



Avaya Solution & Interoperability Test Lab

Application Notes for SLIT NovaHop CM and Avaya Communication Manager – Issue 1.0

Abstract

These Application Notes describe the compliance testing of SLIT NovaHop CM with Avaya Communication Manager. These Application Notes contain an extensive description of the configurations for both NovaHop CM and Avaya Communication Manager which were used for testing. The compliance testing tested the major functions of the NovaHop CM product.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

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Introduction

These Application Notes describe the configuration steps required for SLIT NovaHop CM to successfully interoperate with Avaya Communication Manager. The NovaHop CM software is a PC-based application suite that provides features for an end user to use Avaya Communication Manager in a healthcare environment. The suite is able to manage one or several Avaya Communication Managers, and works as a client/server application to meet the requirements of hospitals or retirement homes.

1.1. Interoperability Compliance Testing

The compliance testing included the following test scenarios:

- Verification of patient checkin / checkout
- Verification of correct operation of patient room transfer
- Verification that patients can make extension calls
- Verification that patients can make calls to the PSTN
- Verification that a Direct Inward Dialing number (DID) can be allocated to a patient which can be used for direct calls from the PSTN.
- Verification that a DID is redirected after a patient room transfer.
- Verification that a DID is deallocated after a patient checkout.
- Verification that patients with insufficient funds cannot make calls
- Verification that patient calls to national, international, and mobile parties are billed correctly
- Verification that the NovaHop CM server recovers from network interruptions and unexpected power failures.

1.2. Support

Support from Avaya is available at <http://support.avaya.com/>.

Support from SLIT is available at <http://www.slit.fr/support> and +33(0)4.72.10.16.20.

2. Reference Configuration

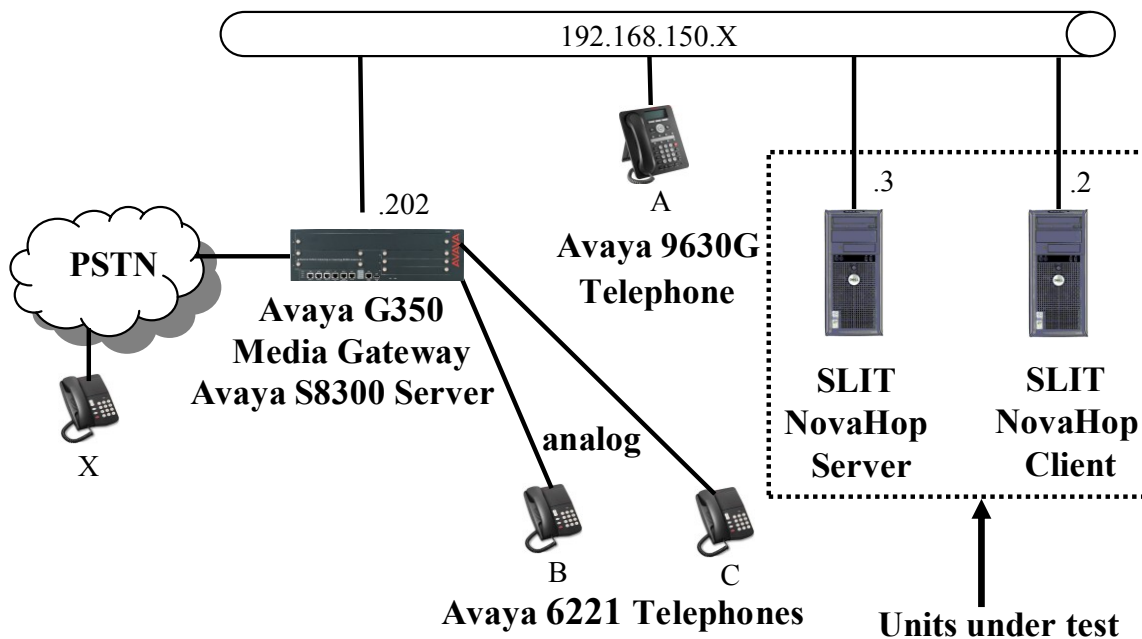


Figure 1: Test System Configuration

The SLIT NovaHop Server in the above diagram performs telephony operations via PMS-Link and receives CDR events from Avaya Communication Manager, which is running on the Avaya S8300 Server. The NovaHop CM Client communicates with the SLIT NovaHop Server and provides a user interface which allows hospital personnel to administer telephone usage within the hospital. The Avaya 6221 analog telephones are for hospital patients and the Avaya 9630G phone for the hospital administrator.

The following table contains additional information about how each of the telephones contained in the above diagram are configured in Avaya Communication Manager:

Endpoint	Ext	PSTN Number	Station Type
A	10093	069 xxx39887 10093	9630G
B	10202	069 xxx39887 10202	6221
C	10203	069 xxx39887 10203	6221
DID 1	12001	069 xxx39887 12001	XDIDVIP
DID 2	12002	069 xxx39887 12002	XDIDVIP
X		069 xxx 6174	

Table 1: Extensions Used for Testing

3. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Software Component	Component	Version
Avaya Communication Manager	CM	R015x.01.2.416.4
Avaya G350 Media Gateway	G350	30.10.4
Avaya G350 Analog Module	G350	HW06/FW093
Avaya 9630G IP Telephone	Telephone	S3.002
Avaya 6221 Analog Telephone	Telephone	N.A.
Windows XP Professional	Client	SP 3
Adobe Reader (French Version)	Client	9.0
Microsoft Internet Explorer	Client	6.0.2900.5512
FireBird Database	Server	2.1
SLIT NovaHop Server	Server	4.1
Windows XP Professional	Server	SP 3
Apache HTTP Server	Server	2.2.4

Table 2: Equipment and Version Validated

4. Configuration

4.1. Configure Avaya Communication Manager

The configuration and verification operations illustrated in this section were performed using the Avaya Communication Manager System Administration Terminal (SAT).

Note that the configuration of the Avaya Communication Manager interface to the PSTN is out of the scope of these application notes.

4.1.1. Verify System-Parameters Customer-Options

Use the **display system-parameters customer-options** command to verify that Avaya Communication Manager is configured to meet the minimum requirements to support the configuration used for these tests, as shown by the parameter values in **Table 3**. If these are not met in the configuration, please contact an Avaya representative for further assistance.

Parameter	Usage
Maximum Stations (p.1)	The value must be sufficient to allow the number of room stations, admin stations, and DID stations shown in Table 1 .
Maximum Concurrently Registered IP Stations (p.2)	The value must be sufficient to allow the number of admin stations shown in Table 1
Hospitality (Basic)? (p.4)	This value must be set to “y”.
Hospitality (G3V3 Enhancements)? (p.4)	This value must be set to “y”.

Table 3: Configuration Values for System-Parameters Customer-Options

change system-parameters customer-options		Page 1 of 11
OPTIONAL FEATURES		
G3 Version: V15	Software Package: Standard	
Location: 2	RFA System ID (SID): 1	
Platform: 6	RFA Module ID (MID): 1	
		USED
	Platform Maximum Ports: 44000	500
	Maximum Stations: 36000	332
	Maximum XMOBILE Stations: 0	0
	Maximum Off-PBX Telephones - EC500: 0	0
	Maximum Off-PBX Telephones - OPS: 1000	27
	Maximum Off-PBX Telephones - PBFMC: 0	0
	Maximum Off-PBX Telephones - PVFMC: 0	0
	Maximum Off-PBX Telephones - SCCAN: 0	0

Figure 2: System-Parameters Customer-Options Form, p.1

change system-parameters customer-options		Page 2 of 11
OPTIONAL FEATURES		
IP PORT CAPACITIES		USED
Maximum Administered H.323 Trunks:	1000	50
Maximum Concurrently Registered IP Stations:	18000	5
Maximum Administered Remote Office Trunks:	0	0
Maximum Concurrently Registered Remote Office Stations:	0	0
Maximum Concurrently Registered IP eCons:	0	0
Max Concur Registered Unauthenticated H.323 Stations:	0	0
Maximum Video Capable H.323 Stations:	0	0
Maximum Video Capable IP Softphones:	0	0
Maximum Administered SIP Trunks:	1000	30
Maximum Administered Ad-hoc Video Conferencing Ports:	0	0
Maximum Number of DS1 Boards with Echo Cancellation:	0	0
Maximum TN2501 VAL Boards:	10	1
Maximum Media Gateway VAL Sources:	0	0
Maximum TN2602 Boards with 80 VoIP Channels:	128	0
Maximum TN2602 Boards with 320 VoIP Channels:	128	0
Maximum Number of Expanded Meet-me Conference Ports:	0	0

Figure 3: System-Parameters Customer-Options Form, p.2

change system-parameters customer-options		Page 4 of 11
OPTIONAL FEATURES		
Emergency Access to Attendant? y		IP Stations? y
Enable 'dadmin' Login? y		
Enhanced Conferencing? y		ISDN Feature Plus? n
Enhanced EC500? y		ISDN/SIP Network Call Redirection? y
Enterprise Survivable Server? n		ISDN-BRI Trunks? y
Enterprise Wide Licensing? n		ISDN-PRI? y
ESS Administration? n		Local Survivable Processor? n
Extended Cvg/Fwd Admin? n		Malicious Call Trace? n
External Device Alarm Admin? n		Media Encryption Over IP? n
Five Port Networks Max Per MCC? n		Mode Code for Centralized Voice Mail? n
Flexible Billing? n		
Forced Entry of Account Codes? n		Multifrequency Signaling? y
Global Call Classification? n		Multimedia Call Handling (Basic)? n
Hospitality (Basic)? y		Multimedia Call Handling (Enhanced)? n
Hospitality (G3V3 Enhancements)? y		Multimedia IP SIP Trunking? n
IP Trunks? y		
IP Attendant Consoles? n		

Figure 4: System-Parameters Customer-Options Form, p.4

4.1.2. Configure IP Interfaces

Use the **change node-names ip** command to configure the IP address of the NovaHop server.

change node-names ip		Page 1 of 2
IP NODE NAMES		
Name	IP Address	
default	0.0.0.0	
nova-hop	192.168.150.3	
procr	192.168.150.202	

Figure 5: IP Interfaces Form

4.1.3. Configure IP Services

Use the **change ip-services** command to configure the services used by NovaHop.

change ip-services					Page	1 of	3
IP SERVICES							
Service	Enabled	Local	Local	Remote	Remote		
Type		Node	Port	Node	Port		
CDR1		procr	0	nova-hop	9001		
PMS		procr	0	nova-hop	9002		

Figure 6: IP-Services Form

4.1.4. Configure System-Parameters Hospitality

Use the **change system-parameters hospitality** command to configure the features required by NovaHop, as shown by the parameter values in the following table.

Parameter	Usage
Message Waiting Configuration (p.1)	Set this parameter to “act-pms”.
Controlled Restrictions Configuration (p.1)	Set this parameter to “act-pms”.
Housekeeper Information Configuration (p.1)	Set this parameter to “act-pms”.
Client Room Coverage Path Configuration (p.1)	Set this parameter to “act-pms”.
PMS Endpoint (p.1)	Set this parameter to “PMS”.
PMS Protocol Mode: transparent ASCII mode? (p.1)	Set this parameter to “y”.
Display Room Information in Call Display? (p.2)	Set this parameter to “y”.
Automatic Selection of DID Numbers? (p.2)	Set this parameter to “y”.
Custom Selection of VIP DID Numbers? (p.2)	Set this parameter to “y”.
Number of Digits from PMS (p.2)	Set this parameter to “5”.

Table 4: Configuration Values for System-Parameters Hospitality

change system-parameters hospitality	Page 1 of 3
HOSPITALITY	
Message Waiting Configuration: act-pms Controlled Restrictions Configuration: act-pms Housekeeper Information Configuration: act-pms Number of Housekeeper ID Digits: 0 PMS Log Endpoint: Journal/Schedule Endpoint: Client Room Coverage Path Configuration: act-pms Default Coverage Path for Client Rooms: Forward PMS Messages to Intuity Lodging? n	
PMS LINK PARAMETERS	
PMS Endpoint: PMS PMS Protocol Mode: transparent ASCII mode? y Seconds before PMS Link Idle Timeout: 20 Milliseconds before PMS Link Acknowledgement Timeout: 1500 PMS Link Maximum Retransmissions: 5 PMS Link Maximum Retransmission Requests: 5 Take Down Link for Lost Messages? y	

Figure 7: System-Parameters Hospitality Form, p. 1

change system-parameters hospitality	Page 2 of 3
HOSPITALITY	
Dual Wakeups? n Daily Wakeup? n VIP Wakeup? n Room Activated Wakeup With Tones? n Time of Scheduled Wakeup Activity Report: Time of Scheduled Wakeup Summary Report: Time of Scheduled Emergency Access Summary Report: Announcement Type: silence	
Length of Time to Remain Connected to Announcement: 30 Extension to Receive Failed Wakeup LWC Messages: Routing Extension on Unavailable Voice Synthesis: Display Room Information in Call Display? y Automatic Selection of DID Numbers? y Custom Selection of VIP DID Numbers? y Number of Digits from PMS: 5 PMS Sends Prefix? n Number of Digits in PMS Coverage Path: 3 Digit to Insert/Delete:	

Figure 8: System-Parameters Hospitality Form, p. 2

4.1.5. Configure Class of Service

Use the **change cos** command to configure the class of service for room extensions as well as XDIDVIP stations. COS 1 is used for guest rooms and COS 2 for XDIDVIP stations.

change cos	Page 1 of 2															
CLASS OF SERVICE																
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Auto Callback	n	y	y	n	y	n	y	n	y	n	y	n	y	n	y	n
Call Fwd-All Calls	n	y	n	y	y	n	n	y	y	n	n	y	y	n	n	y
Data Privacy	n	y	n	n	n	y	y	y	y	n	n	n	n	y	y	y
Priority Calling	n	y	n	n	n	n	n	n	n	y	y	y	y	y	y	y
Console Permissions	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Off-hook Alert	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Client Room	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Restrict Call Fwd-Off Net	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Call Forwarding Busy/DA	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Personal Station Access (PSA)	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Extended Forwarding All	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Extended Forwarding B/DA	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Trk-to-Trk Transfer Override	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
QSIG Call Offer Originations	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Contact Closure Activation	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n

Figure 9: Class of Service Form

4.1.6. Add Stations for DIDs

Use the **add station** command to add an XDIDVIP station for each of the DIDs which can be allocated for patients to receive calls directly from PSTN callers for each of the DID items listed in **Table 1**, using the parameters shown in the following table.

Parameter	Usage
Type	Enter “XDIDVIP”
COS	Assign the COS (as configured in Figure 9) which does not have “Client Room” assigned .

Table 5: XDIDVIP Station Parameters

```
add station 12001                                     Page 1 of 1
                                                    STATION
Extension: 12001                                     BCC: 0
  Type: XDIDVIP                                       TN: 1
Name:                                                COR: 1
Coverage Path 1:                                     COS: 2
Coverage Path 2:
Hunt-to Station:
Time of Day Lock Table:
Survivable COR: internal
Survivable Trunk Dest? y
```

Figure 10: XDIDVIP Station Form

4.1.7. Add Stations for Guest Rooms

Use the **add station** command to add an extension for each of the room extensions shown listed in **Table 1**, using the parameters shown in the following table.

Parameter	Usage
Type	Enter “2500” for an analog telephone.
Port	Enter the address of the port to which the telephone is attached.
COS	Assign the COS (as configured in Figure 9) which has “Client Room” assigned.

Table 6: Guest Room Station Parameters

```

add station 10202                                     Page 1 of 4

                                STATION

Extension: 10202                                Lock Messages? n                BCC: 0
  Type: 2500                                Security Code:                  TN: 1
  Port: 001V702                            Coverage Path 1:               COR: 1
  Name:                                    Coverage Path 2:               COS: 1
                                Hunt-to Station:                Tests? y

STATION OPTIONS
  XOIP Endpoint type: auto                Time of Day Lock Table:
  Loss Group: 1                          Message Waiting Indicator: none
  Off Premises Station? n

Survivable COR: internal
Survivable Trunk Dest? y

```

Figure 11: Add Guest Room Station Form

4.1.7.1 Configure CDR Interface to NovaHop

Use the **change system-parameters cdr** command to configure the Avaya S8300 Server to send CDR records using the format required by NovaHop. Set the parameters on page 1 of this form as show in the following table. Note that the configuration values for the “Secondary Output” were included to cause CDR records to be written to a test tool, and are not required for normal operation.

Parameter	Usage
Primary Output Format	Set this field to “customized” so that CDR records can be generated using the format required by NovaHop.
Primary Output Endpoint	Set this field to “CDR1” to use the CDR IP output device (see Figure 6) which is configured in Figure 13 .

Table 7: Values Used for System-Parameters CDR, Page 1

```

change system-parameters cdr                         Page 1 of 2
                                CDR SYSTEM PARAMETERS

Node Number (Local PBX ID): 1                    CDR Date Format: day/month
  Primary Output Format: customized    Primary Output Endpoint: CDR1
  Secondary Output Format:
    Use ISDN Layouts? y                Enable CDR Storage on Disk? y
    Use Enhanced Formats? n            Condition Code 'T' For Redirected Calls? n
    Use Legacy CDR Formats? y          Remove # From Called Number? n
  Modified Circuit ID Display? n        Intra-switch CDR? n
    Record Outgoing Calls Only? n      Outg Trk Call Splitting? y
  Suppress CDR for Ineffective Call Attempts? n    Outg Attd Call Record? y
    Disconnect Information in Place of FRL? n      Interworking Feat-flag? n
  Force Entry of Acct Code for Calls Marked on Toll Analysis Form? n
    Calls to Hunt Group - Record: member-ext
  Record Called Vector Directory Number Instead of Group or Member? n
  Record Agent ID on Incoming? n        Record Agent ID on Outgoing? y
    Inc Trk Call Splitting? y            Inc Attd Call Record? y
  Record Non-Call-Assoc TSC? n          Call Record Handling Option: warning
  Record Call-Assoc TSC? n              Digits to Record for Outgoing Calls: dialed
  Privacy - Digits to Hide: 0            CDR Account Code Length: 2

```

Figure 12: System-Parameters CDR Form, Page 1

The parameters on page 2 of the **system-parameters cdr** form define the format of the CDR record which is sent to NovaHop. Set the parameters on this form as shown in the following screen. Additional information on this subject is contained in [2].

change system-parameters cdr Page 2 of 2

CDR SYSTEM PARAMETERS

Data Item	Length	Data Item	Length	Data Item	Length
1: date	- 6	17: isdn-cc	- 11	33: clg-num/in-tac	- 10
2: space	- 1	18: space	- 1	34: space	- 1
3: time	- 4	19: cond-code	- 1	35: in-crt-id	- 3
4: space	- 1	20: space	- 1	36: space	- 1
5: out-crt-id	- 3	21: auth-code	- 7	37: in-trk-code	- 4
6: space	- 1	22: space	- 1	38: space	- 1
7: code-used	- 4	23: acct-code	- 15	39: ppm	- 5
8: space	- 1	24: space	- 1	40: return	- 1
9: code-dial	- 4	25: attt-console	- 2	41: line-feed	- 1
10: space	- 1	26: space	- 1	42:	-
11: calling-num	- 10	27: vdn	- 5	43:	-
12: space	- 1	28: space	- 1	44:	-
13: dialed-num	- 18	29: frl	- 1	45:	-
14: space	- 1	30: space	- 1	46:	-
15: sec-dur	- 5	31: node-num	- 1	47:	-
16: space	- 1	32: space	- 1	48:	-

Record length = 140

Figure 13: System-Parameters CDR Form, Page 2

4.2. Install and Configure NovaHop Server

The screenshots and much of the corresponding installation instructions in this section are in French. The following table lists the French to English text mappings for UI constructs shown in the screenshots:

Function Keys		Fields	
French	English	French	English
Annuler	Cancel	Chambre	Room
Aide	Help	Clef	Key
Créer	Create	Lancement	Launch
Installer	Install	Liaison	Connection
Modifier	Modify	Lits	Beds
Suivant	Next	Nom	Name
Parcourir	Browse	Place	Location
Précédent	Previous	Poste	Extension
Valider	Validate	Tarif	Price
Quitter	Quit		
Terminer	Finish		

Table 8: French / English Translation

Insert the NovaCom install media and let it auto-start the install tool. Click “NovaCom Client/Serveur”.

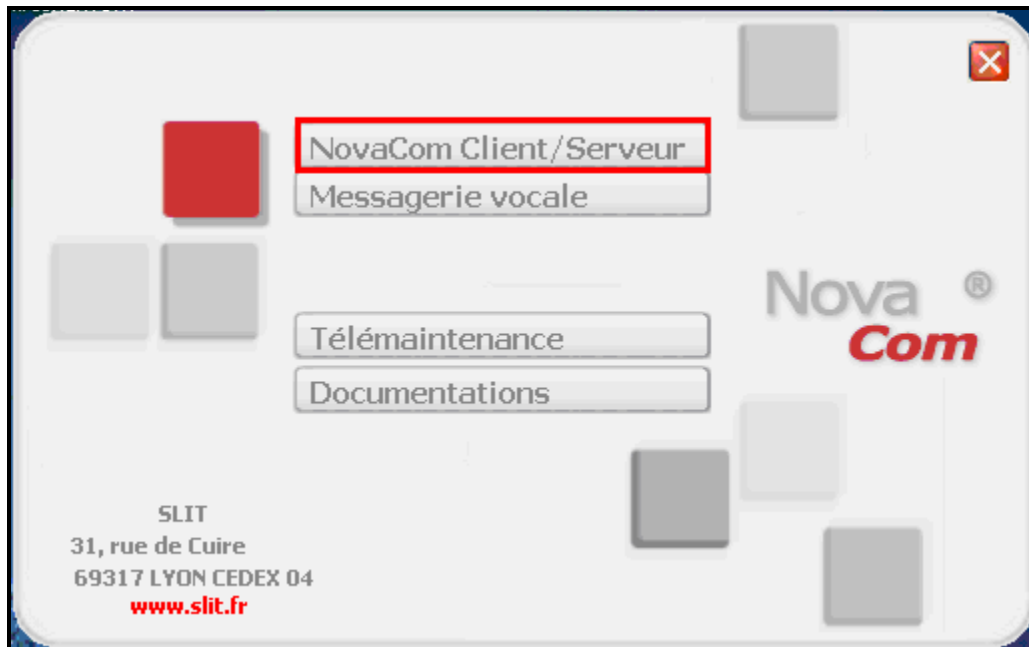


Figure 14: NovaCom Autostart Greeting Screen

Click “Suivant”.

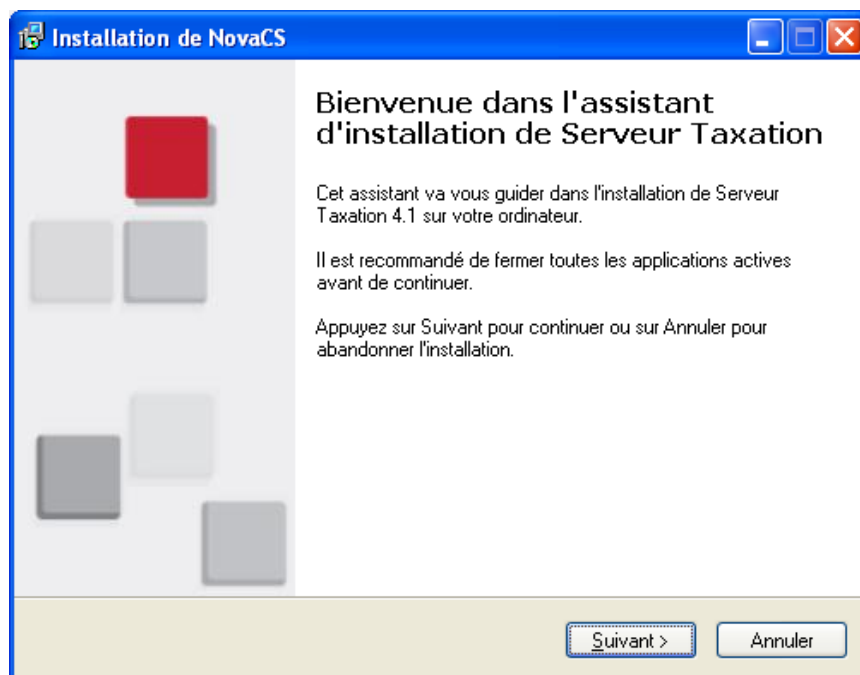


Figure 15: NovaCom Server Installation Wizard Greeting Screen

Select the first radio button to accept the license conditions and Click “Suivant”.

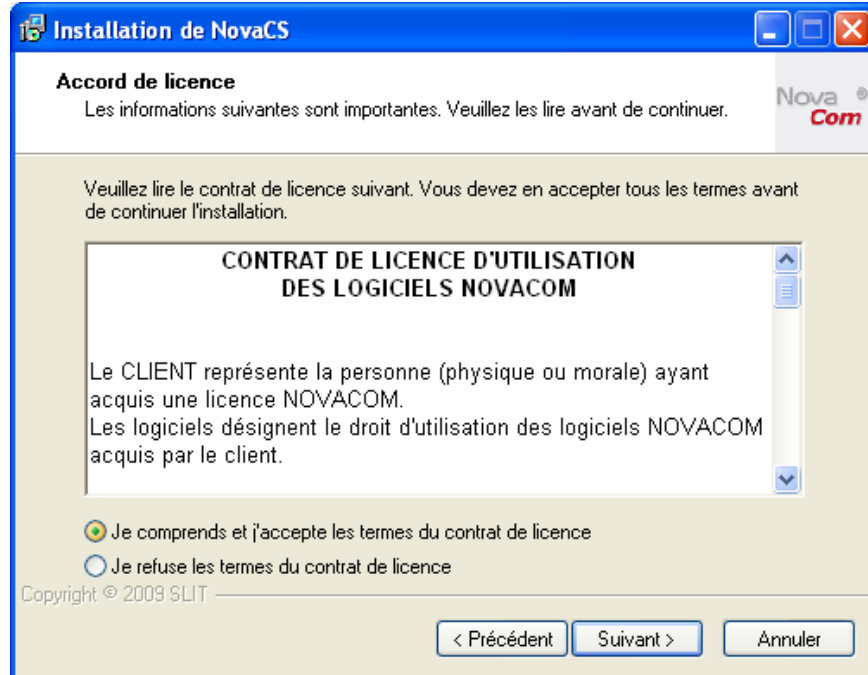
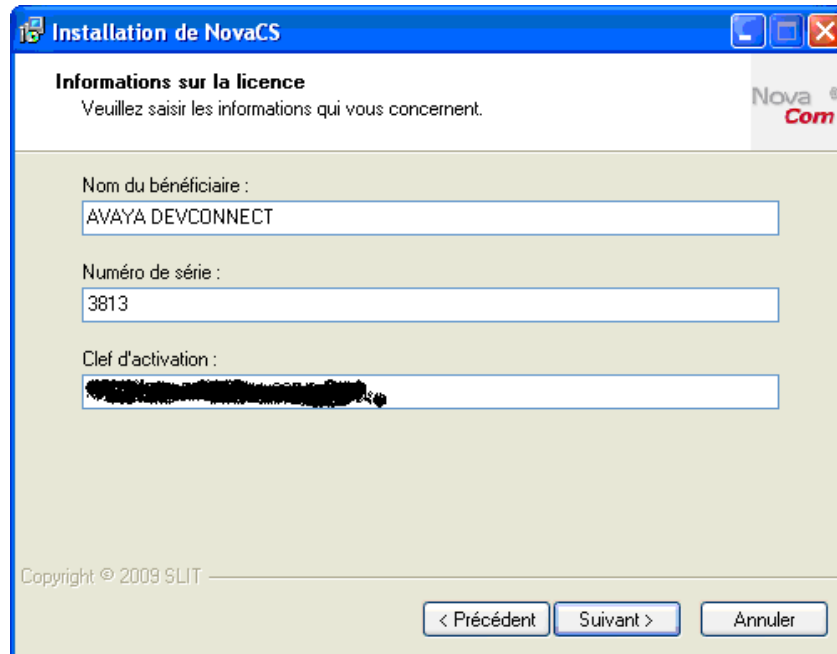


Figure 16: NovaCom License Acceptance Screen

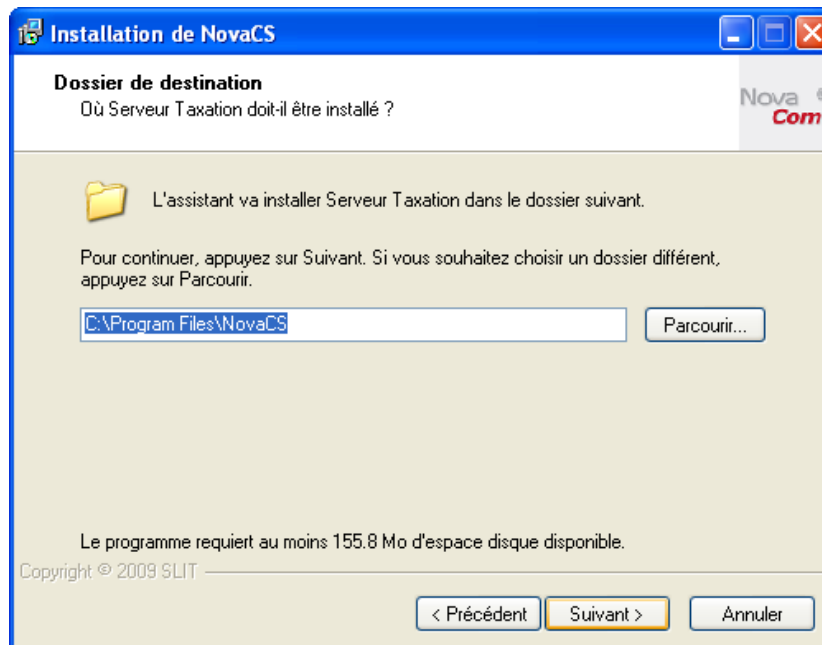
Enter a user name in the first field and an activation code in the “Clef d’activation” field and click “Suivant”.



The screenshot shows the 'Installation de NovaCS' window with the 'Informations sur la licence' tab selected. The window title bar includes standard Windows controls. The main area contains three text input fields: 'Nom du bénéficiaire' (containing 'AVAYA DEVCONNECT'), 'Numéro de série' (containing '3813'), and 'Clef d'activation' (containing a masked key). A 'Nova Com' logo is in the top right. At the bottom, there is a copyright notice 'Copyright © 2009 SLIT' and three buttons: '< Précédent', 'Suivant >', and 'Annuler'.

Figure 17: NovaCom License Key Entry Screen

Retain the default installation path and click “Suivant”.



The screenshot shows the 'Installation de NovaCS' window with the 'Dossier de destination' tab selected. The window title bar includes standard Windows controls. The main area contains a folder icon, the text 'L'assistant va installer Serveur Taxation dans le dossier suivant.', and instructions: 'Pour continuer, appuyez sur Suivant. Si vous souhaitez choisir un dossier différent, appuyez sur Parcourir.' Below this is a text input field showing the default path 'C:\Program Files\NovaCS' and a 'Parcourir...' button. A note at the bottom states 'Le programme requiert au moins 155.8 Mo d'espace disque disponible.' and 'Copyright © 2009 SLIT'. At the bottom right are three buttons: '< Précédent', 'Suivant >', and 'Annuler'.

Figure 18: NovaCom Data Directory Selection Screen

Click “Suivant”.

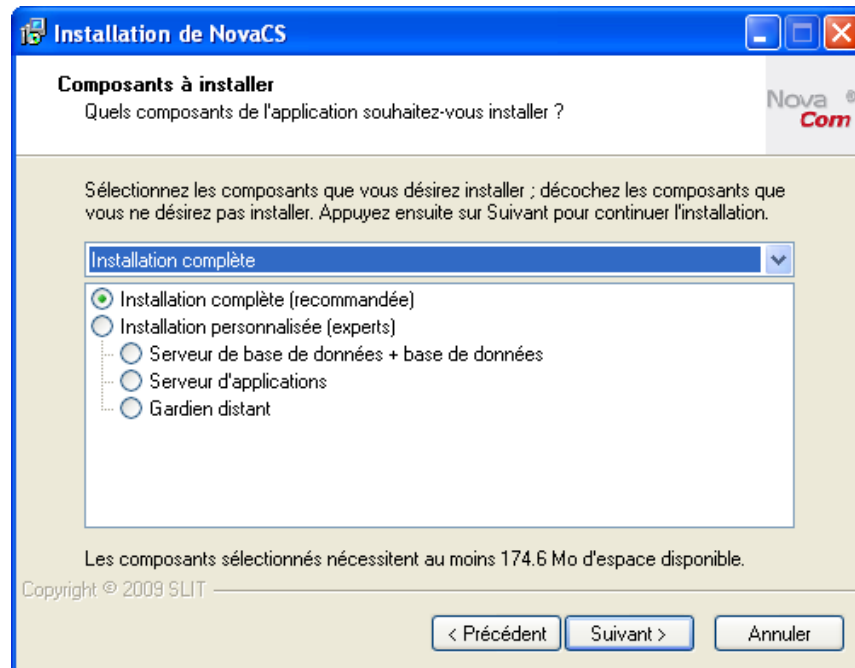


Figure 19: NovaCom Component Selection Screen

Click “Suivant”.

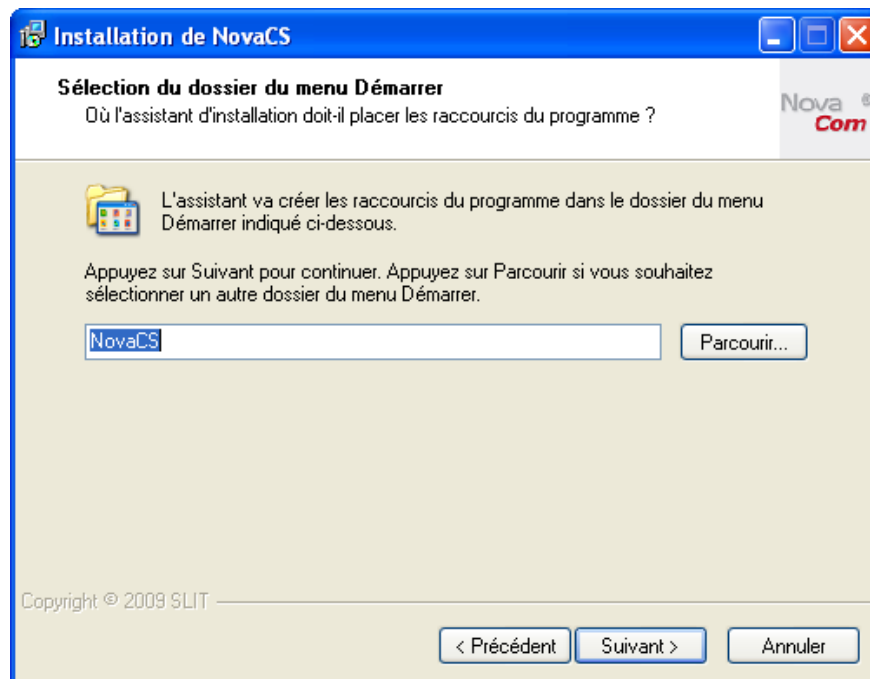


Figure 20: NovaCom Program Directory Selection Screen

Click “Suivant”.

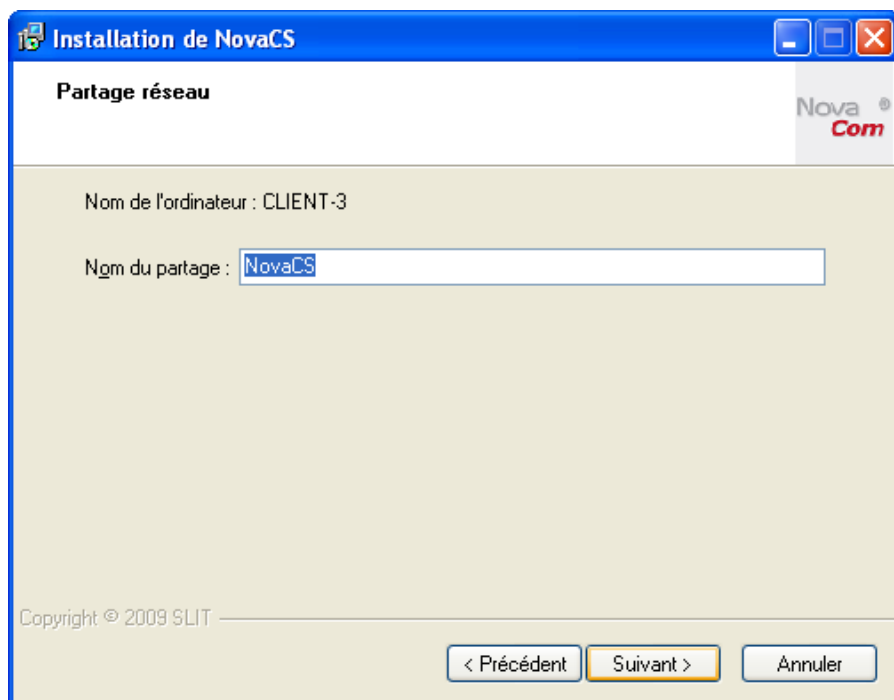


Figure 21: NovaCom Client Directory Selection Screen

Click “Suivant”.

Licences

Licence globale de la suite logicielle

Bénéficiaire : **AVAYA DEVCONNECT**

Clef : **[REDACTED] - [REDACTED] - [REDACTED] - [REDACTED] - [REDACTED] - [REDACTED]**

Licences des modules

Module	Licence	Connex.	Expiration
A.I.C.			
Annuaire	[REDACTED]	1	Jamais
Annuaire non-voyant			
Annuaire P.O			
Archivage			
Coupure communications			
DHM	[REDACTED]	1	Jamais
Editeur de tarifs opérateurs			
Facturation			
Fil de l'eau	[REDACTED]	2	Jamais
Hôpital	[REDACTED]	1	Jamais
MajCom			
Manager	[REDACTED]	1	Jamais
Messagerie vocale admin.			
Messagerie vocale client			

Cette page permet la saisie des licences d'utilisation correspondant aux différents modules achetés.

Suivant >>

<< **Précédent**

Figure 22: NovaCom License Confirmation Screen

Click “Suivant”.

Paramètres généraux

Paramètres généraux | Utilisateurs systèmes et mot de passe | Serveur Smtip de mail

Paramétrage monétaire

Symbole :

1ère monnaie : €

2ème monnaie : F

Parité : 1 F = 0.15245 €

Nombre de décimales : 2

Position du symbole : ☐ Avant ☒ Après

Double saisie : ☐ Double affichage : ☐

Exemple : 3524.12 €

Coûts

Taux de la T.V.A. : 19.6 %

Coût de la taxe (HT) : 0.09375 €

En-tête des éditions

AVAYA DEVCONNECT
Kleyerstr. 94
D-60326 Frankfurt

Couleurs

Champs obligatoires :

Zones d'information :

Zones de rappel :

Séparateurs critères de recherche

Intervalles : : (deux points)

Valeurs : : (point virgule)

Cette page permet de régler les paramètres de la Suite s'appliquant à tous les modules.

Figure 23: General Parameters Screen

Click “Suivant”.

The screenshot shows a software interface titled "Historiques / Journaux". It contains several sections with retention period settings:

- Communications**:
 - Les communications sont conservées pendant : Externes 365 jour(s)
 - Internes 62 jour(s)
- Abonnés internes et contacts externes**:
 - Les abonnés et contacts supprimés sont conservés pendant : 31 jour(s)
- Journaux et alarmes**:
 - Les événements des journaux sont conservés pendant : 31 jour(s)
- Hôpital**:
 - Les occupants sortis sont conservés pendant : 365 jour(s)
 - Les occupants sortis débiteurs sont conservés pendant : 365 jour(s)
 - Les écritures du journal de caisse sont conservées pendant : 365 jour(s)

On the right side, there is a yellow box with the text: "Cette page permet de saisir les différentes périodes de conservation des communications, des journaux ...". Below this box are two buttons: "Suivant >>" and "<< Précédent".

Figure 24: Operational Period Selection Screen

Click “Suivant”.

Utilisateurs et profils

Gestion des utilisateurs Gestion des profiles Gestion des formats

Tous les utilisateurs **Droits par modules** **Utilisateurs connectés**

Rechercher par : Nom utilisateur ▼ Critère : 🔍 Grille...

Nom utilisateur	Nom détaillé	Administrateur	Confidentialité
▶ ADMIN	Administrateur	x	1
TAXATION	Utilisateur taxation	-	0

Créer... Modifier... Supprimer Import ...

Imprimer...

Cette page affiche la liste des utilisateurs, et permet d'ajouter, de modifier ou de supprimer des utilisateurs.

Suivant >>

<< Précédent

Figure 25: User Profile Screen

For the “Numérotation” tab, enter the parameters shown in the following table and click “Suivant”.

Parameter	Usage
La numérotation externe	Enter the prefix used to dial external calls.
Nombre de chiffres...	Enter the minimum number of digits used to dial an external number.

Table 9: Annuaire Numérotation Configuration Parameters

Annuaire

Hiérarchies et champs **Numérotation**

Poste obligatoire pour les abonnés : ☒

Préfixe pour :

- La numérotation externe : 0
- La numérotation abrégée : 2

Nombre de chiffres validant l'ajout du préfixe pour la numérotation externe : 7

Cette page permet le paramétrage de tous les champs de l'annuaire ainsi que les niveaux hiérarchiques de la suite.

Suivant >>

<< Précédent

Figure 26: Annuaire Numérotation Screen

For the “Chambres” tab, set the parameters as shown in the following table.

Parameter	Usage
Compte téléphonique	Check this box.
DHM	Select the “DHM sans attente” radio button.
Gestion des sorties permissionnaires	Check this box.

Table 10: Hôpital: Chambres Configuration Parameters

Hôpital

Comptes gérés

Compte téléphonique : ☒ **DHM**

Compte télévision : ☐ ☐ Pas de DHM

Compte divers : ☐ ☐ DHM avec attente

☒ DHM sans attente

Mode de fonctionnement

Chambres Comptes Factures Forfait SDA Télévision Dates

Si chambre occupée, le nouveau patient chasse l'occupant actuel : ☐

Si chambre occupée, le nouveau patient sort l'occupant actuel : ☐

Si chambre occupée, le nouveau patient est mis dans le couloir : ☐

Si chambre inconnue, alors arrivée ou mouvement impossible (erreur) : ☐

Possibilité de saisir directement le nom du lit lors de l'arrivée d'un patient : ☐

Gestion des sorties permissionnaires : ☒

Cette page permet de configurer le fonctionnement ainsi que les champs du module Hôpital.

Type de champs

Champs clients Champs lits

Fixes Libres Libres

Libellé	Obligatoire	Visibilité	Nb de caractères
Genre	Non	Géré	0
I.E.P.	Oui	Géré / Visible	0
I.P.P.	Oui	Géré / Visible	0
Prénom	Oui	Géré	0

Modifier Suivant >> << Précédent

Modifié

Figure 27: Hôpital: Chambres Configuration Screen

For the “Comptes” tab, check the “Lors de l’arrivée d’un patient, le compte téléphonique s’ouvre automatiquement” box and click “Suivant”.

Hôpital

Comptes gérés

Compte téléphonique : ☒ **DHM**

Compte télévision : ☐ ☐ Pas de DHM

Compte divers : ☐ ☐ DHM avec attente

☒ DHM sans attente

Mode de fonctionnement

Chambres Comptes Factures Forfait SDA Télévision Dates

Lors du départ d'un patient, le solde de son compte téléphonique est supprimé : ☐

Lors de l'arrivée d'un patient, le solde de son compte général est supprimé : ☐

même si le solde de son compte est négatif : ☐

Mouvement autorisé même si le tarif du nouveau lit est différent de l'ancien : ☐

Lors de l'arrivée d'un patient, le compte téléphonique s'ouvre automatiquement : ☒

Le coût de la dernière communication avant coupure est celui du seuil de coupure ☐

Cette page permet de configurer le fonctionnement ainsi que les champs du module Hôpital.

Type de champs

Champs clients Champs lits

Fixes Libres Libres

Libellé	Obligatoire	Visibilité	Nb de caractères
Genre	Non	Géré	0
I.E.P.	Non	Non géré	0
I.P.P.	Non	Non géré	0
Prénom	Oui	Géré	0

Modifier

Suivant >>

<< Précédent

Modifié

Figure 28: Hôpital: Comptes Configuration Screen

Double click on the first entry.

Pabx

Nom	Fil de l'eau	DHM
PABX1	FIL01	DHM1
PABX2	non	DHM2
PABX3	non	non

Suivant >>

<< Précédent

Ajouter Modifier Priorités DHM >>

Figure 29: PBX Selection Screen

Click “Liaison” under “Fil de l’eau”.

Modification d'un Pabx

Nom : PABX1

Rattaché au niveau hiérarchique : Site

Code pays où se situe le pabx : 0049 (France = 0033)

☒ Fil de l'eau

Liaison ... (Liaison "BT direct")

Opérateurs | Fonctionnement | Coût minimal

Taxation à la durée : ☐

Répertoire : Répertoire ... Opérateurs ...

Reconnaissance des opérateurs :

Opérateur	Identifiant	Valeur
-----------	-------------	--------

Ajouter Modifier Supprimer

☒ DHM

Liaison ... (Liaison "Série directe")

Mise à jour des noms : administratifs ☐ dans le pabx.
hospitaliers ☐

Topologie

Pabx gérés par le fil de l'eau courant :

Nom

Pabx du site :

Nom
PABX2
PABX3

Cette page permet le paramétrage du Fil de l'Eau, des opérateurs, de la topologie de Fil de l'Eau, du DHM.

Modifier Annuler Aide

Modifié

Figure 30: PBX Configuration Screen

Set the fields as shown in the following table and click “Modifier”.

Parameter	Usage
Type de liaison	Select “TCP/IP” from the drop-down menu.
Lancement	Select “Automatique” from the drop-down menu.
Modèle de Pabx	Select “COMMANAGER” from the drop-down menu.
Address IP	Leave the value at the default of “0.0.0.0”. When running as a server, SLIT NovaHop does not need to know the address of Avaya Communication Manager.
Protocole réseau	Select “tcp” from the drop-down menu.
N° du port	Enter the port number assigned to CDR in Figure 6 .
Mode serveur	Click this box.

Table 11: CDR Connexion Configuration Parameters

Modification d'une liaison

Type de liaison : TCP/IP

Declenchement de l'alarme : 0 minutes

Poste Longueur : 5

Alphanumérique : ☐

Taille du fichier capture du dialogue : 1500 Ko

Temps d'attente sur trame incomplète : 0 secondes

Type de connexion

☒ Connexion permanente ☐ Connexion périodique

Durée entre deux connexions : 10 min. Durée de la connexion (max) : 10 min.

Lancement : Automatique

A partir d'un serveur distant :

Paramètres supplémentaires :

ID du Pabx :

Création automatique des postes : ☒

Modèle de Pabx : COMMMANAGER

Paramétrer les variables ...

Marque : AVAYA

Modèle : Communication Manager

Version : 1

Commentaire : Format CM114 et CM140

Liaison :

Rattachement à : Aucun

TCP / IP

TCP/IP

Adresse IP : 0 . 0 . 0 . 0 N° du port : 9001

Time out réseau : 0 minutes

Mode serveur ☒

Protocole réseau : tcp

Mode parano : ☐ Connexions multiples : ☐

Avancé...

Modifié

Figure 31: Connection Configuration Screen

Verify that the “Fil de l’eau” Liaison is “TCP/IP”. Enter the international dial code for country in which the server is located and click “Modifier”. Click “Liaison” under the “DHM” heading.

Modification d'un Pabx

Nom : **PABX1** Rattaché au niveau hiérarchique : **Site** ... Eff. Code pays où se situe le pabx : **0049** (France = 0033)

☒ Fil de l'eau

Liaison ... (Liaison "TCP/IP")

Opérateurs Fonctionnement Coût minimal

Taxation à la durée : ☐

Répertoire : Répertoire ... Opérateurs ...

Reconnaissance des opérateurs :

Opérateur	Identifiant	Valeur
-----------	-------------	--------

Ajouter Modifier Supprimer

Topologie

Pabx gérés par le fil de l'eau courant :

Nom

Pabx du site :

Nom
PABX2
PABX3

☒ DHM

Liaison ... (Liaison "Série directe")

Mise à jour des noms : administratifs ☐ dans le pabx. hospitaliers ☐

Modifié

Cette page permet le paramétrage du Fil de l'Eau, des opérateurs, de la topologie de Fil de l'Eau, du DHM.

Figure 32: PBX Configuration after Connection Selection Screen

Select the fields as shown and click “Paramétrer le DHM”:

Modification d'une liaison

Type de liaison : **Eclateur**

Transparence DHM
Archivage : ☐ conservation de 30 jours.

Gestion des films vocaux : Poste : ☐ Clef localisée : ☐ Clef généralisée : ☐

Lancement : **Automatique**

À partir d'un serveur distant : ...

Paramètres supplémentaires :

Modèle de Pabx : **AVAYA PMS**

Paramétrer le DHM

Marque : AVAYA
Modèle : PMS LINK
Version : 1
Commentaire : SDA (5 chiffres)
Liaison :

TCP / IP

TCP/IP
Adresse IP : 127.0.0.1 N° du port : 9002

Time out réseau : 0 minutes

Modifier Annuler Aide

Figure 33: Protocol Configuration Screen

Click “Valider” without entering a password.

Mot de passe PABX

Sécurité

Mot de passe :

Valider Annuler

Figure 34: Additional Parameters Screen

Retain the default values shown and click “Valider”.

[illegible]

Figure 35: User Rights Configuration Screen

Click “Suivant”.

Nom	Fil de l'eau	DHM
PABX1	FIL01	DHM1
PABX2	non	DHM2
PABX3	non	non

Ajouter Modifier Priorités DHM >> Suivant >> << Précédent

Figure 36: PBX Selection Screen

Click “Suivant”.

Num.	Nom
------	-----

Ajouter Modifier Supprimer Suivant >> << Précédent

Figure 37: PBX Pools Screen

Click “Suivant”.

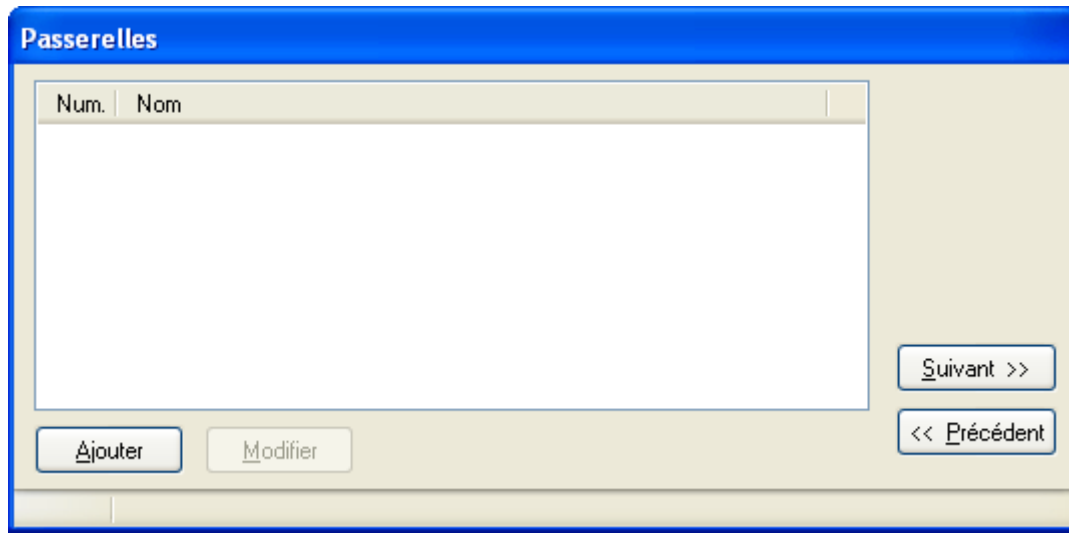


Figure 38: Bridge Selection Screen

Click “Suivant”.

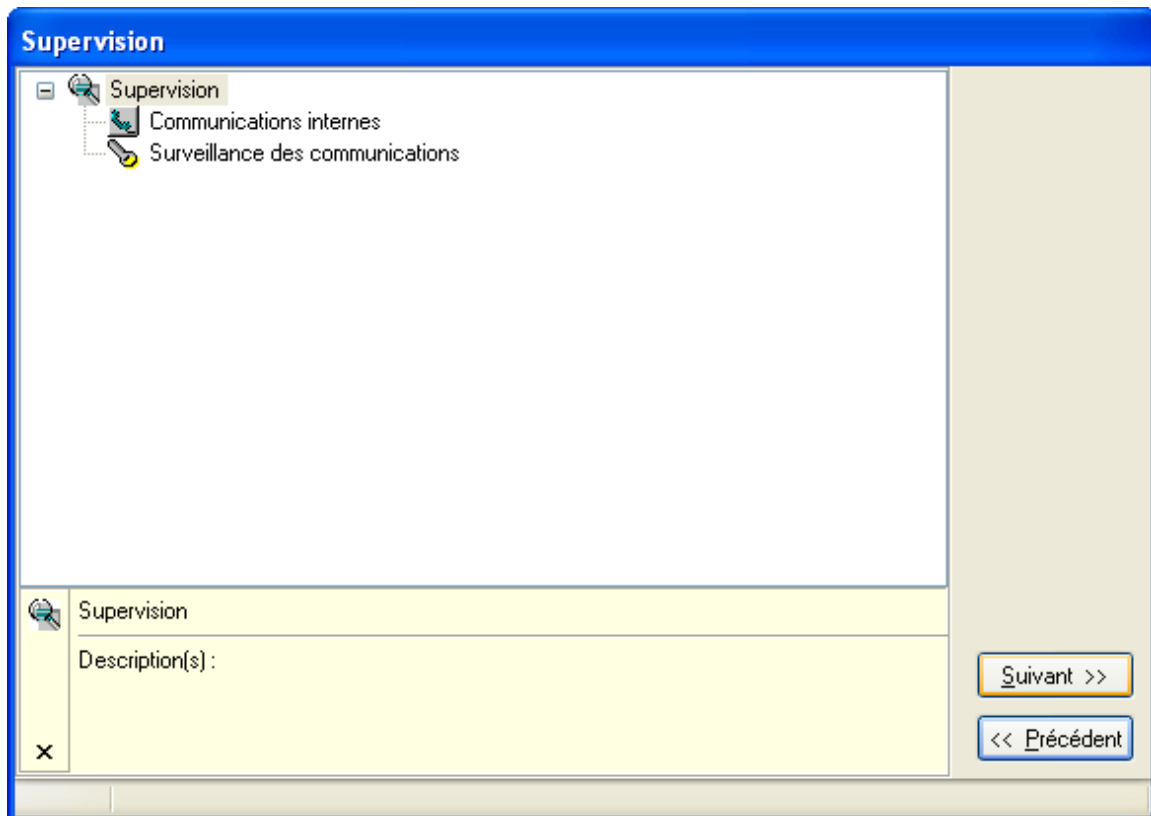


Figure 39: Supervision Screen

Click “Suivant”.

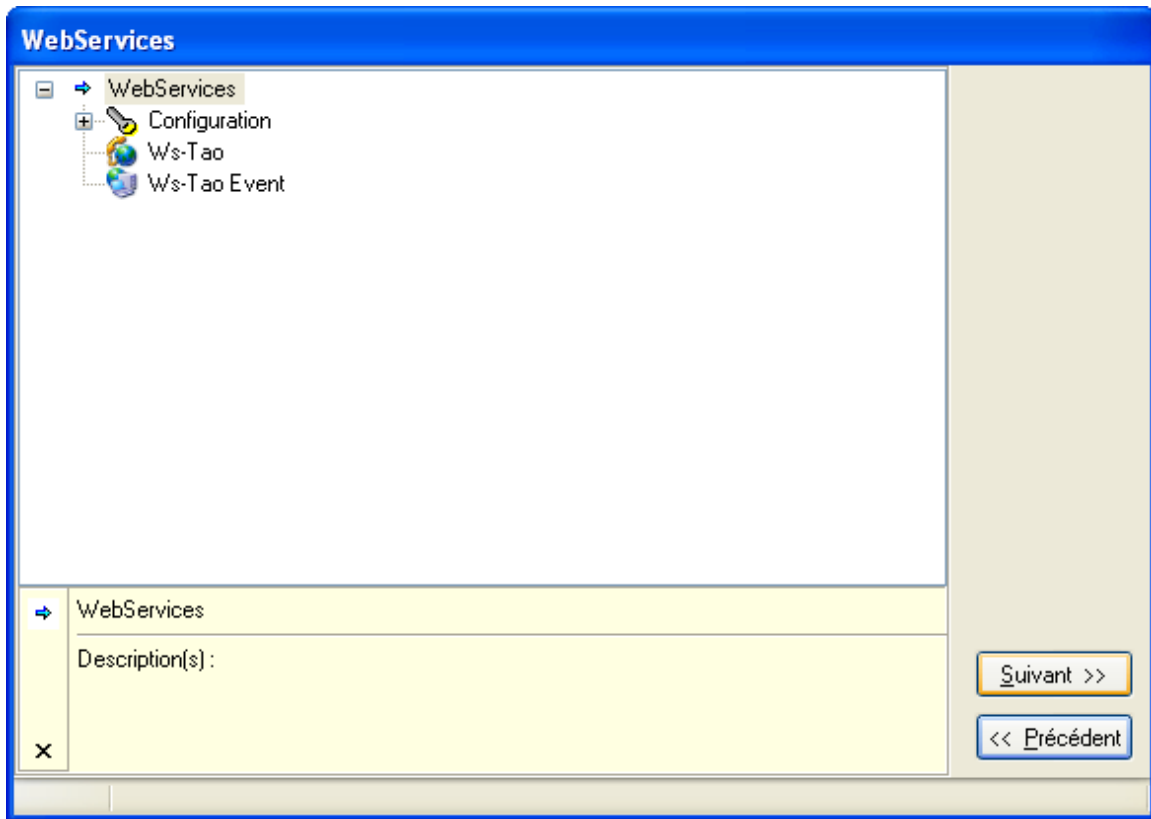


Figure 40: Web Services Screen

Click “Suivant”.

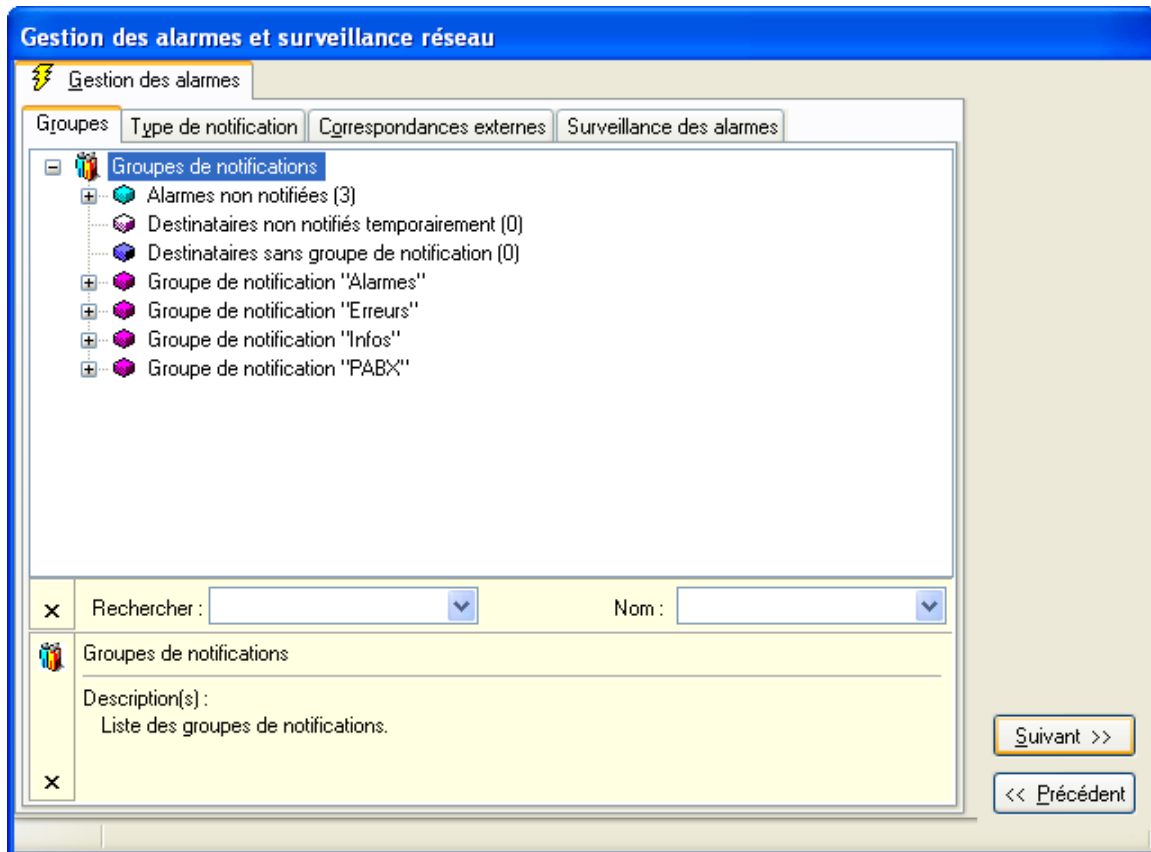


Figure 41: Alarm Screen

Click “Suivant”.

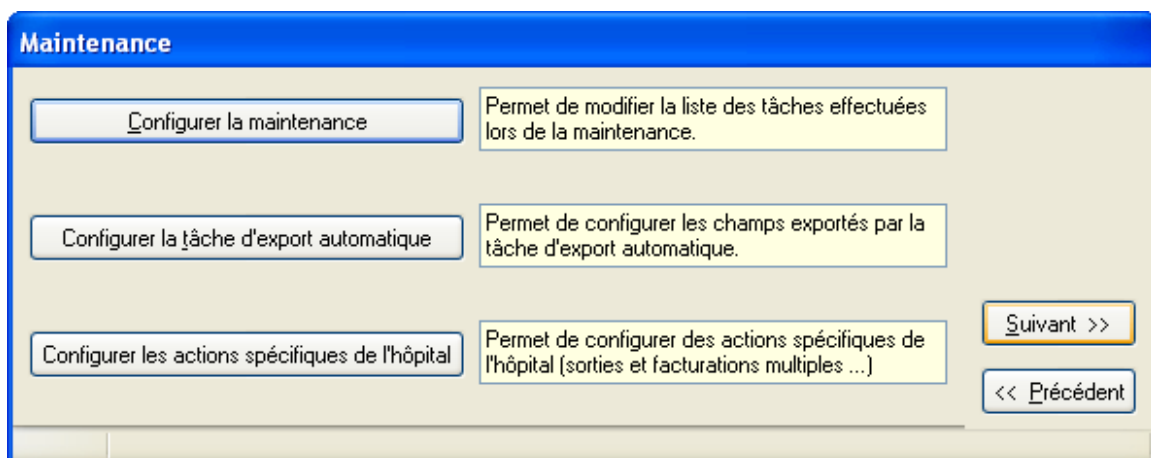


Figure 42: Maintenance Screen

Click “Terminer”.

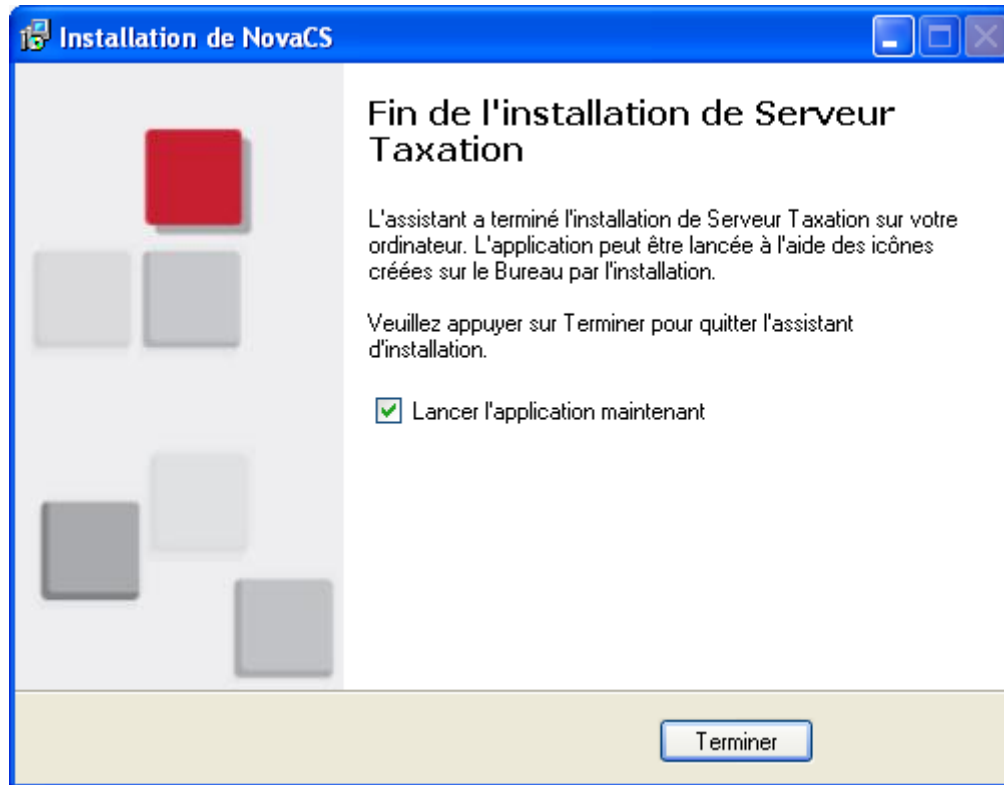


Figure 43: Completion Confirmation Screen

4.3. Configure NovaHop Client

For the test configuration, the Client and Server are installed on separate PCs. However, the Client and Server can be installed on the same PC if desired. To install the Client software, the system boot volume of the Server PC should be mounted as a network drive from the Client. The Client software can then be installed by executing `\\<SERVER>\NovaCS\Setup client\Setup.exe`, where `<SERVER>` is the network name or IP address of the server.

When the Wizard Greeting screen appears, click “Suivant”.

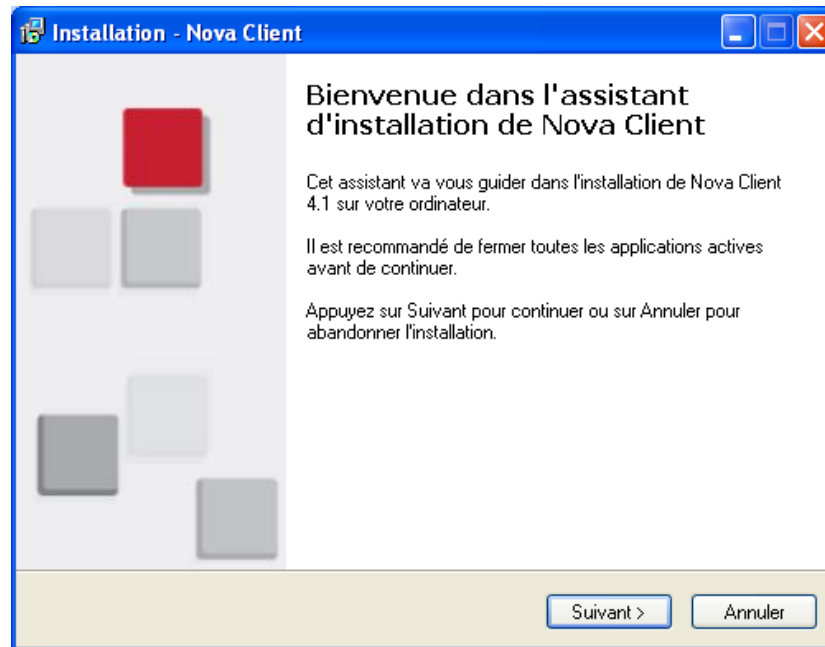


Figure 44: Client Installation Wizard Greeting Screen

If the license terms are acceptable, click “Suivant”.

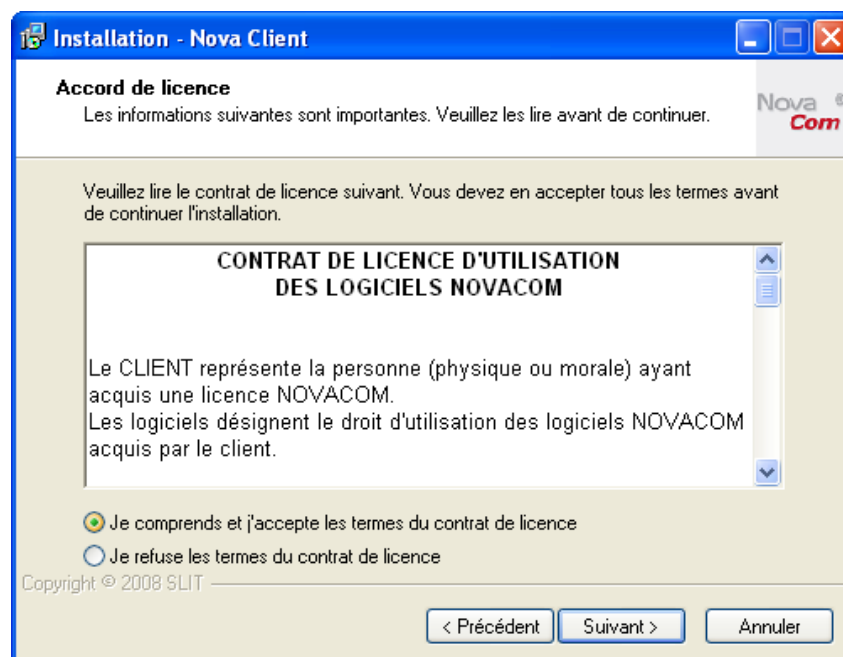


Figure 45: Client License Acceptance Screen

Click “Suivant”.

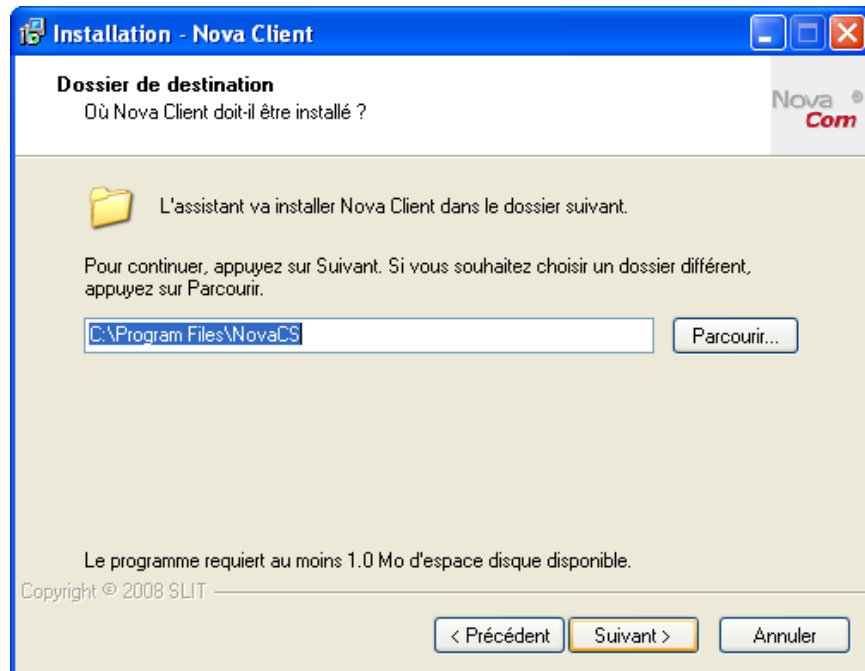


Figure 46: Client Archive Selection Screen

Click “Suivant”.

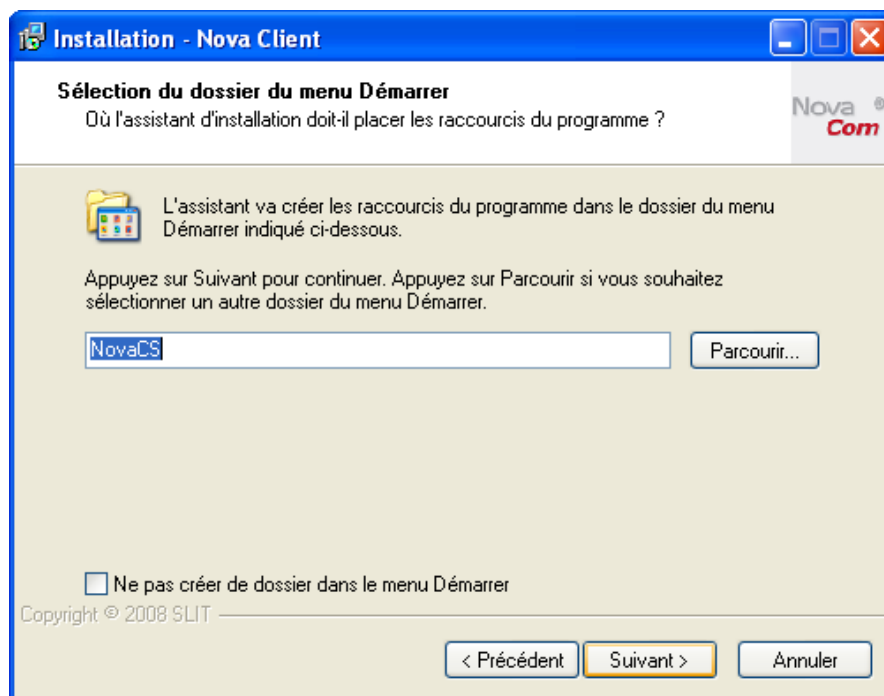


Figure 47: Client Program Directory Selection Screen

Click “Suivant”.

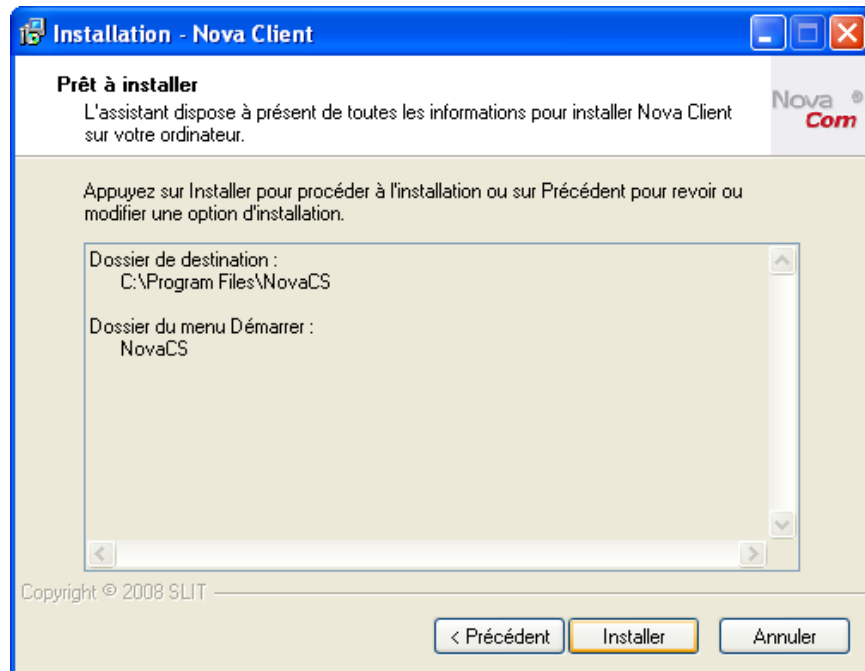


Figure 48: Client Installation Confirmation Screen

Click “Terminer”.



Figure 49: Client Installation Completion Screen

4.4. Configure NovaHop Facility Environment

This section describes the adaptation of NovaHop to the endpoint/room environment of specific hospital setting. Start the NovaCom “Lanceur” program selection tool. Enter an appropriate user name and password and click “Valider”.



Figure 50: PBX Modification Confirmation Screen

Start the “Lanceur” program from the Windows Notification Area, and select “NovaAnnu”.

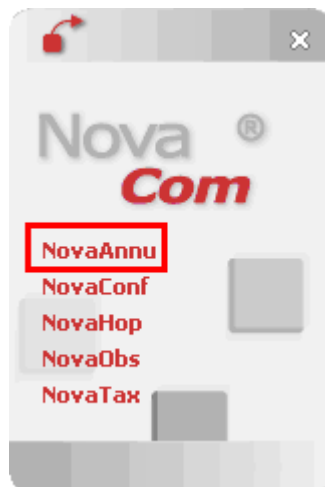


Figure 51: NovaAnnu Launch Screen

From the “Hiérarchie technique” tab, double click “Technique”, and click “Créer”

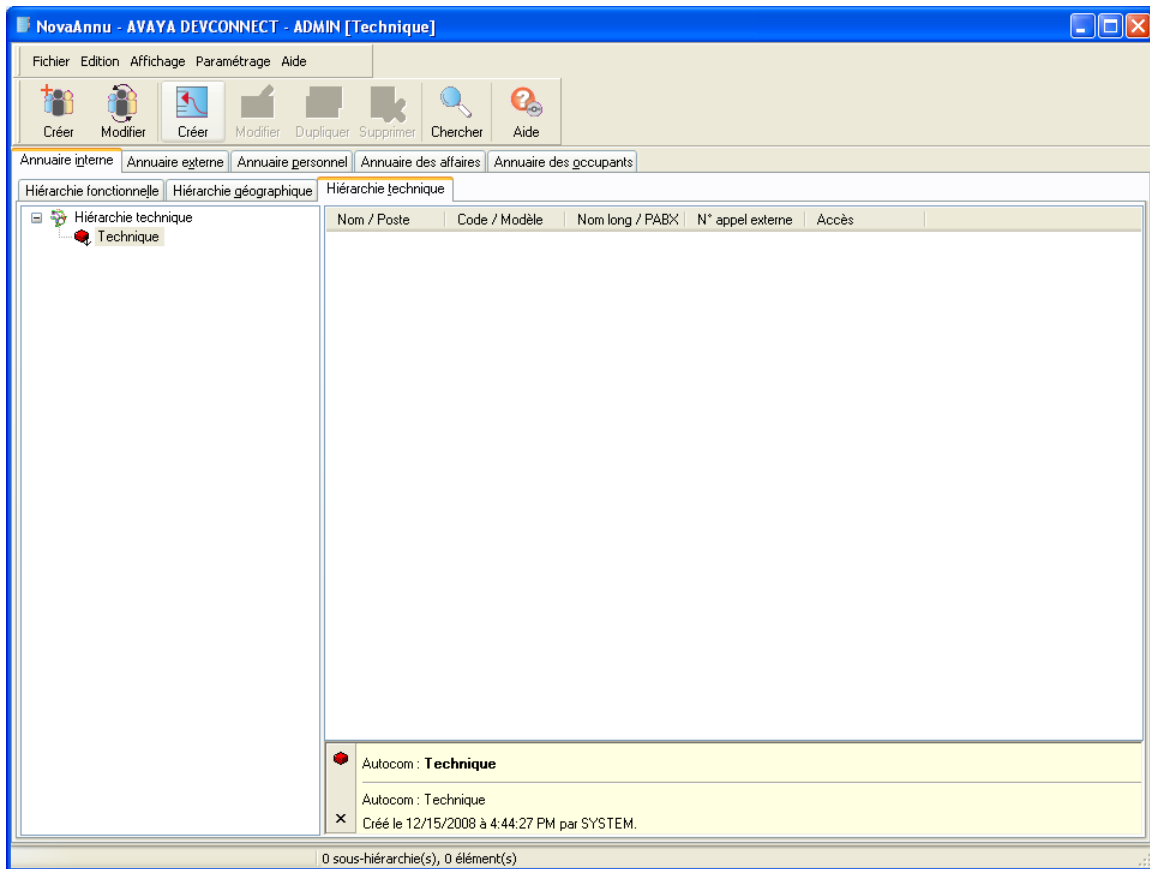


Figure 52: NovaAnnu Hiérarchie Technique Screen

Enter an extension to be created from **Table 1** in the “Poste” and “au poste” fields and click “Créer”.

The screenshot shows a software window titled "Poste" with two tabs: "Propriétés" and "Éléments associés".

Propriétés tab:

- Poste : 10093 (text field)
- au poste : 10093 (text field)
- Masquage particulier du n° composé : 0 (spin box) with a link "Utilisation du masquage de l'utilisateur"
- Niveau de confidentialité : 0 (spin box) with a link "Liste blanche"
- N° appel externe : \$POSTE (text field)
- Notes : (empty text area)
- Autocom : Technique (dropdown menu)
- PABX : PABX1 (dropdown menu)
- Modèle : (empty dropdown menu)

Éléments associés tab:

- Principal | Nom | Hierarchie fonctionnelle | Hiérarchie g (tabbed interface)
- A list area with a scrollbar (currently empty)

Buttons: Créer, Quitter, Aide

Figure 53: NovaAnnu Extension Screen

Repeat this for the other extensions from **Table 1** to be configured.

Start the “Lanceur” program from the command line, and select “NovaHop”.



Figure 54: NovaHop Launch Screen

Select the “Modes de fonctionnements” tab. Click “Créer”.

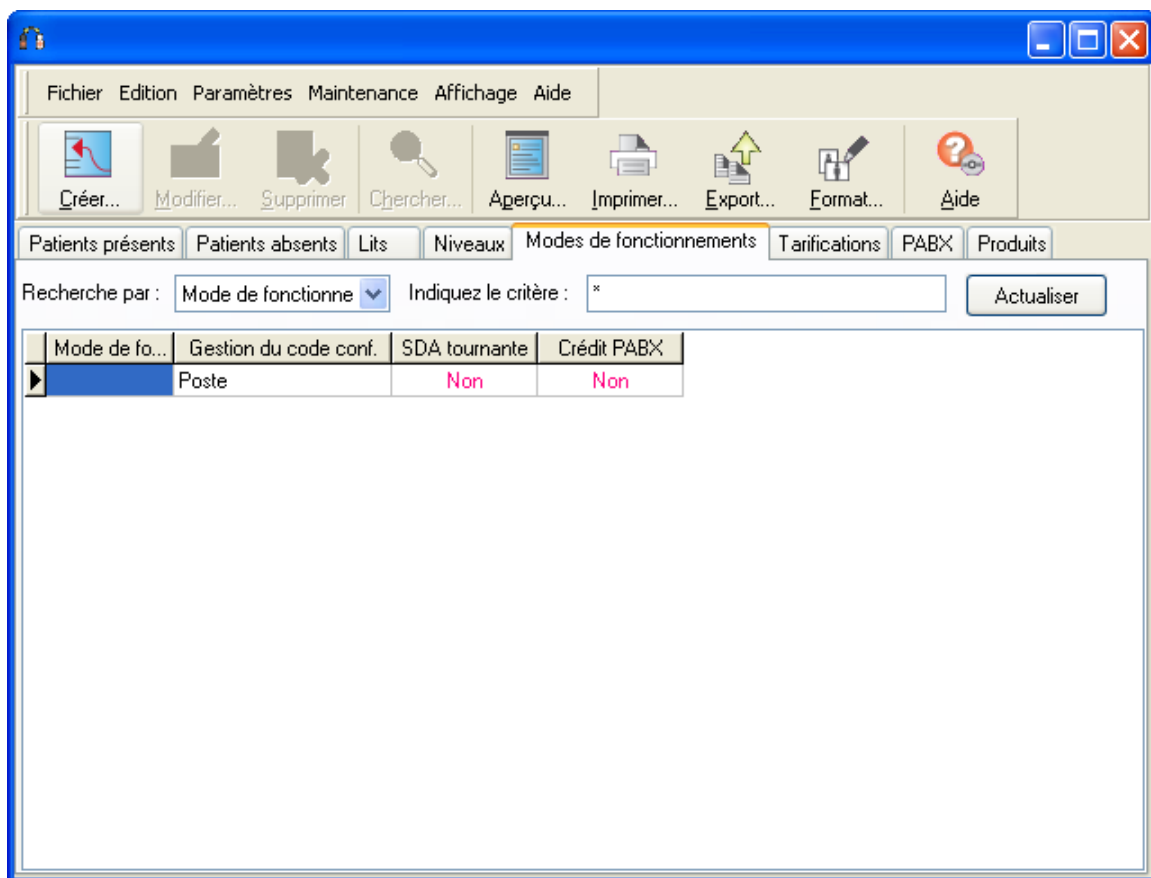


Figure 55: Client Modes de Fonctionnements Screen

Enter “extension” in the “Intitulé” field, check “SDA tournante”, select “par poste” and click “Créer”.

The screenshot shows a window titled "Mode de fonctionnement" with a close button (X) in the top right corner. Inside the window, there is a gear icon and a text field labeled "Intitulé :" containing the word "extension". To the right of this field are three buttons: "Créer", "Quitter", and "Aide". Below the text field, there is a group box containing four radio buttons: "SDA tournante" (checked), "Attribution automatique", "Attribution manuelle", and "Attribution non sélectionnée". To the right of this group box is another group box titled "Fonctionnement" containing three radio buttons: "par poste" (selected), "par code confidentiel localisé au poste", and "par code confidentiel généralisé". Below these is a third group box titled "Gestion de la coupure" containing two radio buttons: "Coupure au rattaché (par le fil de l'eau)" (selected) and "Coupure par le PABX (crédit dans le meuble)".

Figure 56: Functional Mode Selection Screen

Select the “Tarifications” tab, and click “Créer”

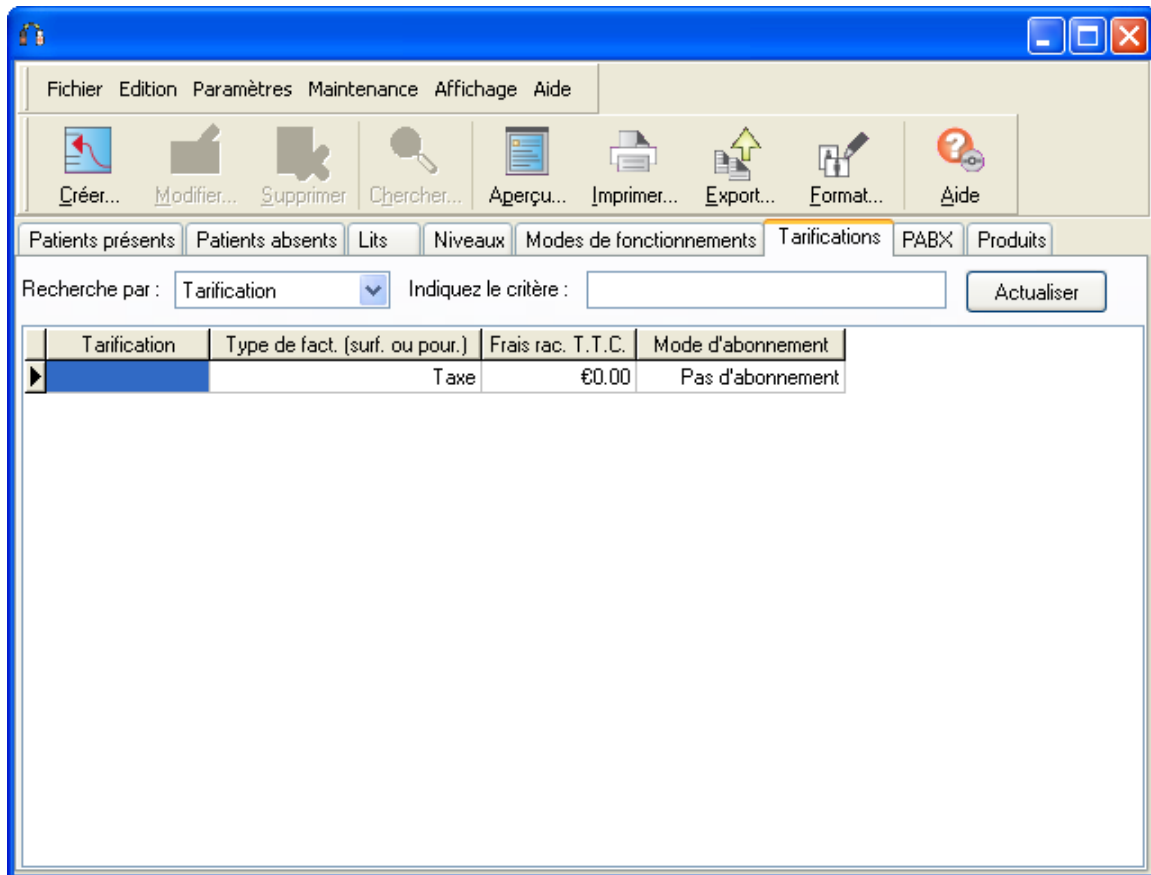


Figure 57: “Tarifications” Tab Screen

Enter “Standard” in the “Intitule” field and click “Créer”.

Tarification

Intitulé :

Tarification | Abonnement | Remboursement | Classes dynamiques

Surfacturation par appel

☒ Coût d'une taxe
☐ Pourcentage sur le coût réel H.T.

Expression des coûts pour les taxes

☒ H.T.
☐ T.T.C.

Frais de raccord. T.T.C. : €

Première taxe H.T. : €

Autorisation de découvert

☒ Par défaut : €
☐ Illimitée

Valeur d'une taxe : €

Acompte par défaut : €

Coût min. d'une comm. : €

Figure 58: Tarif Creation Screen

Select the “Niveaux” tab and click “Créer”.

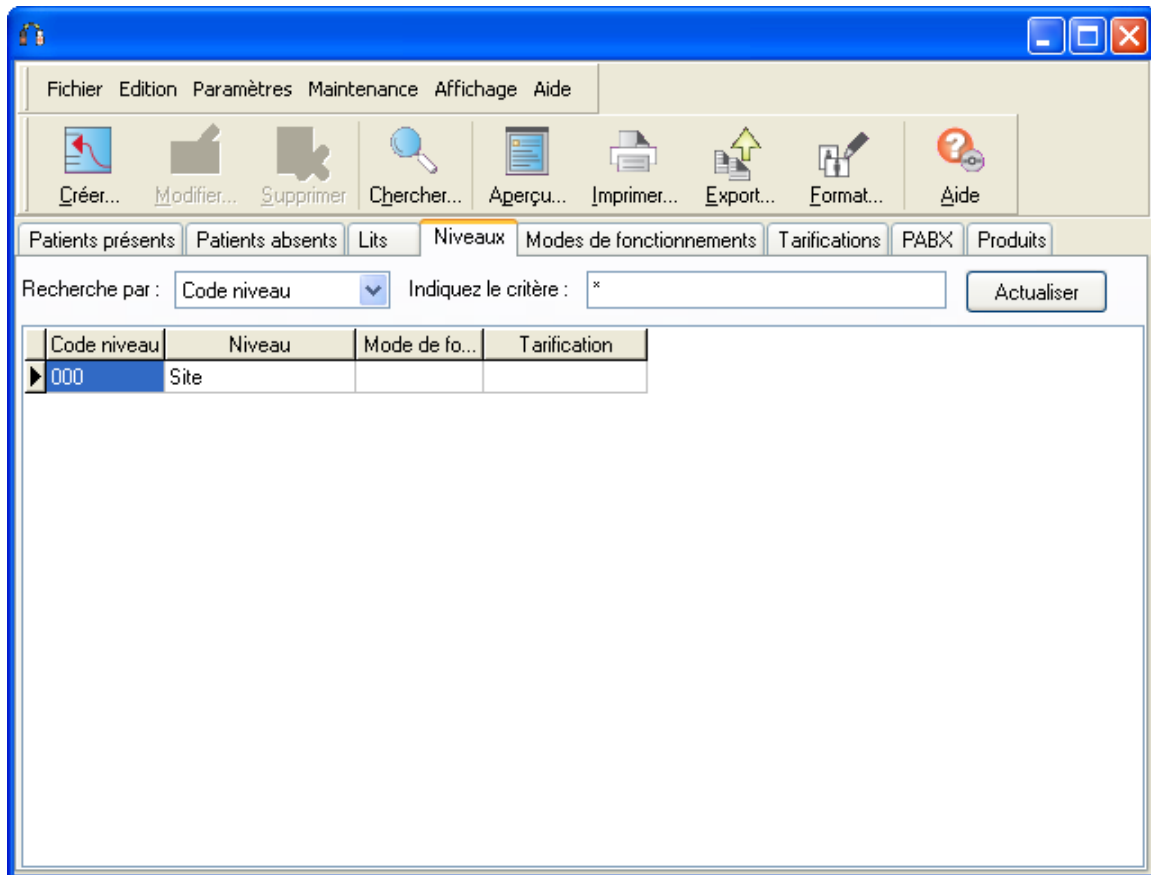


Figure 59: Client Niveaux Tab Screen

Enter the parameters shown in the following table and click “Créer”.

Parameter	Value
Nom	Enter a name to identify the level.
Code	Enter a code to identify the level.
Tarification	Select “Standard” from the drop-down menu.
Mode de fonctionnent	Select “extension” from the drop-down menu.
PABX	Select “PABX1” from the drop-down menu.

Table 12: Niveau Parameters

Figure 60: Client Niveaux Screen

Select the “Lits” tab, and click “Créer”.

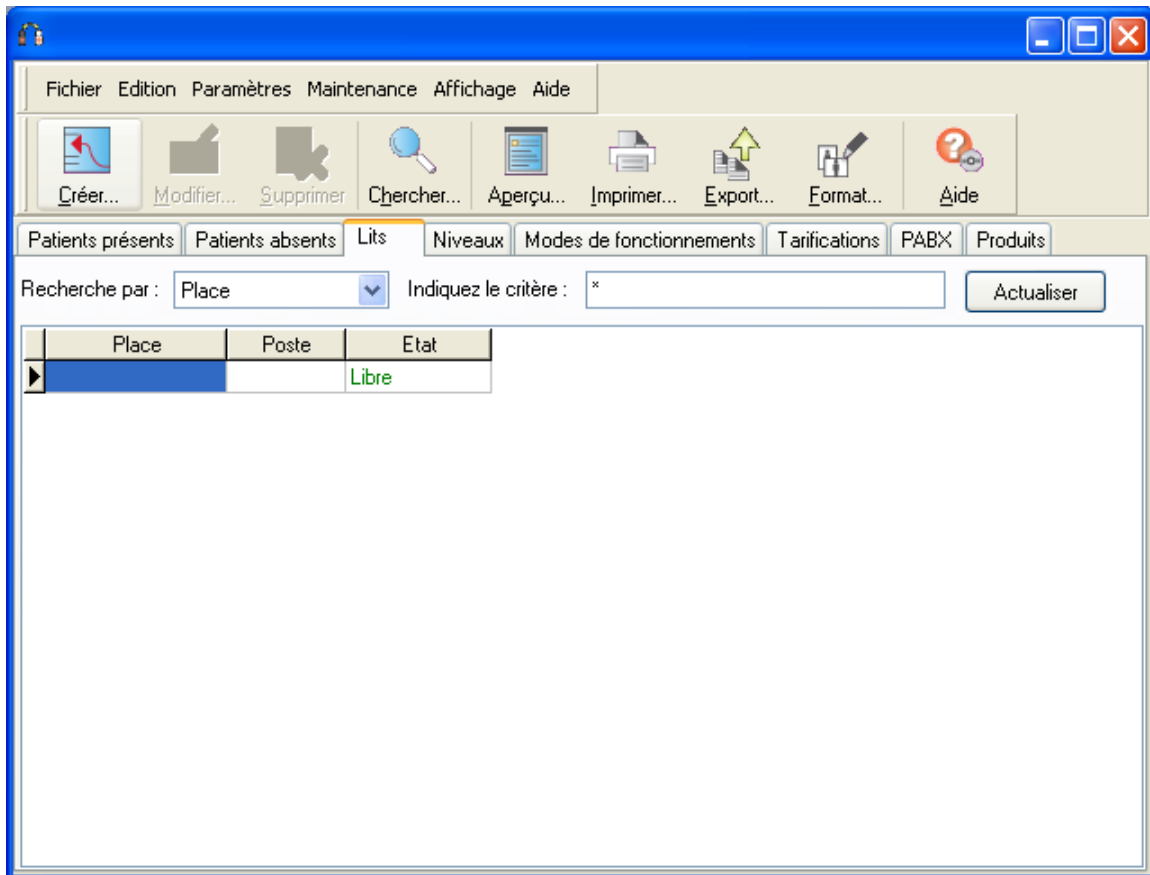


Figure 61: Client Lits Tab Screen

Enter the parameters shown in the following table and select the “DevConnect” Hierarchy key and click “Cr  rer”.

Parameter	Value
Intitul��	Enter a name to identify the room.
Tarification	Select “Standard” from the drop-down menu.
Mode de fonctionnement	Select “extension” from the drop-down menu.
Poste	Enter telephone extension which is to be assigned to the room, from Table 1 .

Table 13: Lits Parameters

Figure 62: Client Lits Creation Screen

Repeat this for the remaining rooms. Upon completion, the rooms are shown in the “Lits” tab.

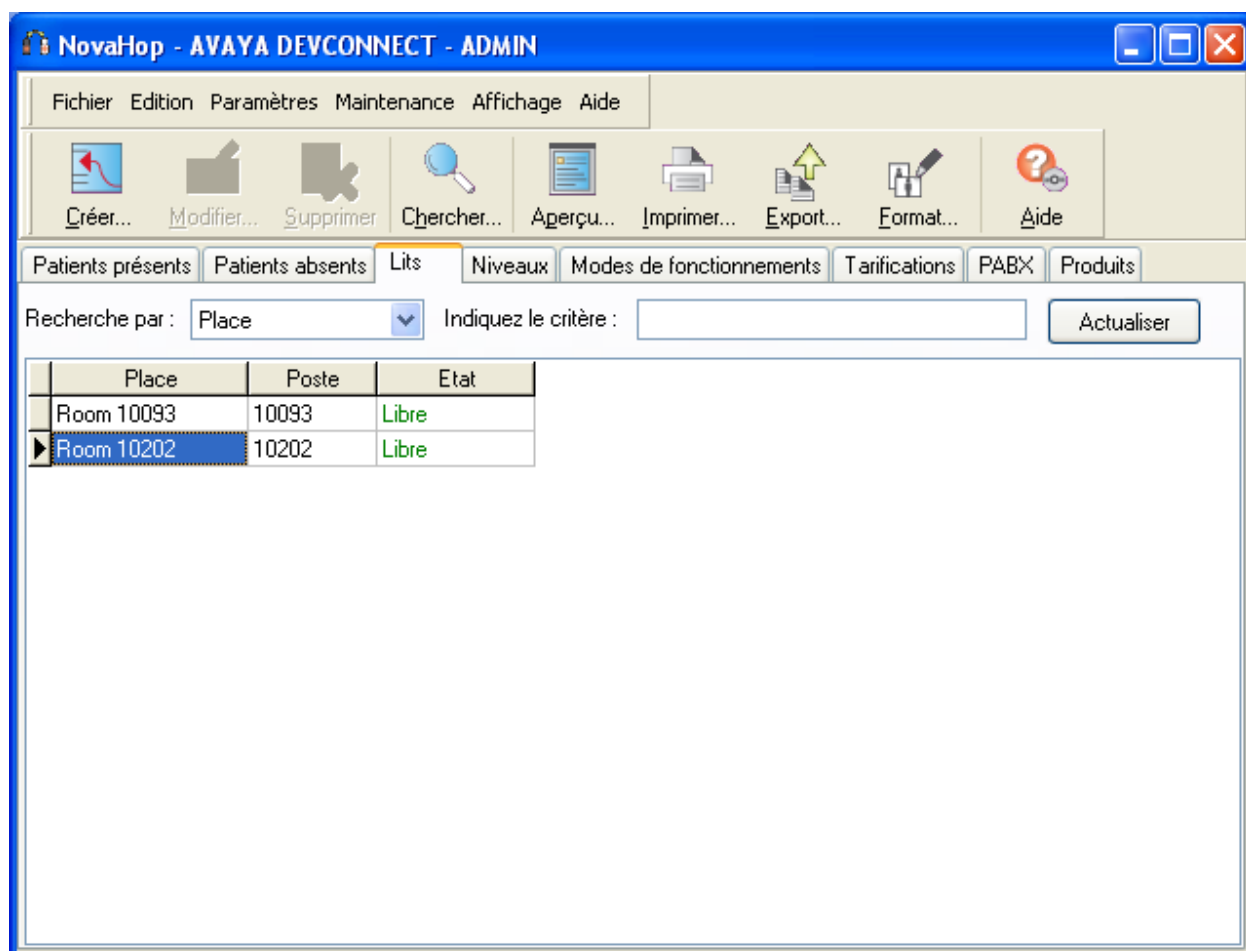


Figure 63: Client Lits Tab after Rooms Configuration

5. General Test Approach and Test Results

The compliance testing on SLIT NovaHop CM interoperating with Avaya Communication Manager was performed manually. The tests were functional in nature, and no performance testing was done. One problem was encountered when testing with CM 5.2.1: it is not possible to call a station via an XDID: the caller hears ringback, however the “hunt-to” station assigned to the XDID does not alert. This problem does not occur with CM 5.1.2, which was used to retest the NovaHop application. This problem has been reported to the Avaya Communication Manager development team with MR defsw093811.

With the exception of the above-described problem, all tests which were performed produced the expected result. **Section 1.1** contains a list of tests which were performed.

6. Verification Steps

The correct installation and configuration of NovaHop CM server can be verified by performing the steps shown below.

6.1. Verify CDR Link

1. Double click on the “man with a red cap” icon in the Systray (highlighted by oval) to view the “Gardien NovaCS” window.

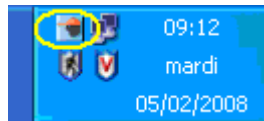


Figure 64: Man with Red Cap Icon in Systray

2. Double click on the FILOx entry in the screen (the number after FILO may vary depending on the number of PBX) in order to view the “Novatick” window.

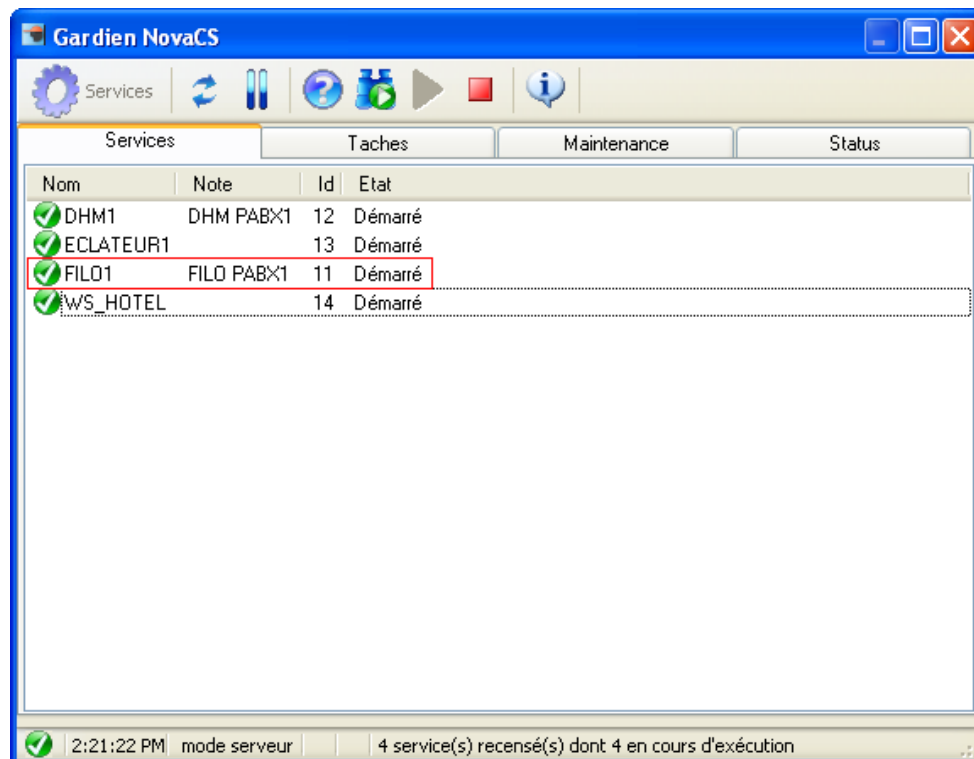


Figure 65: NovaTick FIL01 Selection Screen

3. Make a call. If everything is set up correctly, blue text should scroll on the screen (CDR received from the PBX) followed by text in black (interpretation of the CDR). In addition, the bottom window border shows the IP address of the connected PBX.

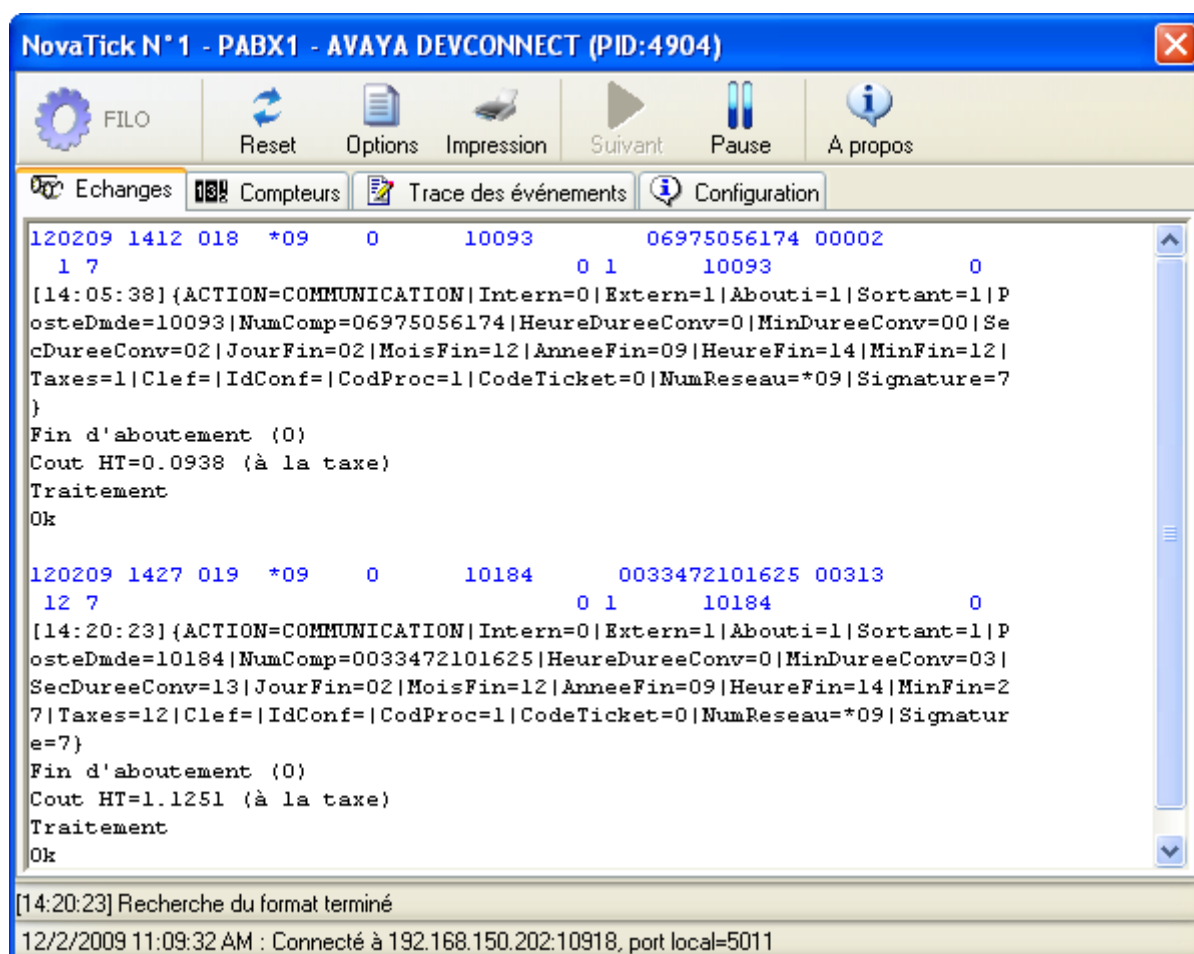


Figure 66: NovaTick CDR Trace Screen

6.2. Verify PMS Link

1. Double click on the “man with a red cap” icon in Systray (shown in **Figure 64**) to view the “Gardien NovaCS” window.
2. Double click on the DHMx entry in the screen (the number after DHM may vary depending on the number of PBX) in order to view the "NovaDHM" window

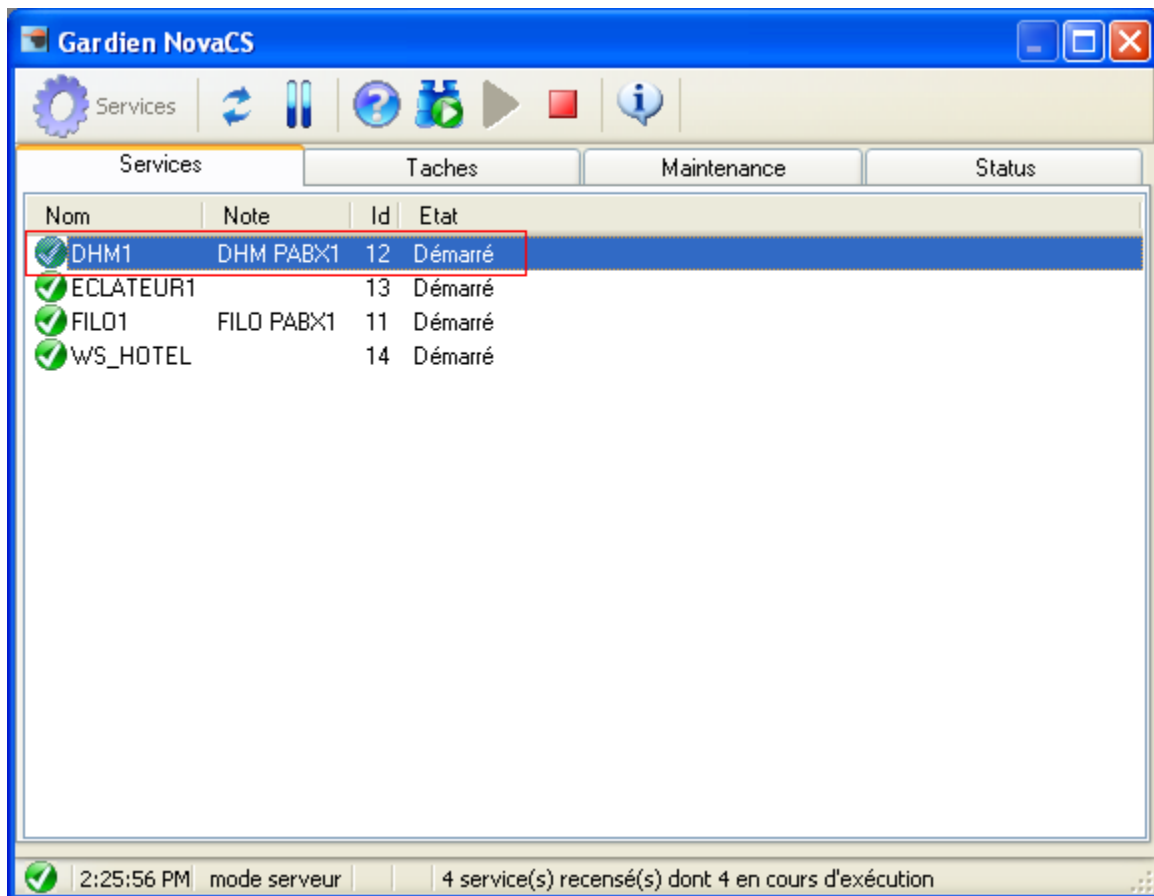


Figure 67: NovaTick DHM1 Selection Screen

3. Create a patient arrival from the NovaHop module. When all parameters are correctly set, magenta text should display the list of extensions and green text should display the command for opening the extension.

```

• [06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06]
• [06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06]
• [06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06]
• [06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06][06]
• ♦ [06][06][06][06][06][06][06][06]INIT|33| CHECK IN (02/12/09 14:41:56)
• • Ordre déposé le 12/2/2009 2:41:56 PM par NovaPass N°1 - ADMIN
• • LOGIN|0| LOGIN MASTER
• • LOGIN|1| LOGIN NIVEAU 1
• • # Demande au DHM si le PABX est connecté ?
• ♦ [05]
• • [06]-> Acquiescement OK
• • # Changement de chambre ?
• • IF ([GENERIC_1]:<>=<>) THEN SKIP 3 LINES -> OK
• •
• ♦ [02]}/CK0110093 [03]
• • [06][02]}/CK0410093 [03]y-> Acquiescement OK
• • [02]}/CKI110093 TEST,A n [03]
• • [06][02]}/CKI310093BBBF [03]c-> Acquiescement OK
• • INIT|4| Coupure PRISE DIRECTE (PAS D'ANNULATION DES REVEILS, DND...) (02/12/09 14:42:00)
• ♦ [06][02]}/CR 11009301 [03]
• • [06]
• • [06]
• ♦

```

@ : 127.0.0.1, port : 9002 Activité du port de communication : Txd Rxd connecté

PABX1 (PABX n° 1) AVAYA PMS Attente...

Figure 68: NovaTick PMS Trace Screen

7. Conclusion

These Application Notes contain instructions for configuring Avaya Communication Manager to connect to the NovaHop CM. A list of instructions is provided to enable the user to verify that the various components have been correctly configured.

8. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com>.

- [1] *Administrator Guide for Avaya Communication Manager*, January 2008, Issue 4.0, Document Number 03-300509.
- [2] *Feature Description and Implementation for Avaya Communication Manager*, January 2008, Issue 6, Document Number 555-245-205.
- [3] NovaHop CM Product Description: NovaHop.pdf v4.1 delivered with the NOVA CD

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