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# OmniPCX Enterprise

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URGENT

NOT URGENT

PERMANENT

# SUBJECT : INSTALLATION PROCEDURE FOR VERSION J1.410.34.C – RELEASE 10.0

This is the technical release of OmniPCX Enterprise with the version J1.410.34.c. It corresponds to Release 10.0.

It is available on Alcatel-Lucent Business Portal (<u>https://businessportal.alcatel-lucent.com</u>) and on DVD with the references 3BA 27740 AAAB (non secured version) and 3BA 27741 AAAB (secured version).

Technical modes to change the release, new features, registered restrictions and controlled features are described in the installation procedure for version J1.410.34.c.





# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

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# **APPENDIXES**

# **APPENDIX 1 - NEW FEATURES**

# **APPENDIX 2 - REMARKS & RESTRICTIONS**



INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0



# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

# 1. APPLICATION DOMAIN

# WARNING

This document applies to the OmniPCX Enterprise Release 10.0 in standardized version J1.410.34.c. In term of corrections, patch J1.410.34.c is at the same level than G1.503.35.g / H1.301.48 / I1.605.23 and only introduces new features.

Additional corrections of major RAs, coming from 11.605.24 to 11.605.26 have been integrated selectively.

This document is based around a central document, the Release 10.0 installation procedure, and appendices which describe:

- The restrictions and remarks.
- The new features.

### Note

The appendices below of previous installation procedures were removed from this document and replaced by technical communications to make easier their search and their update:

- The comparison of licenses from R5.0 Ux.
- The migration from an OmniPCX 4400 to an OmniPCX Enterprise.
- The synchronization of the system after migration to an OmniPCX Enterprise with an Appliance Server.
- The reminder of features released in previous releases.

# 2. **REFERENCE DOCUMENTS**

Technical communications:

TC0150 Configuring the OmniPCX 4400 as "boot server" for IP Phones attached to networked OmniPCX 4400

TC0155 Compatibility of Alcatel 4635 with OmniPCX 4400 backplanes (Reminder of restrictions)

TC0230 CPU6 Step2 board - 3BA23197 AA

TC0259 Alcatel 4635 - Migration procedures

TC0274 DECT Compatibilities

TC0297 Change of external/internal ringing melodies in Release 4.2

TC0298 Migration from Alcatel 4630 voice mail to Alcatel 4635 voice mail

TC0328 Wrong initialization of "Antenna Diversity" after translating from Release 3.0 to Release 3.1, 3.2M, 4.1, 4.1.1

TC0336 Setting the T38 fax over IP application (with MP-102 version 4.0)

**TC0418** Compatibilities

TC0487 Migration ACD-V1 to CCDistribution

TC0594 Coupling a Bluetooth device on Alcatel IP Touch set 4068



## INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

TC0680 Risk of wrong negotiation of speed and duplex mode of Ethernet interfaces for INTIPs, GA & GD after software upgrades

TC0682 Stop of dynamic patch delivery from Release 6.1.1

TC0712 Modem, Fax, Data transparency over IP

TC0777 Comparison of licenses from Release 5.0 Ux

TC0778 Migration OmniPCX 4400 to OmniPCX Enterprise

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

TC0780 New hardware and features from Release 5.1

TC0781 Migration of Mobile IP Touch from Release 1.x to Release 2.x

TC0941 VoWLAN compatibility

TC0944 Configuration, incidents & log files recovery

TC1106 Thomson ST20xx SIP sets deployment

TC1108 Native SIP Call Controller: White list

TC1212 CS-2 board introduction

TC1254 Technical Release Note for Device Management Server 1.2.000.020

TC1255 4008 / 4018 SIP set deployment with OmniPCX Enterprise

TC1271 Checks for integrity and authenticity of downloaded software

TC1290 LLDP-MED on IP Touch sets

TC1319 Installing and using the OmniPCX Enterprise PC Installer v2.26 software

TC1373 Alcatel 4635 - Installation procedure for version 5.4.9 - Release 5

TC1410 Alcatel 4059 MAC / IP - Installation procedure for version 5.2.3

TC1418 Technical Release Note of VoWLAN R5.0

- TC1435 Technical Release Note of OmniTouch 8118/8128 WLAN handsets version 2.2.29
- TC1448 Technical Release Note for OmniPCX Enterprise Release 10.0 Version J1.410.34.c

TC1458 One way VoIP calls or white calls on installation with INTIP3A boards behind firewalls and SBC

TC1479 OmniVista 4760 - Installation procedure for version 5.2.01.03.d - Release 5.2

TC1500 Technical release note for MylCPhone in an OmniPCX Enterprise R10 Hotel environment - Release R200 version 01.026.5

TC1501 OmniVista 8770 - Installation procedure for version 1.0.20.01.b - Release 1.0



# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

# 3. INTRODUCTION TO RELEASE 10.0

Release 10.0 (version J1.410.34.c) is a major release.

## Note

In term of corrections, patch J1.410.34.c is at the same level than I1.605.23 and only introduces new features.

Additional corrections of major RAs, coming from 11.605.24 to 11.605.26 have been integrated selectively.

The program of certification is available on Business Portal.

This document indicates the steps necessary for installing version J1.410.34.c for:

- a new installation,
- an evolution from R5.0 Lx, R5.x, R6.x, R7.x, R8.x, R9.0, R9.1 to R10.0
- a migration from OmniPCX 4400 to OmniPCX Enterprise R10.0 controlled by OmniPCX 4400 CPU type or Appliance Server (AS).

New features from Release 10.0.

# 3.1 New hardware

- New eZ32-2 board with CPC (Calling Party Control) support.

# 3.2 New features

### 3.2.1 Increasing provisioning level

- Increase number of hunting groups
- Increase number of Phone Class Of Service
- Increase number of attendant groups
- Increase number of boss per secretary

# 3.2.2 Localization

- Japanese support on 4059 (Windows 7)

# 3.2.3 Terminals

- Support the OmniTouch 8118 and 8128 WLAN handsets
- 8082 MyICPhone support in hospitality environment (waiting for MyICPhone 8082 and 8770 versions availability).

### 3.2.4 SIP Enhancement

- SIP Trunk enhancement: CLI display with From header, even if P-Asserted-ID header is available (Incoming call)
- SIP Trunk enhancement: Service route header (RFC 3608) and Path header (RFC 3327)



## INSTALLATION PROCEDURE FOR VERSION J1.410.34.c - RELEASE 10.0

- SIP Trunk enhancement: Faster overflow on no answer to INVITE, REGISTER and OPTIONS method
- SIP MyIC PC: Overflow on associate when out of order

# 3.2.5 Security

- Copy process from etc/host to swinst/.rhosts

## 3.2.6 Call Handling features

- FlexOffice enhancement
- Call park timers
- Emergency Call to Attendant (with 4059IP version 5.2.5).

### 3.2.7 Applications

- Alcatel-Lucent 4059 on Windows 7 32bits
- OmniPCX Enterprise PC Installer on Windows 7 32bits

### 3.2.8 Serviceability

- Remote download evolution

### 3.3 Features under PCS

If one of the following features has to be implemented on an OmniPCX Enterprise, contact Technical Support for the deployment:

- SIP TLS/sRTP for external SIP Gateway

### 3.4 Features availability in progress

- SIP trunking.

Interoperability tests with new carriers done under the control of the SIP Bid Desk.

The following features are in validation progress and will be available in an upcoming OmniPCX Enterprise patch

- New SIP improvement for interworking with OpenTouch Solution
- Call Routing Groups
- NOE in SIP protocol encapsulation



# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

# 4. CONTENT OF THE SOFTWARE PACKAGE

The software package contains the OmniPCX Enterprise J1.410.34.c application.

The different versions of the OmniPCX Enterprise application modules are:

- Linux : 72.0
- Linux Package : 72.3
- swinst : 2.63.0
- PC Installer : 3.2

- OmniPCX Enterprise R10.0: J1.410.34.c: J1.410 complete version

J1.410.34 static patch

J1.410.34.c dynamic patch

SJ1.410.34.c secured patch (Note)

## Note

The access to secured patch is only given on request after filing the appropriate document posted on Business Portal Customer Support > Technical Support > Software download > OmniPCX Enterprise > OmniPCX Enterprise > All Release > Generic > Request for Security Patch Access.



From Release 6.1.1, dynamic patches will be no more delivered. They are replaced by static patches; refer to the technical communication TC0682 Stop of dynamic patch delivery from Release 6.1.1.

# Reference of compatible CD-ROMs and DVD

### REMINDER

As of Release 6.1, the software is only delivered on DVD.

CD-ROM/DVD	Reference	MD5 checksums (1)
Version J1.410.34.c (DVD)	3BA 27740 AAAB	62fda425d70025a35c048e907d15faf2
		*Image_R100_J141034c.iso
Secured Version SJ1.410.34.c	3BA 27741 AAAB	85adb9c5c518371fd92fff19fb714250
(DVD)		*Image_R100_SJ141034c.iso
System voice guides v5.3	3BA 57423 AAAG	
OmniVista 4760 R5.2.01.03.d	3BH 11632 AKAA	4bf879c27952dd851462a8412fde6a19
		*CD Version R5.2.01.03.d.iso (2)
OmniVista 8770 R1.0.20.01.b	3BH 11669 AAAC	(3)
SIP Device Management Server	3BH 11761 AAAD	392937c3530b40f1101d040631483065
1.2.000.020 – Release 1.2		*image_dm_12000020.iso

- (1) Before installing the software, we strongly advise you to check the integrity and authenticity of the software. For detailed information about checksums, please refer to the technical communication TC1271 Checks for integrity and authenticity of downloaded software.
- (2) This checksum concerns only the DVD containing the OmniVista 4760 software Release R5.2.01.03.d reference 3BH 11628 AMAA.



### INSTALLATION PROCEDURE FOR VERSION J1.410.34.c - RELEASE 10.0

(3) This checksum concerns only the DVD containing the OmniVista 8770 software Release R1.0.20.01.b reference 3BH 11670 AAAC.

#### Note

PSP software (Phone Set Programming) is not delivered with J1.410.34.c and SJ1.410.34.c DVD versions.

PSP software is available on Business Portal (<u>https://businessportal.alcatel-lucent.com</u>) in section Customer Support > Technical Support > Software Download > OmniPCX Enterprise > OmniPCX Enterprise > Phone Set Programming.

This version is compatible with OmniPCX Enterprise Release 10.0.

#### List of binaries in version J1.410.34.c

The new binaries of the version are in bold characters.

<b>D</b> imension	<b>Released R10.0 Versions</b>		
binaries	J1.410.34.c		
Binaries re	lative to system		
bios CPU5 Step3 <u>(3)</u>			
bios CPU6 Step2 <u>(1)</u>	3BA24095AAAB08_4.8		
bios CPU7	3BA24115AAAA16_3.02		
bios CS	10.14		
bios GD	10.14		
bios CS-2 (AMI)	3EU24009AAAA01_9.0		
io1n	16		
io2	4.6		
io2n	5.17		
linux_patch	72.3		
obca	1.5		
pc_install	3.2		
swinst <u>(2)</u>	2.63.0		
Binaries re	elative to DECT		
dect4	7.9		
dect8	1.28		
ibs_appli_ng	49.03		
ibs_boot_ng	71		
ibsng	18.06		
rbsng	53.0		
startibsng	0.71		
Binaries relative t	o compression boards		
binintip_appli	16.03		
bindsintip	4.37.3		
bindsintip2	3.44		
bootintip	6.10		
mg_appli	46.04		
binmcv	3.9.0		
binmcv2	3.44		
mg_version_country	1.1.13		
ioip	4.08		
lio_comp2	3.40		



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Pingrios	<b>Released R10.0 Versions</b>		
bindries	J1.410.34.c		
rlio_comp2	3.27		
mg3	3.35		
intip3	3.35		
Binaries re	elative to sets		
noeip	4.31.00		
bin40x8	4.31.00		
dat40x8	4.31.00		
noe40x8	4.31.00		
noeipG	4.31.01		
bin40x8G	4.31.01		
dat40x8G	4.31.01		
noe40x8G	4.31.01		
noesip4018	2.10.90		
noesip40x8G	2.10.60		
Binnoeuax9	3.81.00		
Binnoeua19	3.81.00		
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		
chi_4068	2.01.00		
chi_40x8	2.01.01		
chi_40x9	2.01.01		
ipphone	2.31		
tscip	5.2		
tscipv1S	3.0		
Secure	d binaries		
noeip	4.36.00		
bin40x8	4.36.00		
dat40x8	4.36.00		
noe40x8	4.36.00		
noeipG	4.36.01		
bin40x8G	4.36.01		
dat40x8G	4.36.01		
noe40x8G	4.36.01		
SM modules (Thales) <u>(4)</u>	3.3.05		
mg_appli	46.04		
security Thales library	1.1.02		
mg3	3.85		
intip3	3.85		
Thales SRTP client	1.0.06		
Thales VPN client	1.1.03		
Binaries rel	ative to boards		
brapra	2.06		



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Dimension	<b>Released R10.0 Versions</b>		
bindries	J1.410.34.c		
c1nvgpa2	3.4		
c1nvua	5.0		
c1nvz32	3.2		
cpl2dpnss	1.11		
dpnss	2.3		
dpnssnv	2.3		
dpt1	2.05		
dsp_emtl24021	3.01		
dsp_gpa	2.01		
dsp_vgu	1.5		
dsp0Z32	1.02		
dsp1_gpa2	1.09		
dsp1nddi2	2.01		
dsp2 gpa2	1.10		
gpa2tns	1.11		
gpa	2.24		
intof	1.24		
intofssync	1.05		
intof2	2.4		
ivrZ24	2.0		
lia	4.18		
lioebbc2	3.05		
lio b/p/x	3.25		
mic2	2.31		
nddi	2.5		
nddi_in	2.7		
nddi2	2.22		
nprae	2.06		
pcm2_ru	1.6		
pra	2.06		
pra2	2.26		
rma	3.04.04		
tonesnv	2.17		
υα	3.8100		
uscvg	2.9		
Binaries relat	ive to attendants		
tbc	2.13		
mapacs2	2.01		
ta/mac	4.7		
ta/pac	2.01		
Binaries rela	tive to VoWLAN		
noemipt_r2	109.025		
noemipt_r3	120.027		
noemipt8_r100	2.2.9		



# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

- 1 The delivery of a new CPU6 Bios requires to reboot the PABX after installing the dynamic patch.
- 2 You should connect to **swinst** to complete its installation.
- **3** CPU5 Step3 is no longer supported from Release 8.0.
- **4** SM Modules Thales: this is the reference seen in mgr.

# 5. **BEFORE STARTING**

## 5.1 Applications, functionalities not supported by Release 10.0

### REMINDER

As of Release 5.1, some applications and functionalities of Release 5.0 Ux are no more supported, and will have to be replaced by others.

The table below shows all the applications and functionalities which are no more provided by OmniPCX Enterprise R10.0, whatever hardware used.

Migration batches exist including a specific rate, which have been defined and taken into account automatically by Actis R16.1.

Family	Type of application	Migration to	Compulsory deletion/ modification before migrating to R10.0	Documentation
47xx	OmniVista 4760i (3)	mgr or OmniVista 4760	Not applicable	System Documentation
	4715			
	4730	OmniVieta 1760 P5 2	No	TC1470
	4740	Official 4700 K3.2	INO	101477
	4740 PTP			
	4730i	mgr or OmniVista 4760	Not applicable	System Documentation
	4755	OmniVista 4760 R5.2		TCV010
	4000 Directory Server	4760 LDAP Server	No	TCV017
	Directory PC Client for	4760 Directory Client	110	TC1479
	4755/4000			
Voice mail	4630	4635J (default) or 4635H2	Yes	TC0298
	4620 or VPS35 (1)	4635 VPM35 or VPU6	Yes	No
	4635 VPCPU	4635 VPM35/VPU6	Yes	TC0155, TC0259,
	4635 VPCPU-1	4635 VPM35/VPU6	Yes	TC1373
ACT migration	4300	Manage the equipment in the new ACT	Yes	No
	2600, 4600	Delete all equipment and manage it in a new ACT	Yes	No
	5400	Delete all equipment and manage it in a new ACT	Yes	No
ACD-V1	ACD-V1	CCD R7.1	Voc	TC0487
	4735 & 4736	CCS	res	100407
	4961 first party TAPI middleware	No migration – Not supported	Not applicable	No



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Family	Type of application	Migration to	Compulsory deletion/ modification before migrating to R10.0	Documentation
	4973 Telephony	Not supported (Replaced		
	Assistant	by OmniTouch UC My Phone)	Not applicable	
Others	Alcatel Unified Messaging	Not supported (Replaced by OmniTouch UC)	Not applicable	
	SPB	IO2, IO2N or IP/V24 module	No	System Documentation
	Datcol	No migration – Not supported	Not applicable	Not applicable
	Overflow on QoS (VoIP)	Not supported	No	No
	CPU2, CPU3, CPU5 Step1/Step2/ Step3	Replaced by CPU6 Step2 - 128 MB CPU7 – 256 MB or Appliance Server (depends on the Actis configuration)	No	No
	LIOE & TSC-LIOE (2)	INTIP	Yes	No
	INT1/INT2	INTOF	Yes	No
VoWLAN	VoWLAN R1.x	VoWLAN R5.x	No	TC1418

- (1) VPS35 board is replaced by the VPU6 board for any migration towards OmniPCX Enterprise R10.0.
- (2) The boards are not authorized on the nodes of a network.



# LIOE boards are in phase out from Release 6.1. They are no more supported by Release 10.0.

(3) As of Release 10.0, OmniVista 4760i is no more supported and can't be activated anymore. Use mgr or OmniVista 4760 to configure the OmniPCX Enterprise. In case of upgrade to Release 10.0, the application will be deactivated, if previously activated.



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# 5.2 Applications and functionalities dependent on CPUs and hardware platform used

Depending on the type of CPU (CPU6 Step2/CPU7, Appliance Server, Call Server in rack) and the hardware platform used (Crystal or common hardware), certain applications or functionalities are not authorized.

		CPI16 Stop2		Ар	pliance Server
		CPU8 Slep2 CPU7	Call Server	Common hardware	Crystal hardware
Voice mail	4645	No	Yes	Yes	No
	4615 / VMU-OBCA	Yes	No	No	No ⇔ 4635J (VPU5) (2)
	4615/VMU-OBCA2 (1)	(only with CPU6)			
Various	Campus DECT	Yes	No	No	No (4)
	DTM for DECT on	Yes	No ⇔	No ⇒	No ⇔ DECT8 (2)
	CPU6		DECT8	DECT8	
	VG on CPU6	Yes	No	No	No ⇔ GPA2 (2)
	DTMF	Yes	No	No	No ⇔ GPA2 (2)
		(on CPU6 & CPU7)			
	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	No	No	No (5)
		(only with CPU6)			
	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

- (1) Can no more be configured in a new business account.
- (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.



# REMINDER

DECT2/DECT4 and DECT4 HB boards are in phase-out. They are supported by Release 10.0 but can no more be configured for addition or for new installation.

- (3) Manual modifications are required.
- (4) No alternative possible.
- (5) Boards IO2, IO2N (30 B channels), OBCA and OBCA2 (3 B channels) do not exist with an Appliance Server or Call Server. A certain number of applications and functionalities are therefore no more supported, such as:
  - Extension of V24 physical ports via SPB board on which applications were managed (greeting management, hotel, login, etc.).
  - 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.).



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- 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).

# 5.3 VoIP network conformity check

The OmniPCX Enterprise R10.0 is a native IP product when using a CPU-CS, CS-2 or Appliance Server 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 Business Portal for the methodology, recommendations and tools to secure the 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.

# 5.4 Recommendations and 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.

# 5.5 DECT

Each system equipped with DECT needs **a unique PARI** configured in the system. To obtain the PARI, consult the e-Flash eND03007D 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 4400 configuration.



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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.



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.

# 6. CONDITIONS FOR INSTALLATION IN NETWORK

As of Release 10.0, the RTP direct mode in network is activated by default and can't be de-activated (the parameter has been removed).

In case of migration to Release 10.0, the RTP direct mode will be automatically activated.

The complete ABC-F network must be managed in accordance and all devices / boards incompatible with RTP direct mode in network removed before the migration. As a consequence, systems in Release up to 5.0 Ux can not be in a network having a PBX in Release 10.0.



As of Release 8.0, the limit capacities of the system have changed.

The increase of these capacities can generate an increase in the number of equipment by Call Server.

Beyond 27000 equipments, a system is regarded as XL or "Large Capacity". This limit is determined by Actis. If this limit is exceeded, Actis sets the PARA\_MAO 24 to 1 (Large Capacity configuration).

Two types of systems are to be considered as of Release 8.0:

- System of which the number of equipment does not exceed 27000 (identified with 2 bytes) : idem Release 7.1
- System of which the number of equipment exceeds 27000 (identified with 4 bytes): System considers as XL or 'Large Capacity"



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## Network interworking

Each node of a network must be in Release 8.0 or higher if one of conditions below exist on one of node of the network:

- A R8.0 node or higher in XL mode
- 50 000 users and more in network
- 1000 entities and more on a node of network
- 200 DDI translator ranges and more on one node of network
- 50 NPD and more on one node of network
- 30 DCT and more on one node of network



As the T38 fax mode between Media Gateways is implemented only in Releases 8.0.1 (since patch G1.503.35), 9.0, 9.1 and 10.0, no faxes exchange will be possible via IP between a Release 10.0 node with NGP boards and nodes in Release prior to 8.0.1 during the temporary progressive migration phase.

Networked interworking rules for a system in Release 10.0 of which the number of equipment does not exceed 27000 (identified with 2 bytes), have evolve compared to a system in Release 7.1 as described hereafter.

# As of Release 7.0 and with the implementation of name using UTF-8 format, the networked interworking rules have evolved.

It is authorized to operate a Release 10.0 in a single sub-network only with systems having at least the versions below:

- R9.1 : I1.605.12
- R9.0 : H1.301.24
- R8.0.1 : G1.503.9
- R8.0 : G1.302.5
- R7.1 : F5.401.7
- R7.0 : F4.401.13
- 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.z (patch for compatibility UTF-8)

Cohabitation in a single sub-network of a Release 10.0 with Releases 5.1.x, 6.x, 7.x is only authorized temporarily to allow progressive migration to the latest supported release (in case of 5.1.x and 6.0, UTF-8 must not be activated in the network).

Cohabitation in a single sub-network of a Release 10.0 with Releases < 5.0 Ux, 5.0 Ux, 5.0 Lx is not authorized.



During progressive migration and depending on certain topologies and hardware used, there may be poor audio quality; see chapter 7.





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As of Release 7.0, the number of entities and IP domains changes to 1000 (in Releases < 6.2, the number of entities is 255 and the number of IP domains is 128). In a network, these limits are allowed only if each node of the network is in Release 6.2 or higher.



In Release 10.0 and on each node of the network (whatever their version) cohabiting with R10.0:

- LIOE and TSC-LIOE boards must be replaced by INTIP or INTIP3 boards.
- INT1 and INT2 boards must be replaced by INTOF/INTOF2 boards.



If using Gigabit sets, refer to the technical communication TC1090 Wrong IP Touch Ethernet port speed negotiation to know the versions to be used on the nodes in release lower than 10.0.

## 6.1 Installation of Release 10.0 in network with Releases 5.1.x, 6.x, 7.x and 8.0

During the cohabitation period you must prohibit:

- broadcasting of the database and not carry out any audit,
- on the Release 10.0 node, sending of the names in UTF-8 format in the network (set the Enable UTF8 in ABCF network system parameter to False) if a node is not in a UTF-8 compatible version (see above).

Releases 5.1.x, 6.x, 7.x and 8.x are allowed to cohabite temporarily in a sub-network environment with Release 10.0 to allow progressive migration, with the following restrictions:

- The **Enhanced Voice Quality** (**Framing VoIP**) parameter must be identical on each node of the network.
- The LIOE and TSC-LIOE boards are not authorized in heterogeneous network functioning.
- The H323 Inter-node protocol parameter must be set to Yes.
- The **Direct RTP** (in network) parameter must be set to **Yes**.
- See table in 7.4.2.
- If NGP boards are present in the Release 10.0 node, no faxes exchange via IP will be possible between this Release 10.0 node and nodes in Releases 5.1.x / 6.x / 7.x, as these releases don't support the T38 fax mode between Media Gateways.

#### Note

Release 5.0 Ux cannot cohabite, even shortly, in a sub-network environment with Release 10.0, as it does not support RTP direct mode in network.

### 6.2 Installation of Release 10.0 in network Releases 8.0.1, 9.0 and 9.1

Releases 8.0.1, 9.0 and 9.1 are compatible with Release 10.0 in a sub-network environment, with the following restrictions:

- Minimum compatible versions:
  - R9.1 : 11.605.12



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- R9.0 : H1.301.24
- R8.0.1 : G1.503.9
- The H323 Inter-node protocol parameter must be set to Yes.
- The **Direct RTP** (in network) parameter must be set to **Yes**.
- The T38 only parameter has to be managed in coherency amongst the sub-network. This parameter for the protocol to be used when sending faxes between Media Gateways is supported in all patches of Releases 9.0 and 9.1 and in 8.0.1 only from patch G1.503.35. NGP boards support only the T38 fax mode between Media Gateways.

# 6.3 Audit/Broadcast

## – Audit

All the tables not implemented in a Release generate the message below in the results of the audit for these tables:

Not Audited: Not implemented in the version but does not cause a blockage of the audit.

## Broadcast

On receipt of an unknown object in a Release, an error is signaled and an incident is generated.

## Note

Although the audit and the broadcasting must be inhibited during the period of cohabitation, for information purposes, these errors can be deleted by the versions below or higher:

- E2.404.b
- E2.502.2.e
- E2.504.1.e

The following tables are not broadcast:

- inst/desc/SIO parameters
- data/data prefix
- inst/desc/free numbers range list

# 6.4 Compatibility of external applications



In a heterogeneous network, it is essential to align the application versions with those of Release 10.0.

See paragraph 7.9 for the versions of applications compatible with Release 10.0. Certain applications are no more supported by Release 10.0; see paragraph 5.1.

# 7. COMPATIBILITIES

# 7.1 Reminder on boards supporting the Transit function and the direct RTP

The Transit function allows a reduction in the time introduced by a compression and decompression. This function is only available with the G723 and G729 algorithms.



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	Support of transit function (4)	Support of direct RTP function
LIO P/B/X COMP6 (1) (2)	No	Not applicable
LIO P/B/X COMP2 (2)	Yes	Not applicable
LIOE (3)	No	No
INTIP or INTIP2	Yes	Yes
GD or GA	No	Yes
GD3, GA3 or INTIP3	No	Yes

- (1) The LIO P/B/X-COMP6 board is not compatible in R6.x and R7.x. It is not authorized in a network with INTIP or GA/GD.
- (2) The LIOP/B/X boards are supported by Release 7.1 but can no more be configured for addition or for new installation.
- (3) The LIOE board is no more authorized in heterogeneous network.
- (4) There is no transit in G711 but packetization/depacketization.

# 7.2 Delay (in one direction) introduced by IP gateways

- In G711: Average delay of 100 ms for GD/GD2/GA/GA2/INTIP/INTIP2 Average delay of 71 ms for GD3/GA3/INTIP3 (60 ms for an IP Phone (e-Reflexes/ series 8))
- In G729: Average delay of 120 ms for GD/GD2/GA/GA2/INTIP/INTIP2 Average delay of 72 ms for GD3/GA3/INTIP3 (70 ms for an IP Phone (e-Reflexes/ series 8))
- In G723: Average delay of 150 ms for GD/GD2/GA/GA2/INTIP/INTIP2 Average delay of 95 ms for GD3/GA3/INTIP3 (90 ms for an IP Phone (e-Reflexes/ series 8))

In addition to the here above mentioned full NGP and full "GD/INTIP" configurations, the mixed case between a GD3/GA3/INTIP3 board and a GD/GD2/GA/GA2/INTIP/INTIP2 board will introduce the following one way average delay:

In G711	In G729	In G723
85 ms	93 ms	130 ms

Transit: approx. 20 ms (there is no transit in G711)

**Note**: All the figures given for the delay have been measured in a case without background noise and IP disturbance.

# 7.3 Delay (in one direction) from an IP Phone towards a set behind ACT or eMG

For GD/GD2/GA/GA2/INTIP/INTIP2 boards:

In G711	In G729	In G723	
approx. 80 ms	approx. 100 ms	approx. 120 ms	



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For GD3/GA3/INTIP3 boards:

In G711	In G729	In G723
approx. 71 ms	approx. 72 ms	approx. 95 ms

# 7.4 ABC-F2 compatibility depending on the hardware and the type of configuration used (with or without compressed voice)

The table in paragraph 7.4.2 presents cases of connection allowing an acceptable audio quality to be obtained (greater than index 3 of the MOS). The prohibitions in the table are not linked to problems setting up calls, only to obtaining an acceptable audio quality.

In this table you will find a summary of the different configurations authorized in ABC-F2 (from an audio point of view) between Releases 5.1 and 10.0. This table takes into account both a connection in VoIP and a T2, T0 or T1 type wire connection.

## 7.4.1 Rules used in the tables

## Note

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

- A maximum delay of 200 ms "One way" (one way, IP equipment + network) is authorized through IP (400 ms in Round Trip Delay). Beyond that, voice quality deteriorates.
- There can not be more than two passages in G711 during a call.
- The LIO P/B/X boards are prohibited once there are Media Gateway boards (except in certain cases where the connection is made through a Crystal IP Media Gateway).
- The LIOE are not supported since Release 6.0 nor on any node of a network cohabiting with Release 7.1 (whatever their versions even they allow it) minimum.
- H323 terminals are only compatible with configurations which allow to have a maximum delay of 200 ms "One way".
- Direct RTP is available for H323 equipment and all OmniPCX Enterprise Gateways (GDx, GAx, INTIPx) for voice and Fax T38.
- 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".
- In ABC-F networked configuration, all the nodes must be in Release 7.1 minimum to benefit the direct RTP for H323 terminals on all the nodes.
- 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).
- Only a single compression & decompression is authorized with GD/INTIP boards (use of the G723/G729 algorithm and one or two transits). Two compressions/decompressions are authorized only in cases of a call on VPN overflow (only used in an emergency).
- In configuration full NGP, a double compression & decompression will correspond to a MOS of 3.4 (resp. 3.6) in G729 (resp. G723). Configurations with more compression & decompression will lead to a one way delay higher than 200 ms and thus are not authorized.



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- In mixed configurations, ie with IP connections between NGP and GD/INTIP boards, only a single compression & decompression is authorized in case G723 is used, due to delay considerations. In case of G729, a double compression & decompression will correspond to a MOS of 3.4. In this last case, configurations with more compression & decompression will lead to a one way delay higher than 200 ms and thus are not authorized.
- In case of TDM link between two nodes, in order to limit the number of compression/decompression when sets of both nodes are involved in MyTeamwork conferences (and keep an acceptable voice quality), it is required to use G711 between the TDM link and MyTeamwork server (mandatory rule).
- The table takes into account configurations using the G723/G729 compression/decompression algorithm or configurations that do not use compression or which are in G711.
- With the IP rack server, there are considered to be at least two IP items of equipment (1 GD + 1 IP Phone or 2 GDs).
- SIP is not authorized in configurations **if the Direct RTP is disabled**.
- The internode VoWLAN calls (via VoIP hybrid link) are not authorized **if the Direct RTP is disabled.**



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## 7.4.2 Table of ABC-F2 compatibility

In case a Release 10.0 node (J1.410.34.c minimum) is connected in VoIP ABC-F2 (with or without compression) with another node in Release lower or equal to Release 10.0, there is no restriction as the Direct RTP in network is used.

The following table refers to the use of a TDM (T0/T1/T2) link between a Release 10.0 node and another node in Release lower or equal to Release 10.0.

			NGP			non NGP			Mix	
		G711	G723	G729	G711	G723	G729	G711	G723	G729
	G711	Y	Y	Y	Y	Ν	Y	Y	Ν	Y
NGP	G723	Y	Y	Y	Y	N	N	Y	N	Y (2)
	G729	Y	Y	Y	Y	N	Y	Y	N	Y
	G711	Y	Y	Y	Y	N (1)	N (1)	Y	Ν	Y (2)
non NGP	G723	N	N	N	N (1)	N (1)	N (1)	Ν	N	N
	G729	Y	N	Y	N (1)	N (1)	N (1)	Ν	N	Ν
Mix	G711	Y	Y	Y	Y	Ν	Ν	Y	Ν	Y (2)
	G723	N	N	Ν	Ν	Ν	Ν	Ν	Ν	Ν
	G729	Y	Y (2)	Y	Y (2)	Ν	Ν	Y (2)	N	Y (2)

- (1) In case Crystal IP (ACT) Media Gateway with INTIP boards is present on both nodes, transit function can be used and thus the configuration is authorized. In all other cases, it is not authorized, except if Crystal IP (ACT) Media Gateway with INTIP can be added in order to use transit function.
- (2) In case the TDM access is declared on a NGP Media Gateway (Common Hardware or Crystal), there is no restriction. Otherwise, if the TDM access is declared on a non NGP Media Gateway (Common Hardware or Crystal) and there is another non NGP Media Gateway (Common Hardware or Crystal) in this node, the configuration is not authorized (too important one way delay) unless the transit function can be used (case of INTIP).

### Notes

- 1. In the here above table, "non NGP" stands for GD/GD2/GA/GA2/INTIP/INTIP2 and NGP for GD3/GA3/INTIP3. "Mix" corresponds to a node with a mix of NGP and non NGP Media Gateways (Common hardware and/or Crystal).
- 2. As a general remark, in case of nodes linked with TDM link, it is recommended, when it is possible, to declare the access of this link on Crystal IP (ACT) Media Gateway with exclusively INTIP board, in order to benefit from the transit function of INTIP (reminder: this function is not present on INTIP3).

If the ACT, where the TDM access is declared, contains a mix of INTIP and INTIP3 (and on the other node, the access is declared on an ACT with INTIP or a mix of INTIP and INTIP3), as all compressors are considered as part of a single set, transit function will be available only if a compressor on INTIP is used. Otherwise a compression / decompression or packetisation / depacketisation will be done due to the use of the INTIP3. In the above table, for this specific configuration, refer to the INTIP3 case.



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# 7.5 Network & VoIP compatibility

## 7.5.1 ABC-F2 trunk group compatibility summary

	Release 10.0	Observation
< Release 5.0 Ux	ABC trunk group only	No progressive migration to a network
Release 5.0 Ux		UTF-8 compatibility: set the New Local Name
Release 5.0 Lx		UTF-8 for users system parameter to False
Releases	No Total compatibility	See table in 7.4.2
5.1.x	but progressive migration	Audit/Broadcast: E2.404.b - E2.502.2.e -
6.x	authorized (1)	E2.504.1.e
7.x		UTF-8 compatibility: Set the Enable UTF8 in
8.0		ABCF network system parameter to False if a
8.0.1		node is in a non-compatible UTF-8 version
(1)		Set the Direct RTP and H323 Internode
		Protocol system parameters to True in all nodes
Releases	Total	See table in 7.4.2
9.0	ABC-F compatibility	Refer to the technical communication TC1090
9.1	(2)	Wrong IP Touch Ethernet port speed negotiation if
		using Gigabit sets
		Set the Direct RTP and H323 Internode
		Protocol system parameters to True in all nodes

(1) This Release is no more supported. Only the progressive migration is allowed.

(2) See Appendix 2.

# 7.5.2 Number of compressors/algorithms that can be used with INTIPx and GDx/GAx

The term INTIP (resp. GD, GA) concerns INTIP boards as well as INTIP2 (resp. GD2, GA2).

### REMINDER

LIO P/B/X COMP6 and LIOE boards are prohibited as soon as there is a node in R7.1 in the network. Moreover, the LIO P/B/X -COMP6 boards are not authorized in a network with INTIP or GA/GD.



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				1	1
			G711	G723.1	G729
			With or w/out VAD	With or w/out VAD	With or w/out VAD
INTIP with	32 ms echo	GIP6A	14	14	14
2 daughter	cancellation	GIP6	56	56	56
boards	128 ms echo	GIP4-1	16	16	16
(1 & 2)	cancellation	GIP4-4	60	60	60
	32 ms echo	MCV8	8	7	7
GD or GA	cancellation	MCV24	24	21	21
	128 ms echo	MADA-1	8	8	8
	cancellation	MADA-3	24	24	24
GD3 or GA3 with 1 daughter board	128 ms echo cancellation	Armada	60	60	60
INTIP3 with 3 daughter boards (3)	128 ms echo cancellation	Armada	120	120	120

- (1) It is not authorized to have two daughter boards of different types on a same INTIP board.
- (2) The echo delay is not configurable, it depends on the hardware used.
- (3) Only the INTIP3A can have up to 3 daughter boards (1 daughter board maximum for INTIP3B). In case embedded encryption is managed on INTIP3A, only 1 daughter board maximum can be used (i.e. maximum 60 compressors instead of 120).

# 7.6 Alcatel-Lucent 4635 voice mail compatibility

# CAUTION

Check the compatibility of backplanes; refer to the technical communication TC0155 Compatibility of Alcatel 4635 with OmniPCX 4400 backplanes (Reminder of restrictions).

Below is a reminder of the compatibility between Alcatel-Lucent 4635 and OmniPCX Enterprise R10.0 software.

OmniPCX Enterprise Release ₽	VPCPU SCSI Disk	VPCPU-1 IDE Disk	VPS35 16 MB RAM	VPS35 (Note) 32 MB RAM	VPM35 (Note) 32 MB RAM	
10.0	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible	

OmniPCX Enterprise Release	VPM35 64 MB RAM		VPU5 16 ports		VPU6 (ROHS) 16 ports	
Û	Mini	Maxi	Mini	Maxi	Mini	Maxi
10.0	5.2.6	5.4.9	5.2.6	5.4.9	5.3.1	5.4.9

### Notes

- VPS35 board is replaced by the VPU6 board for any migration towards OmniPCX Enterprise R10.0.
- IMAP (A4635 version 5.2.6 or higher) and VPIM (A4635 version 5.1.4) require 64 MB of RAM.



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- Any problem found on a mini or intermediate version as regards maximum version must be the subject of a realignment of the maximum version before escalating the problem.

# 7.7 Hardware compatibility

As of Release 5.1, the mixing of hardware (crystal hardware & common hardware) is authorized.

- In the case of a CPU-CS or an Appliance Server, a single Crystal IP Media Gateway can be connected in **the main zone** to support operations such as 4635H2-J, DECT8, etc. Voice Hub, M1 or M2 are the supported cabinets.
- In the case of a CPU-CS or an Appliance Server with Crystal IP Media Gateways in the peripheral zone, there are no restrictions.
- In the case of an Appliance Server controlling crystal hardware in the main zone, there are no restrictions on the hardware used

In case of Multi-Countries systems, only Common Hardware can be used for secondary countries. Besides, in such configurations, Call Server and Passive Call Server functions can only be done with Appliance Server or CS-2 board.

### REMINDER

As of R5.0 Lx, only 1U and 3U shelf racks can be used: 2U shelf racks are not authorized.

For more details, see technical communications TC0418 Compatibilities & Evolutions.

# 7.7.1 CPU boards



# CPU2, CPU3 Step1/Step2/Step3 and CPU5 Step1/Step2/Step3 boards are not compatible with Release 10.0.

# CPU6 Step2 128 MB boards can be used with either the hardware key (dongle) or with the CPU-Id (software key). The CPU7 can only be used with the CPU-Id.

The table below indicates the editions of compatible boards.

#### REMINDER

The CPU5 boards have only a 10 Mbits Half Duplex Ethernet interface.

		Using the hardware key	Using the CPU-Id	Update possible of the CPUs in after-sales service
	3BA 23197 BAAB	Yes	No	Yes, becomes 3BA 23197 BAWB
	3BA 23197 BAWB	Yes	Yes	Not applicable
	3BA 23197 BABB	Yes	No	Yes, becomes 3BA 23197 BAXB
	3BA 23197 BAXB	Yes	Yes	Not applicable
Cr00 Slepz	3BA 23197 BACB	Yes	No	Yes, becomes 3BA 23197 BAYB
	3BA 23197 BAYB	Yes	Yes	Not applicable
	3BA 23197 BADB	Yes	No	Yes, becomes 3BA 23197 BAEB
	3BA 23197 BAEB	Yes	Yes	Not applicable
CPU7	3BA 23259 AA	No	Yes	Not applicable
CPU7-2	3BA 23259 ABJE	No	Yes	Not applicable



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For more details on the CPU6 Step2, refer to the technical communication TC0230 CPU6 Step2 board – 3BA 23197 AA.



CPU7-2 boards are only compatible from Release 7.1.

## 7.7.2 Common Hardware CPU boards

As of Release 8.0, CPU-CS boards must be equipped with 256 MB RAM:

References: Single SDRAM 256 MB: 3EH 75056 AA CPU-CS board equipped with 256 MB RAM: 3EH 73048 BB

CS-2 CPU boards are supported as of Release 9.0 (from patch H1.301.31.b). To install a software on a CS-2 board, PC Installer must be in version 2.24 minimum ; refer to the technical communication TC1212 CS-2 board introduction.

## 7.7.3 Appliance Server

### Only Alcatel-Lucent recommended Appliance Servers are to be used.

Status Phase to "Out": no more in OmniPCX Enterprise catalog

- O = Supported by the Release and in catalog
- S = Supported by the Release but no more in catalog
- N = Non supported by the Release
- \* = Only on addition

Appliance Server									
Model	Phase		OmniPCX Enterprise						
	Status	R6.2/R7.0	R7.1	R8.0.x	R9.0	R9.1/R10.0			
IBM 305	Out	S	S	S (2)	S (2)	S (2)			
IBM X306	Out	S	S	S (2)	S (2)	S (2)			
IBM X306M	Out	O (1)	0	O (2)	S (2)	S (2)			
IBM X3250	Out	N	0	O (2)	O (2)	O (2)			
IBM X3250-M2		N	O (5)	O (4)	0	0			
IBM X3250-M3		N	N	0	O (6)	O (7)			
HP DL320 G5		N	N	O (2)	O (2)	O (2)			
HP DL320 G5p		N	N	O (3)	0	0			
HP DL320 G6		N	N	N	O (6)	O (7)			

- (1) Minimum version = F3.301.16.d
- (2) Memory size = 1 GB
- (3) Minimum version = G1.503.11
- (4) Minimum version = G1.503.16.a
- (5) Minimum version = F5.401.36.d
- (6) Minimum version = H1.301.42.a
- (7) Minimum version = 11.605.16.c



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Model	References		
IBM X305	Alcatel-Lucent Reference: 3BA 00438 AA		
	IBM reference (in case of external purchase): Model Type : 8673-62X		
IBM X306	Alcatel-Lucent Reference: 3BA 27582 AB		
	Its installation can be carried out only as of PC Installer v2.17.		
	CAUTION		
	It must be ordered <b>only</b> via Alcatel-Lucent.		
IBM X306M	Alcatel-Lucent Reference: 3BA 2/582 AC		
(INOTE)	CALITION		
	Lt must be ordered <b>only</b> via Alcatel Lucent		
IBM X3250	Alcatel-Lucent Reference: 3BA 00617 BA		
(Note)	Its installation can be carried out only as of PC Installer v2 22		
	The IBM X3250 Appliance Server must not be equipped with SAS HW RAID		
	(LSI chipset - RAID 0.1) option.		
	CAUTION		
	It must be ordered <b>only</b> via Alcatel-Lucent.		
IBM X3250 M2	Alcatel-Lucent Reference: 3BA 27582 BA		
(Note)	Its installation can be carried out only as of PC Installer v2.22.		
	IBM X3250 M2 Appliance Server must not be equipped with RAID option.		
	CAUTION		
	It must be ordered <b>only</b> via Alcatel-Lucent.		
IBM X3250 M3	Alcatel-Lucent Reference: 3BA 27582 CA		
(Note)	Its installation can be carried out only as of PC installer v2.22.		
	CALITION		
	It must be ordered <b>only</b> via Alcatel-Lucent.		
HP DL320 G5	Alcatel-Lucent Reference: 3BA 00678 BA		
(Note)	Its installation can be carried out only as of PC Installer v2.22.		
<b>、</b>	The HP Proliant DL320 G5 Appliance Server must not be equipped with		
	RAID option.		
	CAUTION		
	It must be ordered <b>only</b> via Alcatel-Lucent.		
HP DL320 G5p	Alcatel-Lucent Reference: 3BA 27704 BA		
(Note)	Its installation can be carried out only as of PC Installer v2.22.		
	HP Proliant DL320 G5p Appliance Server must not be equipped with RAID		
	Lt must be ordered <b>only</b> via Alcatel-Lucent		
HP DI 320 G6	Alcatel-Lucent Reference: 3BA27704 CA		
(Note)	Its installation can be carried out only as of PC Installer v2.22.		
()	HP Prolignt DL320 G6 Applignce Server must not be equipped with RAID		
	option.		
	CAUTION		
	It must be ordered <b>only</b> via Alcatel-Lucent.		



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# Note

The "Load Balancing" mode is supported by these models.

In migrating a system with Appliance Server from a release less than 8.0, check that it has 1 GB of memory. Otherwise, additional memory has to be ordered through an IBM reseller and installed on the Appliance Server.

- IBM X306: <u>http://www-03.ibm.com/systems/xbc/cog/Withdrawn/x306/x306mem.html</u>
- IBM X306m: http://www-03.ibm.com/systems/xbc/cog/Withdrawn/x306m/x306mmem.html

# 7.7.4 Hard disk capacity

A hard disk with a minimum of 10 GB must be used.

## 7.7.5 USB keys compliant with CPU7-2, Appliance Server and Blade Server

USB keys, for save and restore on USB key, are compatible as of Release 7.1 with CPU7-2, Appliance Server and Blade Server only. The USB connector of CS-2 CPU board is unused.

### Note

Hard disk on USB is not supported.

## 7.7.6 IO2 board

The IO2 and IO2N boards must be flashed with a boot of at least version 4.0.

# 7.7.7 INTIP board

The term INTIP concerns INTIP boards as well as INTIP2.

Since Release 5.0 Ux, the INTIP board can be used either in full duplex or in half duplex.

As of Release 5.1, direct RTP is possible with INTIPs.

Since Release 4.2, the INTIP board is multi-functional: IP Phones, Remote IP and VoIP link.

The functioning with a LIOE board is not authorized.

As soon as the migration is completed, you should set the IP services so that the new services provided by the INTIP board since R4.2 can be used; refer to the System documentation.

The INTIPB board can function at 100 Mbits in all types of shelves. For VH and WM1 cabinets, the operation depends on the version used; see the table below.

The INTIP board does not function with LIOP/B/X COMP6 in a single network.

Transit is possible between INTIP - LIO P/B/X COMP2.

The INTIP board can not be used with the Ethernet embedded (a CBC1 10/100 connector must be used).



# The CBCA connectors of the LIOE board should not be used to connect an INTIP board.

The INTIPA board can be used at 100 Mbits. With a VH, it is essential to use the Patch Panel 10/100 Mbits Reference 3BA23244 AAAA 01.



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Compatibility at 100 Mbits of VH and WM1 shelves for use of CPU6 Step2 and CPU7 boards.



# The CPU7 board is not allowed in a VH cabinet.

All types of shelves are or will be compatible at 100 Mbits. For VH and WM1 cabinets, compatibility at 100 Mbits is available 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 Batteries batch 1.2 Ah battery autonomy	3BA 57106 AC
WM1 Batteries batch 1.2 Ah battery autonomy - USA	3BA 57106 UB

### Note

If the shelves referenced above are not used, the CPU6 Step2 and CPU7 boards only function at a maximum of 10 Mbits.

### 7.7.8 NGP boards

This general naming concerns GD3, GA3, PowerMEX as well as INTIP3 boards.



# Pay attention to always stop the software with shutdown –h now or the stop button before unplugging a GD3/GA3/INTIP3 board. Direct unplug is forbidden.

In a Common Hardware Media Gateway, no mix between NGP boards and previous hardware (GD, GA, MEX) is authorized. If one board has to be replaced, all the other ones will have to be replaced.

In a Crystal Media Gateway, mix between INTIP3 and the previous INTIP/INTIP2 is authorized, except that for main and stand-by function the same kind of boards have to be used.

All the previous compression daughter boards (MCV, MADA, GIP) are incompatible with NGP boards as well as Armada daughter board is incompatible with GD/GA/INTIP boards.

HSL, Slanx-4 and AFU daughter boards are compatible with common hardware NGP boards.

The 10/100/1000 Base-T connector for INTIP3 is incompatible with INTIP/INTIP2 as well as the 10/100 connector for INTIP/INTIP2 is incompatible with INTIP3.



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INTIP3A boards provide up to 120 compressors. If Soft-MSM feature is used, then the maximum number of compressor is 60.

The V24 console cable for NGP boards is the same as the one used for CS / GD boards.



boards.

GD3, GA3, PowerMEX are authorized only in shelves with external battery (rule taken into account by Actis 15). In case of shelves with internal battery, Actis will continue to configure GD/GA/MEX

References of the current Common Hardware media Gateway shelves without internal battery:

Designation	Reference
Rack module 1 - 110V/230V (without internal battery)	3BA 00404 AB
Rack module 1 - 48V (without charger & battery)	3BA 00404 AV
Rack module 3 - 230V (without internal battery)	3BA 00406 AB
Rack module 3 - 48V (without charger & battery)	3BA 00406 AV

The USB connector, present on NGP boards, is not taken into account by the board binary.

NGP boards provide two 10/100/1000 Base-T connectors. Either Ethernet connector can be used but not both in the same time: currently **Ethernet redundancy is not available on NGP boards**.



The DIP switch on the NGP boards has not to be modified. The only reason for which it could be modified on GD/GA boards was to enter in LOLA mode: with NGP boards, this mode is useless as a flash format is automatically performed when a network boot is done. Besides this component is quite fragile.

### 7.7.9 INT1/INT2 boards



In Release 10.0, INT1 and INT2 boards must be replaced by INTOF/INTOF2 boards.

### 7.7.10 Negotiation of speed of Ethernet interfaces

Refer to the technical communication TC0680 Risk of wrong negotiation of speed and duplex mode of Ethernet interfaces for INTIPs, GA & GD after software upgrades.


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## 7.8 Subdevices & IP Phone compatibility (Reprom reference/Binary version)

	Туре	Use	Reprom Reference
Subdevice 2G	Asynchronous V24 (4083 ASM)	V24/V110/V14	V24 A1 3.01
	Asynchronous V24 (4083 ASP)	V24/V110/V120	V24 A2 2.06
	Asynchronous V24	MAC/PC	MPC 3.10
	Synchronous V24 (4083 SYV)	V24 (adapt. V35/V36)	V24 S1 1.04
	Synchronous X21 (4083 SYX)	X21	X21 1.01
	Non-powering S0 (4084 IS)	SO	SO 3.14
	Z behind UA (4085)	Z set	1.09
Subdevice 3G	A4091 CTI	CTI	OSI 4.211
	A4093 ASY-CTI	V24 (V110, V14) + CTI	V24 A1 3.01 / OSI 4.204
	A4094 ISW	SO	S0 4.05
	A4094 ISW-CTI	S0 + CTI	S0 3.16 / OSI 4.06
	A4095 AP	Z behind UA	OSI 4.211
Subdevice	S0 behind series 9 and UA TDM	SO	
series 9	AP behind series 9 and UA TDM	Z behind series 9 and UA	
IP Phone	A4097	Subdevice DECT + CTI	1.51
	A4098 RE (1)	TSC-IP / IP Phone V1	5.2
	A4098 FRE	TSC-IP / IP Phone V1S	3.0
Subdevice	A4093 ASY-CTI	V24 (V110, V14) + CTI	
ROHS		behind UA TDM for visually	
		impaired attendant console	

(1) IP V1 (4098 RE) sets are no more supported from Release 6.0.

Refer to the technical communication TC1090 Wrong IP Touch Ethernet port speed negotiation if using Gigabit sets.



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# 7.9 Application compatibility

Applications	Minimum version (Note 1)	Released version	
PC Installer (Note 2)	2.26	3.2	
Security Center / Personalization center	1.2.01	1.2.01	
A4058 (SBC)	No more supported		
A4059 (Multimedia operator)	5.1.2	5.2.5	
A4059 IP (MMK USB Keyboard)	5.1.2	5.2.5	
MMK keyboard (A4059)	3.8	3.8	
TA/MAC (A4059)	4.7	4.7	
MMK keyboard (A4049)	3.8	3.8	
TA/PAC (A4049)	2.1	2.1	
4059 Management	No more	supported	
PC client	No more supported as	of Release 5.1 (see § 5)	
A4615	(No more supported	d as of Release 6.2)	
A4635H2	5.2.6	5.4.9 (Note 3)	
A4635J (VPU5)	5.2.6	5.4.9 (Note 3)	
A4635J (VPU6)	5.3.1	5.4.9 (Note 3)	
OmniTouch Premium Edition	3.0.303	GCE 4.0.204	
OTCC Standard Edition - CCA	9.0.8.1	10.0.8.0	
OTCC Standard Edition - CCTA	8.0.0	10.0.0	
OTCC Standard Edition - CCZ	No more supported	No more supported	
OTCC Standard Edition - CCIVR	9.1.0 PL2	9.1.0.11 (Win 2003) / 10.0.0.0	
		(Win 2008)	
OTCC Standard Edition - CCO	9.0.1.0	9.1.0.0 (Win 2003) / 10.0.0.0	
		(Win 2008)	
OTCC SE - CCO Agent Scripting Editor	9.0.1	9.0.2	
OTCC Standard Edition - CCS&CCS Light	9.0.90.2	10.0.90.1	
OTCC Standard Edition - CCS Server	9.0	10.0	
OTCC SE - ASM External Server	8.0.0	10.0.0	
OTCC Standard Edition - WBM	9.0.0.0	10.0.0.0	
A4735 No more supported as of Release 5.1 (see § 5)		of Release 5.1 (see § 5)	
A4736 No more supported as of Release 5.1 (see §		of Release 5.1 (see § 5)	
A4715 (Charging)	No more supported as	of Release 5.1 (see § 5)	
A4730/4740 (Management)	No more supported as of Release 5.1 (see § 5)		
A4755	No more supported as of Release 5.1 (see § 5)		
OmniVista 4760	5.1.06.03.c	5.2.01.03.d	
SIP Device Management Server	1.2.000.020	1.2.000.020	
OmniVista 8770	1.0.18.03.b	1.0.20.01.b	
Alcatel Audio Station (AAS)	7.2.3	7.2.3	
Visual Messenger R2	No more supported as of Release 6.0		
Alcatel Unified Messaging 2.3	No more supported as of Release 5.1 (see § 5)		
OmniTouch Unified Communication	5.1.000.574	5.1.000.585	
OmniTouch 8400 ICS	6.0.000.683.b	6.2.000.104.a	
OmniTouch 8450 FS (R5)	5.6.3.31	5.6.3.31	
OmniTouch 8450 FS (R6)	6.0.1.45	6.5.6.26	
OmniTouch 8460 ACS	7.1.4b4033	8.0.3.b5559	
Notification Server R2	No more	supported	



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Applications	Minimum version (Note 1)	Released version
TAPI Premium Server R3	3.2.2	3.3.4
TSAPI Premium Server	6.3.0 / 6.3.1 (Note 4)	6.4.7
XML Web Services	Same as OTUC / OT 8400 ICS	
Wizard for common hardware / crystal hardware	No more s	supported
Datcol	No more supported as	of Release 5.1 (see § 5)

#### Notes

- 1 Allows operation with Release 10.0 but in the event of problem, the update in the released version will be required before any investigation.
- 2 CS-2 (resp. GD3, GA3, INTIP3) boards are taken into account by PC Installer from version 2.24.
- **3** The IMAP function is available from A4635 version 5.2.6. The VPU function is available from A4635 version 5.1.4.
- **4** For XL configurations, the minimum version is 6.3.1.

## 7.10 OEM/External equipment compatibility

#### 7.10.1 UPS

In the case of a local 110 Volt power supply, the following MGE 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.

#### 7.10.2 V24 over IP ("Moxa" unit)

On the CPU of the Call Server, a single V24 port is available and reserved for the local console. If an application needs a V24 connection with the Call Server (AHL over V24, real time alarms, etc.), then the "Moxa Nport Server Lite" unit must be used.

This item allows V24 calls over IP with the Call Server. Four DB9 connectors are available on the unit. See the System documentation for management of this equipment.

#### 7.10.3 T38 Fax over IP

T38 Fax over IP operation is supported with the MP-102 equipment version 4.0 for **Fax** transmissions only.

See the technical communication TC0336 Setting the T38 fax over IP application (with MP-102 version 4.0).



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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.

From Release 9.0 on, an analog set behind a MP-118 must be set as "SIP Extension". A fax behind a MP-118 will remain in "SIP Device" (formerly "External Set").

#### 7.10.4 SIP Survivability

The version of SIP proxy servers tested with this feature is the following:

- AudioCodes MP-118 : 5.20A.026.007
- Cisco 2801 SRST : c2801-ipvoicek9-mz.124-11.XW.bin
- Teldat Atlas 150 : 10.6.47

#### 7.10.5 LLDP-MED on IP Touch sets

The data switches, and their relative version, which have been qualified for this feature are the following:

- Cisco Catalyst 3750 : 2.12(46)SE
- HP ProCurve 2610 : R.11.25

Refer to Technical Communication TC1290 LLDP-MED on IP Touch sets for more information (settings, restrictions, ...).

# 8. CLIENT INFORMATION

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

In Release 10.0, a new ergonomics appears for the 4059 application.

- Localization: Japanese on 4059 (Windows 7)

#### 8.1.1 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 11.605.14.e.
- PERSO page displaying after a time-out.
- MIPT alarm display.

#### 8.2 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.

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

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## 8.3 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.

## 8.4 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.

## 8.5 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.

## 8.6 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.

## 8.7 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.

## 8.8 Reminder of changes appeared with R4.1

## - Twin set (Tandem)

- Management of "Partial Busy of the set".
- Enhancement of supervision function.

## 8.9 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. **PREPARATION**

The purpose of this paragraph is to mention everything that the technician needs to prepare before starting the change of version.

## 9.1 Checking compatibility

Before starting, it is essential to review all the applications, hardware and functionalities which should evolve.

See paragraph 5.

## 9.2 Voice guides

Ensure that you have the voice guides required in Release 10.0.

#### 9.2.1 System voice guides

The version of system voice guides compatible with the OmniPCX Enterprise R10.0 is **v5.3** CD-ROM reference: 3BA 57423 AAAG.

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 Customer Support > Technical Support > Software Download > OmniPCX Enterprise > System Voice Guides.

#### 9.2.2 Alcatel 4645 voice guides

The version of the Alcatel 4645 voice guides is v1.7. CD-ROM reference: 3BA 27588 AAAE.

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.



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# They can be downloaded from the Business Portal section Customer Support > Technical Support > Software Download > OmniPCX Enterprise > 4645.

The following languages are available:

Country	Code	Law A	Law µ
Arabic female	AR1	x	-
Arabic male	ARO	x	
Cantonese	CA0	x	x
Catalan	ES1	x	
Croat	HRO	x	
Czech	CS0	x	
Danish	DAO	x	
Dutch	NLO	x	x
English	ENO	x	x
English Australia	ASO	x	
English United States	USO	x	x
Finnish	FIO	x	x
Flemish	NL1	x	
French	FRO	x	
French Canada	FR2	x	x
German	DEO	x	x
Greek	GRO	x	
Hungarian	HU0	x	
Icelandic	ISO	x	
Italian	ITO	x	x
Japanese	JPO	x	x
Korean	KRO	x	x
Latvian	LVO	x	
Lithuanian	LTO	x	
Mandarin China	CN0	x	x
Mandarin Taiwan	CN1	x	x
Norwegian	NO0	x	x
Polish	PLO	x	x
Portuguese	PTO	x	X
Portuguese Brazil	PT1	x	X
Romanian	ROO	x	
Russian	RUO	x	x
Slovak	SKO	x	
Slovenian	SIO	x	
Spanish	ESO	x	
Spanish United States	ES2	X	X
Spanish Latin America	ES3	x	X
Swedish	SV0	x	x
Turkish	TRO	x	



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## 9.3 OPS

The Actis version for the OmniPCX Enterprise is **R16.1**, the catalog is referenced **E16**.

The locks are based on a software key which is unique. This software key is calculated according to the licenses and the physical number of the CPU.

To take into account the evolution of provisioning limits as of Release 8.0, software locks are identified with 6 digits.

For each CPU-CS, CS-2, Appliance Server or CPU5 Step3, CPU6 Step2, CPU7, CPU7-2 a unique physical number exists (called CPU or CPU-id identifier). This number is engraved in a PROM of each CPU.

#### Note

In the case of a CPU6 Step2, the "hardware" key can always be used. The CPU7 board accepts only the CPU-Id.

In the case of a CPU-CS, CS-2, Appliance Server or 4400 CPU replacement, the license files must be updated on the system within 30 days. The description of the CPU exchange process is available Business Portal.

# In the event of a migration from ANY Release to R10.0 even without adding of license or hardware, it is mandatory to reconfigure the system by Actis.

## 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).

There is no check on 4760 license. The add-on is possible even if the license 4760 is not valid (list of license without checksum).

Download the .sw4760 file from eLP then import it into Actis.

For safety reasons, put this file manually in OmniPCX Enterprise; the *Photoconfig* process can retreive it.

As of Release 10.0, the Migration Release (165) lock is set to 40.

- Make a configuration request in Release 10.0 with the version OPS E16. Four or five R10.0OPS files will be generated:
  - <offer\_id>.zip
  - <offer\_id>.swk (this file results from the eLP)
  - <offer id>.hw
  - hardware.mao
  - <offer\_id>.sw4760 (if a 4760 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 not supported by R10.0.

## 9.4 Saving the database (swinst)

In the current version, carry out the following operations.



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#### 9.4.1 Rebuilding the database before saving

login	mtcl	
directory	/DHS3data/mao	
command	/DHS3bin/fab/fichges recover all	(if $R \le 1.5.2$ )
	fichges force_recover_dico	(if R > 1.5.2)

This operation may be long and it is essential not to interrupt it while running.

#### 9.4.2 Saving the rebuilt database

Carry out the back-up in swinst and transfer it to disk or PC.

#### CAUTION

- Do not choose the save option "Save for rebuilt".
- Do not use a base saved in "Automatic save".

#### **REMARKS**: On the saving of charging tickets.

Sites going from A9.5xx to R10.0 which wish 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 R10.0which already have compressed files should save them as they will be compatible.

#### 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. In fact, when migrating from OmniPCX 4400 to OmniPCX Enterprise R10.0 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.
- There is no automatic translation from Releases below 1.5.3 to Release 10.0. For all these versions, it is essential to go via an intermediate translation in a release compatible with translation to R10.0 (from R1.5.3 to R5.1.2).
- There is no automatic translation from the Custom Release 3.0C (C1.580.1) to Release 10.0. It is essential to carry out an intermediate translation with Custom Release 3.2-C2 (C1.762.18 minimum).

## 9.5 Saving Chorus/Linux data

#### REMINDER

If there are no disk drives, the back-up version of the OmniVista 4760 tool must be used; see the OmniVista 4760 technical documentation.



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.



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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  $\leq$  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".

The translation of the tunnel creates static LCNs. For a network where all nodes are in R7.1, the static LCNs must be deleted.

## 9.6 Saving Actis files in the image of the site

It is essential to save the site OPS files (**photoconfig**). They will be required to be able to carry out a migration to R10.0.

## 9.7 Saving the lanpbx.cfg file

If the *lanpbx.cfg* file was used in Release 3.2, it is essential to save it before passing to Release 10.0 (*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).

Refer to the technical communication TC0150 Configuring the OmniPCX 4400 as "boot server" for IP Phones attached to networked OmniPCX 4400.

# 10. OPERATING MODE

#### 10.1 New installation

New installations are not dealt with in this document, since in this case all the products delivered and installed will be in the correct editions and compatible.

Particular attention should be paid in the case of networking.

See paragraphs 6 and 7.

## 10.2 Updating R5.1.x, R6.x, R7.x, R8.0.x, R9.x to R10.0

After updating to R10.0, you will find the same level of functionalities as initial release.

However, certain applications require a minimum version, see paragraph 7.9.

All the elements required for passage to R10.0 are given in paragraphs 7 to 16.

#### REMINDER

It is mandatory to reconfigure the system by Actis even if there is no changing of license or hardware.



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## 10.3 OmniPCX 4400 migration to R10.0

Two possibilities are provided for migration of an OmniPCX 4400 to R10.0:

- Migration of an OmniPCX 4400 to R10.0, keeping the 4400 type CPU (called Migration ISO).
- Migration of an OmniPCX 4400 to R10.0, changing the 4400 type CPU for Appliance Servers (called Migration with AS (Appliance Server)).

The migration of an OmniPCX 4400 to R10.0 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 Appliance Servers leads to restrictions on the use of certain functionalities; see paragraph 5.2.
- 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 R10.0 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.

Actis is used to migrate locks (resulting from site by photoconfig) of an OmniPCX 4400, proposing migration packages for functionalities and hardware not supported by R10.0.

## 10.3.1 Use of the hardware or software key

It is always possible, except on a CPU7, to use the hardware key (dongle) or to use the software key (cpu-Id) of the CPU. The hardware or software (cpu-Id) key allows a unique encrypted key to be calculated.

The hardware key should be forwarded in certain cases; see Hardware Support documentation.

For 30 days, a lock file can be used even if the calculated key does not correspond to the key present on the site (to allow the exchange of CPUs).

#### 10.3.2 Crystal hardware compatibility with an Appliance Server

See the table in paragraph 5.2.

Technical communication TC0778 Migration OmniPCX 4400 to OmniPCX Enterprise describes the steps necessary for transition to Release 9.1.

# 11. LOADING THE SOFTWARE

## 11.1 Generalities

Loading is now carried out using the PC Installer tool common to all CPUs (CS, CS-2, AS and 4400 CPU). Refer to the technical communication TC1319 Installing and using the OmniPCX Enterprise PC Installer v2.26 software.

To load the software in a CS-2 board, PC Installer application must be in version 2.24 minimum. Besides the parameter "Type of Call Server" must be set to "CS-2".



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#### 11.1.1 Security activated by default during a installation

As of Release 6.2, the first standard installation, a list of security levels are 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 for 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  $\mathbf{R}$  is used to restore Linux data of the system (and thus to retain its levels of security) if this is a migration from R5.1, R6.x.

Choice **0** is used to initialize the system with no default level of security as in R6.1.

Choices 1, 2, 3 are used to set the various levels of security already existing in R6.1 and in R7.0 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.

#### 11.1.2 Installation of a secured system for VoIP encryption ("IP Touch Security" service)

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".



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#### Installation process

The installation of security on a system in J1.410.34.c must be carried in two steps:

**1** Installation of system with generic version i.e.:

Installation generic version J1.410, installation of static patch J1.410.34 then installation of dynamic patch J1.410.34.c with usual tools (Standard Installation, Installation on inactive partition or Remote Download).

**2** Installation of the latest patch of security in addition of the previous installation i.e.:

Installation of the security patch SJ1.410.34.c containing the latest secured binaries with usual tools (Deliveries installation or Remote Download).

#### Note

If installing a generic complete version and patches, for instance J1.410 + J1.410.34 + J1.410.34.c, the installation of the security patch of the complete version SJ1.410 and static patch SJ1.410.34 are not needed since the security patch SJ1.410.34.c has the same binaries but the latest ones.

#### 11.1.3 Using the Remote Download



In the event of heterogeneous version, the archive to be installed must be located in a version lower than version F2.500.

Refer to the technical communication TC0669 Compatibility of versions for remote download feature.

#### 11.1.4 Reading the hardware key or CPU-id of the CPUs

#### 11.1.4.1 Label

For all types of CPU (CS, CS-2, AS, CPU6 and CPU7), a label is visible indicating the CPU-Id number.

#### 11.1.4.2 Command to read the CPU-Id

For all types of CPU (CS, CS-2, AS, CPU6 and CPU7), telephone started or not, run:

login	mtcl			
command	spadı	nin		
option 5	Read	the	system	CPUID

This method is to be applied in particular in the case of an Appliance Server not controlled via Alcatel-Lucent (no marking on the server).

#### 11.1.5 Creating a blank database



A blank database should only be created for CPU installation on a new site

login



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passwordSoftInstoption 7Database toolsoption 2Create an empty databaseEnter country nameexample "zb" for Zimbabwe

## 11.2 Restoring the database and site tickets

login	swinst
password	SoftInst
option 4	Backup & restore operations
option 3	Restore operations menus
option 1	Restore from cpu disk
option 3	Restore from floppy (does not exist in the case of a CS or AS
	controlling common hardware)

The system automatically identifies the type of diskette (database) and requests confirmation of the restitution.

### 11.3 Restoring Chorus/Linux data

#### CAUTION

The Chorus data of certain Releases cannot be reused automatically; refer to the section 9.5.

login	swinst
password	SoftInst
option 4	Backup & restore operations
option 3	Restore operations menus
option 1	Restore from cpu disk
option 3	Restore from floppy (does not exist in the case of a CS or AS
	controlling common hardware)

The system automatically identifies the type of diskette (Chorus data) and requests confirmation of the restitution.



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# 12. TRANSLATIONS

## CAUTION

- Do not create blank database.
- As of Release 5.1, the translation is automatically run after loading the OPS files.
- There is no automatic translation from Releases below 1.5.3 to Release 10.0. For all these
  versions, it is essential to go via an intermediate translation in a release compatible with
  translation to R10.0.
- Sites in A9.532 should first pass to A9.537.
- 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**.
- There is no automatic translation from the Custom Release 3.0C (C1.580.1) to Release 10.0. 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, to take into account the provisioning limit evolutions, 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.
- As of Release 9.0, 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.

# It is mandatory to declare Nokia sets, used in Dual mode with OXE, and OT4135 IP Conference Phones with type "SIP device".

Procedure to follow:

- Export the SIP entities which are not standard SIP sets (Nokia sets in Dual mode, 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".



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



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- As of Release 10.0, the Direct RTP mode (in network) is automatically enabled and the relative parameter removed. The same is done for **H323 Internode Protocol** system parameter.
- As of Release 10.0, the system boolean to activate the application 4760i is set automatically to False and then removed (the application is no more supported).
- When creating a new Media Gateway or an A4645 voicemail after the upgrade to Release 10.0, 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.

## 12.1 Installing OPS files



The procedure for installing OPS files has changed as of R5.0 Lx compared to previous releases. It is essential that it be respected. Any other procedure for installing OPS files is prohibited, as the system will be in a fraudulent state.

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

Procedure

- Copy the OPS files using "ftp" in the directory /usr4/BACKUP/OPS.
- Use the menu **swinst/OPS** configuration.

The progress of the 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.
- 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.

## 12.2 Remarks

- Check the value of the **Antenna Diversity** parameter; see the technical communication TC0328 Wrong initialization of "Antenna Diversity" after translating from Release 3.0 to Release 3.1, 3.2M, 4.1, 4.1.1.
- To consult the history and the progress of the translations, a new utility exists in swinst.



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## 13. UPDATING THE BETA TEST SYSTEMS

All the Release 10 beta test sites should evolve to released version J1.410.34.c.

## 14. SYSTEM MANAGEMENT

Use the menu swinst/System management.

## 14.1 Declaring the automatic start-up of the telephone

Procedure

login	swinst
password	SoftInst
option 6	System management
option 2	Autostart management
option 1	Set autostart

## 14.2 Updating the date and time

Procedure

swinst
SoftInst
System management
Autostart management
Set autostart

# 15. CHECKING START-UP OF CPU/IO1/IO2/IO2N

## CAUTION

- On a duplicated installation, if an IO2 or 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 IO2 or 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 IO2 or IO2N using the command

RUNTEL -DNOIO2 in mtcl.

 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 IO2/IO2N to be checked.



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# 16. COMPULSORY MINIMUM ADDITIONAL DATABASE MANAGEMENT

## 16.1 Reminder for sites migrating from Release < 3.0

#### 16.1.1 IP addressing plan (from R3.0)

The new management of the IP interfaces in OmniPCX 4400 does not allow default declaration of all the interfaces of all the possible network nodes. The management machines that can connect by Ethernet on all the nodes must therefore be declared on all the nodes.

#### 16.1.2 IP routing (from R3.0)

IP routing is validated by default on Release 3.2 installation. This function is handled by the "gated" process and can only operate if this 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

#### 16.1.3 ABC network (from R3.0)

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 DPNSS network (from R3.0)

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.

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.

#### 16.1.4 ARS Time Schedule management (from R3.0)

Control ARS management to ensure that it meets client requirements.

Refer to the operation manual "ARS" section.



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#### 16.1.5 Time-outs (from R3.0)

Control the value of time-out 144 (Timeout for distributed call). It must be greater than or equal to 600.

Control the value of time-out 188 (Timer for Release of set reserved by attendant). It must be greater than 3000; time-out used for defending sets blocked on networked music on hold.

#### 16.1.6 Accounting (from R3.0)

#### Access path : Applications/Accounting

Manage all the new parameters according to client requirements.

#### 16.1.7 Filter table (from R3.0)

In order for the attendant not to by-pass filtering, enter the attendant individual call prefix in the filter tables. Do not enter the attendant physical directory number.

## 16.2 Reminder for 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, Release 10.0 is also used to send the name with UTF-8 format 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 10.0 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 Release 10.0 nodes otherwise the calls through the network don't work.



# In a network, if a Release 10.0 node is of XL or "Large Capacity" type, each node of the network must be in Release 8.x.

The system parameter **Direct RTP** must be enabled in all nodes of the sub-network as soon as one node is migrated to Release 10.0.

## 16.3 Additional management for IO2N

For CPU6 equipped with IO2N board, the management of signaling channel for ACT0 only must be as follows:

- **Signaling mode = IO2** instead of Nx64



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- Signaling Channel N64 Size = 8 instead of 4

Access path

Shelf 0/Signaling mode: IO2

Shelf 0/Signaling Channel N64 Size: 8

For CPU7, CPU7-2 equipped with IO2N board, the management of 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.

#### Note

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

#### 16.4 Synchronization



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

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



For migration of an OmniPCX 4400 with change of 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.

#### 16.5 System parameters to check

Use the command **compvisu** to display the parameters.

#### 16.5.1 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**.

In an OmniPCX Enterprise R10.0 system, this parameter is removed (validated by default).

#### 16.5.2 Frame VoIP (Enhanced quality voice)

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

It is better to use the Framing 20 ms for G711 or G729.



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G723 can only do 30 ms.

### 16.5.3 Direct RTP for H323 terminals

This parameter must be set to  $\mathbf{No}$  if a only one H323 terminal of the installation does not support the direct RTP

#### 16.5.4 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 R10.0 system, this parameter is removed (validated by default).

## 16.5.5 Pre-login (V120)

As of Release 5.1, the pre-login path as changed as regards Unix versions. It is located under the **DHS3bin/servers** or **usr2/servers** directory.

# 17. STARTING UP THE CPU IN ITS ENVIRONMENT ON SITE

Do not proceed by switchover.

Proceed with a complete system start-up in order to download the new firmware of the couplers.

## 17.1 Downloading the 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.

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) downloading.
- Use the downstat t command to monitor the evolution of IP Touch TDM (series 9) downloading.

# 17.2 Sites with the "IP Touch Security" feature: Migration from R6.2 or R7.x to R10.0 with SSM & MSM boxes in version 1.3.xx

#### CAUTION

Sites using "IP Touch Security Solution" feature (Encryption) must follow a specific procedure to update the IP Touch security boxes.



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#### SSM & MSM downloading procedure after an upgrade in R10.0

After upgrading in SJ1.410.34.c and with the RUNTEL done, you must update the IP Touch Security boxes (MSM, SSM) as follows:

1 Check that the versions 3.3.03 for bin SM or 3.3.05 for bin SM2 is managed in mgr.

- 2 Reboot (with Off/On button) each SSM, MSM box, SSM-RM or MSM-RM to allow the downloading of the new binary 3.3.03 or 3.3.05 (the *config\_Bt.cfg* file has been modified; this enhancement is available only from the version 1.6.02).
- **3** Check with **info** -**v** command that each SSM, MSM box, SSM-RM or MSM-RM has been downloaded with the version 3.3.03 or 3.3.05 then re-generate the *Config\_BT.cfg* file.

#### Note

If the system is duplicated, it should be better to stop the Stand-By CPU before installing the Main CPU.

## **18. CHECKING CORRECT OPERATION**

- Check synchronization.

Ensure that the real synchronization plan corresponds to the managed synchronization plan. Use the command **infocs** or **clockstat**.

# As of Release 3.0, the notion of configuration domain is taken into account for multi-ACTs.

- Check the distribution of calls to operators.
- Check the ARS.
- Check the coherence of the files.

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 start-up of the IBSs behind INTOF.

During transition of a Release 3.2 (with CPU3) to Release 4.1 (with CPU6), the IBSs behind INTOF do not start up if the Inter ACT Handover or DTM Synchro parameter is set to No and there is no DECT-Sync category.

Access path: mgr/DECT Parameters/Go down hierarchy/RBS Parameters

- Check start-up of the INTIP used in particular for the remote ACT.



# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

Faced with a board initialization problem, check that the value **MTU** in the IP Parameters is correctly managed at **256**.

- Check conference type management.

Coming from Release 4.1 or 4.11, it is not possible to retain two types of conference: for example the programmed conference and the conference directed with modulo circuit 30.

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



INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0



# **NEW HARDWARE AND FEATURES**

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# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

#### APPENDIX 1 NEW HARDWARE AND FEATURES

# 1. INTRODUCTION

Consult the Marketing documentation available on Business Portal.

## REMINDER

The main features included in previous releases are detailed in the technical communication TC0780 New hardware and features from Release 5.1.

# 2. NEW HARDWARE AND FEATURES FROM RELEASE 10.0

For more information, refer to the System documentation.

## 2.1. New hardware

## 2.1.1. eZ32-2 board

The new eZ32-2 boards are only supported from Release 10.0.

- Allow the user to connect up to 32 Z devices (Analog sets or modems or fax machines).
- Provide a new method to activate the MWI called DC Bias: Short ringing 100 VDC pulses (<100 ms) are sent over a and b wires to drive the MWI.
- Provide a new service Calling Party Control [CPC] also called the Open Loop Disconnect signal.

eZ32-2 boards can provide a CPC signal to terminals. The CPC signal indicates to the terminals connected to an eZ32-2 board that the remote party has hung up. Any terminal receiving a CPC signal should hang up.

## 2.2. New features

#### 2.2.1. Increasing provisioning level

- Increase number of hunting groups: Up to 500 hunting groups per node (instead of 200).
  - **Warning**: The maximum number of hunting groups "in network" remains 200.
  - It is possible to manage up to 200 hunting groups where users can belong to several nodes. Beyond, hunting groups users have to be managed on the same node.
- Increase number of phone Class Of Service: Up to 256 Class Of Service (instead of 32).
  - Increase number of attendant groups: Up to 50 attendant groups per node (instead of 10).
    - **Reminder:** The maximum number of attendant groups per sub network remains 80.
- Increase number of boss per secretary: Increase from 8 to 16 bosses per secretary. Number of secretaries per boss is kept at 8.

## 2.2.2. Localization

Japanese support on Alcatel 4059 installed on Windows 7 OS.



## APPENDIX 1 NEW HARDWARE AND FEATURES

### INSTALLATION PROCEDURE FOR VERSION J1.410.34.c - RELEASE 10.0

#### 2.2.3. Terminals

#### 2.2.3.1. MIPT OmniTouch 8118 and 8128 handsets

As of Release 10.0, the new OmniTouch 8118 and 8128 WLAN handsets are supported (the support is also available on R9.0 and R9.1).

The maintenance tools in the system for MIPT are updated to display the right type of the new sets (miptsets, miptview, ippstat, tradna, getnoeversion, ...).

For more information, refer to technical communication TC1435 Technical Release Note of OmniTouch 8118/8128 WLAN handsets version 2.2.9.

#### 2.2.3.2. My IC Phone 8082 support in hotel environment

As of Release 10.0, the new My IC Phone 8082 sets are supported **only in hotel environment** and must be managed as **"room"** set.

The global solution will be released with the release of My IC Phone 8082 and OmniVista 8770 application.





# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

#### APPENDIX 1 NEW HARDWARE AND FEATURES

#### 2.2.4. SIP Enhancement

#### 2.2.4.1. New SIP improvement for interworking with Open Touch Solution

As of Release 10.0, new SIP improvements allow the interworking of OmniPCX Enterprise in the new Open Touch Solution.

# 2.2.4.2. SIP Trunk enhancement: CLI display with From header, even if P-Asserted-ID header is available (Incoming call)

Up to R9.1, Call Presentation mechanism does not scope with all situations because all carriers do not use the headers in the same way.

For example, some carriers give the user number in the **From** header and the installation number in the **P-Asserted-ID** header. This means, that in some cases, the **From** header should be used to provide the calling number even if the **P-Asserted-ID** header is present.

As of Release 10.0, three parameters allow to manage the way the headers are used for calling presentation.

The three parameters, configured for each external gateway, are:

- P-Asserted-ID in Calling Number
- Trusted P-Asserted-ID header
- Trusted From header

# 2.2.4.3. SIP Trunk enhancement: Service route header (RFC 3608) and Path header (RFC 3327)

When an external gateway registers, the Supported header of the REGISTER message includes the path header in the list of the supported headers.

The 200 OK responses sent by the remote proxy may contain a Service Route header containing a list of URLs.

As of Release 10.0, OmniPCX Enterprise stores the list of URLs received.

The list of URLs stored for an external gateway is used for outbound calls: each INVITE or OPTIONS method includes one Route header for each URL stored.

# 2.2.4.4. SIP Trunk enhancement: Faster overflow on no answer to INVITE, REGISTER and OPTIONS method

Up to Release 10.0, the classical re-transmission procedure defined in the RFC 3261 applies when SIP requests sent by OmniPCX Enterprise are not answered by remote party.

As a consequence, it takes 32s before OmniPCX Enterprise considers that no response has been received.

When REGISTER/OPTIONS methods are used to supervise the availability of an external gateway, this re-transmission time leads to a slow overflow to a backup/alternate gateway for outgoing calls.

Another situation is slow overflow from one ARS route to another when an outgoing INVITE to a SIP external gateway is not answered.



### APPENDIX 1 NEW HARDWARE AND FEATURES

### INSTALLATION PROCEDURE FOR VERSION J1.410.34.c - RELEASE 10.0

As of Release 10.0:

- A new parameter **Re-transmission No. for REGISTER/OPTIONS** is introduced in the External Gateway: Its default value is 2. Saying that, it takes now 2s before OmniPCX Enterprise considers that no response has been received and that the external gateway is out of order.
- A new parameter **Re-transmission number for INVITE** is introduced in the SIP proxy object: Its default value is 2. Saying that, it takes now 2s before OmniPCX Enterprise considers that no response has been received and call has failed. In case of a SIP trunking call to an external gateway using ARS, the call will overflow to an alternate route managed in the current route list faster than with previous software releases.

#### 2.2.4.5. SIP MyIC PC: Overflow on associate when out of order

As of Release 10.0, the same feature as the "Overflow for IP phones out of service" (OXE R7.0) is supported on SIP My IC SIP Soft Phone.

When SIP My IC SIP Soft Phone PC is switched-off or unplugged, there is an automatic overflow on associate directory N°(e.g. voice mail, associate, ...)

#### Note

If an immediate forward is managed by the user, this one is used in priority in terms of routing.

#### 2.2.5. Security

As of Release 10.0, a new mechanism based on "~swinst/.rhosts" file is provided to improve security concerning the access of Untrusted Host to a secured OmniPCX Enterprise.

This new mechanism is fully transparent for the administrator of the OmniPCX Enterprise.

#### 2.2.6. Call Handling features

#### 2.2.6.1. FlexOffice enhancement

As of Release 10.0, the number of registration terminations in OmniPCX Enterprise is increased from 8 to 50.

So that 50 sets can be registered at the same time in Flex Office environment.

#### 2.2.6.2. Call park timers

As of Release 10.0, the new parameter **Call park Timer** in the phone COS, allows to provide different parking timers depending on the users.

When calls are parked by a user, the behavior of the feature varies according to the value of the **Call park Timer** in the phone COS of the user:

- If the value for this parameter is different from -1: parked calls by users are rerouted after Call Park Timer Duration.
- If the value for this parameter is -1: parked calls by users are rerouted after system timer No. 8 has elapsed



# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

#### APPENDIX 1 NEW HARDWARE AND FEATURES

#### 2.2.6.3. Emergency Call to Attendant

As of Release 10.0 a feature provides a new type of call, called "Emergency call to attendant", which take the priority of all the calls placed in the queue of the attendant.

This enhancement is provided by introducing a new option **Emergency** Call to Attd in Entities:

#### /Entities/Emergency call to Attd

If the value of the option is set to **False** the priority of the calls will work as before Release 10.0.

If the value of the option is set to **True** then the calls which are dialed using this entity prefix would have the highest priority of all the calls in the queue of the attendant.

The call will be displayed with a specific color with the application Alcatel 4059 IP version 5.2.5 to captivate the attendant.

The new attribute **Emergency Call to Attd** will be taken into account during audit and broadcast to remote nodes.

If Audit is done between J1 (Release 10.0) node and the node earlier to J1 release where the attribute **Emergency Call to Attd** is not present, then the existing value of the Flag will remain unchanged in J1 node.

#### 2.2.7. Applications

#### 2.2.7.1. Alcatel-Lucent 4059 on Windows 7 32bits

As of Release 10.0, the Attendant Alcatel-Lucent 4059 IP version 5.2.3 is compatible with Windows 7 OS (Professional Edition 32-bit System).

The Attendant Alcatel-Lucent 4059 IP version 5.2.3 is retro compatible with OmniPCX Enterprise Releases 9.0 and 9.1.

The Attendant Alcatel-Lucent 4059 IP version 5.2.3 only installed with Windows 7 OS supports Japanese language.

For more information, refer to technical communication TC1410 Alcatel 4059 MAC / IP - Installation procedure for version 5.2.3.

#### 2.2.7.2. OmniPCX Enterprise PC Installer on Windows 7 32bits

As of Release 10.0, the OmniPCX Enterprise PC Installer 3.2 is compatible with Windows 7 OS (Professional Edition 32-bit System).

The OmniPCX Enterprise PC Installer version 3.2 is retro compatible with all OmniPCX Enterprise releases.

#### 2.2.8. Serviceability

Remote download evolution.

As of Release 10.0, the **Remote load a CPU as master or distributor** option of "Remote download" tool in swinst, doesn't propose anymore the unused **Remote load of delta** option.

The All country option is also removed and default country is added.



## APPENDIX 1 NEW HARDWARE AND FEATURES

#### INSTALLATION PROCEDURE FOR VERSION J1.410.34.c - RELEASE 10.0

The installed country in the MASTER CPU will be the default option, if the user needs extra countries the next option can be used.

### 2.3. Features under PCS

If one of the following features has to be implemented on an OmniPCX Enterprise, contact Technical Support for the deployment.

#### 2.3.1. SIP TLS/sRTP for external SIP Gateway

Before Release 10.0, only IPsec/SRTP protocols are supported to protect UA/NOE communications.

The IPsec protocol protects UA/NOE signaling and the SRTP protocol (one key) protects the sent and received voice flows.

As of Release 10.0, IPsec/SRTP and TLS/SRTP protocols can be used simultaneously.

As of Release 10.0, TLS/SRTP protocols are supported to protect SIP communications with external SIP Gateways in ISDN mode.

The TLS protocol protects SIP signaling and the SRTP protocol (two keys: one key is used to encrypt sent voice flow and an other key is used to encrypt received flows) protects voice flows.

TLS can be used to secure SIP Trunks configured on the OmniPCX Enterprise to a Carrier or Service Provider network (Public SIP Trunking).

Depending on Carrier/Service Provider capabilities, voice media can also be encrypted using SRTP. Each Public SIP Trunk can be configured at OmniPCX Enterprise level with TLS&RTP or 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.





# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

#### APPENDIX 1 NEW HARDWARE AND FEATURES



#### Important points

- For existing configuration where the SSM-RM module doesn't have a default digital certificate (serial number lower than 02768), it is mandatory to install a digital certificate (X509v3 format) from an external PKI. This PKI can be the one provided by OmniVista 8770 NMS (optional feature).
- SSM box model and MSM box model are not compatible with the SIP TLS feature. These boxes must be replaced by new Thales gates SSM-RM (with a serial number greater than 02768) and MSM-RM.

#### Limitations

- It is not possible to configure secure SIP Trunks with TLS and SRTP and encryption for Applications (OmniTouch ICS) on the same OmniPCX Enterprise node.
- SRTP one key and SRTP two keys are not compatible. All the nodes of the network must operate with the same protocol.
- As of Release 10.0, the TLS/SRTP (two keys) is not available in an ABC-F network, if a Public SIP Trunks is secured with TLS and **SRTP** on a OmniPCX Enterprise node in Release 10.0, network encryption (meaning encryption over OmniPCX Enterprise ABC IP network) between nodes mustn't be activated.
- Those limitations apply to both Public SIP Trunk (interconnection of an OmniPCX Enterprise with a Carrier or Service Provider network) and Private SIP Trunk (connection of a SIP gateway on the OXE node for secure PSTN accesses).
- Those limitations do not exist if SIP TLS and **RTP** are configured.



## APPENDIX 1 NEW HARDWARE AND FEATURES

#### INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

## SIP Trunks secured with TLS and RTP and ABC IP Network Encryption



#### SIP Trunks secured with TLS and SRTP and ABC IP Network without Encryption



## 2.4. Features availability in progress

These features will be available soon (depends on all components availability or new OmniPCX Enterprise patch green light status).

## 2.4.1. SIP trunking

Interoperability tests with new carriers done under the control of the SIP Bid Desk.



# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

APPENDIX 1 NEW HARDWARE AND FEATURES

2.4.2. Call Routing Groups

2.4.3. NOE in SIP with or without TLS protocol encapsulation



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APPENDIX 2 REMARKS & RESTRICTIONS

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# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

### 1. SYSTEM

- Bios for Call Server CPU-CS.

As of Release 5.1, the Call Server (CS board) Bios version is higher than 8.17. This version allows access to certain Bios functions (the main one being the Ethernet boot) which could not be accessed from the R5.0 Lx since only R&D knew the password. When booting the CS board:

- press Ctrl B then Ctrl I,
- the system requests a password (Warning: it is empty!) press < Enter>,
- a "light" Bios menu is displayed which allows an Ethernet boot to be carried out, the MAC address of the board to be displayed, etc.

Bios menu

```
YOU CAN strike Ctrl B to enter in BIOS monitor during several seconds from
NOW !
hit [Ctrl I] for BIOS monitor!
                        (password to access the light menu)
Password?:
Alize BIOS Monitor
*** BIOS Version 3EH30227DRAA bios100/008.017 ***
*** Generated on Jun/13/2003 at 09:25 ***
Monitor Light Menu
01 - Load From Hdisk #0
02 - Load From Ethernet
03 - Load From Flash NAND program
04 - Load From Flash NAND program and Bootp
05 - Load From Hdisk #0 and Bootp
06 - Display MAC address
07 - Display PCMS id
08 - Display System informations
09 - Full Options menu (Reserved for R&D)
10 - Reset System
```

- BIOS for Call Server CPU-CS-2.

To access the BIOS of the CPU-CS-2 board, when booting the board:

- press Ctrl B
- a "graphical" AMI Bios menu, similar to the one use in PC, is displayed



#### APPENDIX 2 REMARKS & RESTRICTIONS

#### INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

```
Initializing Intel(R) Boot Agent GE v1.2.16P7
PXE 2.0 Build 083 (WfM 2.0)
Press Ctrl+S to enter the Setup Menu.
Version 1.23.1109. Copyright (C) 2007 American Megatrends, Inc.
ALCATEL CS-2 BIOS VERSION 0ABPT090
Press 'B to enter setup.
Press ^I to boot EFI SHELL
Entering Setup...
Aptio Setup Utility - Copyright (C) 2007 American Megatrends, Inc.
Main Advanced Chipset Boot Security Save & Exit
  BIOS Information
                                                       <sup>3</sup>Choose the system
  BIOS Vendor
                           American Megatrends
                                                       <sup>3</sup>default language
3
  Core Version
                            4.6.3.1
  Project Version
                           0ABPT090
3
                           5/8/2009 14:22:10
  Build Date
3
  Memory Information
3
                           1024 MB (DDR2)
  Total Memory
3
3
  Package SKU
                            EP 80579EZ600C
3
                                                       3><: Select Screen</p>
                                                                                 3
3
  System Language
                            [English]
                                                       3: Select Item
                                                                                  3
3
                                                       <sup>3</sup>Enter: Select
                                                                                   3
3
                            [Thu 12/03/2009]
                                                       3+/-: Change Opt.
  System Date
                                                                                   з
                                                       <sup>3</sup>F1: General Help
3
                            [16:31:22]
  System Time
з
                                                       <sup>3</sup>F2: Previous Values
3
  Access Level
                            Administrator
                                                       <sup>3</sup>F3: Optimized Defaults
3
                                                       <sup>3</sup>F4: Save ESC: Exit
  33
          Version 1.23.1109. Copyright (C) 2007 American Megatrends, Inc.
```

- As of Release 8.0, the maximum number of **racks** supported is **240**. With the common hardware, this means for example maximum 80 Media gateways with 2 extension racks each.
- BIOS: the command **GRUBBOOT ETHER** forces a network boot, but be careful, it deactivates the hard disk; if the boot fails, the hard disk must be re-installed.
- Double-partition.

To facilitate secure software upgrade, a second version can be installed on the second partition; **use of double-partition is strongly recommended**. The reboot on the second partition can be scheduled; refer to System Documentation on how to manage the double-partitioning.

– Double-partition on CPU7-2.

The CPU7-2 is available only from Release 7.1 The use of a hard disk containing a lower version on one of its partitions is prohibited.

- Ethernet Duplication on CPU7.

In configuration with CPU7 only, and in order to solve certain problems of load with the C1 link in the case of high traffic (for example in configurations with CCD), it is possible to send on IP, the messages of telephone duplication via the process *iplink* as for the Common Hardware CPU or Appliance Server.

Role management, decision of switch and detection of loss of Main CPU remain carried out by IO1 board and not by the iplink.

Any change of signaling mode requires a reboot of Stand-By CPU then a restarting with **mastercopy**.



# INSTALLATION PROCEDURE FOR VERSION J1.410.34.c – RELEASE 10.0

APPENDIX 2 REMARKS & RESTRICTIONS

When Ethernet duplication and IP redundancy are activated, it is necessary to manage timers of IP redundancy in such a way that switch of CPU is done by IP redundancy before the detection of loss of IP by iplink.

- Remote Download.

"Remote Install" can cause problems in a heterogeneous network. The archive to be installed must be located in a version less than F2.500.

Refer to the technical communication TC0669 Compatibility of versions for remote download feature.

- Hard disk.
  - The minimum size is 10 GB for the hard disk.
  - 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.
- Protection against high Ethernet traffic.
  - Refer to the technical communication TC0543 Limitations of Ethernet thresholds on OmniPCX 4400/Enterprise CPUs boards.
- Negotiation of speed of Ethernet interfaces.

Refer to the technical communication TC0680 Risk of wrong negotiation of speed and duplex mode of Ethernet interfaces for INTIPs, GA & GD after software upgrades.

- OmniPCX 4400 applications needing an IO2/IO2N are not available with the Call Server or Appliance Server (hybrid links with signaling in B channel etc.) but always running with OmniPCX 4400 CPU.
- IO2N.

In the case of loss of Stand By or incidents related to the IO2N, you must have IO2N boards Ed07 which will allow a technical investigation. Refer to the technical communication TC0567 Reboot of the CPU board after an inopportune shutdown of IO2N board.

- 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 R5.1.x, R6.0.x or R6.1.x 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.
- As of Release 8.0, to take into account the provisioning limit evolutions, 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.



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



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- NAT/PAT is globally not compatible with the different elements of the system (e-CS, GD, IP-Phones).
- Pre-login (V120).
  - Since Release R5.1, the path for the pre\_login is different from the previous Unix versions. Pre\_login is now located under DHS3bin/servers or usr2/servers.
- "Ensure database consistency" (introduced in R9.1).

This feature is intended for cases where MAO modifications are done 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 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. In the patch 11.605.14.e, MAO messages are stored directly in RAM, removing the buffer limitation.

## 2. COMMUNICATION SERVERS

#### 2.1. Call Server CPU

- **Direct connectivity** of the Ethernet port of the CS to a **port of a switch** is mandatory.
- Only auto-negotiation mode is supported on the CS board => to be able to operate in Fullduplex, the port of the switch used for the connection must be configured in autonegotiation. Otherwise, if the port of the switch is forced to full-duplex, the CS 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 8.0, CPU-CS boards must be equipped with 256 MB RAM: References: Single SDRAM 256 MB: 3EH 75056 AA
   CPU-CS board equipped with 256 MB RAM: 3EH 73048 BB
- As of Release 9.0, CS-2 boards offer Ethernet redundancy with load balancing.

Pay attention that the Actis rules regarding this board change with Release 9.1 (Actis 14.1). In Release 9.0, the rules were the same as for CPU-CS board, except that for system with more than 5000 users (physical sets), the PCS of a branch office was no more restricted to an Appliance Server but could also be a CS-2 board. In Release 9.1 / Actis 14.1, the rules are modified in order to fully benefit from the CS-2 board performances.



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### 2.2. Appliance Server

#### Only Alcatel-Lucent recommended Appliance Servers are to be used.

Model	References
IBM X305	Alcatel-Lucent Reference: 3BA 00438 AA
	IBM reference (in case of external purchase): Model Type : 8673-62X
IBM X306	Alcatel-Lucent Reference: 3BA 27582 AB
	Its installation can be carried out only as of PC Installer v2.17.
	CAUTION
	It must be ordered <b>only</b> via Alcatel-Lucent.
IBM X306M	Alcatel-Lucent Reference: 3BA 27582 AC
(Note)	Its installation can be carried out only as of PC Installer v2.21.
	CAUTION
	It must be ordered <b>only</b> via Alcatel-Lucent.
IBM X3250	Alcatel-Lucent Reterence: 3BA 00617 BA
(Note)	Its installation can be carried out only as of PC Installer v2.22.
	The IBM X3250 Appliance Server must not be equipped with SAS HW RAID (LSI
	Lt must be endered <b>entr</b> ivia Alastel Lucent
IBAA V2250 AA2	Alcatel Lucent Peference: 2RA 27582 RA
(Nata)	Accilei-Lucent Reference: SDA 27 SO2 DA
(Nole)	Is installation can be carried out only as of PC installer v2.22.
	CAUTION
	It must be ordered <b>only</b> via Alcatel-Lucent
IBM X3250 M3	Alcatel-Lucent Reference: 3BA 27582 CA
(Note)	Its installation can be carried out only as of PC Installer v2.22.
()	IBM X3250 M3 Appliance Server must not be equipped with RAID option.
	CAUTION
	It must be ordered <b>only</b> via Alcatel-Lucent.
HP DL320 G5	Alcatel-Lucent Reference: 3BA 00678 BA
(Note)	Its installation can be carried out only as of PC Installer v2.22.
	The HP Proliant DL320 G5 Appliance Server must not be equipped with RAID
	option.
	CAUTION
	It must be ordered <b>only</b> via Alcatel-Lucent.
HP DL320 G5p	Alcatel-Lucent Reference: 3BA 27704 BA
(Note)	Its installation can be carried out only as of PC Installer $v2.22$ .
	HP Proliant DL320 G5p Appliance Server must not be equipped with RAID option.
	It must be ordered <b>only</b> via Alcatel-Lucent.
HP DL320 G6	Alcatel-Lucent Reterence: 3BA2//04 CA
(Note)	Its installation can be carried out only as of PC Installer v2.22.
	Hr Prolight DL320 G6 Appliance Server must not be equipped with KAID option.
	CAUTION
	I it must be ordered <b>only</b> via Alcatel-Lucent.

#### Note

The "Load Balancing" mode is supported by these models.



#### APPENDIX 2 REMARKS & RESTRICTIONS

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In migrating a system with Appliance Server from a release less than 8.0, check that it has 1 GB of memory. Otherwise, additional memory has to be ordered through an IBM reseller and installed on the Appliance Server.

- IBM X306: <u>http://www-03.ibm.com/systems/xbc/cog/Withdrawn/x306/x306mem.html</u>
- IBM X306m: http://www-03.ibm.com/systems/xbc/cog/Withdrawn/x306m/x306mmem.html

In a standard installation of an IBM X3250 M2, the following message is displayed. It states that any hard disk larger than 80 GB will not be used to its real capacity.

Alcatel-Lucent e-Mediate Linux installation ------+ Disk size +-------Disk too big : use optimized up to 80000MB only. +----+ +----+ | Yes | | No | +----+ +---+

The installation continues automatically after a timeout.

An **UPS is mandatory** to secure the system against abnormal stops because of power failure (risk to crash the hard disk).

The UPS MGE Evolution 1250 is appeared in Release 8.0.

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.

#### 2.3. Blade Center

Access to the management of Blade Center is made either via Lan, or by a console, keyboard connected locally.
 In addition, The Module of management (MM) offers the possibility to reach blades servers by a

In addition, The Module of management (MM) offers the possibility to reach blades servers by a serial port emulation via the LAN

This feature, called Serial Over Lan (SOL), is available from Release 7.1.

- If the encryption is enabled on a duplicated Blade Server configuration, IP Touch sets can reset after a CPU switch-over.

#### 2.4. OmniPCX 4400 CPU

- Only the CPU6 Step2 128 MB and CPU7 256 MB can be used as of Release 8.0. CPU5 board is no more supported as of Release 8.0.
- CPU7-2 board is available only from Release 7.1. The use of a hard disk containing another version on one of its partitions is prohibited. Any hard disk coming from another CPU must imperatively have on its two partitions a Release 7.1 installed or will have to be formatted in R8.0.1.



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- CPU6 Step2 functions at 100 Mbits Full Duplex.
- You can manage the mode and the rate CPU7 boards. The setting of CPU7 board and of the port of the switch on which the CPU7 board is connected, must be the same.
- The use of hard key is always available on CPU6 but not on CPU7.
- The CPU7 board does not support the OBCA daughter board.
- The CPU7 board the IO2 board. Only the IO2N boards are authorized.
- The CPU7 board is not allowed in a VH cabinet.
- USB port for Data Backup and restoration.

USB ports on CPU7-2, Appliance Server and Blade Center IBM are usable to connect a USB key for the backups and restorations of the databases, Linux data and OPS via **swinst**.

#### 2.5. Save and restore on USB key

USB keys are compatible as of Release 7.1 with CPU7-2, Appliance Server and Blade Server only. The USB connector of CS-2 CPU board is unused.

#### Note

Hard disk on USB is not supported.

#### 2.6. Passive Communication Server

A CS board configured as Passive Communication Server must be equipped with a 256 MB SDRAM.

Reference for CS equipped with a 256 MB SDRAM used as PCS: 3EH 73048 BBAB.

As of Release 8.0, for an installation equipped with PCS and with more than 5000 users (physical sets), Actis configures necessarily these PCS in Appliance Servers. This restriction is removed with Release 9.0 and Actis 13.6 which authorize the possibility to use CS-2 boards.

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 has to register again as the Call Server registar database is not replicated on the PCS.
- If it is in dynamic mode, a local DHCP server is required.

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## 3. SPATIAL REDUNDANCY

- 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.
- The Main and Stand-by CS or Appliance Server can be located in different sub-networks.
  - Features available on AS and CS:
    - This feature is supported by following IP equipment:
      - SIP sets
      - Alcatel series 8 sets (4028-4038-4068)
      - GD
      - GA
      - INTIP
      - IOIP
      - "IP Touch Security Module" : SSM, MSM
      - Attendant IP Softphone
      - IP CCAgent Softphone
      - MIPT sets
    - The applications able to take into account 2 addresses of CPU are:
      - Alcatel 4635 (R5.2.6)
      - Alcatel 4645
      - OmniVista 4760i / 4760 (R3.2)
      - OmniTouch Contact Center : CCD/CCS/CCA/CCIVR
      - OmniTouch Unified Communication R4.0
      - XML Web services
      - Application "XML IP Touch"
      - TSAPI
      - ACAPI
      - VoWLAN R2.0
  - Features not available on AS and CS:
    - 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
  - If a R7.x node is added in a network with nodes less than R6.0, it is essential to continue to use the addressing by role in case of logical links over IP (the nodes below R6.0 cannot establish logical links towards two different addresses).
  - If an external DHCP server is used, a tftp server must also be used.



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- In Release 8.0.1, with the Release 6.0 of IP Touch 40x8 sets, the internal tftp servers (of 2 Call Servers) can be used. In DHCP mode, the IP Touch 40x8 sets can restore 2 tftp server addresses thanks to the option 43 of DHCP as for the AVA. Release 9.1 (patch 11.605.14.e + MIPT binary 120.023) brings this possibility to MIPT sets.
- Bandwidth required between the 2 CS :

Number of users	Minimal bandwidth (Kbps)
500	512
1000	512
2500	1280
5000	2560

- Audit and broadcast must be performed via IP/X25 and not directly via IP.
- 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.
- The 4008 / 4018 sets in SIP mode on OmniPCX Enterprise cannot be used in a spatial redundancy configuration. This limitation will be removed in a future patch of Release 9.1.

## 4. **POWER SUPPLY**

#### 4.1. 1U and 3U racks with internal batteries

This type of rack can no longer be ordered on new business from Release 5.1.2 and Actis 8.1.1.

#### 4.2. New 1U and 3U racks with external batteries

- These new racks with external batteries are compliant only from R5.1.2.
- The external battery rack 12V can be connected only on a 1U rack (3EH 76020 AE).
- The external battery rack 36V can be connected only on a 3U rack (3EH 76027 AE or BE).

#### 4.3. New 1U and 3U racks -48V

These new racks with external batteries are available from Release 5.1.2 and Actis 8.1.1.



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## 5. IP CRYSTAL MEDIA GATEWAY

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

- Only one **Voice Hub or M1 or M2 cabinet** is supported for the IP Crystal Media Gateway in the main zone.
- The GPA2 is supported in the IP Crystal Media Gateway.
- In peripheral zone all 4400 boards are supported.
- 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 and CPU7.



#### The CPU7 board 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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## 6. MEDIA GATEWAY

#### 6.1. 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.
- Now the maximum duration for the GD software downloading is manageable from eMG binaries:
  - 16.34 (E2.504.1.r)
  - 22.7 (F1.603.1.h)
  - 30.9 (F2.500.6.e)
  - 40.5.1 (F3.301.9)

By default, the timeout is 20 min. AT the end of this timeout, the GD restarts with its previous software.

- 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.

#### 6.2. INTIPB board

In the 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.



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#### 6.3. Remote connection towards GD/GA/INTIP boards

#### 6.3.1. 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 **cp1\_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.

#### 6.3.2. Releases 8.0.1 (from G1.503.35), 9.0 (from H1.301.38) and 9.1

The telnet activation, used for the GD in Release 9.0 before patch H1.301.38, has a major drawback: in case the signaling link between the Call Server and the GD wasn't active, there was no way to activate the telnet, even locally, for remote debugging.

To overcome this limitation, as of Releases 8.0.1 (from patch G1.503.35), 9.0 (from H1.301.38) and 9.1, the telnet activation will be possible in the same fashion, using a new entry in "mgconfig" tool (on GD/GA), "14 – Telnet server", which will allow to de-activate the telnet, activate the telnet for a limited period or activate it without limitation. The ippstat method remains possible.

The same process applies to authorize a remote connection via telnet on NGP boards (the ippstat solution doesn't apply though).

#### 6.4. NGP boards

This general naming concerns GD3, GA3, Power/MEX as well as INTIP3 boards.

Chapter 7.7.8 of the main section of this document provides 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.



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NGP binaries (secured or not) are systematically signed. This signature is verified in all cases by Call Server (mode protect or bypass).

	Armada	Compressors	N-way conferences	Voice Guide	3-way conf	DTMF
	daughter			access		receivers
	board					
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	0	0	0
			1x30			
	Yes	45	1x7, 2x7 or 2x15	0	0	0
GA-3 VolP	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

Resources provisioning on Common Hardware NGP boards:

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 in version 2.26 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
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</pre>



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## 7. VolP

- 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.
- LIOE.

The H323 protocol over LIOE is no longer supported from Release 6.0 since LIOE and TSC-LIOE boards are no longer supported. When migrating to Release 8.0.1, the LIOE boards must be replaced by INTIP2 boards. They also must be replaced in case of an heterogeneous network.

In a network with R8.x nodes, there must not be LIOE and TSC-LIOE boards.

– 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.
- Fast start must be activated with LIOE boards.
- NGP boards support only the "Direct RTP in network" mode.

As of 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.
- 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.



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- 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.



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- 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.
  - 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:



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- **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. As for 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.

### 8. 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.

## 9. SIP

As of Release 9.0, 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.

This new 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



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"white list" continue to be supported with the basic level of service offered by the SIP standard (functioning equivalent to R8.0).

When migrating a system with "SIP Device" / "External set" to R9.0, the system moves these sets into the new mode (SIP extension) automatically.



#### It is mandatory to declare Nokia sets, used in Dual mode with OXE, as well as 4135 IP Conference Phones, with type "SIP device".

Procedure to follow:

- Export the SIP entities which are not standard SIP sets (Nokia sets in Dual mode, 4135 IP Conference Phones, fax, video, ...) 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".

Information to manage SIP sets in SEPLOS mode with SIP Device Management is available in OmniVista 4760 R5.0 documentation. See also the technical communications TC1106 Thomson ST20xx SIP sets deployment and TC1255 4008 / 4018 SIP set deployment with OmniPCX Enterprise.

- **Direct RTP Switching in network** is mandatory when SIP phones are configured.
- A SIP set can be managed in an IP domain from Release 6.1 and Release 6.0.1 (version F1.603.1.h).
- SIP-Phones are supported in:
  - stand-alone,
  - in network configurations.
- In R9.0, 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.
- In Release 9.0, there is no status, either on the display or by voice guides, linked to the use of prefixes (example: forward activation). This limitation has been removed in Release 9.1, where the telephonic state of the set is indicated on the display of SEPLOS sets, provided they support MESSAGE SIP method. This facility is available only on SEPLOS sets.

In the current version, characters country specific are not properly taken into account in the strings displayed on the sets.

- Refer to the Release 9.0 Feature List for the list of telephonic features available on SIP sets with the new mode brought by Release 9.0 (Native SIP Call Controller).
- Support of ST2022 and ST2030 Thomson sets.

The framing on these sets must be set to 20 ms in G711 and G729 and to 30 ms in G723.

Refer to technical communication TC1106 Thomson ST20xx SIP sets deployment for more information regarding the deployment of these sets in an enterprise network (VLAN, spatial redundancy, ...).

In the Release 9.0 current version, in case of forbidden action (prefix, international call, ...), the message "Enter Extra Digits" may be displayed instead of "Not Authorized".



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- Support of 4008/4018 sets in SIP mode.

Refer to technical communication TC1255 4008 / 4018 SIP set deployment with OmniPCX Enterprise for detailed information regarding the deployment of these sets in an enterprise network.

- SIP Session Timer.

This feature can be made of two alternative ways: via the Re-Invite method (available in previous releases) and via the Update method (available from R9.0). Depending of the SIP set possibilities, this mode may also be set up within the set. If the CS is managed in "Update" mode, it is able to switch back to "Re-Invite" mode if the set imposes this mode.

For OmniTouch Unified Communication, this new method requires R5.1. The OmniTouch Unified Communication will use the mode set up on the CS.

- SIP Keep Alive mechanism is available in Release 9.1 only for SIP sets declared in SEPLOS mode and provided that they support OPTION messages.
- Reason header is also specific to SIP sets declared in SEPLOS mode. This information is intended for network administrators and Business Partners (information provided in English only in the SIP trace). In the current version, 4008/4018EE sets in SIP mode display this information, so endusers will see some English messages despite the set language may be managed in another language.

## 10. SETS

#### 10.1. IP Phone V1 – V1S

The IP Phone V1 (4098 RE) sets are no more supported from Release 6.0.

The IP Phone V1 set does not work in Direct RTP.

#### 10.2. IP Phone V2 (e-Reflexe)

- The VoIP Technical Characteristics of the IP-Phones are available on Business Portal.
- Multicast traffic supported before voice degradation, IP Phone reset: 90 Mb/s.
- The initialization duration without binary downloading is about 9 minutes for 2000 IP Phones.
   CAUTION

The old 20 and 40 add-on modules are not compliant with the integrated IP Phones V2, the addon keys are ignored. These old add-on modules function correctly with TSCIP V1 and V1S sets. New modules are available and function with TSCIP V1, V1S and IP Phone V2.

These modules are available with the references:

Add-on 40 keys:
Reflexes module add-on 40 packaged : 3AK 27107 ADAB
Reflexes module add-on 40 : 3AK 26044 ABAA
Add-on 20 keys:
Reflexes module add-on 20 packaged : 3AK 27107 DDAB
Reflexes module add-on 20 : 3AK 26043 ABAA



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These new modules are marked "Add-on UA/IP" on the packaging and on the label pasted under the module.

#### 10.3. Alcatel series 8 & 9 sets

- The Alcatel series 8 & 9 sets cannot be used as attendant sets.
   These restrictions will be removed in next versions. As of Release 9.1, 4068 set (Fast Ethernet or Extended Edition) can be used as attendant.
- Alcatel series 8 & 9 sets can be used as CCD sets from Release 7.0.
- Alcatel series 9 sets used as CCD sets require eUA32 boards (3BA 23266).
- The IP configuration on IP Touch series 8 sets can be locked by a password (common for the installation).
- The series 9 sets cannot access to XML applications.
- Only the 4028-4038-4068 sets can access to XML applications.
- The 4018-4028 set cannot access to OmniTouch UC R4.0 (My Phone, My Messaging, My Assistant).
- No total substitution but only partial.
- No hands-free on 4019 set.
- 4018 & 4019 sets do not support Electronic Add-on modules.
- 4018 & 4019 sets cannot use the call by name feature.
- Add-on modules AP (3GV 27014) and S0 (3GV 27016) are compatible with UA Reflexe and 9 series sets.
- Add-on module External ringing interface (3GV28050AA) is compatible with UA Reflexe and 8 & 9 series sets.
- Add-on module V24 / CTI (3GV 27015) is compatible with UA Reflexe sets and cannot be declared behind 9 series sets.
- No series 9 set behind a RT2 or LIO board.
- No series 9 set in remote UA (LUTA-RUTA).
- The recording of calls on TDM sets as well as the access to the external ringing are possible with the series 9 sets only with the following board references:
  - REC8 : 3BD 19218 AHAA
  - REC1 box : 3BD 19160 AEAA
  - External Bell : 3BD 11086 ACAA

These boards remain compatible with the UA sets of Reflexe range.

Refer to the technical communication TC0715 REC8 board, REC1 box and external bell with binary  $3.6 < uanv \le 4.4$  do not work.

 The Survivability feature is only supported by the IP Touch series 8 sets. The eReflexes sets are not compatible.



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"SIP Survivability" feature, released for 4008/4018/4028/4038/4068 Extended Edition sets.
 Once switched in SIP mode, the sets continue to use the NOE data file.

The concerned binaries are noesip4018 (resp. noesip40x8) and dat4018 (resp. dat40x8) for 4008/4018 Extended Edition (resp. 4028/4038/4068 Extended Edition) sets.

- From Release 6.1, 74 programmable keys are available (72 via the **Perso** tab of the set and 2 via **F1** and **F2** keys).

#### REMINDER

In Release 6.0:

- 40 programmable keys are available,
- the key 43 which was located on the Add-on module will correspond to the key 75 of the Add-on module in Release 6.1.x, 6.2 or R7.0.

When migrating from R6.0 to R7.0, the networked IP Touch 4038 and 4068 Executive/Secretary sets must be managed again. The list of IP Touch Executive/Secretary sets to be managed is supplied automatically in the result of the translation. You can also get it with **swinst**; see below.

Login	swinst
Password	SoftInst
option 7	Database tools
option 5	About last database operation

```
" Altering table KEYBOARD
Copying table files, droping old table, creating new table, done
Preparing to read/insert rows, done
Reading/Inserting rows,
No Translate BOSS/SECRETARY Network DO MANUALLY : Set 64127 Key 047 Sub 64036
No Translate BOSS/SECRETARY Network DO MANUALLY : Set 67889 Key 041 Sub 67881
Table KEYBOARD altered "
```

- Certain prefixes cannot be used since they available through keys available in the menu page of the set: language, programming the contrast, no ring.
- It is recommended to use add-on modules when supervising Boss/Secretary and MLA.
- There is no Help key on external applications.
- Each set of the series 8 support the "Statistic tickets over IP" feature as of Release 6.2.
- The migration of a Z set towards an IP Touch set is carried out in two steps:
  - Migration of Z set towards an UA or IP set.
  - Migration of UA or IP set towards an IP Touch set.
- If using Alcatel IP Touch 4068 set with Bluetooth in a WLAN environment, interferences can be generated which can degrade the quality of transmission, in particular the audio of these equipments. Alcatel-Lucent recommends not to use these two technologies simultaneously.
- You can connect up to 3 Electronic Add-On modules. These modules cannot be mixed with the other types of Add-on modules.



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From Release 6.1, the available configurations are:

- one Add-on module 10 keys
- one Add-on module 40 keys
- one Add-on module 40 keys + one Add-on module 10 keys
- one Electronic Add-On modules
- two Electronic Add-On modules
- three Electronic Add-On modules
- Downloading the series 9 sets.

The loading of a dynamic patch with new binaries regarding the series 9 sets, are initialized automatically following the type of downloading selected. This can eventually cause an inconvenience for the client if the installation of the dynamic patch is carried out in the daytime; you should:

- set the field **Download policy** (Phone Facilities categories) to **Delayed**
- install the patch.
- As of Release 8.0, the display of the Chinese, Japanese and Korean on IP Touch sets requires the use of new fonts (22 000 characters for the Chinese).

These fonts are supplied in the form of files of location downloaded in Flash of the IP Touch sets when selecting the display language of the terminal.

The taking into account of these location files involves a reset of IP Touch.

 As of Release 9.1, Hebrew strings are offered on 4028/4038/4068 sets (Fast Ethernet or Extended Edition). The Call-By-name feature won't benefit from it.

**Restriction**: This new language is not available on IP Desktop Softphone, 4008/4018, X9 series, DECT, MIPT sets.

- As of Release 8.0, all Alcatel series 8 & 9 sets except 4008 can be managed as associated set to A4059-IP attendant equipped with a MMK USB keyboard.
- As of Release 8.0, the customization of series 8 & 9 set ringing is available with the use of "Online Service MyRingtone" application available on Business Portal.
- In Release 8.0, the IME (Input Method Editor) mode allows a user to enter non-Latin characters on series 8 & 9 sets using a standard Latin keyboard (with or without special marking on keyboard) for carrying out a call by name or for managing the softkeys.
- Signature of START\_RTP.

In Release 9.0, during the IP Touch initialization, the CS checks the MAC address of the set, returned at the START\_NOE TFTP request, and the MAC address of the set, returned during the signaling link initialization of the set. A new field was added in IP-link protocol in the message that returns the IP address of the set. If this new field is not present in the signaling message the initialization of the set is still performed, but the incident 441 is generated. This mechanism is not implemented on the MIPTs and IP SoftPhones.

#### 10.4. MIPT 300&600 handsets



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VoWLAN R1.x offer is no more supported from Release 7.0 and must be replaced by VoWLAN Release 3.0 offer from OmniPCX Enterprise Release 8.0.

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<sup>™</sup> (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.

#### 10.5. 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 OmniPCX 4400.
- 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.



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- 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.

#### 10.6. UA Extender 4051/4052

The use of UA Extender 4051/4052 is not available through IP.

## 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 consider 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

After each change of mode (secured / unsecured), Call Server must be restarted.



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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).

### 12. SIP TLS FOR EXTERNAL GATEWAY

Before OmniPCX Enterprise Release 10.0, only IPsec/SRTP protocols were supported to protect UA/NOE communications. The IPsec protocol protects UA/NOE signaling and the SRTP protocol protects the sent and received voice flows.

As of OmniPCX Enterprise Release 10.0, 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.

Restrictions whatever the system configuration:

- The minimum OXE Release is 10.0 (J1.410.34.c).
- 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.
- For duplicated Com Server configuration, spatial redundancy is mandatory (2 different Main IP addresses for each CPU).

As of Release 10.0, IPsec/SRTP and SIP TLS/SRTP protocols can be used simultaneously in the different configurations detailed in PCS Form.

## 13. APPLICATIONS

#### 13.1. OmniVista 4760

- Blind attendant can't reach the 4760 directory through Internet Explorer although it was possible with the A4755.
- From Release 7.1, the OmniVista 4760 R4.2 application allows the remote download of patches on OmniPCX Enterprise and PCS (Passive Communication Server) in a simplified and scheduled process.
- Software download and OmniVista 4760.



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- During the software download operation, you must not try to access to the 2<sup>nd</sup> partition, otherwise the download process which was running will stop!.
- Patch downloading duration per CS in a common hardware rack is about 1.15 hour/CS (patch size of 150 MB).

For more information, refer to the technical communication TC0890 OmniPCX Enterprise download software with OmniVista 4760.

- From Release 7.1, OmniVista 4760 R5.0 application can load MAO logs from PCX.
- OmniVista 4760 R5.0 application forces now a PCX backup whatever the selected mode: immediate or scheduled.

#### 13.2. OmniVista 4760i

This application is no more supported and can't be activated anymore. Use mgr or OmniVista 4760 to configure the OmniPCX Enterprise. In case of upgrade to Release 10.0, the application will be deactivated, if previously activated.

#### 13.3. 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.

#### 13.4. SIP Device Management Server

This application needs to be installed on 4760 server. The exact release required depends on the kind of set to be managed.

It supplies binaries and configuration files to Thomson ST20xx SIP devices (as of 4760 5.0 / SIP DMS 1.0) and to 4008/4018 Extended Edition sets in SIP mode (as of OmniVista 4760 R5.1.06.03.c / SIP DMS 1.2).

For more detailed information, refer to OmniVista 4760 technical documentation and to technical communication TC1254 Technical Release Note for Device Management Server 1.2.000.020.

## 14. CLIP

- CLIP on Z32.
  - Calling Line Identification Presentation (CLIP) is only available with analog Z32/eZ32 board with a Crystal (IP) Media Gateway.
  - The protocol ETSI (ETSI 300569 -1/2) and Bellcore (Bellcore TRNWT000030) are supported.



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- The CLIP information is presented on an incoming call to an analog terminal that is on-hook and is receiving ringing.
- The feature is released only for 6 countries (France, USA, China, Taiwan, Pakistan and Hong-Kong).
- A CLIP terminal cannot receive an incoming call during the first 9.5 seconds after it has gone on-hook.
- CLIP is not available for analog phones associated with the 4980 My Softphone application.
- Some telephones only displayed the calling number and not the calling name.
- The following sets have been validated for the US market: AT&T 9357, Uniden EXAI3781, Sony IT-ID20, GE ATLINKS 29196GE1-A, Panasonic KX-TC1703, Bell South 900Mhz MH9942BK
- Alcatel-Lucent can't test and maintain a list of compatible telephone because there are thousands of different phones. Business Partner should contact Professional Services to undertake the validation of specific telephones on a case-by-case basis. Telephone vendors should contact the Alcatel-Lucent Business Partner Program to carry out such validation of their product.
- CLIP on SLI and MIX.
  - As of Release 8.0, SLI and MIX boards on common hardware supports the CLIP FSK ETSI or Bellcore.
  - Some telephones only displayed the calling number and not the calling name.
  - Alcatel-Lucent can't test and maintain a list of compatible telephone because there are thousands of different phones. Business Partner should contact Professional Services to undertake the validation of specific telephones on a case-by-case basis. Telephone vendors should contact the Alcatel-Lucent Business Partner Program to carry out such validation of their product.
- CLIP Bellcore on NDDI2.

CLIP on NDDI2 is available for all markets from Release 6.1.

- CLIP Bellcore on APA.
  - CLIP on APA line (CLIDSP daughter board 3EH 73034 AB) is available for all markets from Release 6.1.
- CLIP DTMF on APA.

In R6.2 the CLIP DTMF on APA line (CLIDSP daughter board - 3EH 73034 AB) is available for India and Taiwan.

## 15. DIRECTORY

- External LDAP Server.
  - LDAP overflow is available on all sets.
  - Only Alcatel-Lucent 40x8 and 40x9 sets as well as Reflexe/eReflexe have a "Overflow" softkey.
  - During a phone book search with LDAP overflow setup, the PCX searches its local phone book the corresponding entries to the search.



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- 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 anymore to give LDAP parameters, such tool use 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
Result 2 PARIS LAURENT 72345
(611)xa006011>
```

Troubleshooting

You can trace the overflow to external Idap 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 40x8 and 40x9 sets.
 Note



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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).

### 16. **BOARDS**

- MIX board.

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

- LIOB/LIOP/LIOX boards.

These boards are in phase out from Release 6.1. They are supported by Release 8.0 but can no more be configured for addition or for new installation.

– INT1/INT2 boards.

These boards are no more supported from Release 6.1.1. They must be replaced by INTOF/INTOF2 boards. On a migration, Actis will remove the INT1 or INT2 boards and will propose a preferential rate on INTOF2 boards.

- 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.

- LANX16-1 / SLANX4 / LANX16-2 / LANX8-2.
  - These LAN switch boards are not manageable.
- NDDI2 board.

In R6.2 NDDI2 board is available for Australia.

## 17. MISCELLANEOUS

- 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.



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- 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
    - ◆ 10 000 on CPU7
    - 1000 on other CPUs
- Number of automatic call back requests per node
  - As of Release 8.0, the number of automatic call back requests passes to 2000 by node instead of 200.
- Number of T0.
  - Maximum number of T0 is limited to 1000.
- S0 interface on Media Gateway.
  - Native S0 is not supported on the BRA board => only connection through S0 plugware is provided.
- 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 an other 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.



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- 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.
  - EAU (United Arabian Emirates) is available.
- A-Law/μ-Law.
  - The A-Law /  $\mu$ -Law configuration is valid for the **whole system**.
  - DPT1-2 board does not allow any more the A-Law /  $\mu$ -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).

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- ACT 99 can't be synchronizing.
- RMA.
  - No hardware remote reset of the e-CS in case of an Appliance Server.
- eRMA.
  - No hardware remote reset of the e-CS.
  - 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 (with CPU5 Step3 or CPU6 Step2), 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 backup 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 backup 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.



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• 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.

– ррр.

- ppp connection w/o RMA does not operate with each current Linux versions. The connection is active but telnet, config, synchro fail.
- SSH/SSL.

Each node of network must be in Release 6.0.x, 6.1.x or R6.2.

- Modem Multitech MT5600BA V92.

This modem must be connected to an UPS otherwise it can be blocked in case of power supply failure.

- Call completion on busy trunk group.
  - Feature not available on SO and attendant sets.
  - Operates only in overlap mode.
  - Does not operate in network.
  - Operates with ARS if the trunk group is local.
  - Does not operate on shared trunk group.
- Private to public overflow.
  - From Release 6.1.1, private to public overflow is subject to the same checks (through Phone Facilities category) as private to public overflow in network.
  - From Release 8.0.1, private to public overflow of a routed call by RSI is monitored by RSI.
  - The sets of an inaccessible domain must be accessible in DDI.
  - It is required to have at least one public access for each domain.
  - All the phone services are lost when changing from a local call towards a public call.
- MOXA Box.

The MOXA box is used to increase the number of serial ports of OmnipCX Enterprise. The aim of this Release 6.1 feature is to make easier the configuration of serial ports of the box: single management of information in mgr instead of two distinct programs (mgr and npadm).



#### The firmware version of Moxa box must be 3.0 or higher.

A new MOXA box (NPort 5410) has been released as of Actis 13.6. It is used with OmniPCX Enterprise on the same feature perimeter as the previous box.

- Multiple Redial list.
  - No multiple Redial list with 4035 attendants.
  - No save of the name of a local or networked call (homogeneous) in the following cases:
    - Prefix of entity call.
    - Attendant call.



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- Call of an abbreviated number.
- Only available on sets:
  - MR2 3G (4035, 4036, 4037).
  - ◆ 3G (4020, 4021, 4022).
  - ♦ IP Touch B, C, D.
- No update of the list of calls sent by the Stand-By.
- On each RUNTEL or reset of set, the list of sent calls is initialized.
- No save on the disk.
- Installation of ACT shelves in computer cabinets.

OmniPCX Enterprise ACT shelves must be installed in computer cabinets closed and equipped with fans.

They must comply with the same CEM and safety standards as the OmniPCX Enterprise ACT shelves:

- EMC: EN55022 :1998-EN55024: 1998/FCC part15
- Safety EN60950 :2000/IEC 60950 ed03/CSA/UL certification

The authorized configurations in the computer cabinets with 38U and 42U format are:

2 ACT shelves 28 positions or 4 ACT shelves 14 positions.