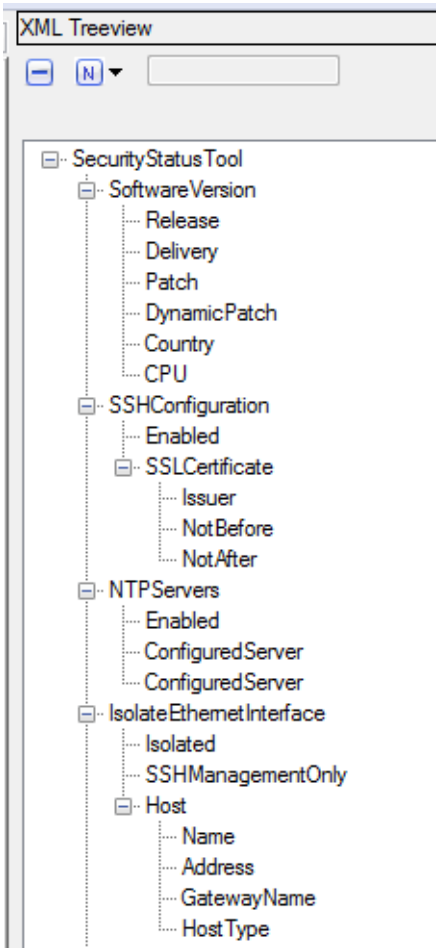
30 compressors are available by default on the board. A daughter boardsARMADA can be used to increase the number of compressors to 60.

17.14 SECURITY

Use the tool "**`securitystatustool`**" to check the security management of the oxe (xml output). See below an extract of different topics scanned by that tool (tool: Notepad++ XML treeview module)



17.15 OXE Device Management for SIP clients

For detailed information regarding the deployment of SIP extensions clients with the OXE DM, check the document: TC2886 OXE Device Management configuration guide for SIP DeskPhone and SoftPhone

17.15.1 Migration from OmniVista 8770 DM to OXE DM

After the upgrade of the OXE server into R100.0, the OmniVista 8770 DM configuration will remain active and all the SIP DeskPhone already connected will remain in service:

- NOE3G-EE SIP R510
- 8088 in Hotel mode
- 8088 in Huddle room

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- 8001 (Phase-Out devices)

17.15.2 Conditions to move to OXE DM

- If the system is already equipped with SIP phones 8001 or 8088: it is mandatory to **keep OmniVista 8770 DM for DeskPhone.** Only the new client ALE-SoftPhone will be supported by OXE DM.
- For an installation where only devices NOE3G-EE SIP are deployed: it is possible **keep OmniVista 8770 DM** OR **move from OmniVista 8770 DM to OXE DM**. During the migration the set will have to be reset. They will be temporarily and lose their customization.
- For installation where no SIP DeskPhones were connected: new phones can be directly deployed to OXE DM.

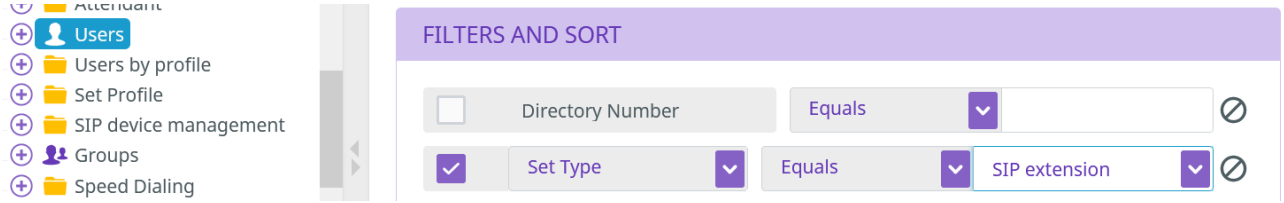
Note

ALE-S clients will always be handled by OXE DM.
OTC clients from OpenTouch server will always be handled by OmniVista 8770 DM.

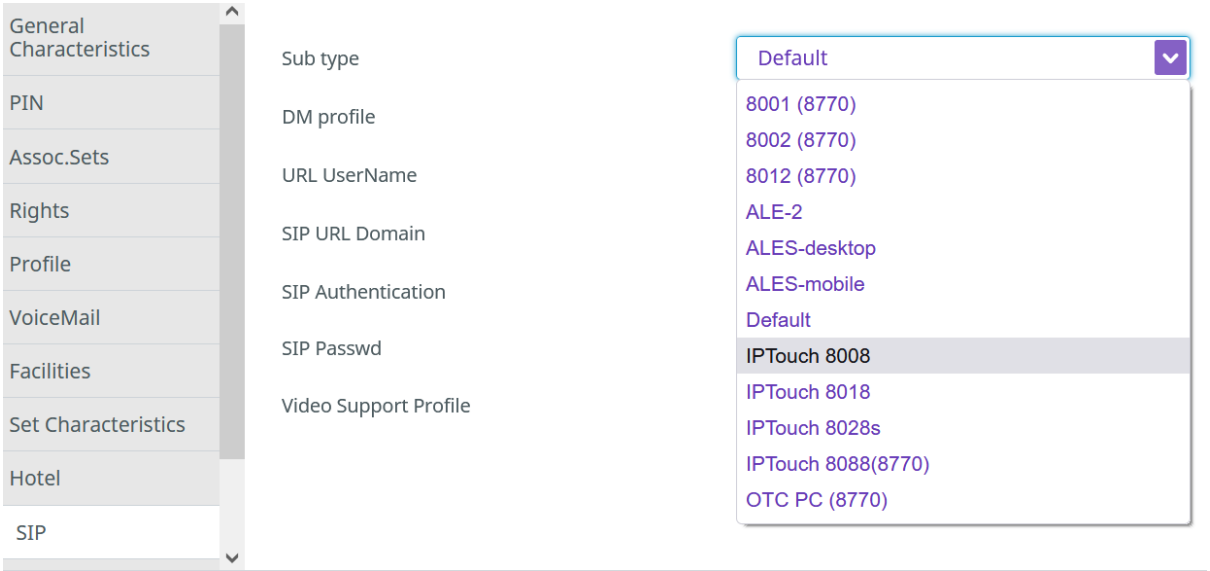
17.15.3 Activation of OXE DM

17.15.3.1 Define a Sub type for each SIP extension device

Before activation of OXE DM, you first need to define the Sub-type of each SIP Extension device declared on the system.
Select the entry Users, pick the filter **Set Type** then select type **SIP Extension** to list the devices:



For each device, define the corresponding **Sub type** in the **SIP** tab:



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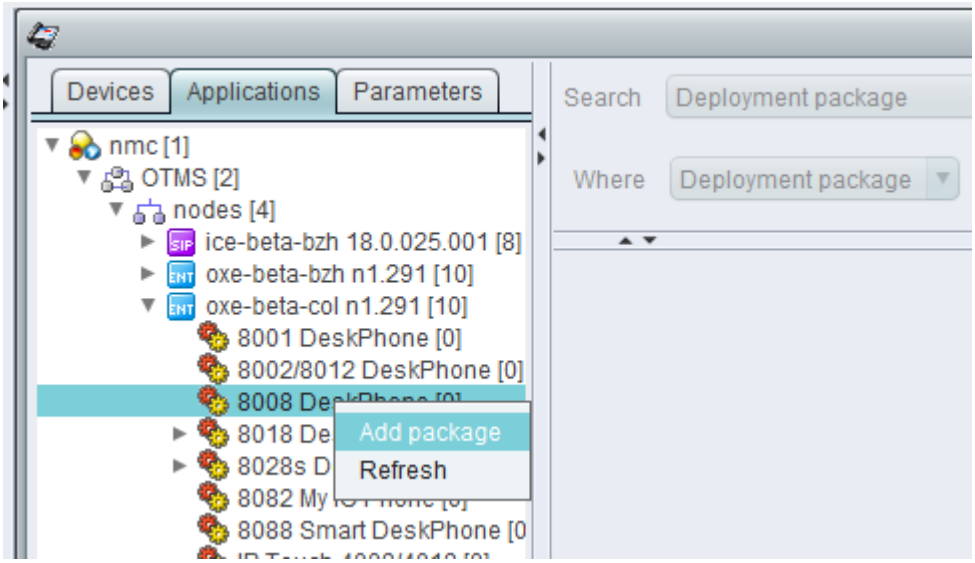
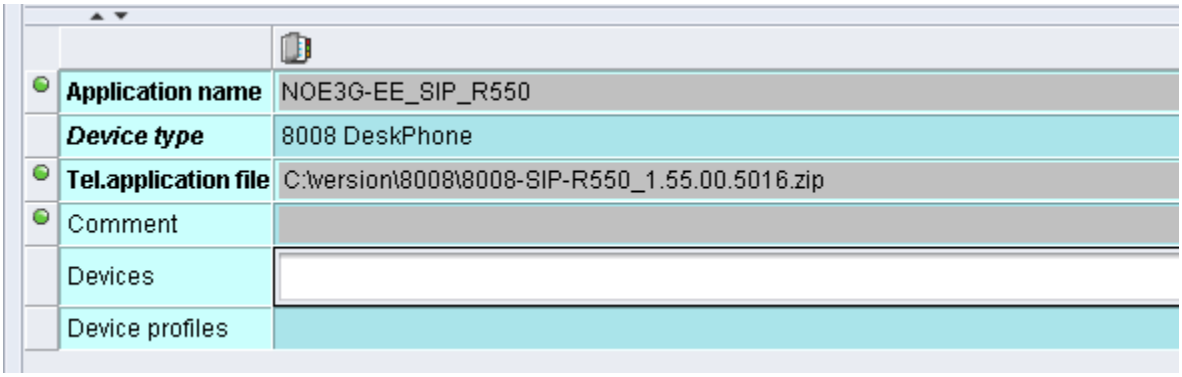
17.15.3.2 Upgrade all NOE3G-EE SIP R510 into R550 using the OmniVista 8770

In OmniVista 8770, Devices application select tab Applications

1. Select the corresponding OXE node and Add Package with the new application profile for each mode of set 8008 / 8018 /8028s:



2. Select the new version R550 – 1.55.00



3. Deploy the package

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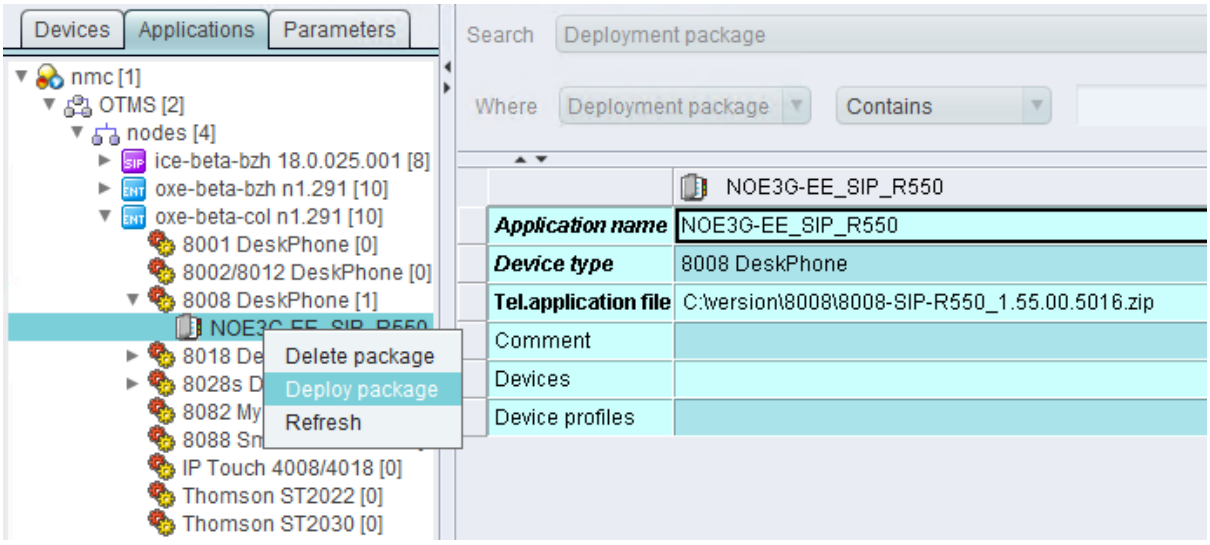


4. Check the phone are properly updated during after scheduled period of upgrade

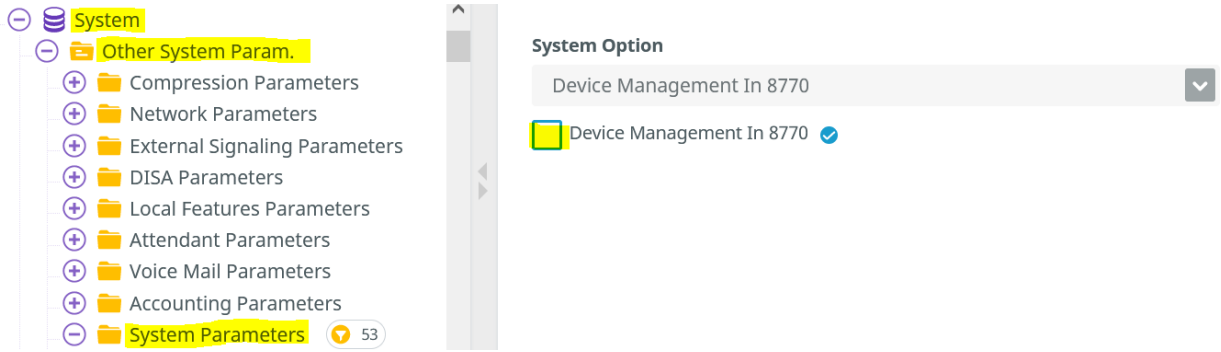
17.15.3.3 Disable the DM in OmniVista 8770 to activate the OXE DM

Warning

Disabling the DM in OmniVista 8770 will cause the OmniVista 8770 to remove the device configuration. Connected phone will lose their configuration. A reset flash will be mandatory on all devices.

Once all the devices have been updated, you can Disable the DM on OmniVista 8770 servers from the directory:

System / Other System Param. / System Parameters



17.16 SETS

17.16.1 8088 Noe/ Android

No desksharing in ABC network.

Feature "no reboot" on desksharing: check compatibilities. Feature works only with 3GEE noe sets, otherwise set will reboot like in the previous mode.

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8088 noe/ Android sets: use the "bugreport" tool as described in Technical communications (TC2347en-Ed04 - Technical Release Notes For 8088 R301 Smart Deskphone) in case of bug to report to technical report. Result will be asked.

17.16.2 DECT

- In the case of common hardware, DECT can be installed on different Media Gateways, but these Media Gateways must be necessarily located on different sites due to the interferences this would generate, the Media Gateways being not synchronized from a DECT point of view. You should not have overlapping between base stations.
- Only frequency number 1, 2, 4, 8 are available for PWT (5 does not work); same as for Crystal hardware.
- DECT Campus.

The DECT Campus feature is not supported with Call Server or Appliance Server driving common hardware or Crystal Media Gateway.
Due to a bad synchronization of INTOFS board, the DECT Campus is not operational. DECT(s) remain attached to their preferential node. Thus, in limit of coverage, there is no handover towards the node of better coverage. In this case, reset INTOFS boards of the PCX after restarting the PCX

- No cohabitation of DECT2 and DECT4 with DECT8.
- 5 digit DECT dialing.

This feature is only allowed for Mobile 100&200 Reflexes, Ascom DECT, 4074 HB in UA2 mode, GAP sets, TSC DECT, 4073 (PWT).

- As of Release 8.0, XL configuration is only supported on Appliance Server and does not allow an operation of Campus DECT.
- As of Release 8.0, DECT is available for USA. PWT and DECT cannot operate on the same installation.
- INTIP3B board carries out a full DTM function for its own ACT. This means all DECT synchronizations are broadcasted over the whole remote crystal including sub-level. In such case, there is no more need to use an additional DECT synchro board in the shelf. It is forbidden in a remote ACT to perform this DTM function on both INTIP3B and DECT board. INTIP3B switchover preserves the DECT synchros.

Dect firmware update:

- Consult "Technical Communication TC2600 - SUOTA for DECT Handsets in OXE 12.3" to know how to upgrade the firmware on all dect sets (82xx series ONLY)
- It is always possible to do that update through a manual download by using a cradle.

17.16.3 IP-DECT system

Generalities:

- In case of incoherency mobiles management between OXE and DAP controller the DAP reboot: workaround is to use authentication between DAP and OXE (Will be fixed in a maintenance version)
- Audio clack in com in G729: workaround is to disable VAD (analysis on going for a fix with VAD)
- Call cut after 50s when DAP managing the handset is disconnected: when during a call the communication between the visiting DAP (handles DECT communication with handset) and the registration DAP (handles the communication with the SIP server) is lost for more than 50 seconds, both DAPs will clear the call.

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4080 DECT IP Access Point:

- No Static IP address management (only in DHCP mode)
- No LLDP Poe negociation
- No AVA and no LLDP-MED VLAN ID acquisition
- No multi-PARI support
- No TFTP server redundancy
- No G723
- No telnet
- No ARP spoofing nor DoS protection
- NAT is not supported
- No RJ45 Cat 7 support

DAP Controller/Manager installer:

- No redundancy of the DAP Manager
- DAP manager and OmniVista 4760/8770 cannot be hosted on the same physical server
- DAP manager cannot be virtualized

ALU DECT IP offer:

- TDM-DECT (IBS or RBS) and IP-DECT APs cannot be mixed on the same OXE system
- MR100/200 handsets are not supported
- No end to end encryption (No encryption over the lan)
- ALU feature called "DECT over campus" is not supported
- Notification server integration enhancement on 400 DECT handsets is not supported (AAPP with newVoice notification server).

17.16.4 IP Phone V1 – V1S – V2 (e-Reflexe) – Alcatel series 8 & 9

Consult previous document version. Information has been removed.

17.16.5 MIPT 300 & 600 handsets

For more information, refer to the technical communications TC0940 Technical Release Note for VoWLAN Release 3.0 offer and TC1195 Technical Release Note of VoWLAN 4.1 for OmniPCX Enterprise.

- MIPT handsets have same level of feature than an IP Touch set (call by name, tandem, Boss / secretary, notification messages, Hotel and Hospital sets, etc.).
- MIPT handsets are not supported in Contact Center, attendant, etc.
- MIPT handsets support codecs G711 and G729A.
- MIPT handsets supports the WEP, WPA and WPA2-PSK
- As of Release 8.0, VoWLAN offer operates around Alcatel-Lucent IP Touch 310&610™ (MIPT 310&610) handsets, integrating the NOE protocol (New Office Environment) and compatible with or without Mobile IP Touch SVP Server (SVP Server). The mode without SVP server is only available on the OmniAccess WirelessLAN infrastructure. If there is a mixing of MIPT 300&600 and MIPT 310&610 handsets, a SVP Server must be used.

17.16.6 NOE3G (premium ip phones)

Only NOE3G-EE sets are compatible with ipv6.

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17.16.7 NOE3G EE (Extended Edition)

Use the command "**`downstat i`**" to check who is not updated & rebooted.
Use the command "**`downstat i r HH:MM`**" to program a reboot of those sets.
Use the command "**`tftp_check -s -t [time]`**" to start the download (incident thrown: 391: "Update the binaries of IP set by tftp server").

Known restrictions, technical details, evolutions … Refer to technical communication: TC2308 Technical Release Notes For 8028S, 8058S, 8068S, 8078S Premium Deskphones

17.16.8 NOE sets: new reboot cause

Below are reset cause after 39. Detailed cause is still not updated in "**`incinfo`**"

NOE_TO_NOE_SIP	= 40
NOE_SIP_TO_NOE	= 41
SIP_REG_TIMEOUT	= 42
SIP_REG_REFUSED	= 43
BT_DEVICE_RESET	= 44
ICTMODULE_STOP	= 45
RELOAD_NEW_FONT	= 46
BINARY_UPGRADE_COMPLETE	= 47
USER_REBOOT_REQUEST	= 48
LMMI_NEED_RESET_FLASH	= 49
VPN_INIT_FAILED	= 50
VPN_CONNECTION_LOSS	= 51
VPN_CONNECT_BAD_SUBNET	= 52
VPN_RECONNECT_IP_DIFFER	= 53
VIRTUAL_ADDON_CONFIG	= 54
DTLS_ENABLED	= 55
DTLS_DISABLED	= 56

17.16.9 Essential Business Deskphone in TDM mode

To address hybrid TDM deskphones increased power consumption and for components obsolescence a mechanism to grant access has been implemented:

- MR1 and Crystal ACT have enough power consumption budget margin to handle directly hybrid TDM deskphones.

- If there is no local Power Adaptor, the Call Server authorizes a TDM hybrid set to boot only in a MR3 150 W

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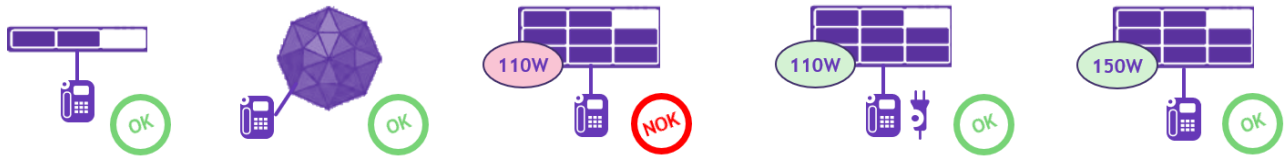
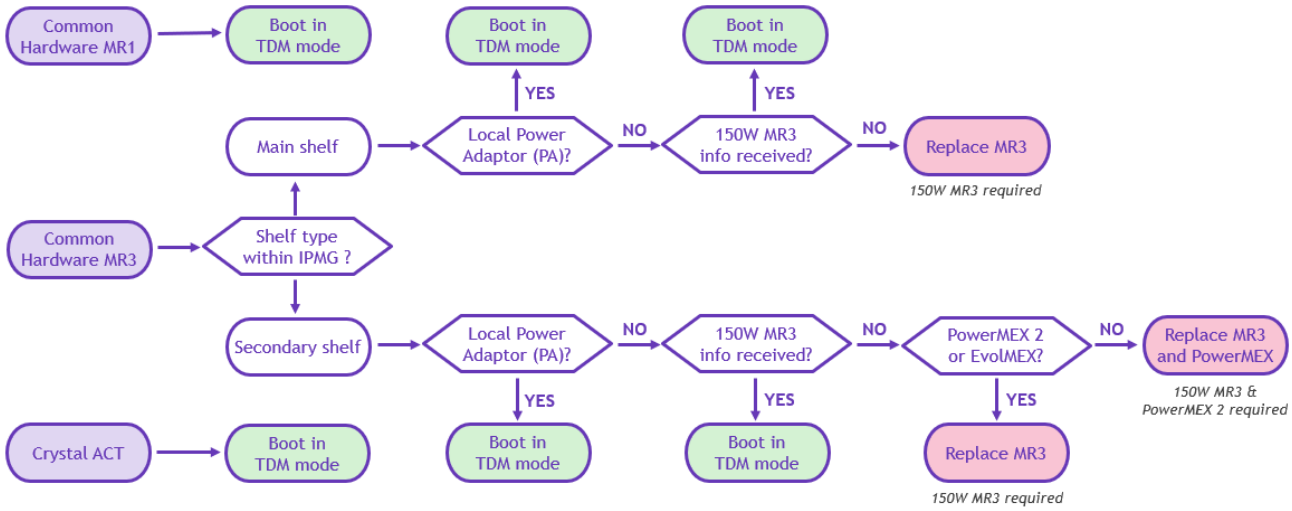


Requirement for external Power supply per type of rack MR3:



New Rack Large MR3 150W exists in two different models:

- 3BA00866AA - MR3 RACK MODULE (110V/230V) - 150W
- 3BA00866AV - MR3 RACK MODULE (48V) - 150W

ALE DeskPhone Essential in TDM mode to start on Rack L 110W with remote power feeding

From R100.0 MD3, several reserved boards can be declared on rack L 110W in empty slots on the main rack or expansion rack. As the capacity of TDM phone connected on the rack is decreased, it is possible to support the power feeding of ALE DeskPhone Essential in TDM mode for remaining ports.

In the main rack, it is required to declare 4 reserved boards, in the expansion rack it is required to declare 3 reserved boards. Reserved boards can be declared in MAO of type MG Reserved.

```
|  4 |  5 |    RESERVED|---------- |ONLY MAO FILE |    NO PCMS CODE |
```

The table below detail the compatibility per model of Media Gateway board:

R100 MD3	**Rack L 110W main (4 Reserved boards declared)**	**Rack L 150W main (4 Reserved boards declared)**
GD- 2/GD	Remote power compatibility	Remote power compatibility
GD-3	Remote power compatibility	Not applicable
GD-4	Remote power compatibility	Not applicable

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R100 MD3	**Rack L 110W expansion (3 Reserved boards declared)**	**Rack L 150W expansion (3 Reserved boards declared)**
MEX (GD-2/GD)	Remote power compatibility	Remote power compatibility
PowerMEX (GD3)	Remote power compatibility	Remote power compatibility
PowerMEX v2 (GD3)	Remote power compatibility	Not applicable
EvolMEX (GD4)	Remote power compatibility	Not applicable

Detection of PowerMex2 board in existing Rack L

A new value for Power Supply Identifier (PSID) is now displayed with the command **config** to identify the compatibility of the PowerMEX model

```
Crystal 7 : (PSID : 2) (External Power Supply)
   +-----------------------------------------------------------------------+
   | Cr | cpl| cpl type    | hw type    |  cpl  state   |  coupler ID      |
   |----|----|-------------|------------|---------------|------------------|
   |  7 |  0 |        pwMEX|----------  |  IN  SERVICE  |    NO PCMS CODE  |
```

If the PSID change to 2: that means a PowerMEX2 board is available, but the rack still got a power supply of 110W. A new kit of upgrade is now available to upgrade the power supply of 150W. Alternatively it is possible to declared Reserved boards, if there are 3 empty slots.

If the PSID remain to 0: either the rack is not be compatible with new kit of upgrade or a PowerMEX board is connected. It is required to replace the rack and PowerMEX2 board. Alternatively, it is possible to declared Reserved boards, if there are 3 empty slots.

17.16.10 SIP SETS

*all standard SIP sets must be declared with the **SIP Extension** type*. Standard SIP sets are no longer supported with the former "SIP Device" mode (formerly called "External set"). Only items other than standard sets (Nokia sets in Dual mode, Alcatel 4135 conference module, fax, video, etc.) should remain with the former "SIP Device" mode.
Set 8088 used for huddle room does NOT follow this rule and MUST be managed as "SIP Device" (simplified telephonic features).

The "SIP extension" mode (Native SIP Call Controller, also named SEPLOS - SIP End Point Level Of Service in some technical documents) allows to increase strongly the level of service on a SIP set, compared with the SIP standard (use of many OmniPCX Enterprise prefixes, etc.). Only the sets mentioned in the SEPLOS "white list" (refer to the technical documentation TC1108 Native SIP Call Controller: White List) will be supported in complete SEPLOS mode. This "white list" is likely to be regularly expanded further interoperability tests performed in the AAPP framework. The sets not listed in the "white list" continue to be supported with the basic level of service offered by the SIP standard (functioning equivalent to R8.0).

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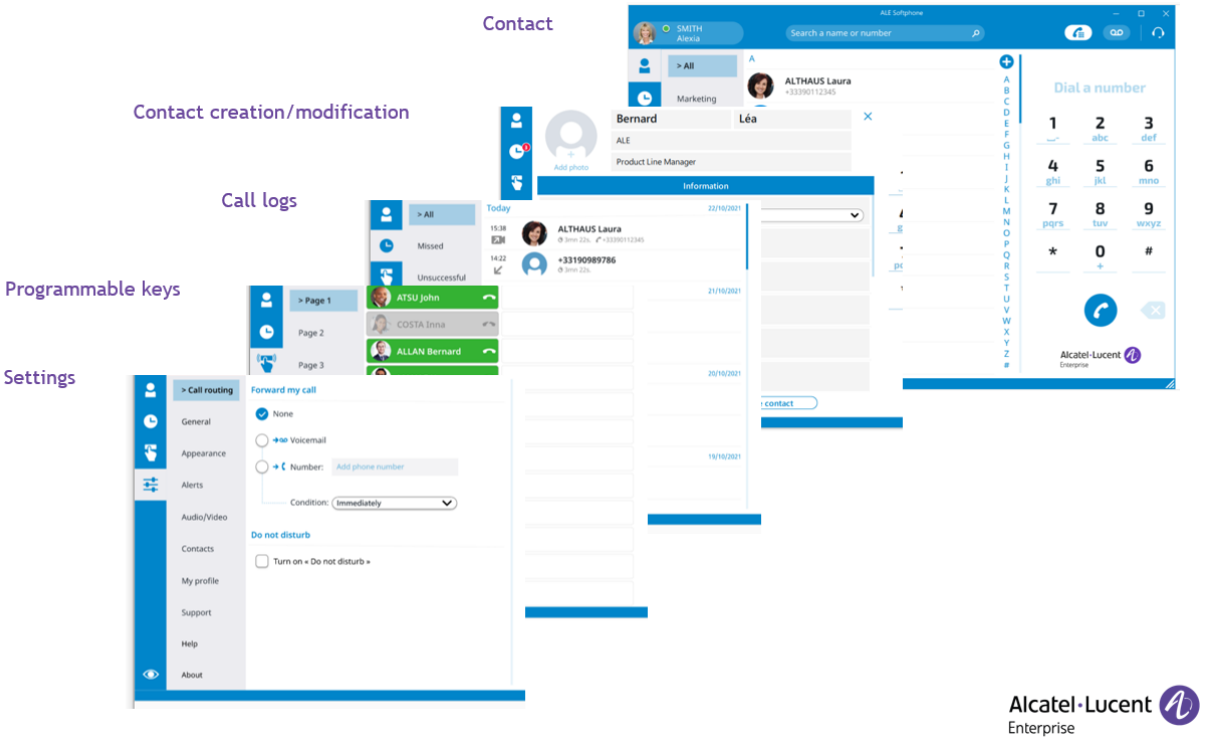
Warning It is mandatory to declare 4135/8135S IP Conference Phones, with type "SIP device" (TC2556).

Business SIP sets in "SIP Extension" are mandatory multiline and room sets monoline. These modes are those available by default and must not be modified for any reason.
Refer to the Feature List for the list of telephonic features available on SIP sets.

17.17 ALE SIP SoftPhone

New SIP SoftPhone client ALE-S is introduced from the OXE R100.0 MD1. It supported by the new component OXE Device Management from the Call server.



Check the deployment guide for technical aspects:
TC2886 OXE Device Management configuration guide for SIP DeskPhone and SoftPhone

17.18 SIP TLS FOR EXTERNAL GATEWAY

SIP TLS/SRTP protocols are supported to secure SIP Trunks configured on the OXE to a Carrier or Service Provider network (Public SIP Trunking in ISDN mode). The TLS protocol protects SIP signaling and the SRTP protocol protects voice flows.
Depending on Carrier/Service Provider capabilities, voice media can also be encrypted using SRTP. Each Public SIP Trunk can be configured at OXE level with SIP TLS&RTP or SIP TLS&SRTP. The voice media can be end-to-end encrypted (using SRTP) from the IP Touch set in the customer's network up to the Carrier's gateway.

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Notice on system configurations:

- SSM boxes model and MSM boxes model are not compatible with the SIP TLS feature. These boxes must be replaced by new Server Security Modules SSM-RM and Media Security Modules MSM-RM in front of PCS.
- SIP TLS with SIP devices or SIP extensions is not supported.
- From R12.3.1: a system with an OXE and THALES based encryption solution & public SIP trunks: it is will be possible to benefit from TLS encryption technology for this SIP trunk (length of keys certificates of 4096 bits, TLS 1.2). Port 5061 in TLS 1.0 to change to 5261 in TLS 1.2

IPsec/SRTP and SIP TLS/SRTP protocols can be used simultaneously.

Note

From R100.0, it is now possible to define the Mutual Authentication at the SIP External Gateway level of each SIP Trunk to adapt to the different constraints of SIP Provider or SIP internal applications.

17.19 VIRTUALIZATION

17.19.1 CONFIGURATION

Check the virtualization guide (Business Portal) & TC2431 (*Virtualization: Configuration of OXE following releases and ESXi infra version*) for more details & provisioning level.

Consult document "https://businessportal2.alcatel-lucent.com/node/430986" for more about vm rules configurations in ESXi vmware environment.

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17.19.2 SUMMARY ON COMPONENTS NEEDED FOR INSTALLATION

	tool used to install on VMWARE	tool used to install on KVM	tool used to install on Hyper-V	info / how to install	misc
OXE	S.O.T.	S.O.T.	S.O.T.	N.A.	N.A.
OMS	S.O.T.	S.O.T.	S.O.T.	on vmware : web client needs to have a vCenter for Suse 12 selection vmware 6.0 won't need that	* OS on Suse 12 SP3 * all bootdvd 12.3.xxx.xxx are compatible
OST (ost64+eegw)	S.O.T.	S.O.T.	not released yet (validation under progress)	on vmware <5.5 : web client needs to have a vCenter for Suse 12 selection vmware 6.0 does not need that	* OS on Suse 12 SP3 * all bootdvd 12.3.xxx.xxx are compatible ! See "note" below
WebRTC gateway	WevRTCgw : OVF/ISO installation	Not in kvm	Not in hyper-V	Details in : "https://support.openrainbow.com/hc/en-us/articles/360001676490"	see also Technical Comm. #2462 chap. "Configuration for VoIP feature"
FLEX Server	vmware installation method	kvm installation method	Cloud Solution only	ovf deployement	*file "vmFlex-2.1.100.019" for CentOS 7 if ESXi 5.5 or more - same version number for kvm "vmFlex-Centos5-2.1.100.019" if ESXi <5.5
Raspberry (PI3+ not compatible) Not compatible with the new dongle !	NA	NA	Cloud Solution only	Win32 Disk Imager (on "Sourceforge") to write on SD card	* the "disk imager" tool is not present in ALE Portal. *OS "ipdongle-firm-1.0.000.000.img" is present on the Portal

Warning Do not use Flex version 2.1.100.021 if you are using remote dongle on ip. It is not compatible

Note Eegw & OST64 are now gathered into a single virtual machine called OST. They cannot operate both at the same time in 1 single vm. Selection of either OMS or OST64 is done during installation by S.O.T.

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17.19.3 RESTRICTIONS

GAS:

soft RAID does not work! Only hardware RAID is supported

HYPER-V:

OMS, OST (including eEGW): do NOT use SOT. Follow the manual installation procedure described in system documentation

Other:

Known as unsupported virtualization systems at the moment:

- **XEN** (implies also Amazon)

17.19.4 Virtualized attendants

CROXE-5216: at CPU switching all com are lost and 4059 is unplugged.
This issue also occurs with physical PC and is not linked to virtualization. If there is no other type of attendant (meaning all attendants are virtual) in the group public external call cannot be recovered.

17.20 VOIP

- The echo delay can no more be managed. It is set automatically according to the hardware used:

GIP6-GIP6A-MCV8-MCV24 board: the echo delay is limited to 32 ms.
GIP4-1/GIP4-4/MADA-1/MADA-3/Armada board: the echo delay is limited to 128 ms.

- Direct RTP H323.

The management of H323 direct RTP on OmniPCX Enterprise must be carefully enabled since all H323 terminals of the installation must be able to reroute the H245 RTP flow called "Empty Terminal Capability Set" or "Voice Path Replacement".
No direct RTP between SIP set and a H323 terminal.
No direct RTP between H323 terminals with different compression algorithms (for instance case of H323 terminal in G723 or G729 calling a 4645 in G711)

- Direct RTP in network.

It is used with IP devices (IP Phones, Alcatel 4980 IP Telephony, GDx, GAx, 4645 voice mail, INTIPx, H323 equipment and H323 Gateways); it allows to establish a direct RTP communication between the 2 IP-devices over the network in order to optimize the number of compressions/decompressions.
The DPNSS prefix for path replacement must be systematically managed.
The configuration must be homogeneous in the whole network; reboot of the system is mandatory after activation of this feature.
Direct RTP in network is available with H323 terminals or H323 Gateway if all nodes are in Release 7.0 or higher.
NGP boards support only the "Direct RTP in network" mode.
In Release 9.1, the Direct RTP mode parameter in "IP / IP Parameters" has been suppressed and the Direct RTP mode in network activated in all cases: the non Direct RTP mode in network is no more possible. This rule applies for both new systems and systems upgraded from older releases to release 9.1. The other nodes of the ABC-F network must be managed accordingly. All the Alcatel-Lucent devices used must support this mode.

- Multi-node transit without compression/decompression like in OmniPCX 4400: this optimization is not implemented in OmniPCX Enterprise; in place, direct RTP in network is provided.

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- It is not possible to create several IP trunk groups for a GDx/GAx/INTIPx board => use the VPN Call Limitation feature to limit the number of calls per direction.
- For a GDx/GAx/INTIPx, the number of trunks in a trunk group must not be managed. You must retain the default configuration (30 trunks created). The limitation of compressors will be carried out by managing the **VPN TS %** in the trunk group or by the "VPN Call Limitation" feature.
- From R5.0 Lx, QoS profile control on ABC-F VoIP links is no longer available (with/out direct RTP switching in network).
- The **VoIPstat** command is no longer usable.
- Mix of communication with Fax and Voice in a same room: during the voice communication, the DSP might change to Fax mode; the only workaround is to reduce the volume of the Fax.
- As of Release 9.1, the boolean **H323 signaling for inter-node links** has been removed: only the H323 mode is possible. The other nodes of the ABC-F network must be managed accordingly. NGP boards only support this mode.
- When creating or modifying the IP trunk group on a GD, the Media Gateway will reset in order to take into account the changes.
- UDP port range: UDP base port manageable by a system parameter and taken into account by all IP equipments (Call Server, INTIP, GD, GA, IP Phone, etc.) except Fast IP Enabler.

CAUTION

This parameter is common for all the installation and is managed only under

IP/IP Phones Parameters/UDP Port

- QoS Tickets.

QoS tickets are provided by GD/GA/INTIP boards, IP Phone V2, IP Touch (in NOE mode), My Phone and 4645 voice mail.

- Fax over IP.

The rate is limited to 9600 bit/s in Fax Relay mode with common hardware and Crystal Hardware.
The rate remains at 9600 bit/s for the inter Media-Gateway T38 fax mode, introduced in R9.0.
Fax T38 interworking with OmniAccess 512 (VSA Interface) is not available.
Fax V34 is supported.
From Release 7.0, the **Analog type** parameter used to create an analog equipment of "Fax" or "Modem" type in order to initialize the connection in transparent mode from the start of the communication, concern only the modem:
Users / Analog type + No specific management or Fax
If the equipment is a fax: Switch-over to transparency after detection of 2100 Hz by DSP.
If the equipment is a modem: Switch-over to transparency after detection of 2100 Hz par le DSP,
If there is no carrier, no switch-over to transparency.
If the equipment is a set: No switch-over to transparency except if the DSP detects the 2100 Hz.
If Fax behind GD or INTIP are used, verify and manage if necessary value 7 in "V21 Jitter Buffer Length" under "IP/Fax parameters": all GDs and INTIP must be rebooted to validate this value
When the Inter-Media Gateway T38 fax, introduced in Release 9.0, is used it must be activated on the various nodes connected by VoIP logical link. A manual reset of GD/INTIP boards is imperative to take into account the new mode. This mode has also been ported in Release 8.0.1 since patch G1.503.35. NGP boards only support T38 fax mode between Media Gateways.
On a secured system with Thales devices (IP Touch Security) and using the inter Media-Gateway T38 fax mode, the **Local T38 port number** parameter must be set to **RTP port Number + 0**.

- Audiocodes MP-102.

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Interworking with MP-102 boxes is supported but only for fax transmissions (analog sets are not supported); refer to the technical communication TC0336 Setting the T38 fax over IP application (with MP-102 version 4.0).
No accounting for fax calls.

- Audiocodes MP-112.

T38-SIP: From R7.1, the default value of the **Minimal authentication method** parameter is set to the **DIGEST** (with a password).
T38 Fax over SIP operation is supported with the MP-112 equipment. The transfer in TCP mode is not allowed, the UDP one must be used.

- Audiocodes MP-118

An analog set (respectively a fax) plugged on a MP-118 must correspond to a SIP set with type "SIP extension" (respectively "SIP Device" / "External set") on CS side.

- IP Services / Port numbers.

The port numbers used are listed in the System Documentation.
CAUTION
The System documentation is also applicable for Releases 5.0 Lx and higher.
For VoIP flows, the range of UDP ports used can be customized in the range 0 to 65535; supported by all IP equipment like GD, GA, e-Reflexes range (IP-Phone V2) etc. except Fast IP Enabler (TSC-IP V1S).

- Internal DHCP Server

Verify that the range of the IP addresses assigned is sufficient for the number of clients. If the number is lower than the numbers of clients, it would duplicate IP addresses with Windows or MAC clients for example, the server is not protected against the reactivation of IP address by these clients.

- Internal DHCP server is restricted to 5 000 IP Touch.
- G729 40 ms.

CAUTION
The lengthening of the sending framing over IP involves two consequences on the voice:

1. An increase of the time from beginning to end.
2. Any loss of package means that larger quantity of information is lost, involving a faster degradation of the voice.

- Jitter buffer.

Up to Release 9.0, the jitter buffer was managed by default in static mode with a buffer depth of 100 ms. From Release 9.1, the default mode is changed with the use of the dynamic mode together with a buffer depth of 300 ms. These new settings will help to avoid any packets accumulation on one side after a jitter burst. They will also allow storing more packets and then accept a more important jitter.

17.21 MISCELLANEOUS

- Important: It is prohibited to install any other NAOS (RPM packages or pure binary) than those provided by ALE OXE
- Feature "Ensure database consistency" (introduced in R9.1)
  This feature is intended for cases where MAO modifications are done (mgr “like” management or user set modification) while the Stand-By is temporarily not present.
  The Double main Call Servers case is specific: MAO messages may be stored in the buffer of both Call Servers. When the duplication link is back operational, if there are stored messages in the Call Server

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which reboots as Stand-By (independently of the fact messages may have been stored or not in the Call Server which stays Main), then they are lost (on both Call Servers) and an incident 439 is displayed to recommend a manual synchronization (mastercopy). If messages have been stored only in the Call Server which stays Main, then they will be sent to the Stand-By after its reboot.
Currently the MAO storage has two limitations: the buffer can store only 255 messages and the storing process cannot last more than two hours. From the patch I1.605.14.e, MAO messages are stored directly in RAM, removing the buffer limitation.

- In case of a V24-IP Moxa box, the time to recover the connection with the system after a Call Server switch-over is about 10 to 20 seconds.
- "mao for rebuild" backup file cannot be used from a file coming from a previous release (CROXE-2141). Issue will be seen from any release to M1 & upper. But not from M1 to later releases. This is a definitive restriction. Error is "segmentation fault" while restoring mao-dat
  Root Cause:
  To rebuild the database restored from "mao-dat" backup, binaries having same MAO version needs to be used.
  To overcome this "mao-dat" backup contains two files "/tmpd/fichges" and "/tmpd/checkinitrem" from the node where the backup is taken.
  Only this fichges binary should be used to rebuild that particular database, if the source and destination MAO versions are different.
  This will not cause any issues for kernel 2.4 to 2.4 BckRestore of "mao-dat" file.
  For 2.6 Linux, the older fichges binary is no longer compatible and causes a segmentation fault.

- Since Android OS Nougat update, some ports historically used by the system are now in conflict with OS Nougat reserved ones. Default port for signaling is 32512, this port is in the range of reserved ports in Android 7 (32100 to 32599).
  To allow android 7 devices, you must change the configuration of default port (IP-> TSC/IP Parameters -> UDP port).
  You must also take this change in the firewall configuration.
- Migration from crystal cpu to appliance/vm: if the migration of rack 0 is not done, check the presence of the file "AS.dat" under "/usr3/mao". Delete it if you want to migrate to appliance/vm.
- Z sets ringing.

Maximum number of simultaneous ringing sets in a Rack 1U: 6.
Maximum number of simultaneous ringing sets Rack 3U: 20.

- In the event where you should use a T1 access and an E1 access on the same system, the two boards must be on different Media Gateway.
- MIPT.

No music played during a music on hold.

- Customized ringing melody.

The customized ringing file is limited to 16 melodies.

- T0 interface on Media Gateway.

T0 "network mode" is only supported with the BRA board. Refer to the technical communication TC0495 Using the network mode on T0 accesses of BRA boards on Media Gateway.

- Number of mini-messages.

Maximum number of mini-messages is limited to:
32 000 on Appliance Server

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10 000 on CPU7
1000 on other CPUs

- 4645 voice mail embedded on Call Server or Appliance Server.

The number of simultaneous accesses is limited to 16 for a 4645 on a dedicated Call Server (CS) or embedded on an Appliance Server (AS).

The voice quality might be impacted by the double compression/decompression on the network when using a poor IP domain (with G723/G729 codec) between the node of the voice mail and another node of the network; even if the 4645 operates in G711, the 4645 will record a G723/G729 compressed/decompressed speech; and again, at the restitution one G723/G729 compression/decompression will take place.
The attendant set has not access to the voice mail for consultation of the messages of a voice mailbox.
Rerouting of Fax is not supported.
The 4645 supports only DTMF sent in the signaling.

- Voice Guides.

GD/GA board supports maximum 4 languages for voice guides (including music on hold).
As of Release 8.0, GD/GA allows the playing of 40 min music on hold.
The USA voice guides are the default A4645voice guides.

- DSP resources per GPA.

The **maximum number of DSP resources per GPA-GD** is fixed as following (**not extensible**):

DTMF Generation: 16.
R2 detection + DTMF Q23/Q23X Detection + Tone (single and dual) Detection:
payload of 5 % for R2:
⇨ maximum 20 detections for R2 when no Tone Detection,
payload of 4 % for Q23/Q23X:
⇨ maximum 25 Q23/Q23X detections when no Tone Detection,
payload of 3 % for Tone Detection:
⇨ maximum 30 Tone Detections when no Q23/Q23X detection.
Voice Guides Play: 16.
Addition (3-Party conferencing, discrete listening, etc.): 3.

The maximum number of DSP resources per GPA-MEX is fixed as following (**not extensible**):

DTMF Generation: 16.
R2 Detection + DTMF Q23/Q23X Detection + Tone (single and dual) Detection:
payload of 7 % for R2:
⇨ maximum 14 detections for R2 when no Tone Detection,
payload of 6 % for Q23/Q23X:
⇨ maximum 16 Q23/Q23X detections when no Tone Detection,
payload of 4 % for Tone Detection:
⇨ maximum 25 Tone Detections when no Q23/Q23X detection.
Addition (3-Party conferencing, discrete listening, etc.): 3.

The **maximum number of DSP resources per GPA-GA** is fixed as following (**not extensible**):

Addition (3-Party conferencing, discrete listening, etc.): 3.
Voice Guides Play: 16.

Mutual aid between Media Gateways regarding DSP resources is not provided (excepted for Voice Guide Play).

- Call Center and CSTA.

SOSM (Russia) is only available with 4400 hardware. An evolution of the box for Common Hardware is being developed.

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EAU (United Arabian Emirates) is available.

- A-Law/μ-Law.

The A-Law / μ–Law configuration is valid for the whole system.
DPT1-2 board does not allow any more the A-Law / μ-Law conversion.

- PSTN synchronization.

In case of common hardware, the PSTN access must be in the main rack (not in extension racks).
In case of common hardware or IP crystal Media Gateway, the synchronization is local to the Media-Gateway => synchronization by domain must be configured (Synchro Number 200 to 254).
ACT 99 can't be synchronizing.

- eRMA.

The connection is lost in case of Call Server switch-over.
The connection won't work if the Call Server Application is not running.
Only one simultaneous connection is possible.
eRMA connection works only in case of switching network connection on the GDx (does not in case of access work through an ABC-F link).
eRMA feature is not available if the concerned Media Gateway encrypts directly the signaling (MGsec).

- Back-up signaling.

The time to recover the telephonic functions in case of back-up link activation is about 3 to 6 minutes depending on the Media Gateway configuration and the type of signaling link used for the back-up.
The number of digits expected when receiving the back-up call must be managed; see the Technical Documentation.
The boards used for the establishment of the back-up link must be in the main rack.
In case of Crystal Server, it is mandatory to have a Media Gateway near the main zone to have the backup feature.
In case an APA link is used for back-up signaling, this APA link will be dedicated for the back-up signaling.
DASS2 or DPNSS links are not supported as back-up links.
No IP Phone in dynamic address.
No 4049 nor 4059 attendant station behind a Media Gateway with potential back-up link. Connection of Hybrid link/H323 links behind a Media Gateway with potential back-up link is possible.
The following features are not accessible/provided when the back-up link is active:

Feed-back tone to the sets when dialing (except for IP-Phone V2).
Access to voice mail 4635H or 4645.
Call Center.
4980 PC MM won't work because the OTS server will not be accessible.
Only local calls between the sets attached to the Media Gateway (including the IP-Phones attached to the Media Gateway) or external calls through the local PSTN connections are possible.

- Remote Extension.

Doesn't work with NDDI, APA, DASS2 and DPNSS.
In VoIP network with the algorithm G723/G729, the public access has to be in the same node that the remote extension otherwise there will be DTMF detection problem. It works correctly with the G711 algorithm.

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18 TECHNICAL SUPPORT

Technical support will be provided to certified ACSE or ACFE engineers. The engineer must provide the valid SMS/SES or SPS contract id (Support processes available on the Business Portal under the heading Customer Support > Technical Support > Support processes).

Before contacting Alcatel's Business Partner Support Center (ABPSC), make sure that you have consulted:

- The Troubleshooting Guides (Diagnostics support guides) where they exist and perform the actions suggested for your system problem (available on the Business Portal under the heading Customer Support > Technical Support > Technical Documentation Library.
- The Technical Knowledge Center tool to perform a search, get a result, print the article or send it by email. This is the Alcatel-Lucent Enterprise Customer Care knowledge tool for Alcatel-Lucent Communications and Network solutions (available on the Business Portal under the heading Customer Support > Technical Support > Technical Knowledge Center): Technical Knowledge Center

19 INTEROPERABILITY with Third-Party applications

In case of interoperability with Third-Party applications, it is highly recommended to verify the interoperability either by contacting the Third-Party supplier or by checking the existence of a valid "InterWorking Report" on the Business Portal.

Technical support will be provided only in case of a valid InterWorking Report and in the scope of the features which have been certified. That scope is defined by the InterWorking report via the tests cases which have been performed, the conditions and the perimeter of the testing as well as the observed limitations. All this being documented in the IWR. The certification does not verify the functional achievement of the AAPP member's application as well as it does not cover load capacity checks, race conditions and generally speaking any real customer's site conditions.

Any possible issue will require first to be addressed and analyzed by the AAPP member before being escalated to ALE.

For any request outside the scope of this IWR, ALE offers the "On Demand Diagnostic" service where assistance will be provided against payment.

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20 RESTRICTIONS or SPECIFIC PROBLEMS OF R100.1 Technical Release

20.1 GAS server

- Installation is possible on server X3250 M3 IBM with the use of bootDVD 12.5.22 minimum (EFI boot issue) and GAS version 10.04 minimum

20.2 GD

GD4: mg4_2.01 will be upgraded only from **mg4_1.19**

20.3 Sets

- ALE-300 sip cannot be deployed with 8770

20.4 Telephonic features

- Set supervision between noe and sip: restriction from N2.514.11.a is now removed in this patch. Anyway, there is still a restriction that is common with R100.0:
    - Network supervision: only local sets can be supervised. This feature was not operational in N1 neither in N2. It needs development.

  Consult also the latest edition of TC2992 for additional information

21 README & LIST OF FIXES / Major open points

The list of fixes can be found in the delivery of the static & dynamic patches:
<dhs3mgr>\<PATCH NAME>readme (text file)
It also shows the name & versions of the components being modified from the previous patch.

The anomaly reports that are fixed have the tags "RA CROXES" or "RA CROXE" followed by the internal ALE reference & a short description of the reporter.
New components have the tag "New"

21.1 Major CR still opened

21.1.1 Major issues to be fixed in a further patch MDx

Summary	Group
mail: Unknown command: "fwdretain"	Generic
CSTA: logon DSU/DSS wrong CSTA sequence	Generic

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Many incident major failure on Sip with SIP voice Mail Number	Generic
[Related] : [86x8][BT Audiohub] In some cases after an internal call, the audio of an audio hub call is neither on the 86x8 nor on the smartphone	Generic
OXE/N2: Backtrace occurs when the old IPT user is deleted and recreated again	Generic
[Alpha]Call server reboot after switched to main	Generic
OXE N2- Noise observed in encrypted rainbow call from rainbow web client	Generic
[Alpha] [CTL] strange format of some certificates in ctl_VHE8082	Generic
Alpha : backtrace in MAOA : asn_get_length	Generic
[Related]: A Switch calls with new "circle┬áwith arrows" C release automatically the call	Generic SEPLOS
GD4 stays OOS when BATMODE is activated and Ethernet link disturbance	N1 GD4
GD4 IPv6: ABCF IP link network call is not established when Network Media Network=IPv6	N1 GD4
GD4 IPv6: Call is released when an IPv4 phone supervises an IPv6 phone in a remote node	N1 GD4
GD4 IPv6: No voice after an immediate transfer of the attendant	N1 GD4
ALE-120: key management is NOK while converting from 8028s set to ALE-300 terminal	N2 AOM ALE-120
[Related] : ALES 1.5.13: The conference is not displayed on the ALES who doesn't initiate the conference	N2 Multi-codec
OXE N2 Lab system: not possible to customize certificate using a CSR from OXE and import of PKCS7 files	N2 Use of FQDN in OXE certificate
[Related] : ALE-300 SIP [MMI] Recall by the voicemail messages displayed an outgoing call with voicemail displayed	N2-MD1 ALE 300 in SIP mode
ALES Android|PC|3pc conference: if one of participants is GSM (external) number: One stays in hold	Support of ALES
ALES/OXE/Sometimes prog keys those numbers are already filled on OXE are created without autofill number field	Support of ALES

22 PATCH .23.b (content, added from latest released patch .12)

New firmwares added from previous version released:

- oms: 12.02 (ALE-120 aom module)
- sip86x8P: 1.00.07 (ALE-300 sip)
- dect8212_0015.0003 (Dect 8212)
- mg4_2.03 (GD4)

23 PATCH .23.c (content, added from latest released patch .12.b)

New firmware added from previous version released:

- /DHS3bin/downbin/wifi/mipt8r2bin + /DHS3bin/downbin/wifi/81x8s.bin: 2.2.26 (wifi sets)
  81x8s wifi sets downgrade to that version

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Submitting a Service Request

Please connect to our eService Request application.

Before submitting a Service Request, please be sure:

- The application has been certified via the AAPP if a third party application is involved.
- You have read the release notes that list new features, system requirements, restrictions, and more, and are available in the Technical Documentation Library.
- You have read through the related troubleshooting guides and technical bulletins available in the Technical Documentation Library.
- You have read through the self-service information on commonly asked support questions and known issues and workarounds available in the Technical Knowledge Center.

- END OF DOCUMENT -

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