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.

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2. Reference Configuration

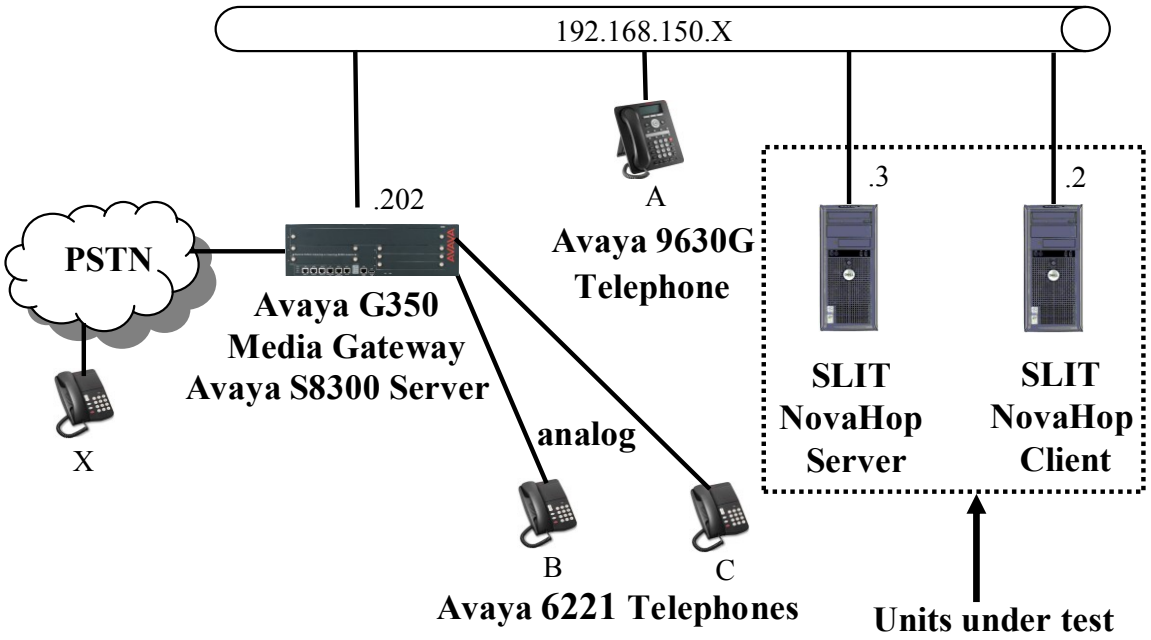

Figure 1: Test System Configuration

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

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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.

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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

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```
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.

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```
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

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```
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

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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

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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
                                  Coverage Path 1:                 COR: 1
     Name:                        Coverage Path 2:                 COS: 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

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```
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

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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: attd-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

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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".

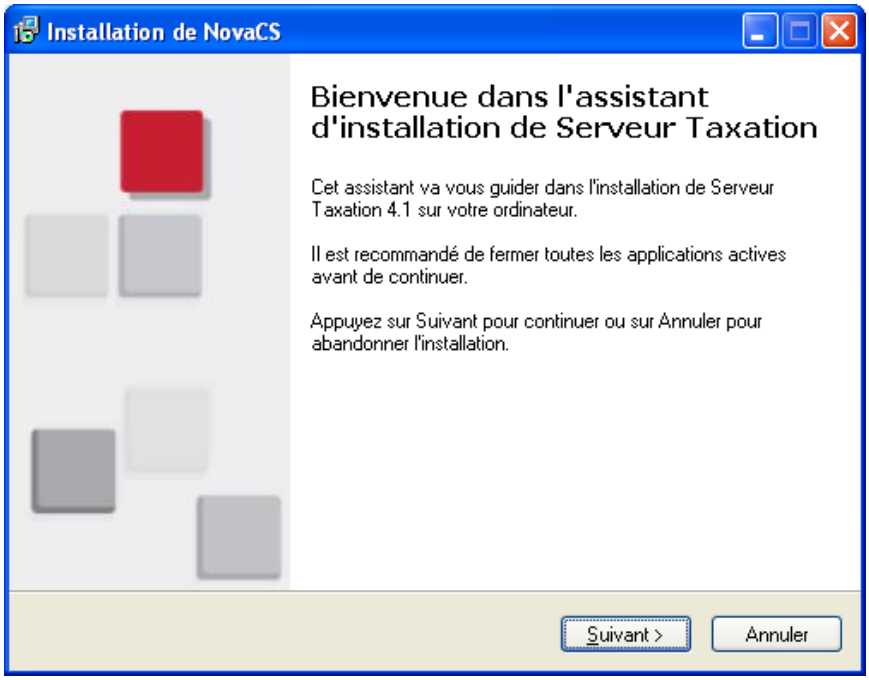

Figure 15: NovaCom Server Installation Wizard Greeting Screen

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

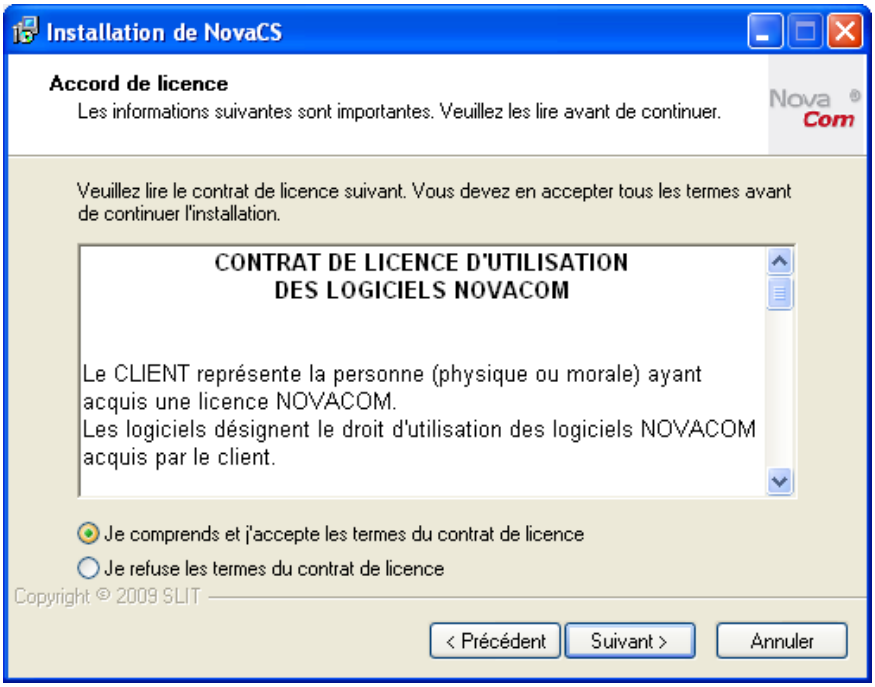

Figure 16: NovaCom License Acceptance Screen

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

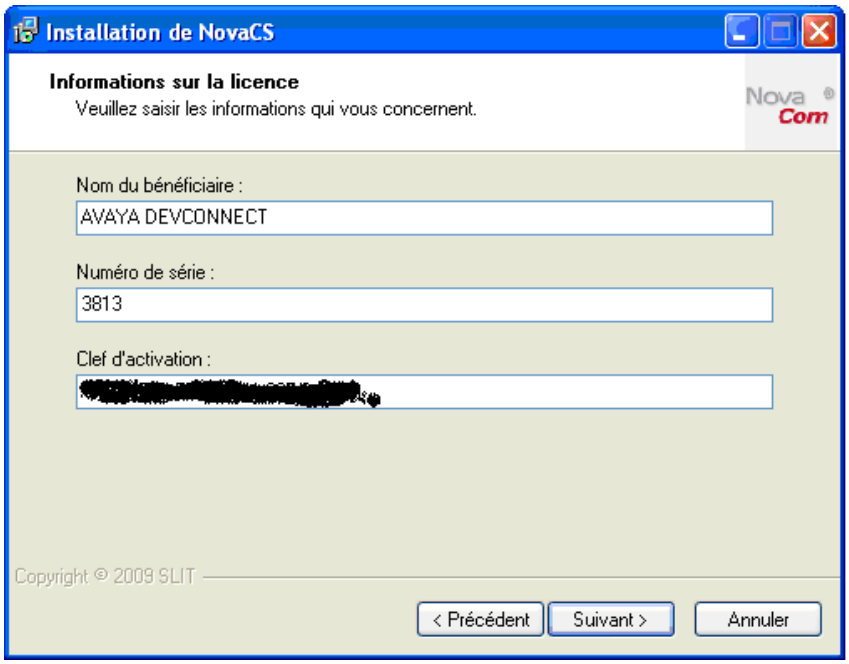

Figure 17: NovaCom License Key Entry Screen

Retain the default installation path and click “Suivant”.

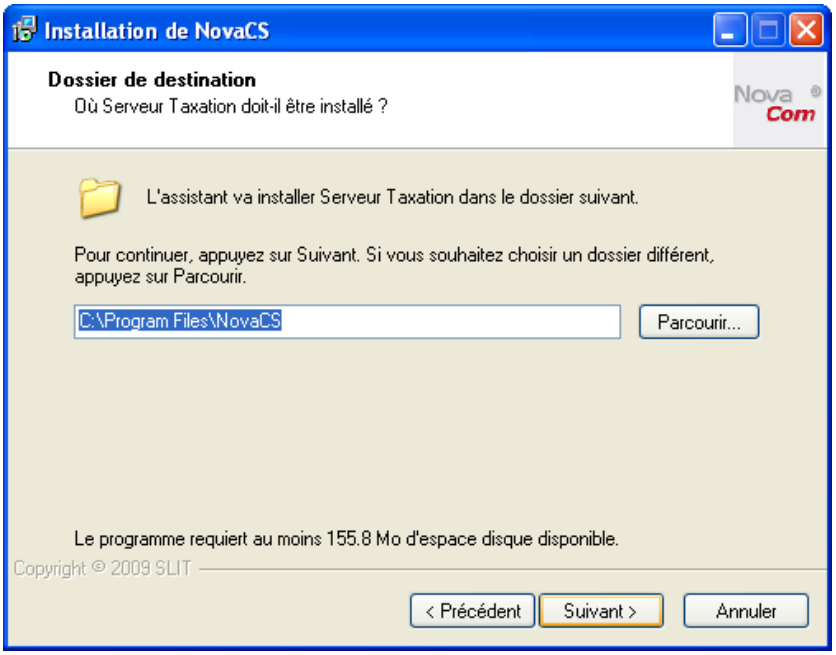

Figure 18: NovaCom Data Directory Selection Screen

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Click “Suivant”.

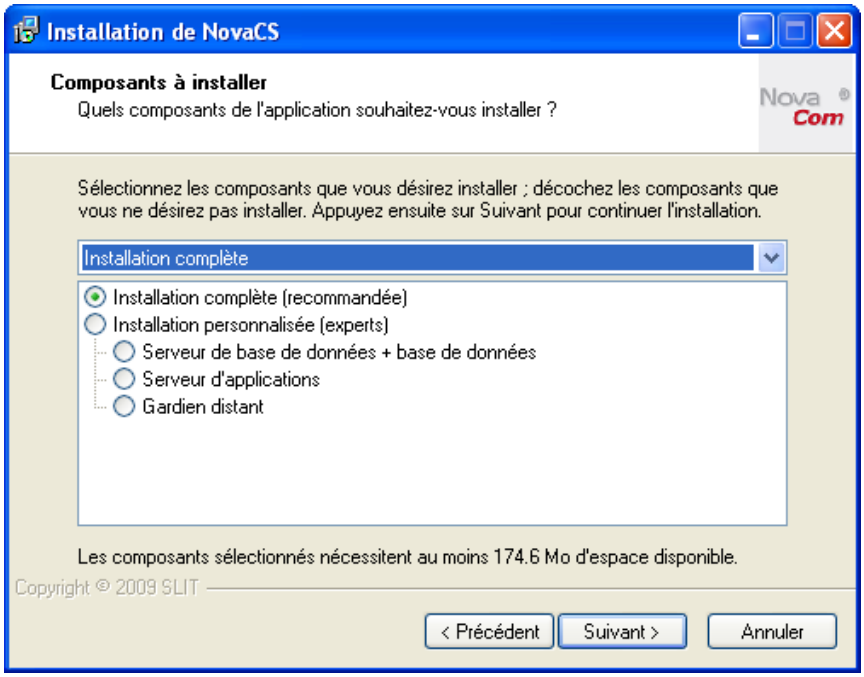

Figure 19: NovaCom Component Selection Screen

Click “Suivant”.

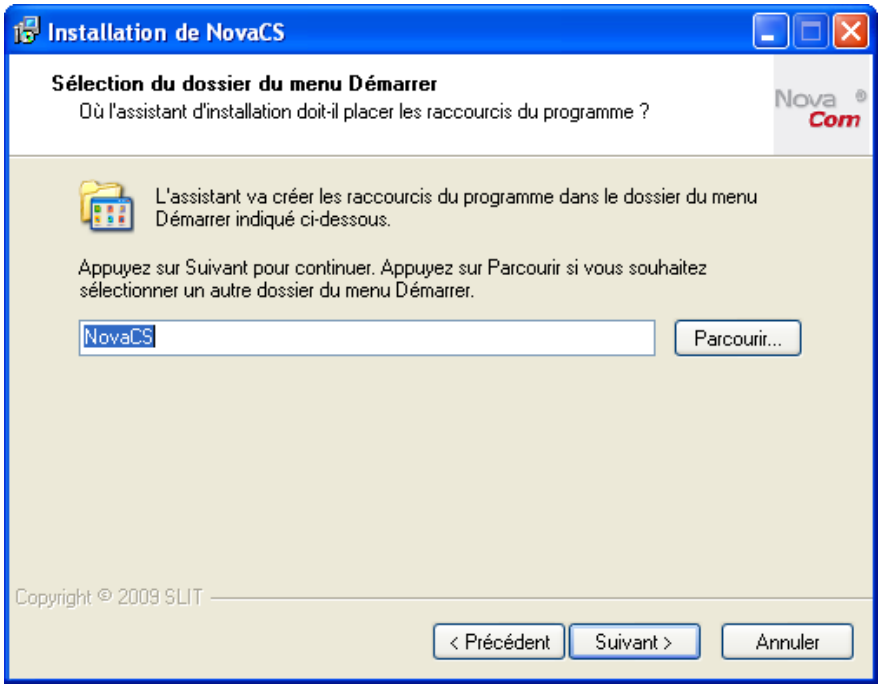

Figure 20: NovaCom Program Directory Selection Screen

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Click “Suivant”.

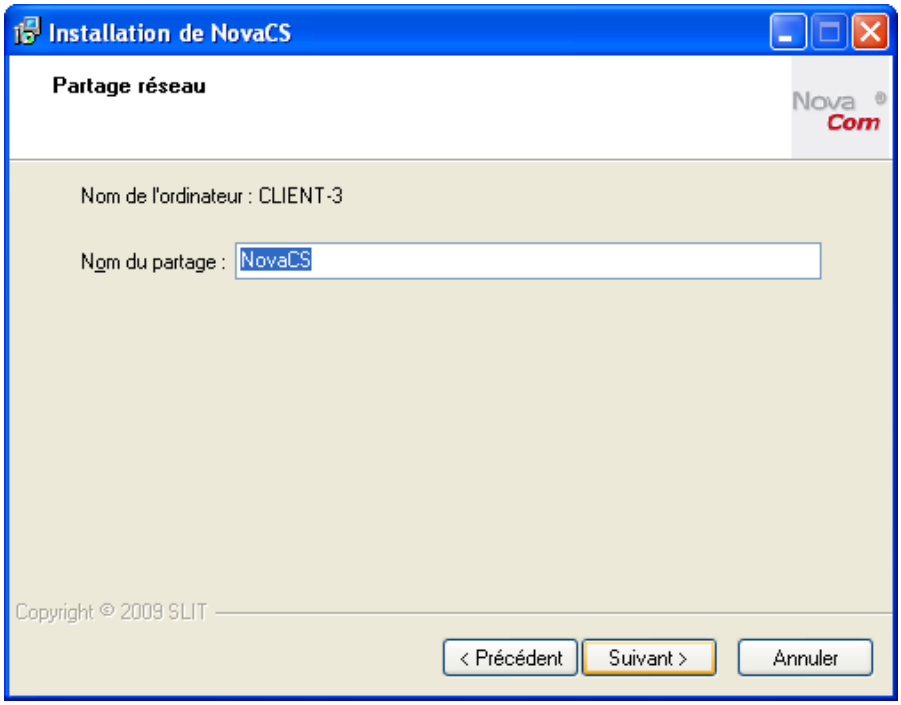

Figure 21: NovaCom Client Directory Selection Screen

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Click “Suivant”.

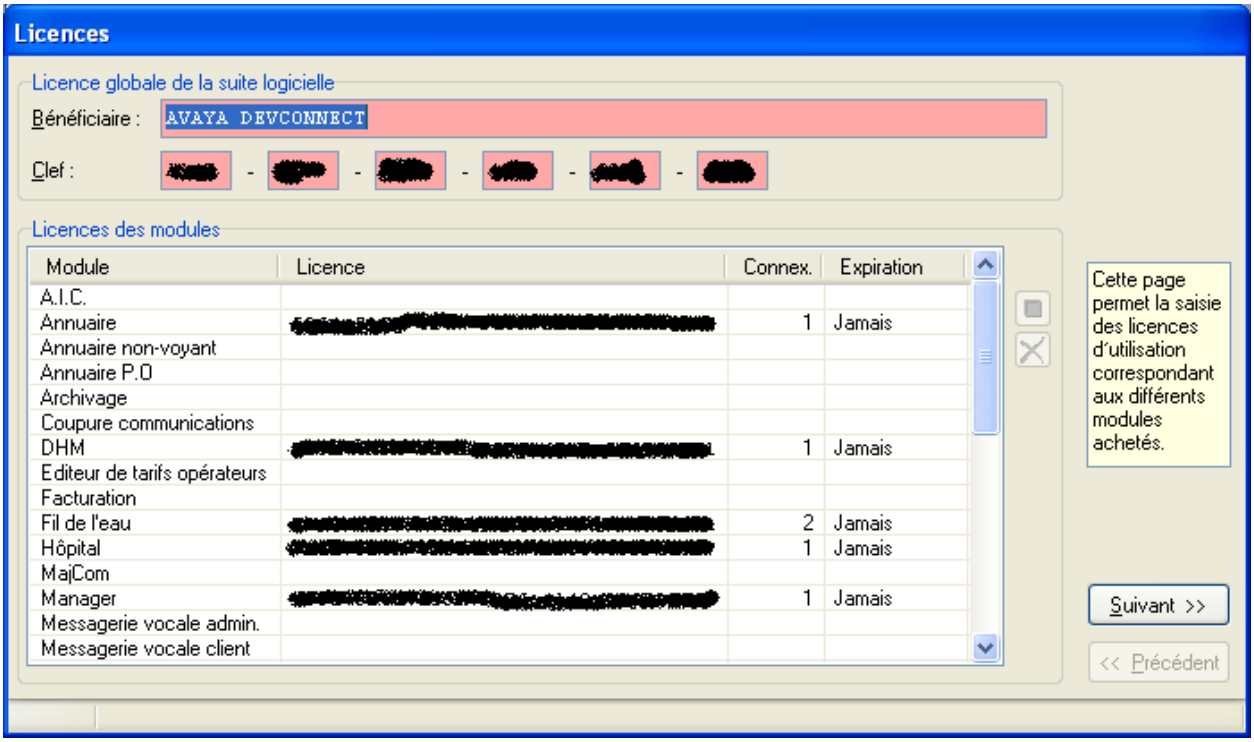

Figure 22: NovaCom License Confirmation Screen

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Click “Suivant”.

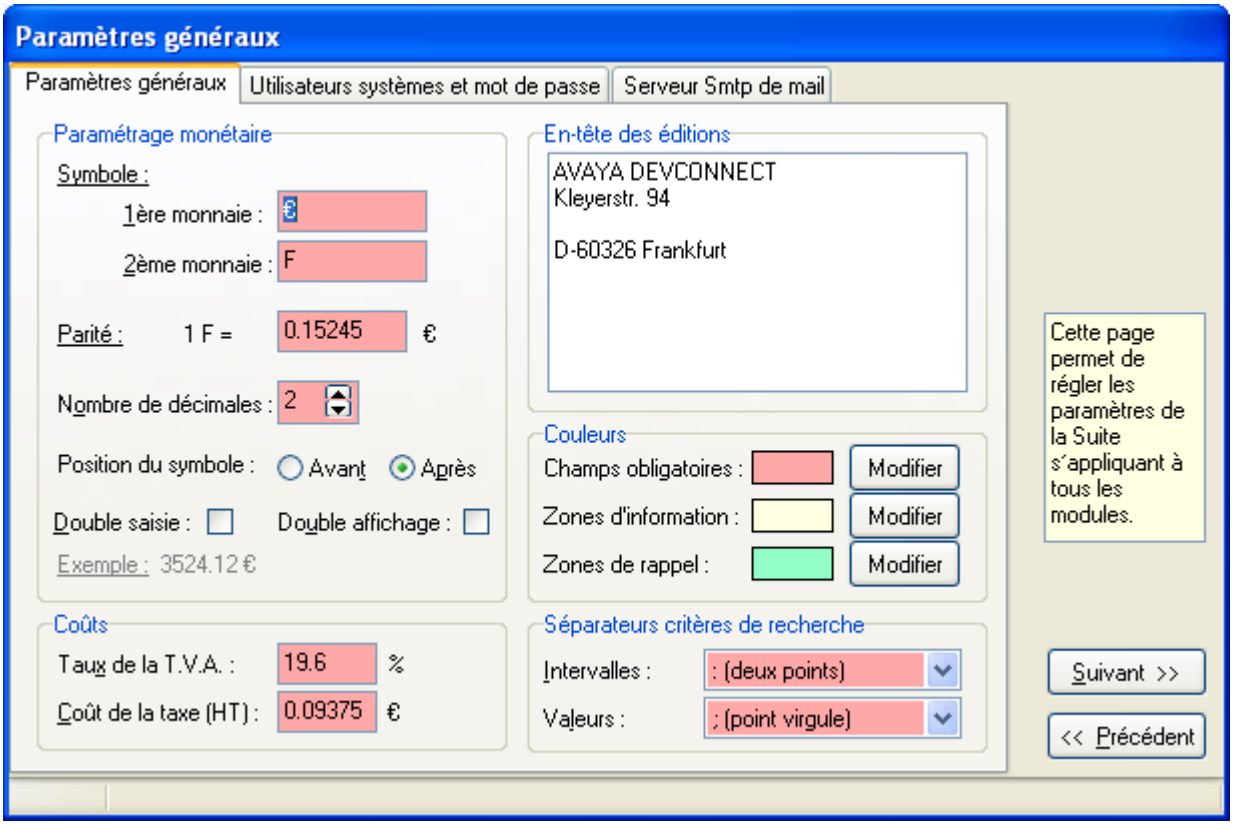

Figure 23: General Parameters Screen

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Click “Suivant”.

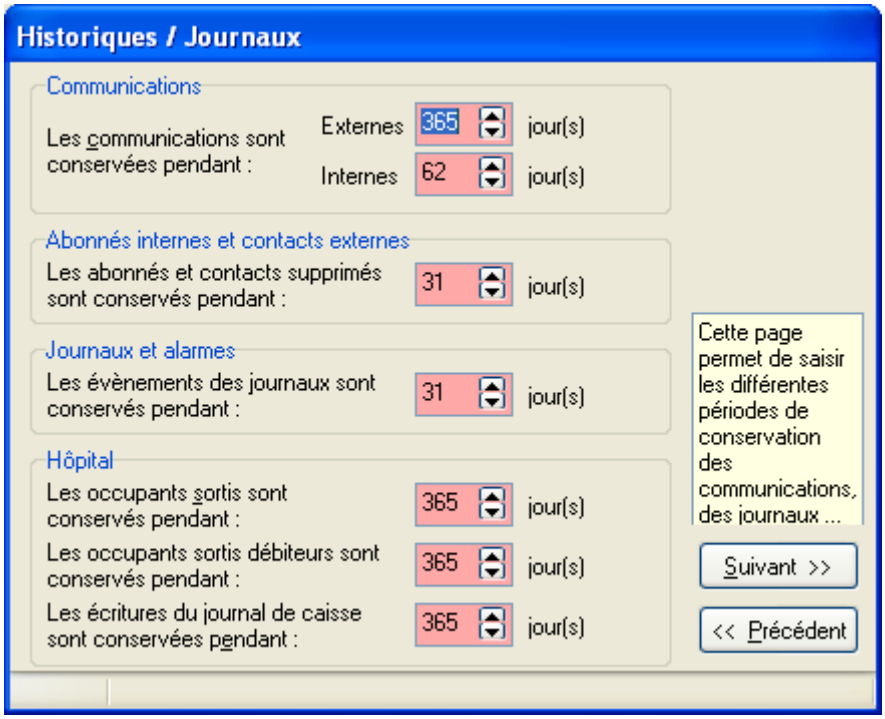

Figure 24: Operational Period Selection Screen

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Click “Suivant”.

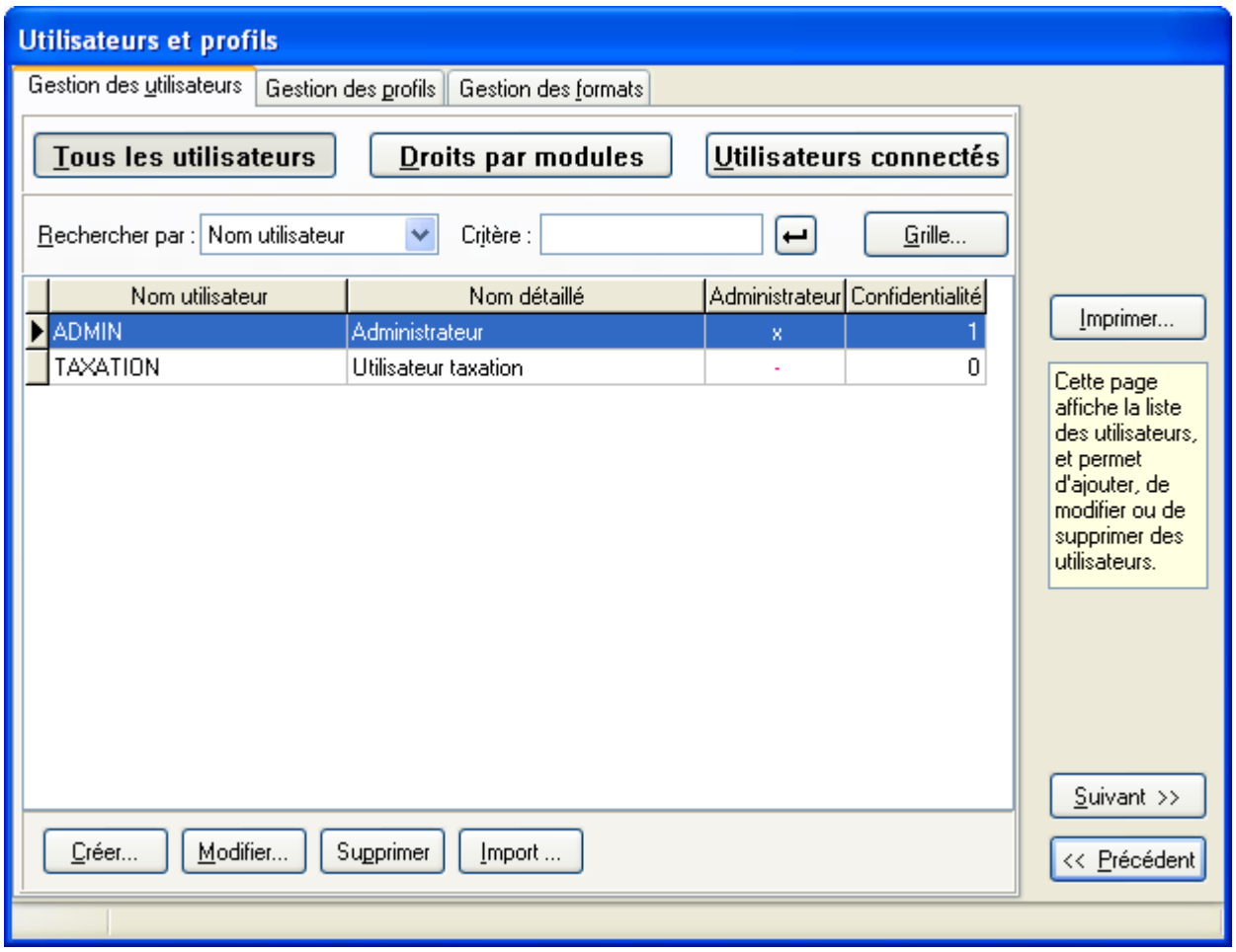

Figure 25: User Profile Screen

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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

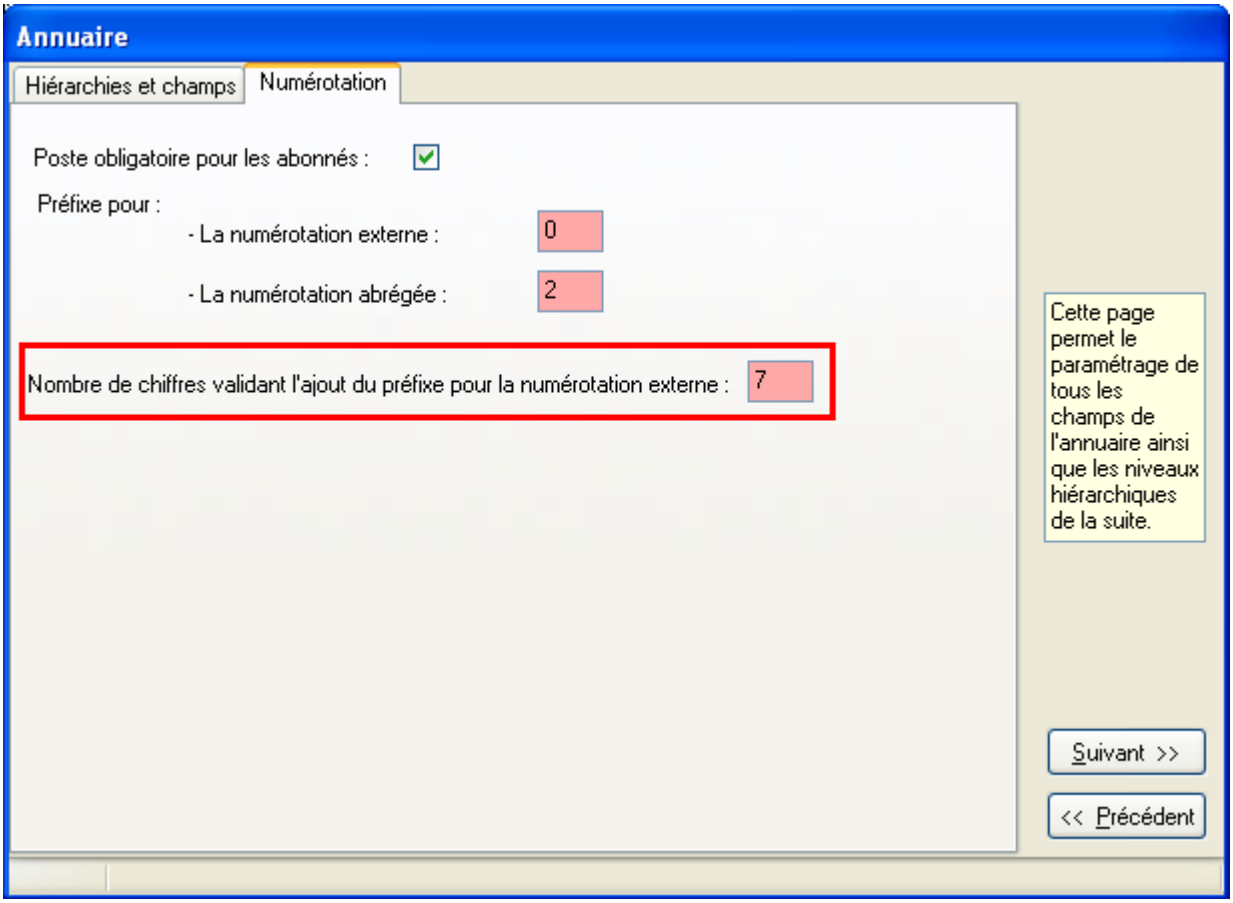

Figure 26: Annuaire Numérotation Screen

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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

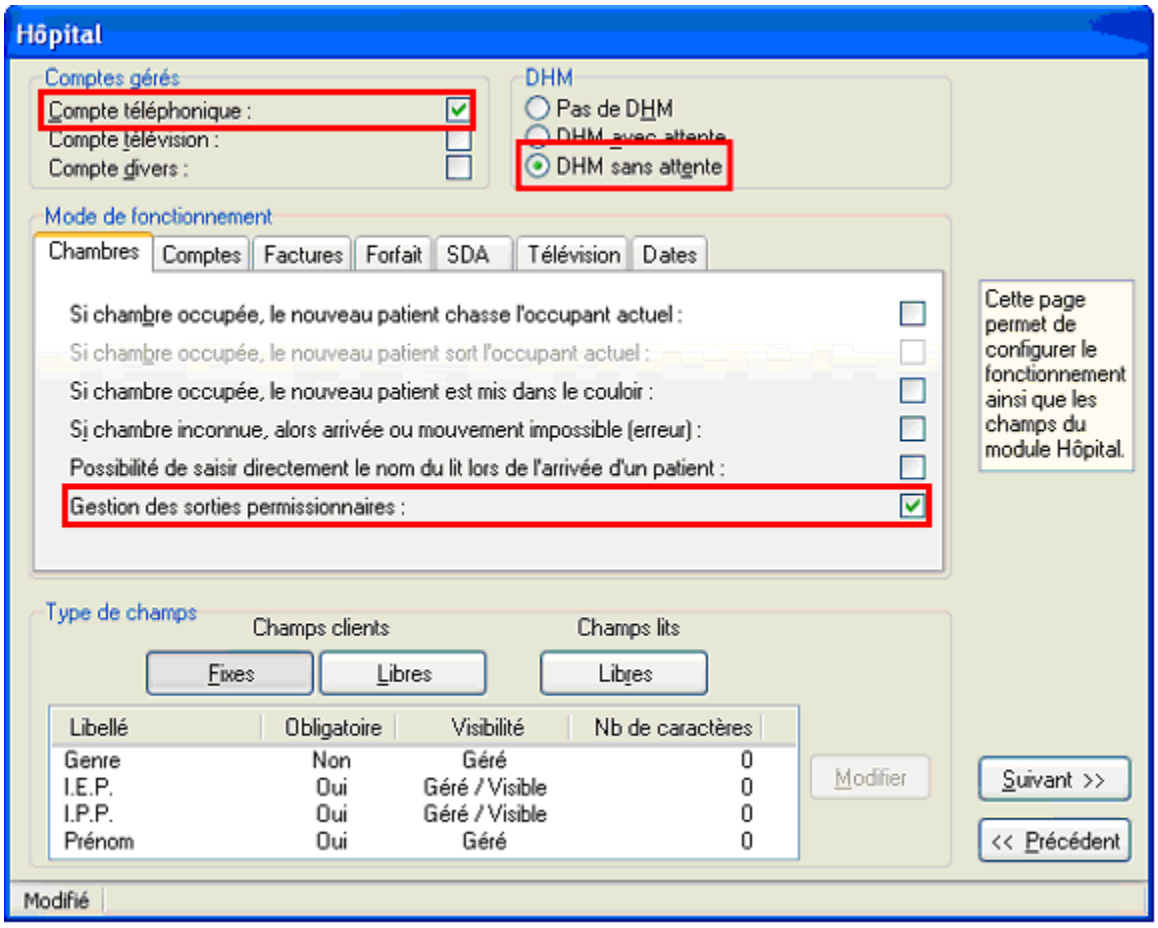

Figure 27: Hôpital: Chambres Configuration Screen

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

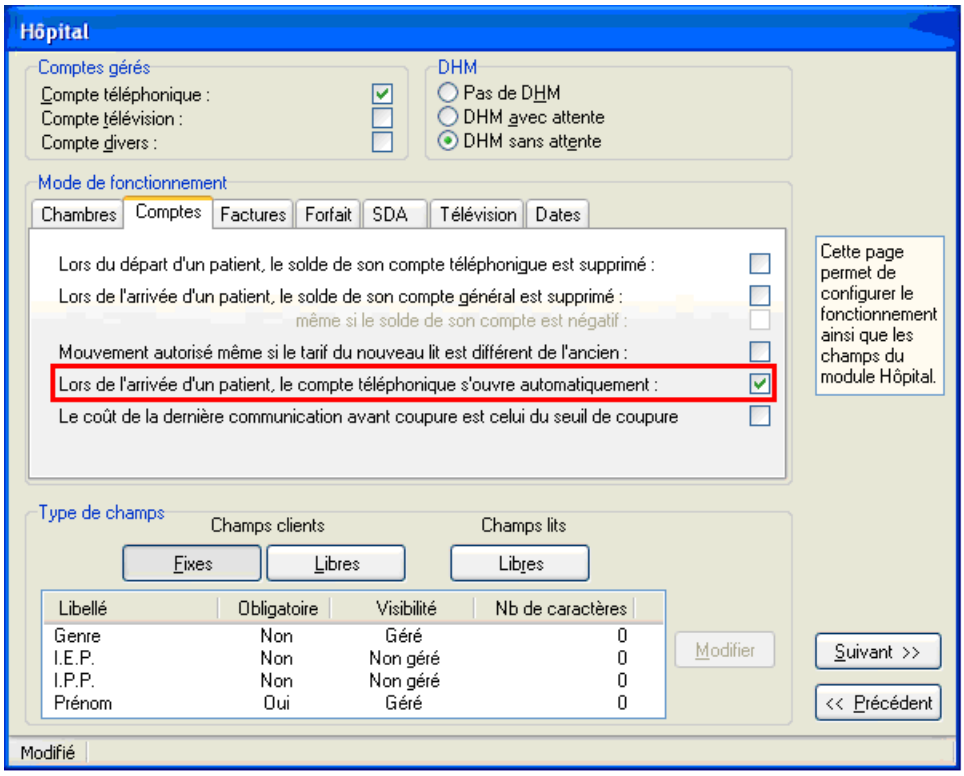

Figure 28: Hôpital: Comptes Configuration Screen

Double click on the first entry.

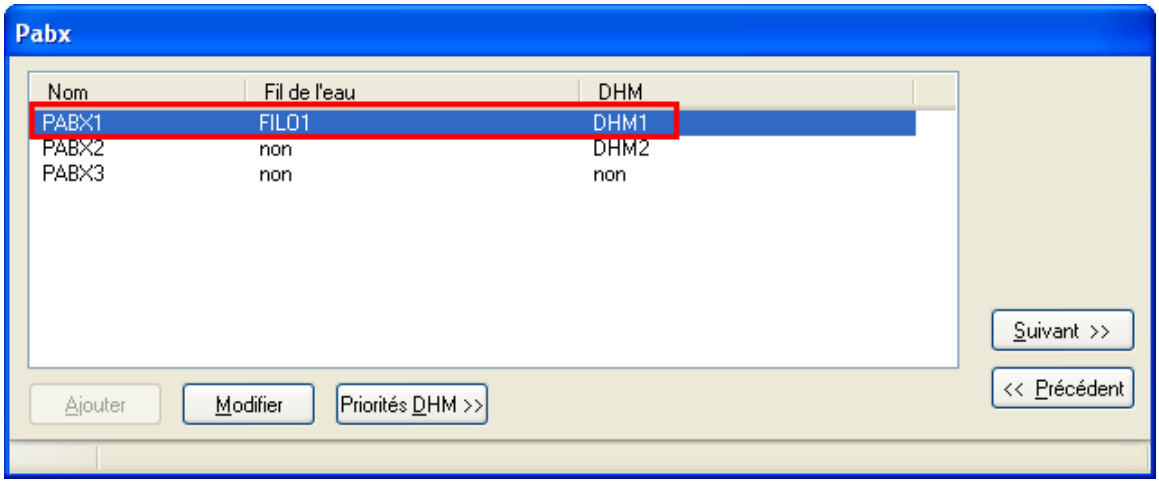

Figure 29: PBX Selection Screen

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Click “Liaison” under “Fil de l’eau”.

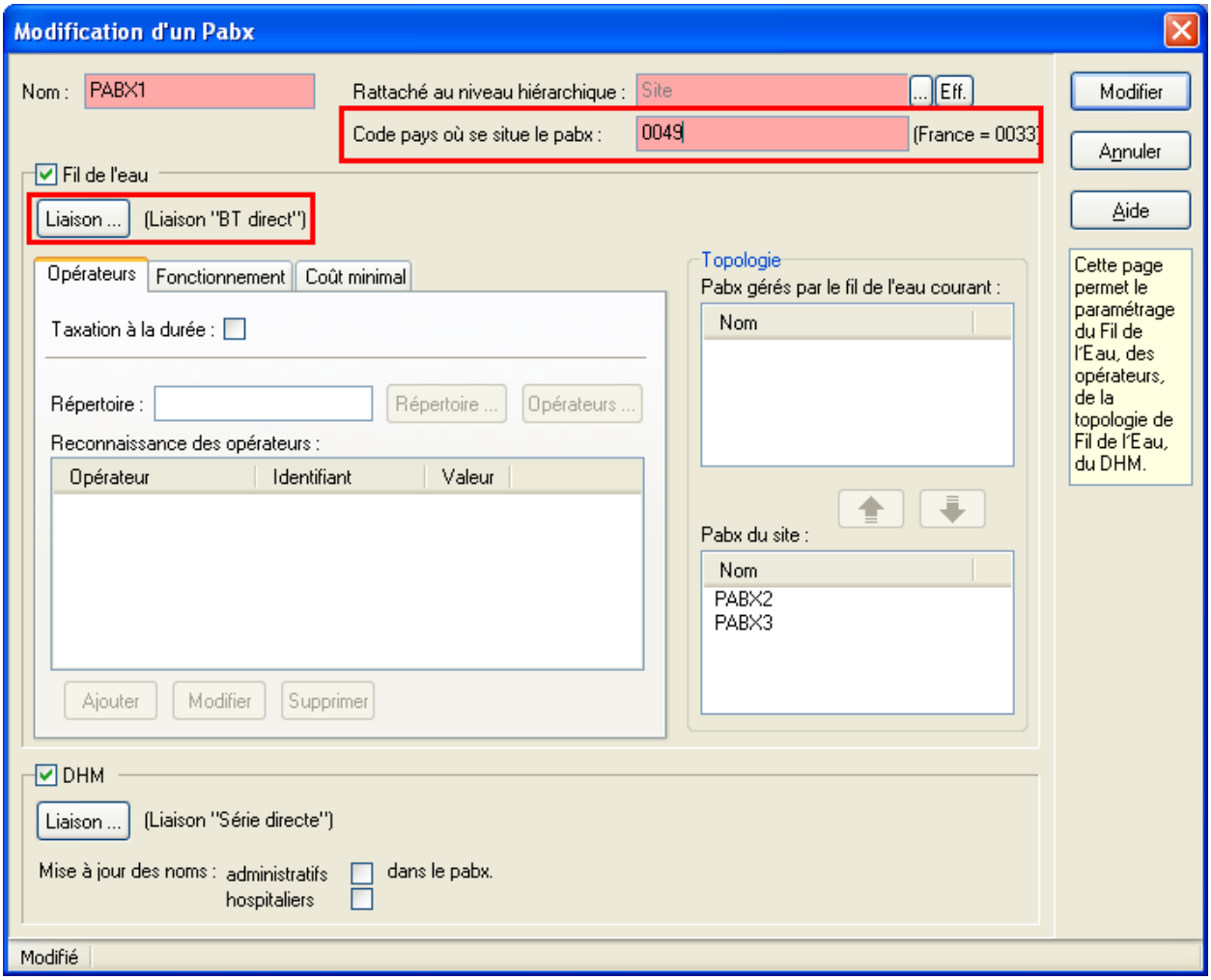

Figure 30: PBX Configuration Screen

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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

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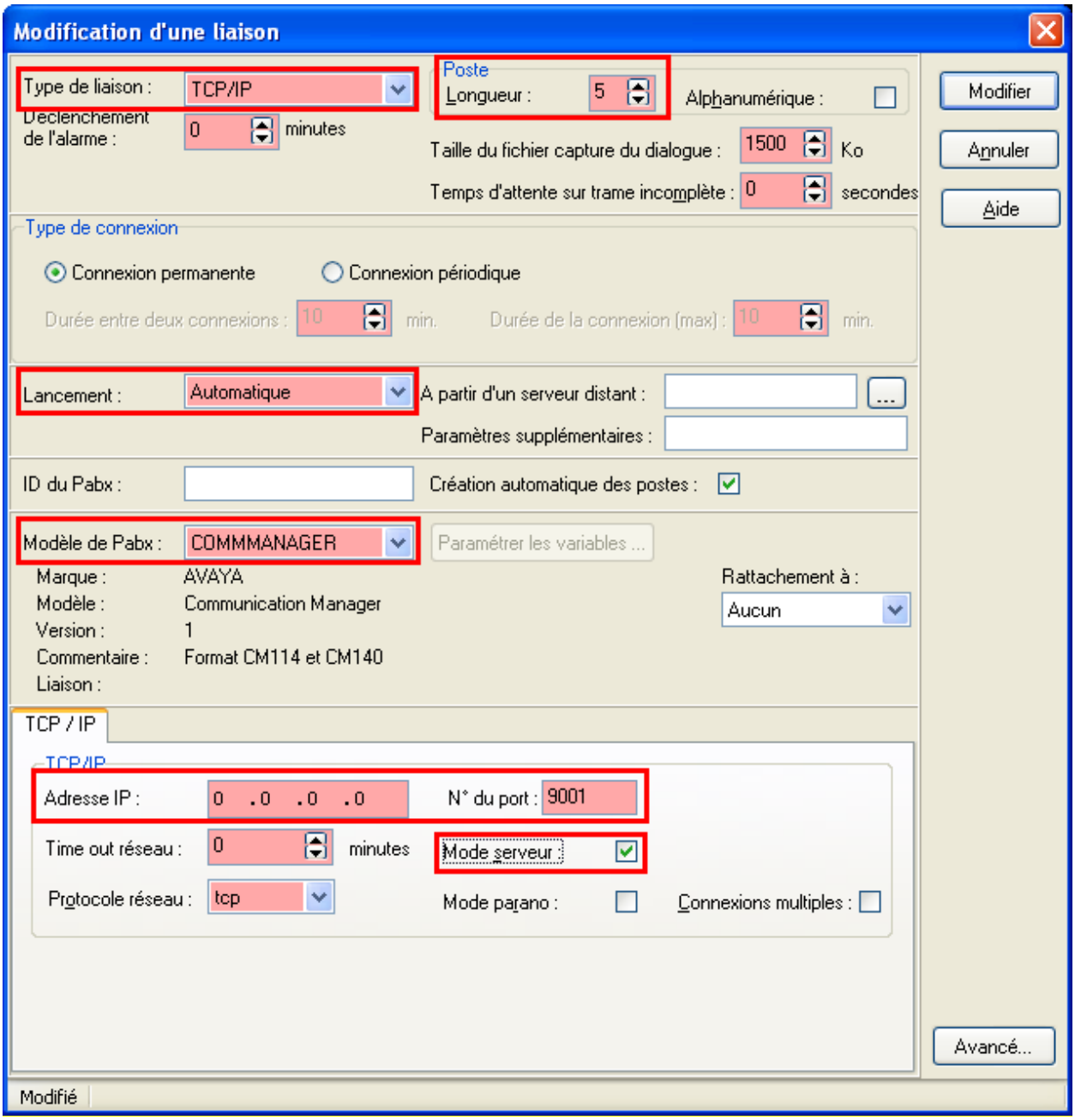

Figure 31: Connection Configuration Screen

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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.

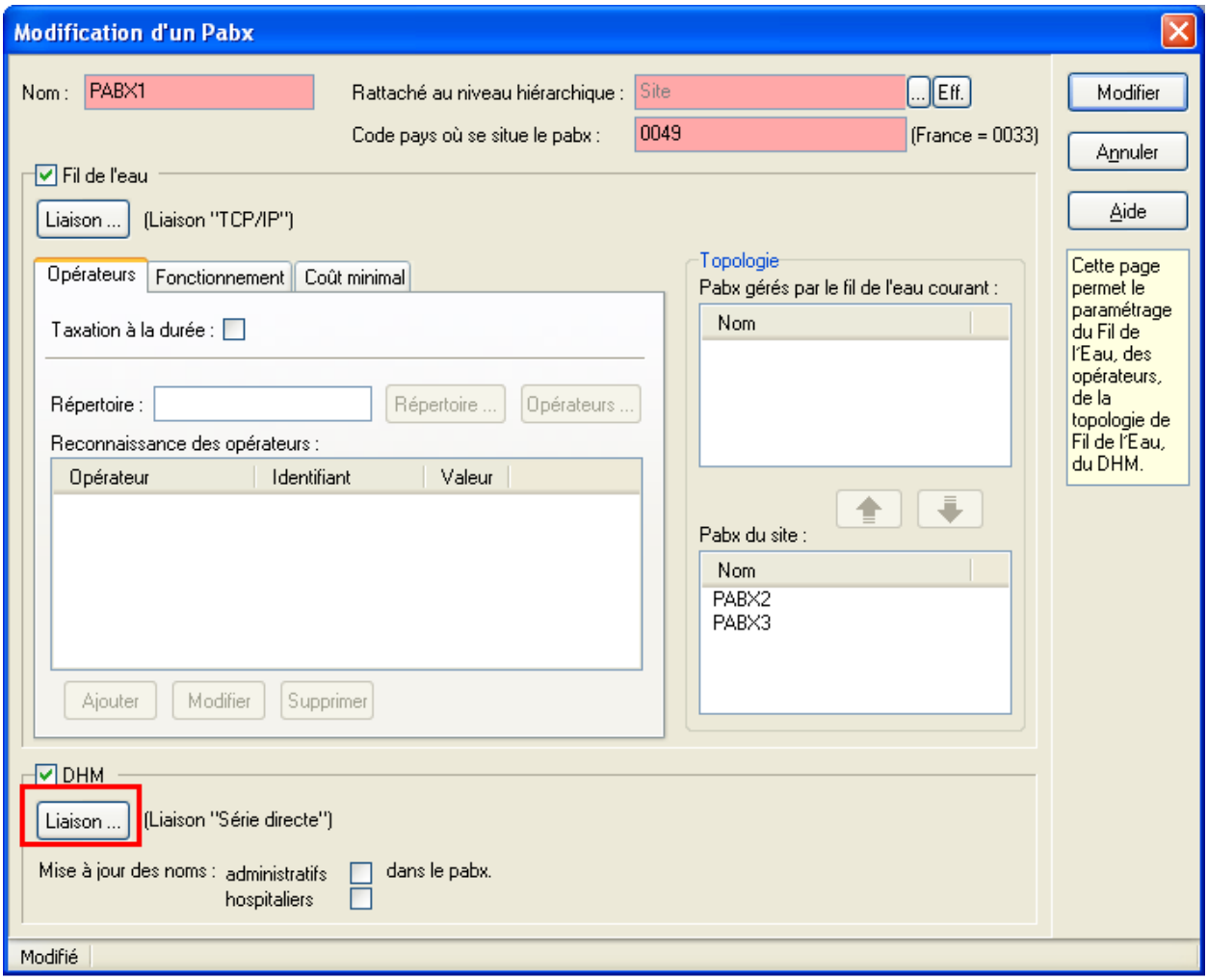

Figure 32: PBX Configuration after Connection Selection Screen

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

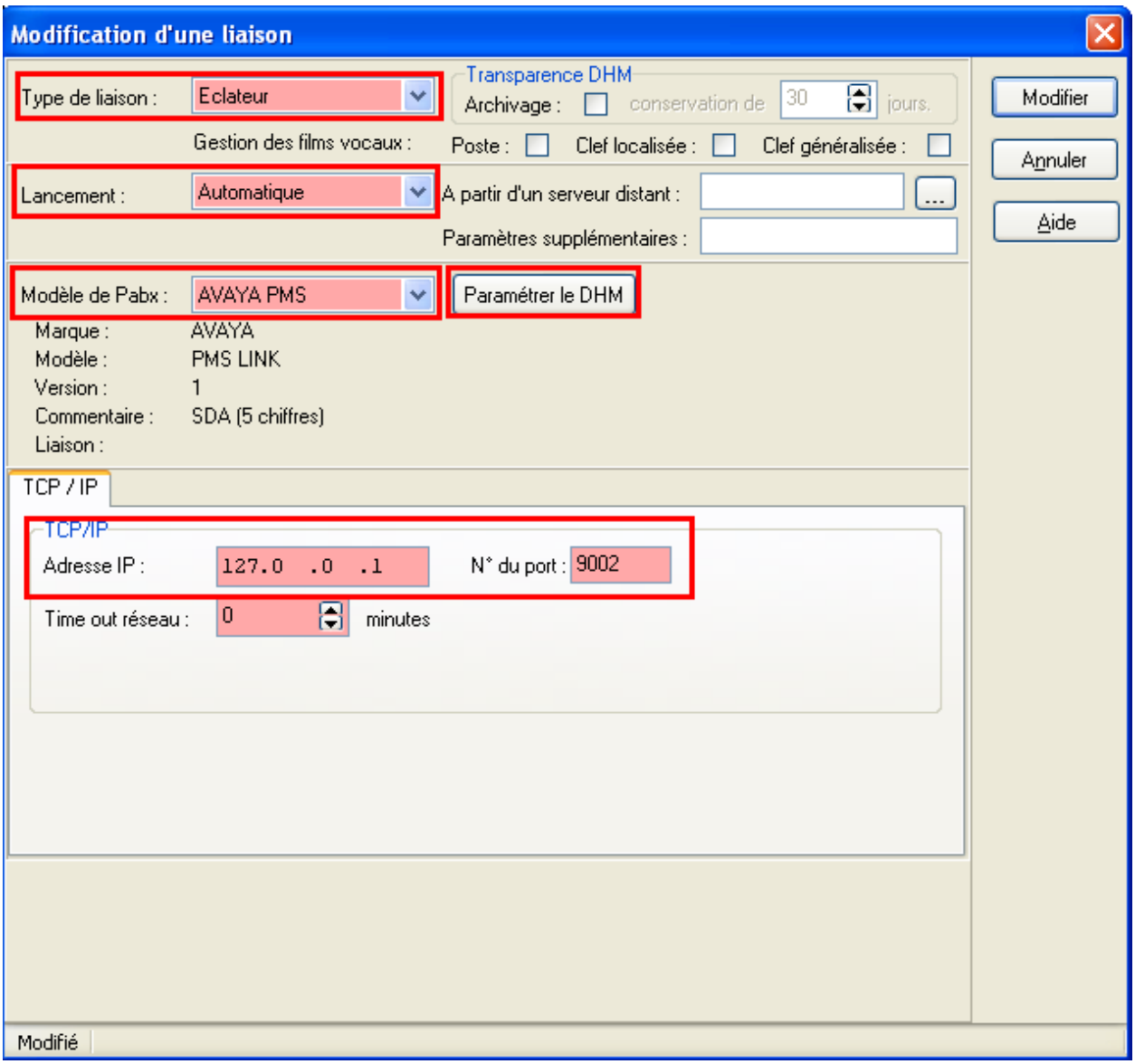

Figure 33: Protocol Configuration Screen

Click “Valider” without entering a password.

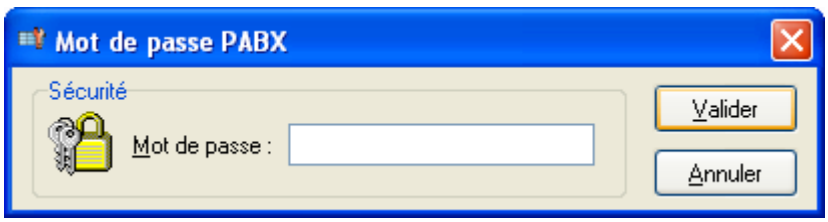

Figure 34: Additional Parameters Screen

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Retain the default values shown and click “Valider”.

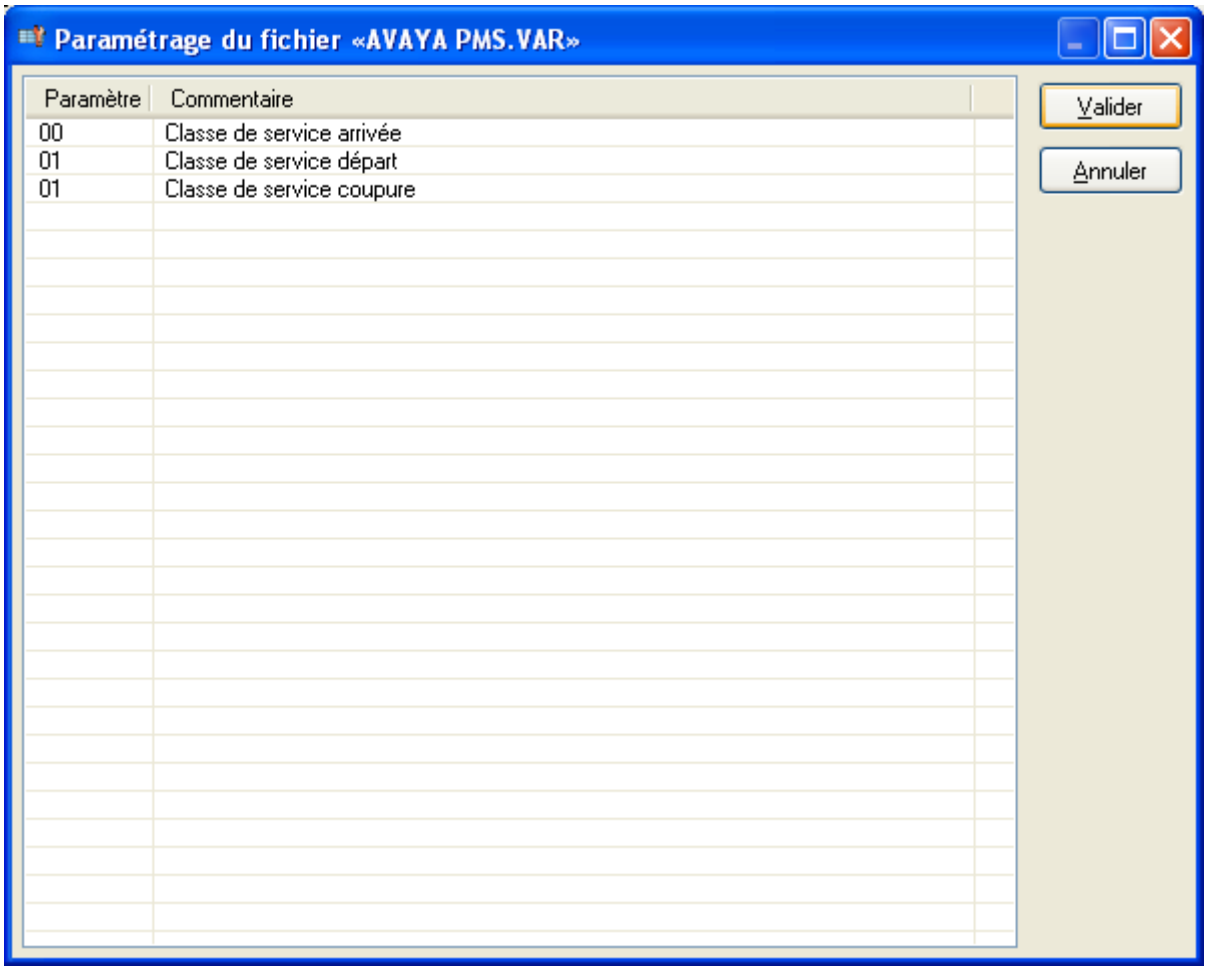

Figure 35: User Rights Configuration Screen

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Click “Suivant”.

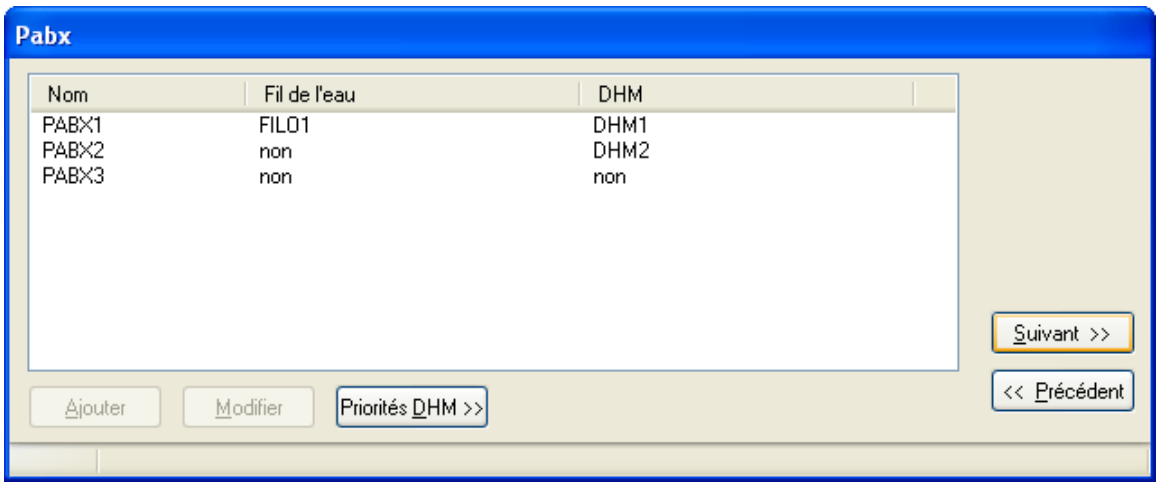

Figure 36: PBX Selection Screen

Click “Suivant”.

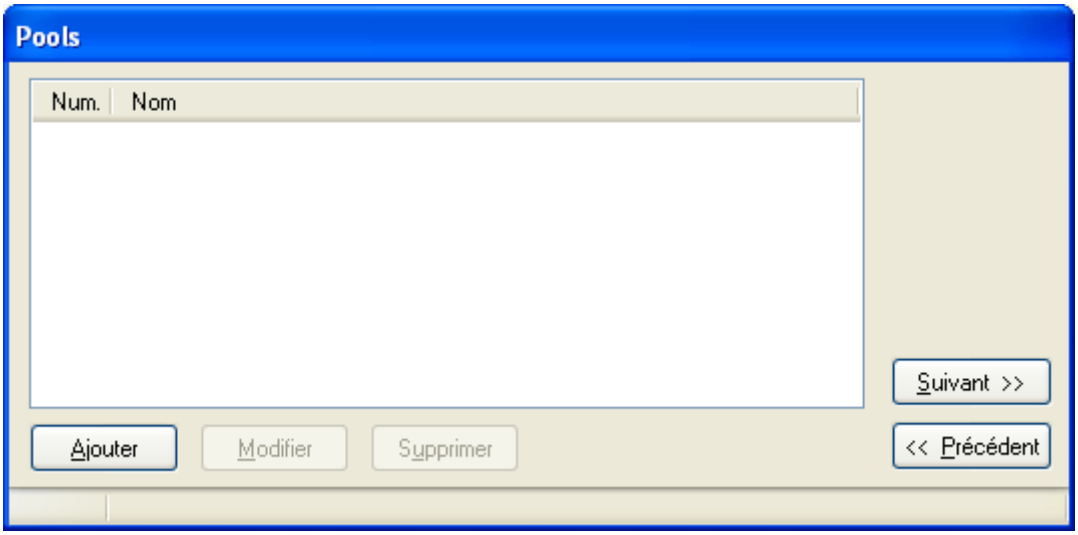

Figure 37: PBX Pools Screen

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Click “Suivant”.

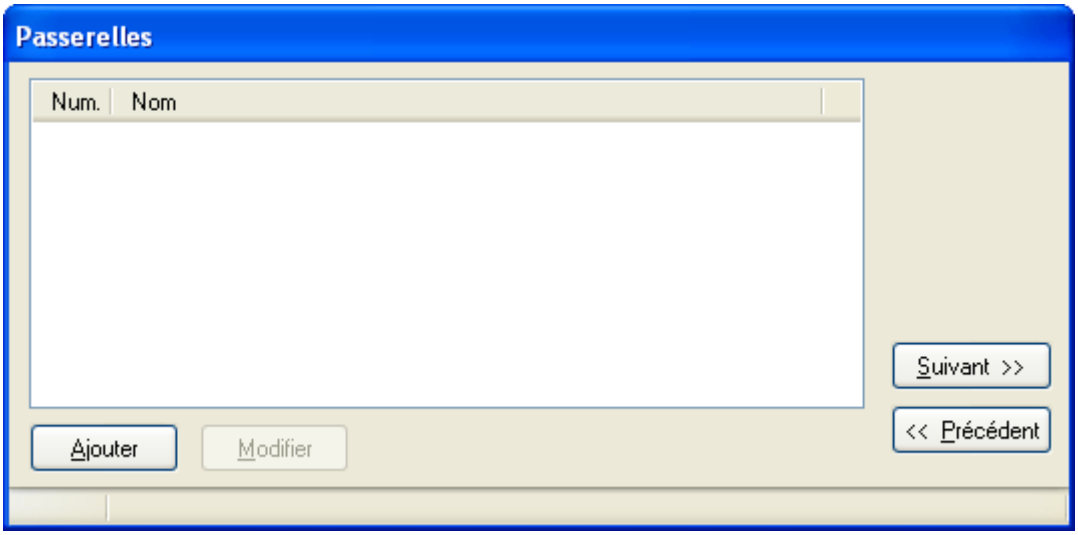

Figure 38: Bridge Selection Screen

Click “Suivant”.

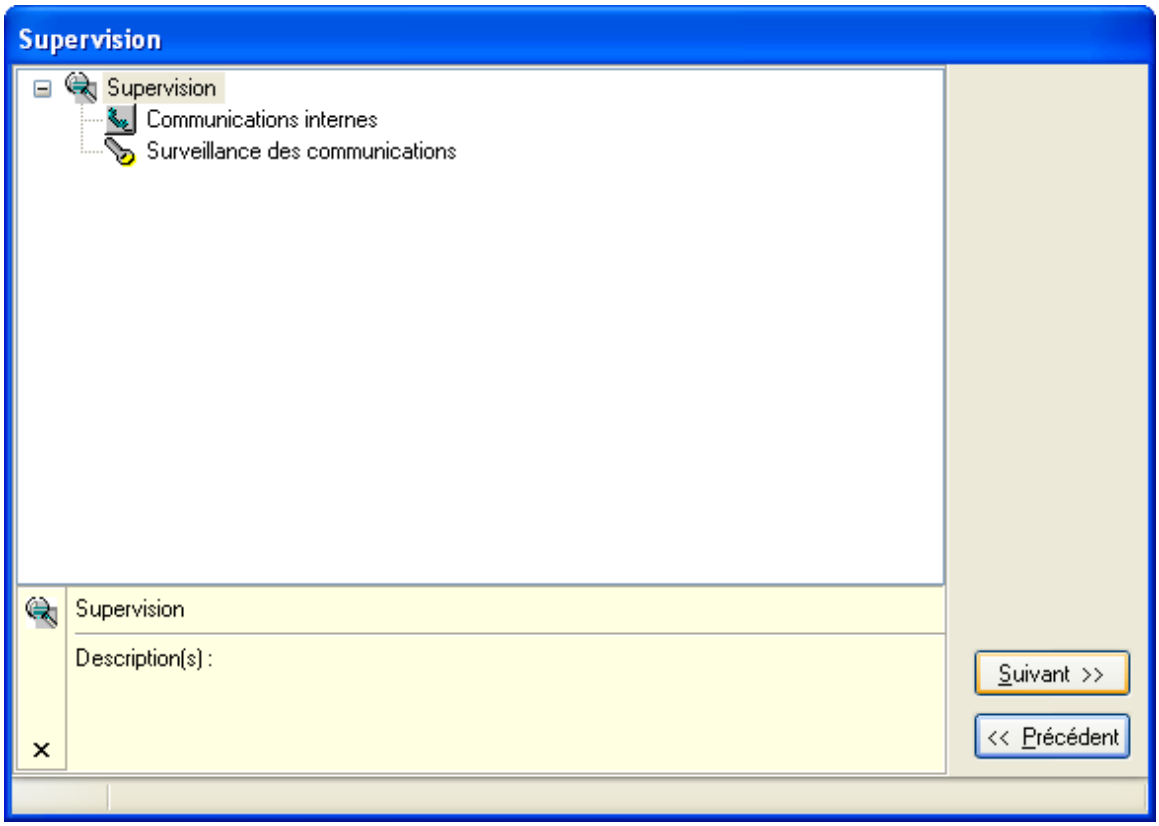

Figure 39: Supervision Screen

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Click “Suivant”.

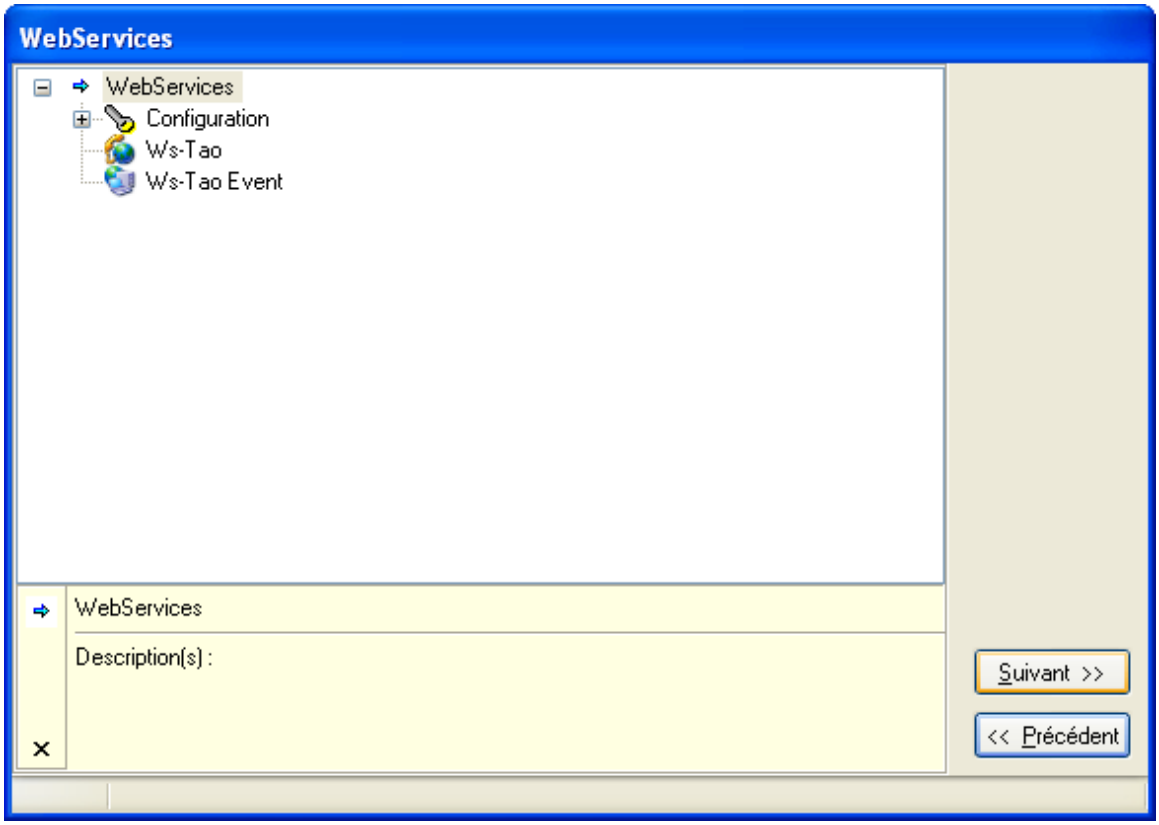

Figure 40: Web Services Screen

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Click “Suivant”.

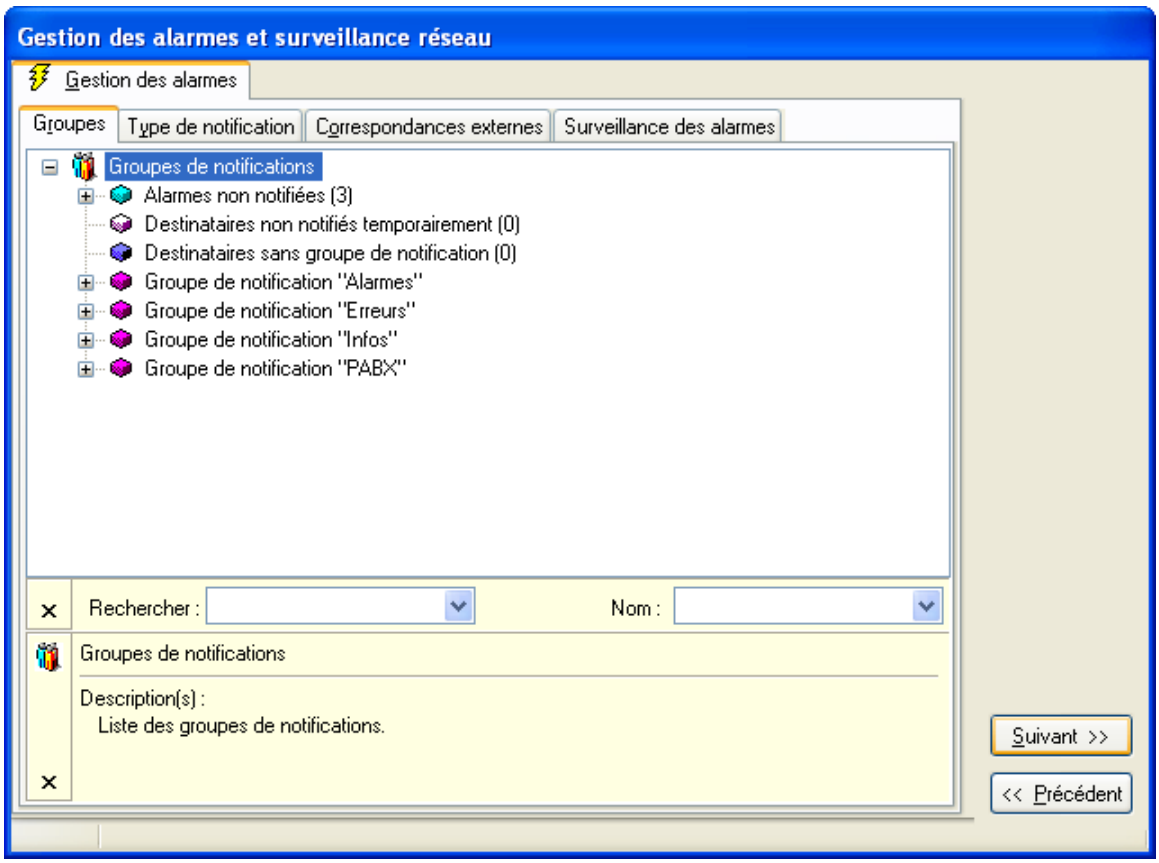

Figure 41: Alarm Screen

Click “Suivant”.

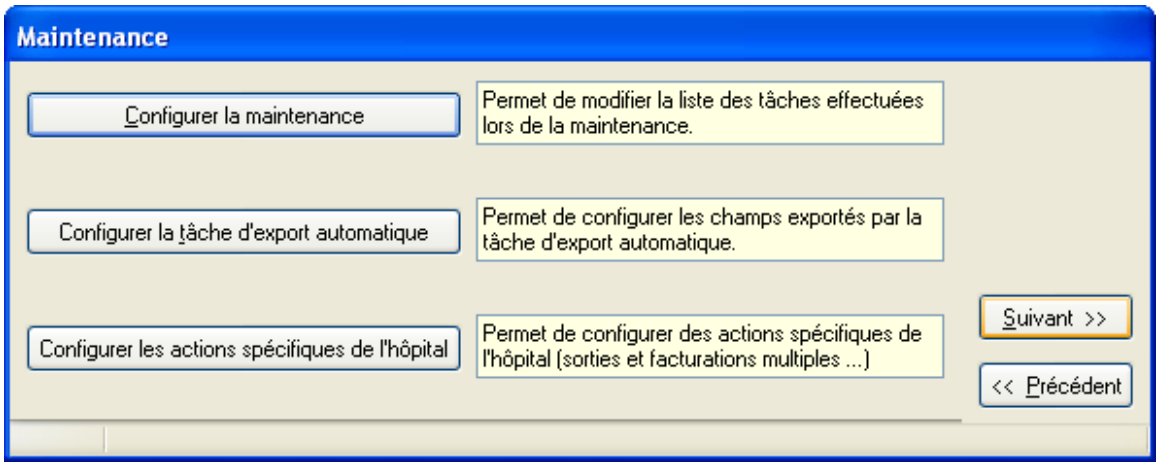

Figure 42: Maintenance Screen

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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.

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

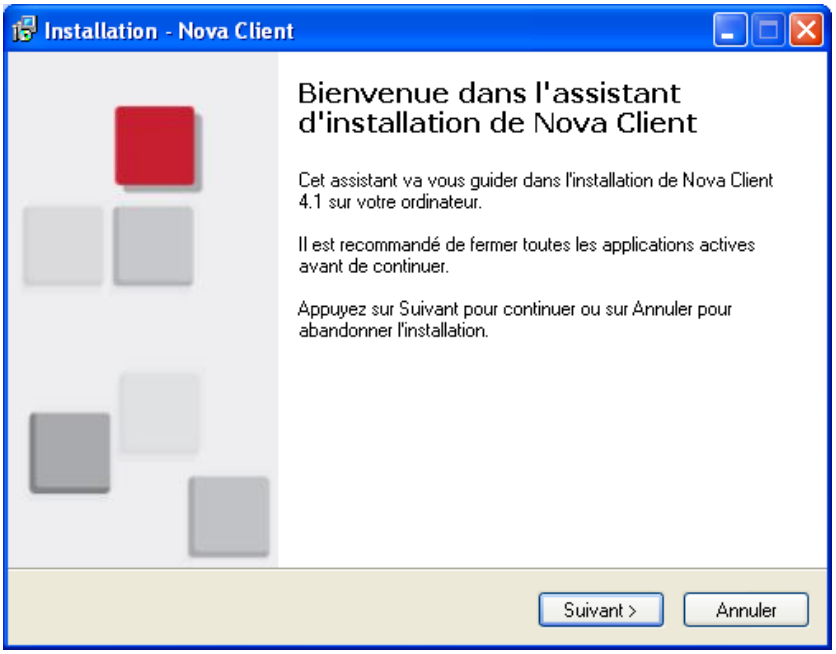

Figure 44: Client Installation Wizard Greeting Screen

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

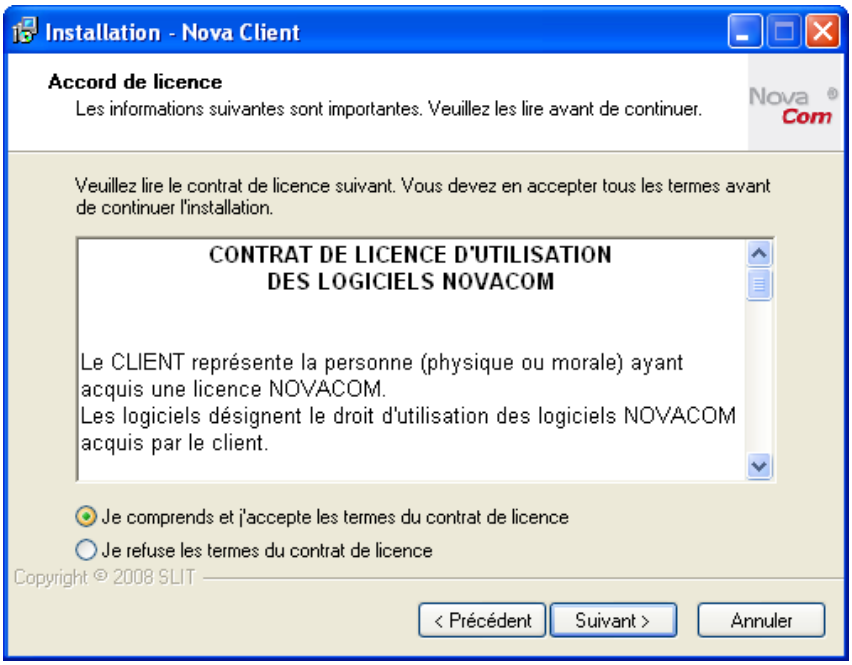

Figure 45: Client License Acceptance Screen

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Click “Suivant”.

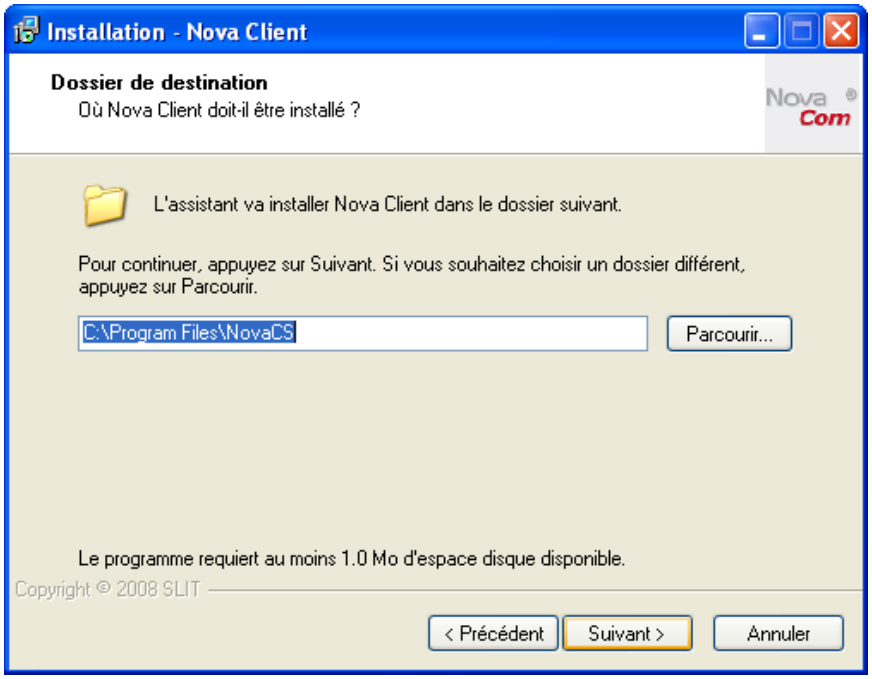

Figure 46: Client Archive Selection Screen

Click “Suivant”.

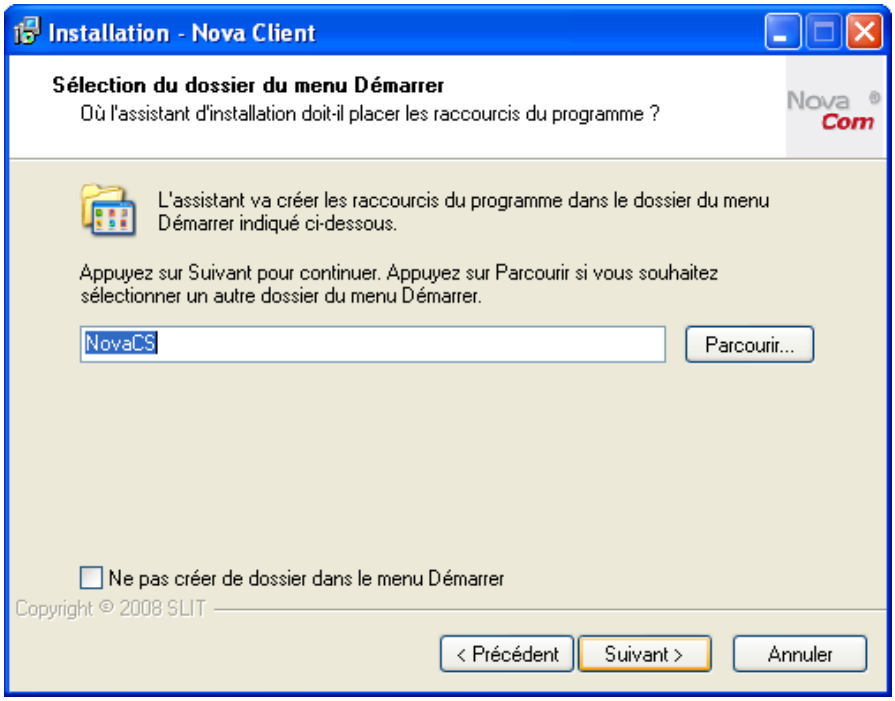

Figure 47: Client Program Directory Selection Screen

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Click “Suivant”.

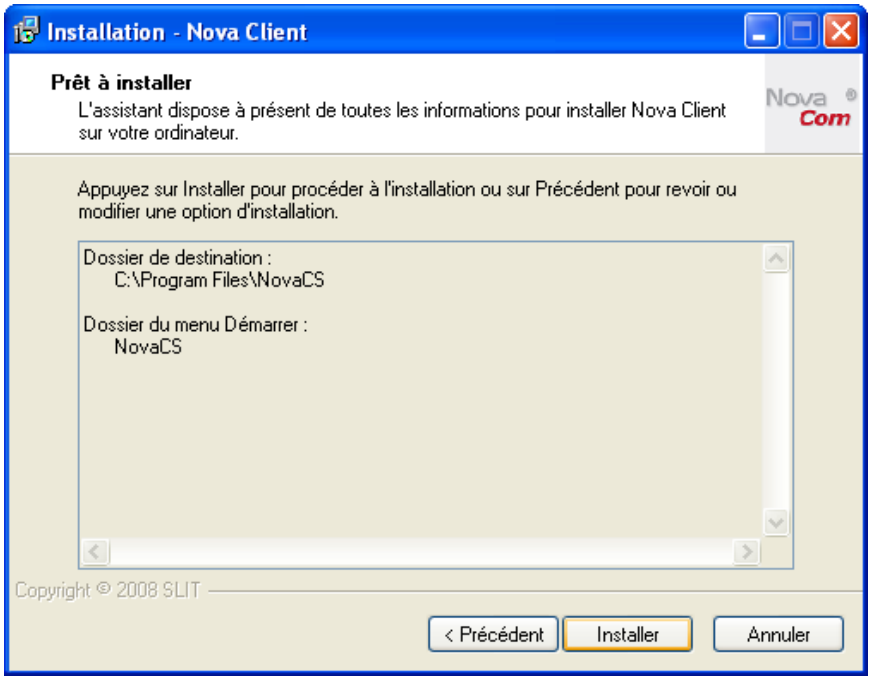

Figure 48: Client Installation Confirmation Screen

Click “Terminer”.

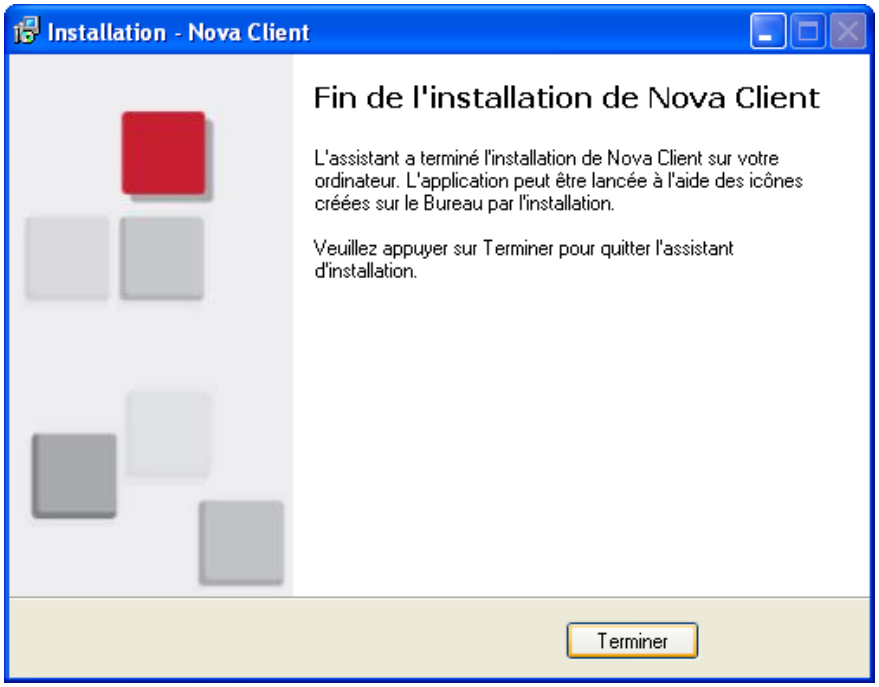

Figure 49: Client Installation Completion Screen

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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

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

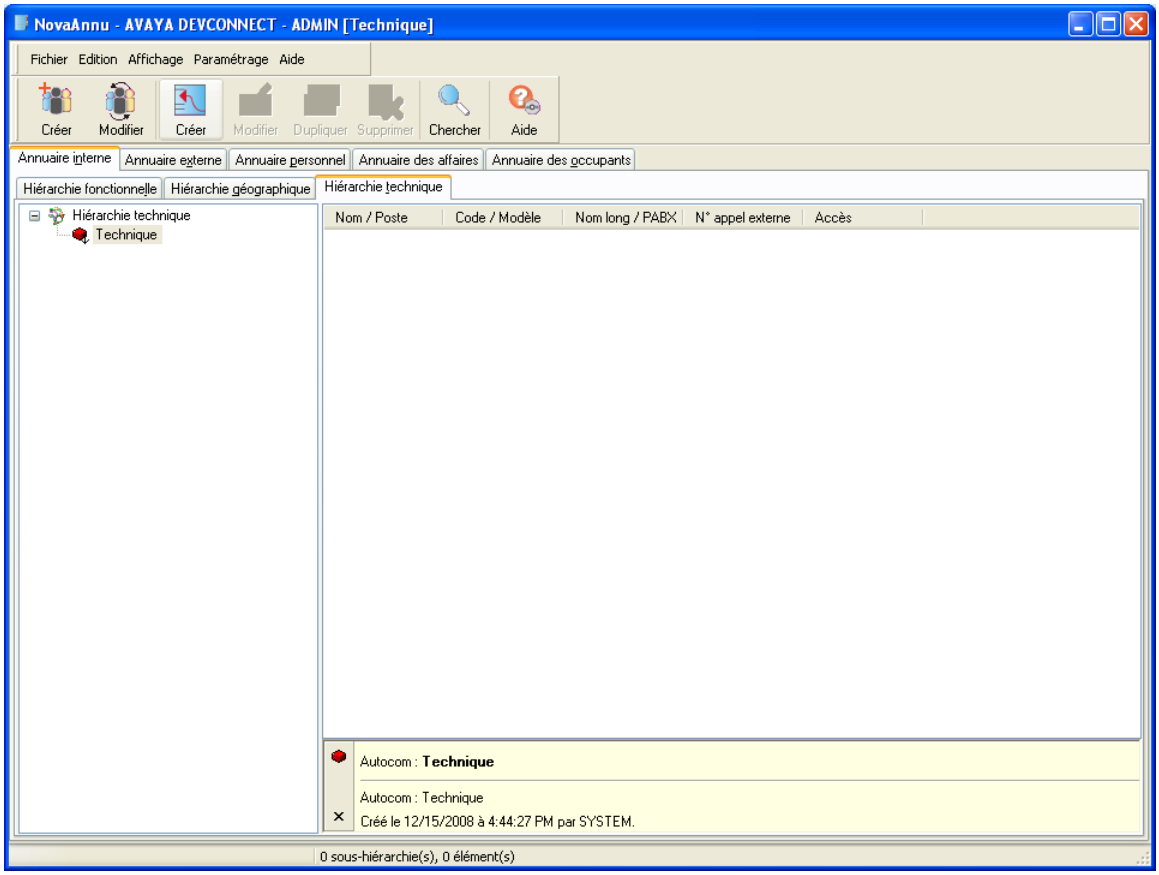

Figure 52: NovaAnnu Hiérarchie Technique Screen

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

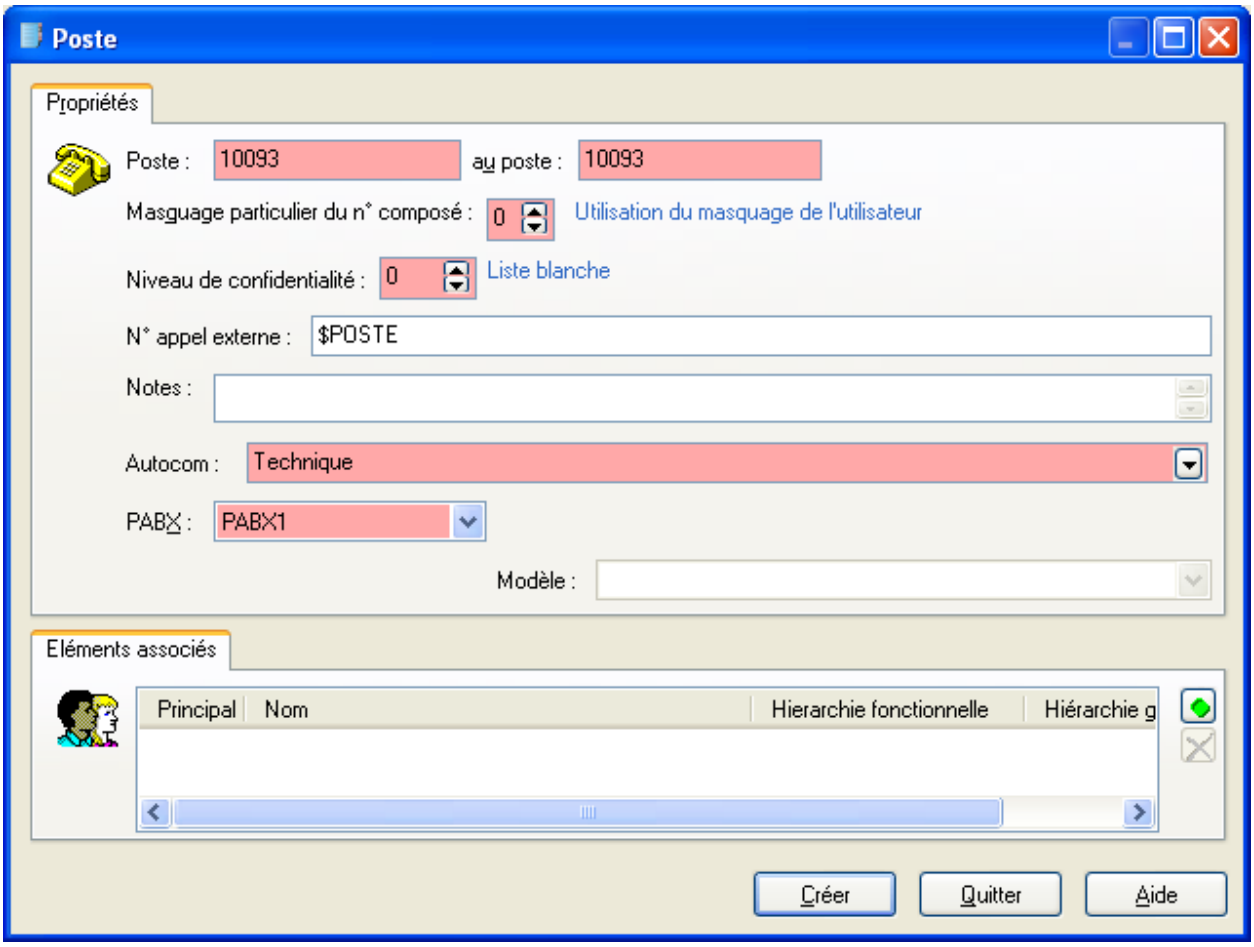

Figure 53: NovaAnnu Extension Screen

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

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

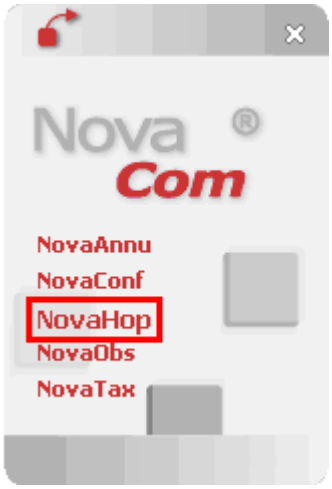

Figure 54: NovaHop Launch Screen

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

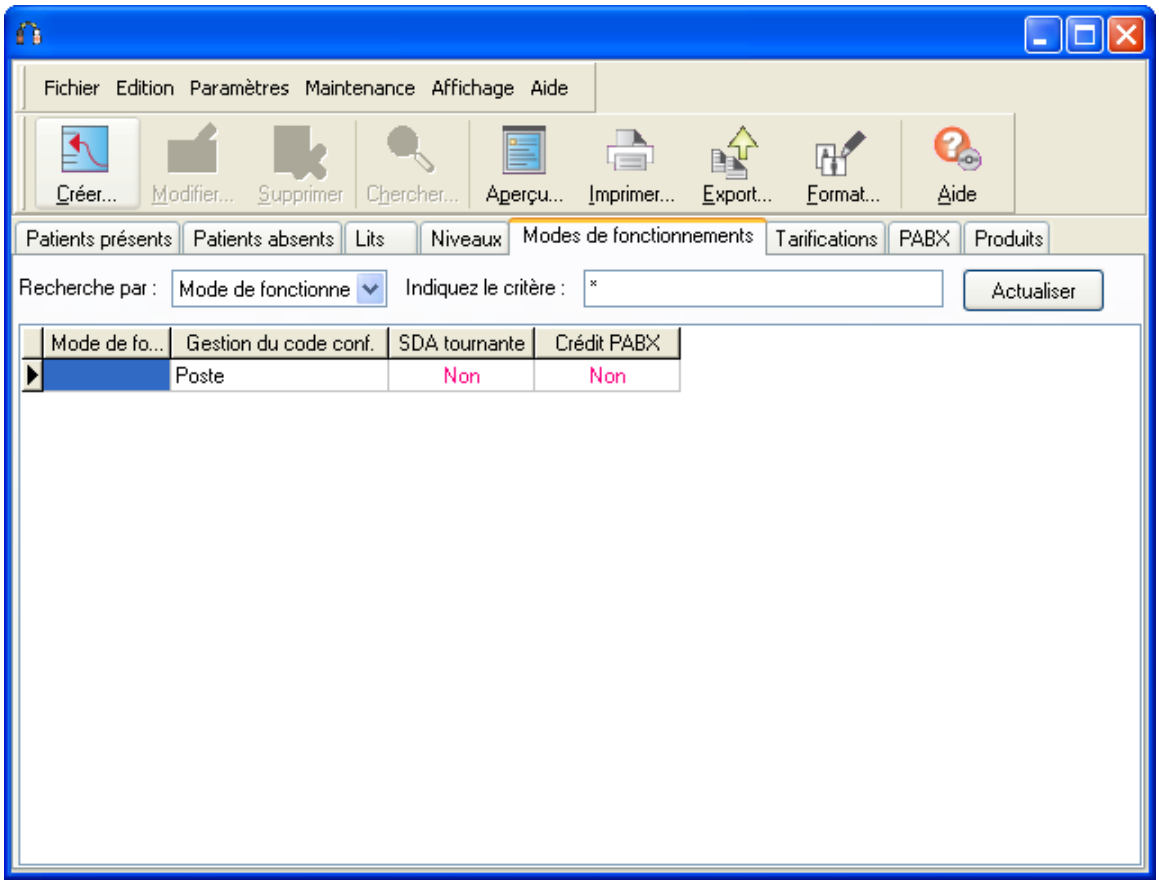

Figure 55: Client Modes de Fonctionnements Screen

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

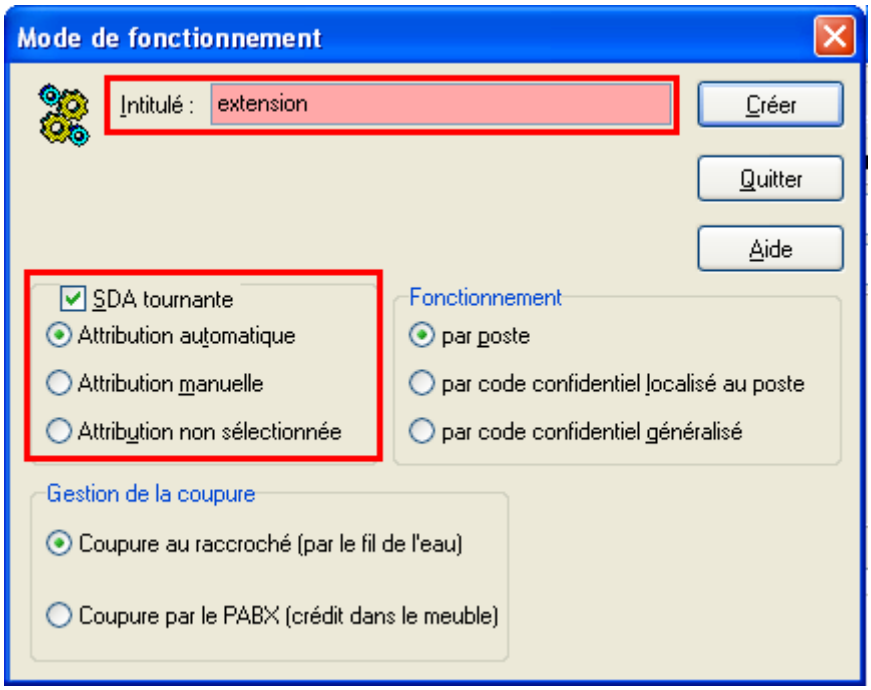

Figure 56: Functional Mode Selection Screen

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

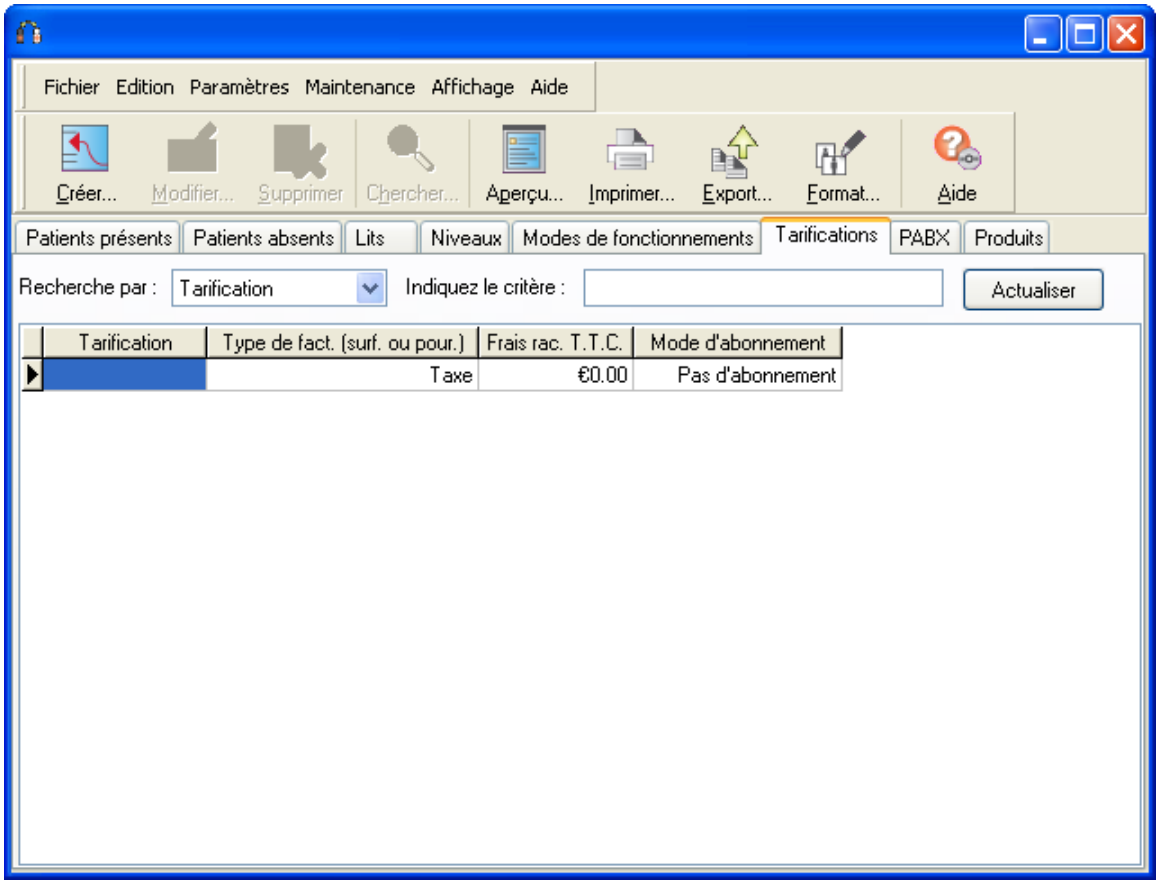

Figure 57: “Tarifications” Tab Screen

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

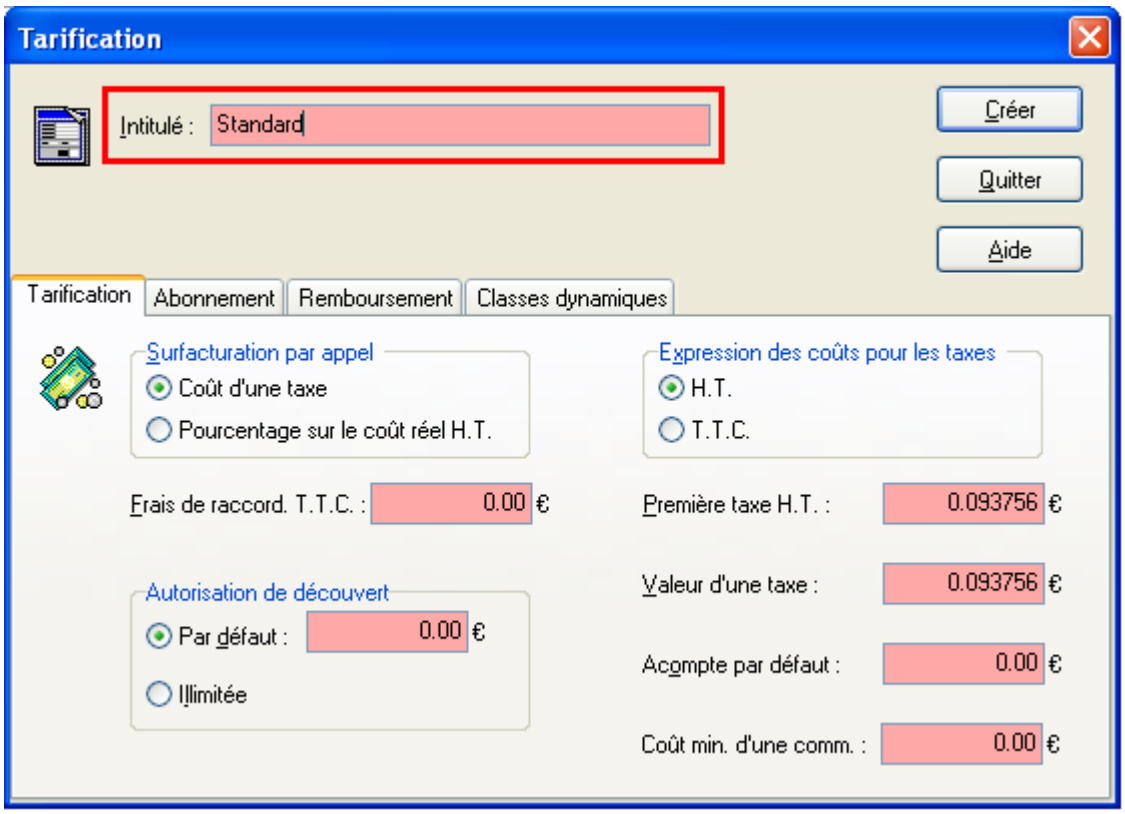

Figure 58: Tarif Creation Screen

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

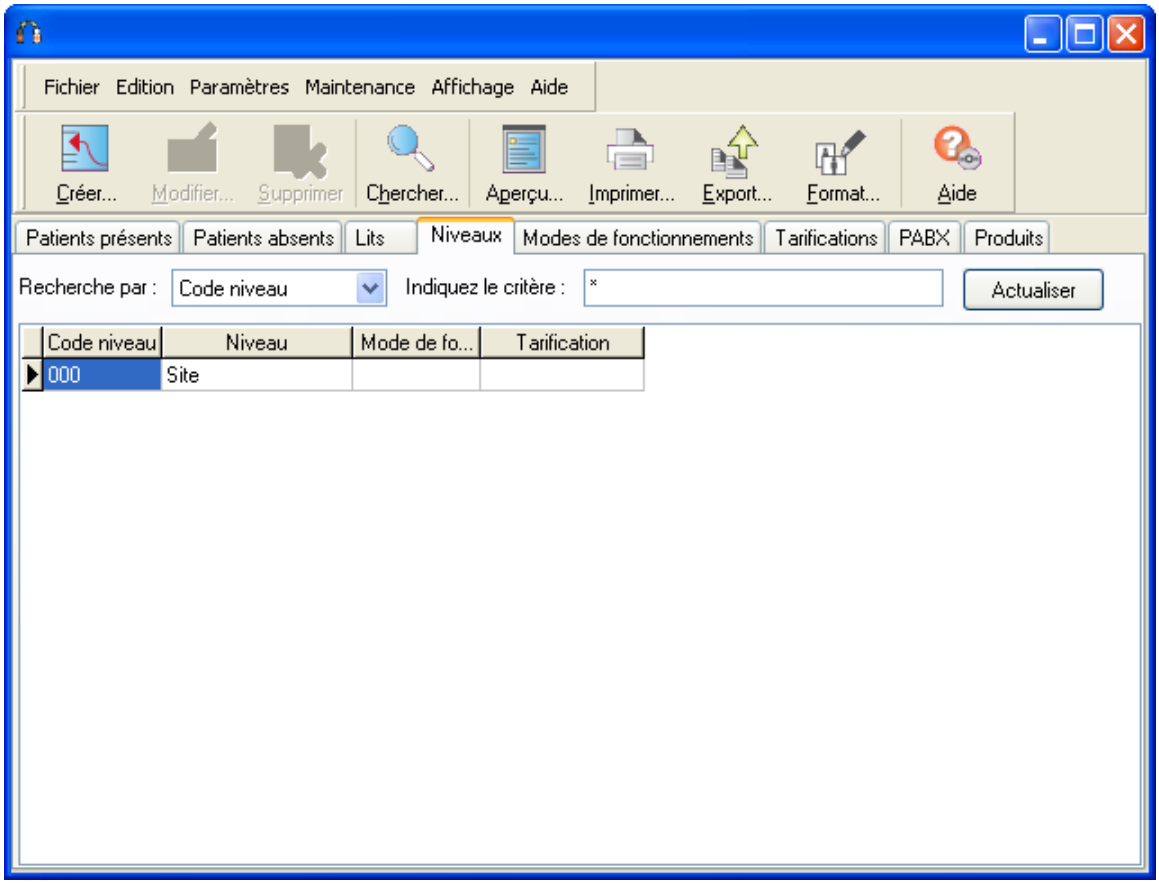

Figure 59: Client Niveaux Tab Screen

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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

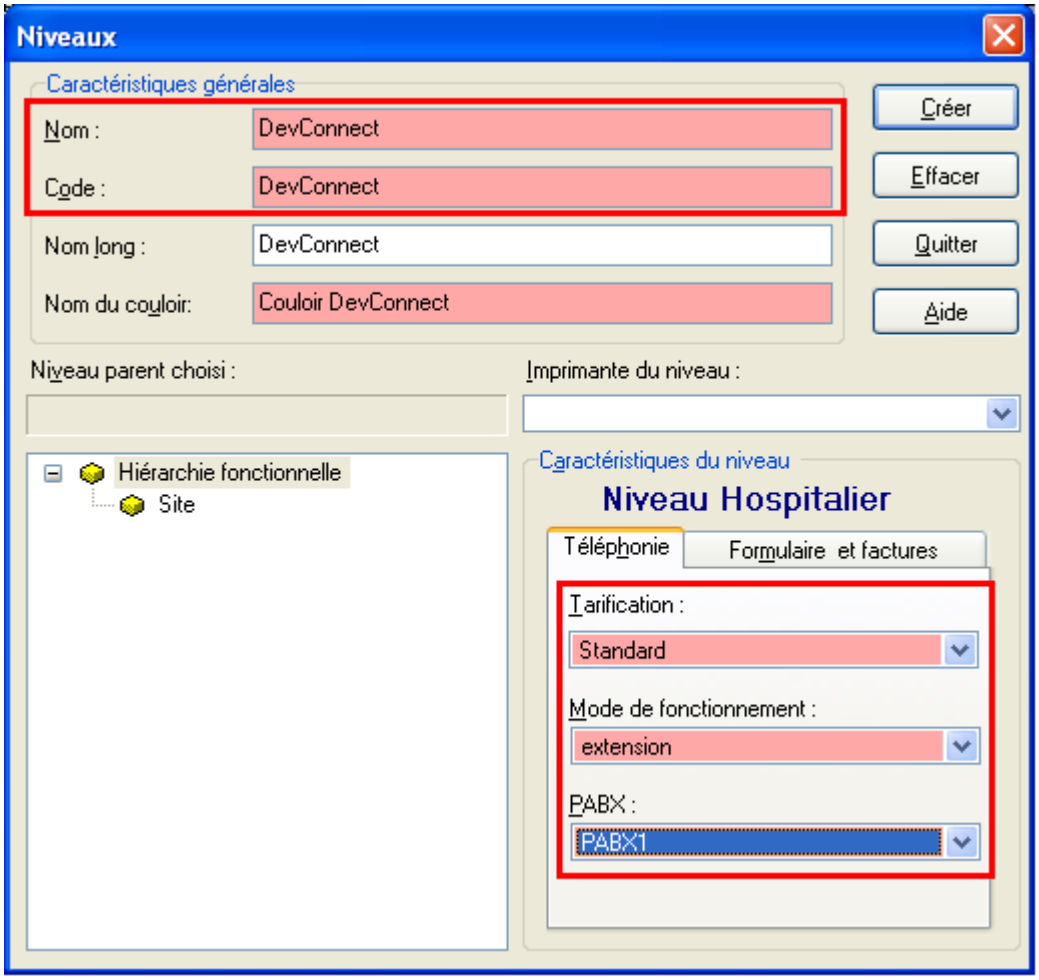

Figure 60: Client Niveaux Screen

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

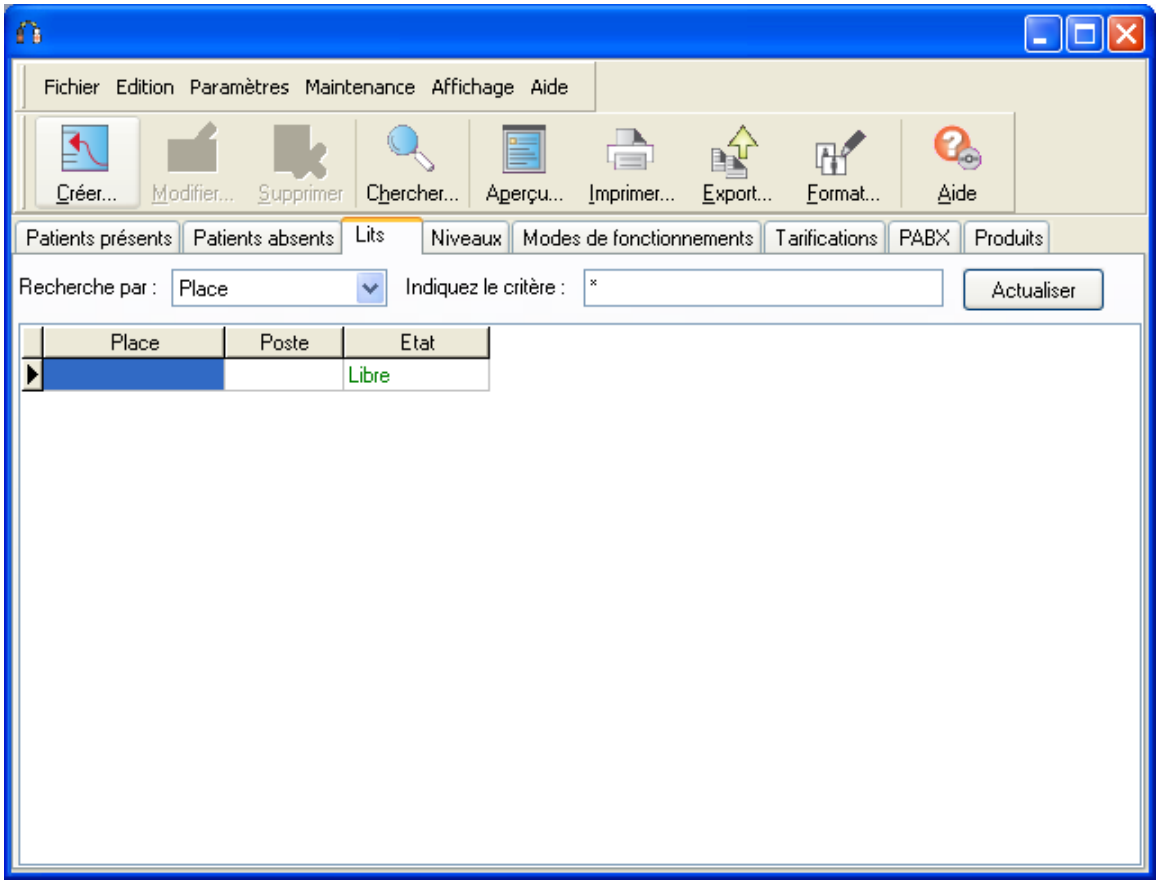

Figure 61: Client Lits Tab Screen

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

Parameter	Value
Intitule	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

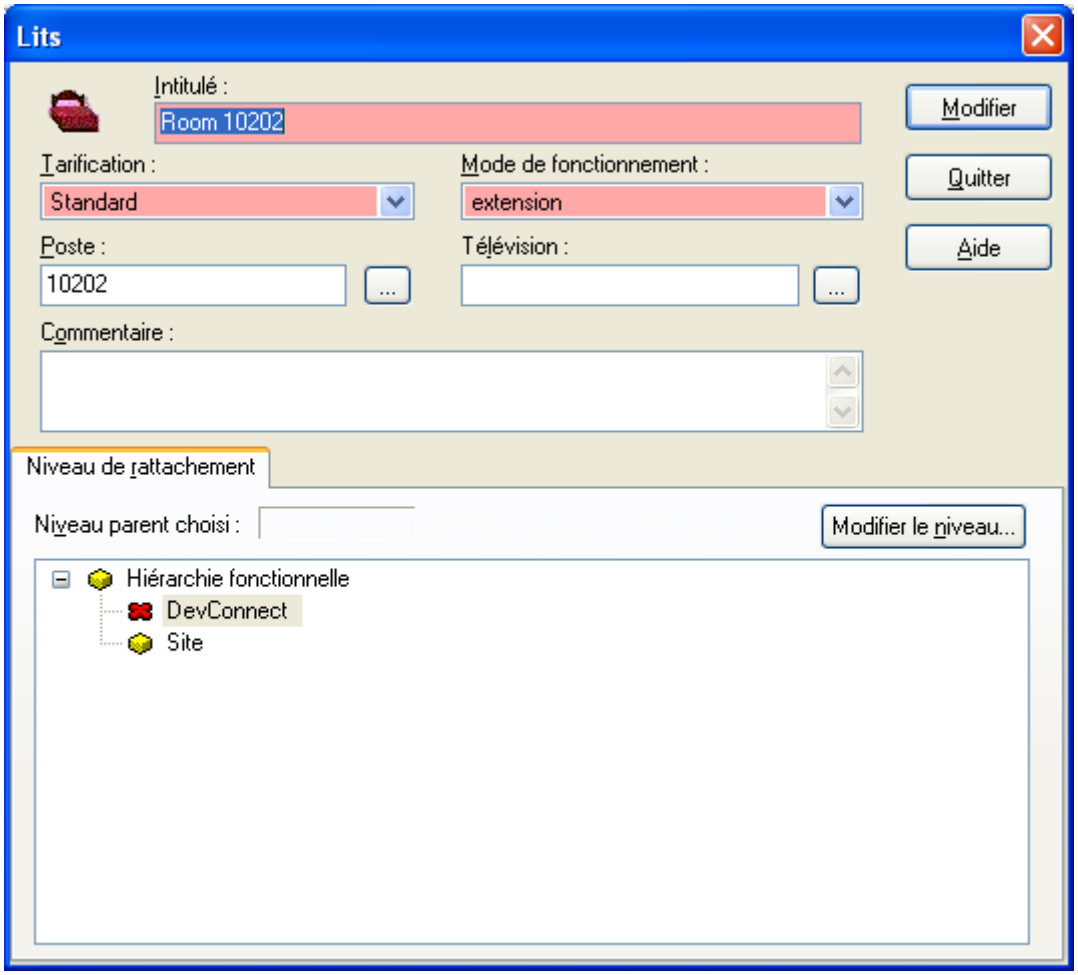

Figure 62: Client Lits Creation Screen

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

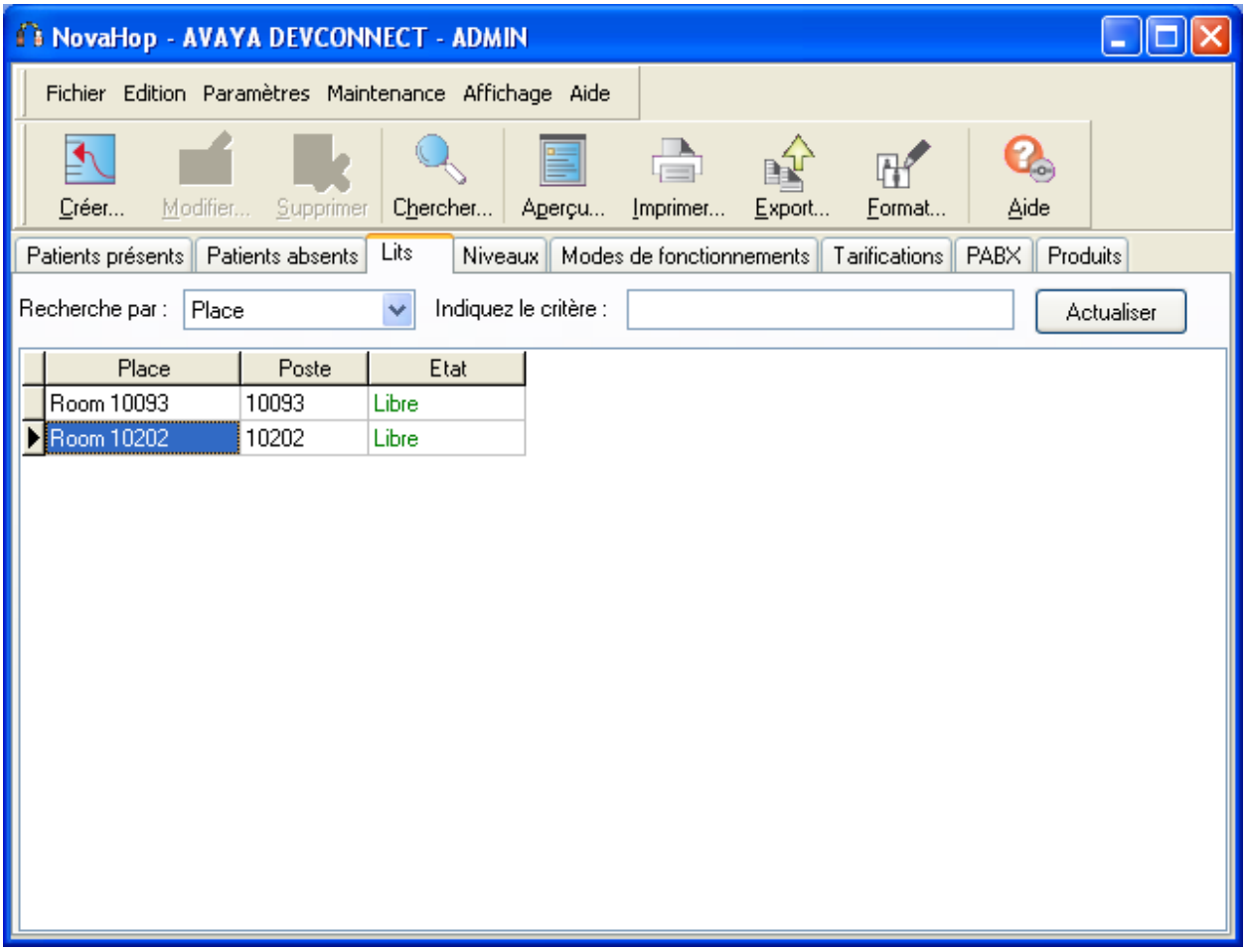

Figure 63: Client Lits Tab after Rooms Configuration

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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.

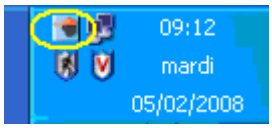

Figure 64: Man with Red Cap Icon in Systray

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.

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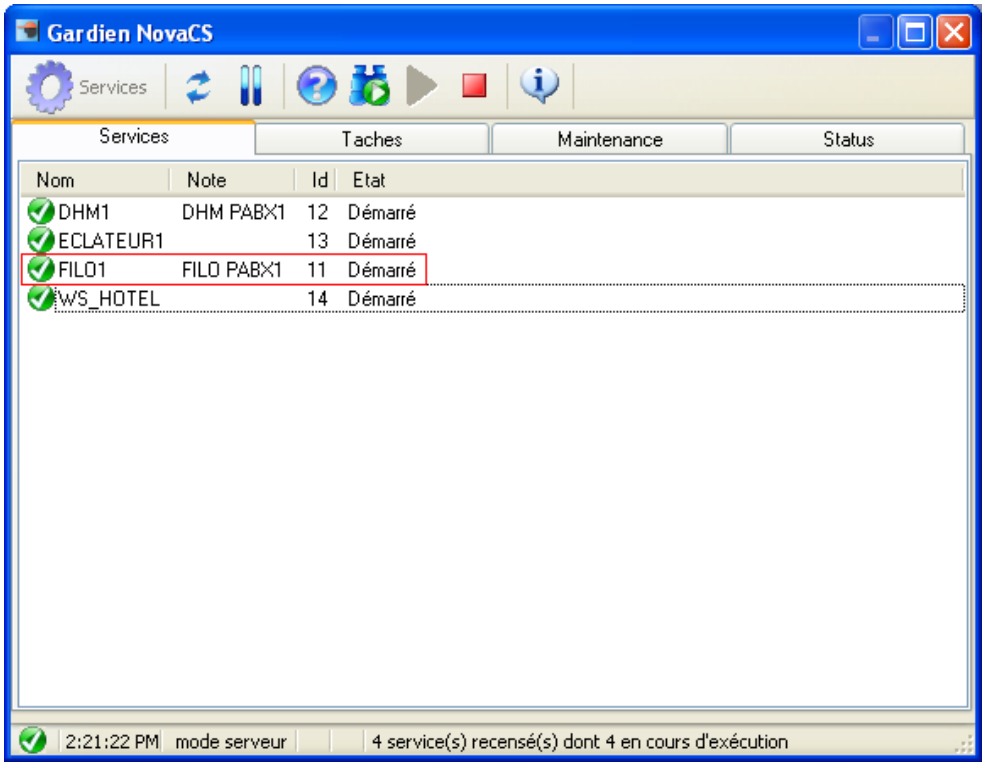

Figure 65: NovaTick FIL01 Selection Screen

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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.

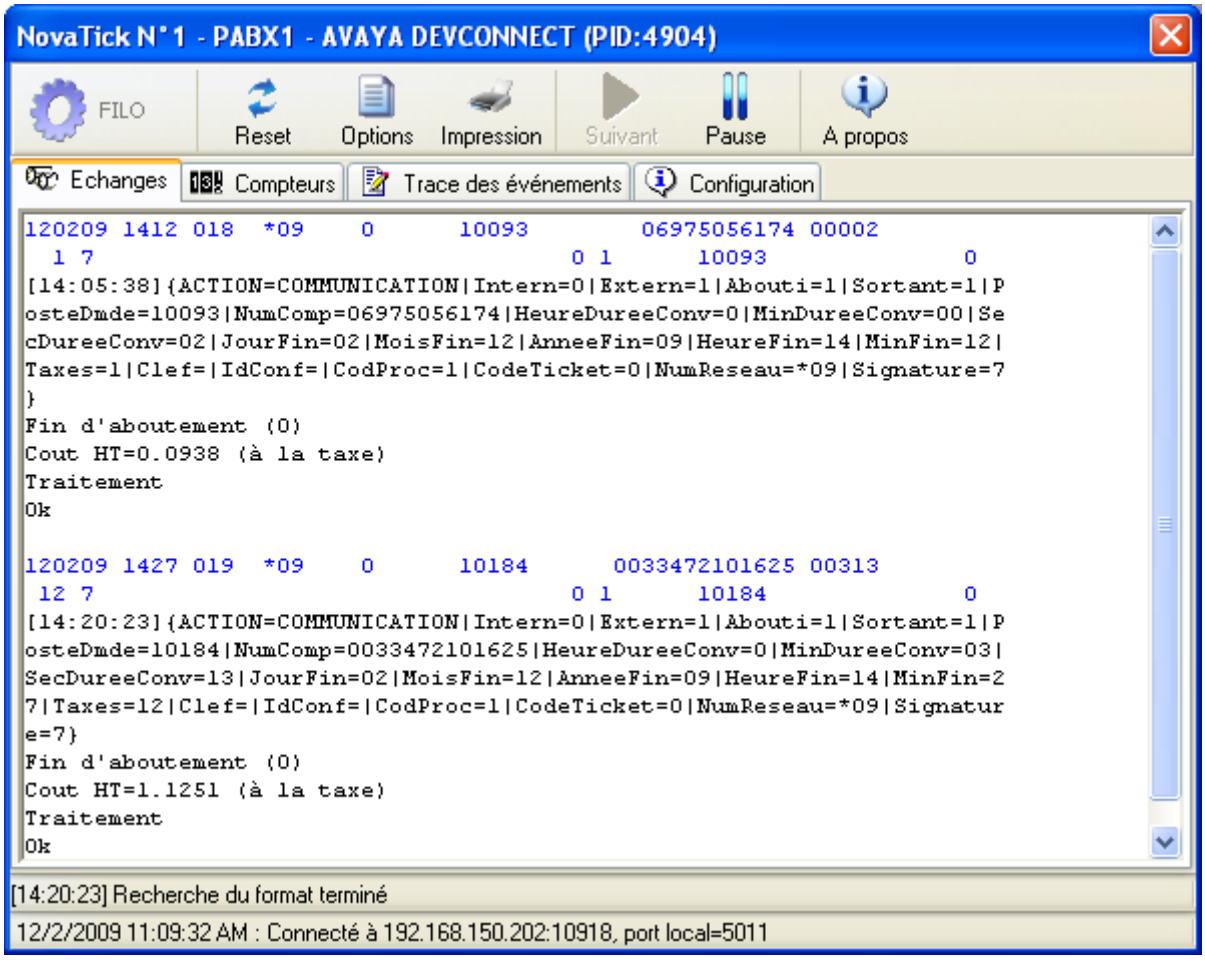

Figure 66: NovaTick CDR Trace Screen

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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

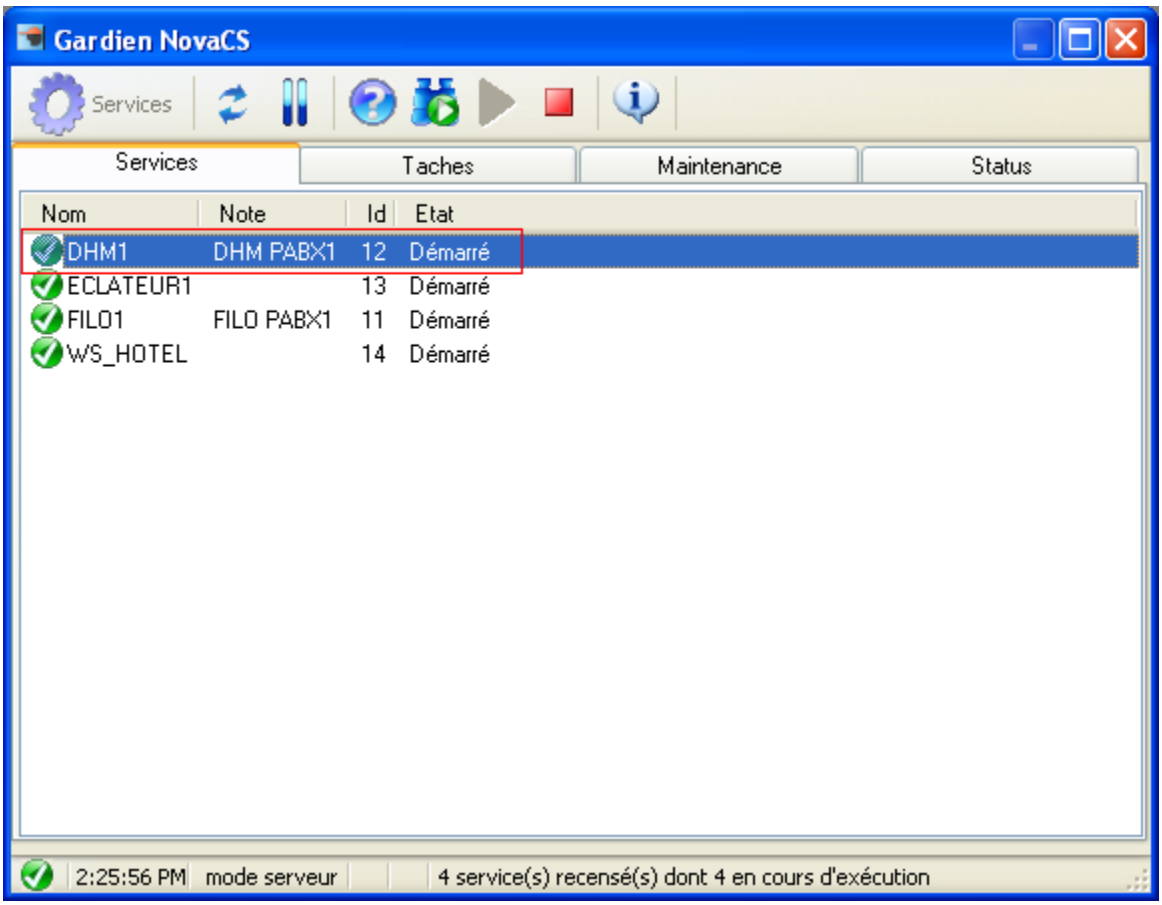

Figure 67: NovaTick DHM1 Selection Screen

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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.

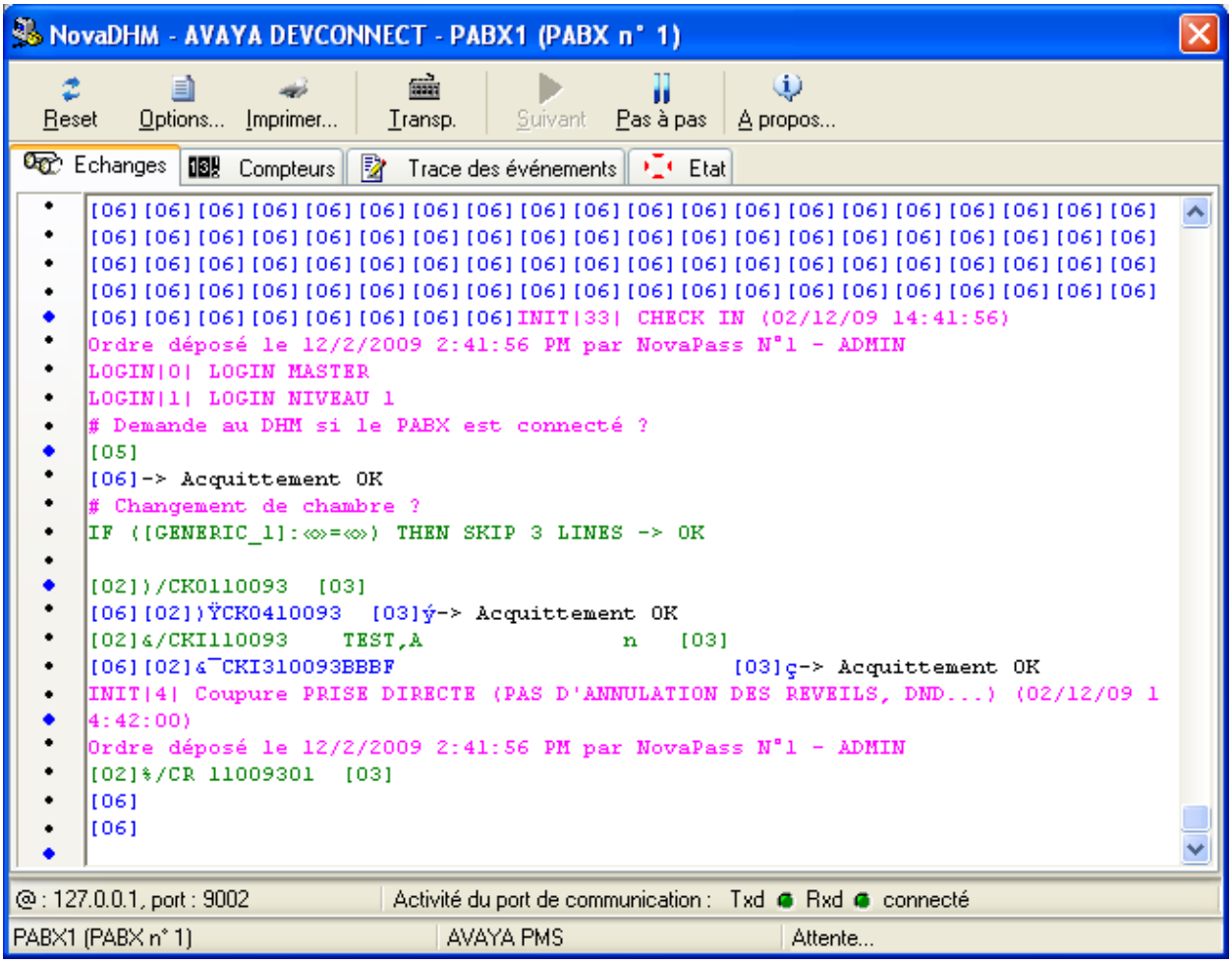

Figure 68: NovaTick PMS Trace Screen

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.

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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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