



Avaya Solution & Interoperability Test Lab

Application Notes for Vocalcom Hermes.Net with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager – Issue 1.1

Abstract

These Application Notes describe the configuration steps required to integrate Vocalcom Hermes.Net with Avaya Aura® Application Enablement Services (AES) and Avaya Aura® Communication Manager. Vocalcom Hermes.Net is a call center solution that uses the AES Telephony Services Application Programming Interface (TSAPI) to monitor and control calls at the Agent and Supervisor desktops for both inbound and outbound call campaigns. Hermes.Net uses the AES System Management Service (SMS) to access Communication Manager configuration data for stations, agents, VDNs, and skills. The Hermes.Net administration interface can then be used to manage an Agent's skills assignments via SMS.

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.

1. Introduction

These Application Notes describe the configuration steps required to integrate Vocalcom Hermes.Net with Avaya Aura® Application Enablement Services (AES) and Avaya Aura® Communication Manager. Vocalcom Hermes.Net is a call center solution that uses the AES Telephony Services Application Programming Interface (TSAPI) to monitor and control calls at the Agent and Supervisor desktops for both inbound and outbound call campaigns. Hermes.Net uses the AES System Management Service (SMS) to access Communication Manager configuration data for stations, agents, VDNs, and skills. The Hermes.Net administration interface can then be used to manage an Agent's skills assignments via SMS.

Vocalcom has integrated its agent interaction toolbar to Avaya providing telephony control commands and telephony functions. Supervisors can monitor and whisper on live agent sessions directly from the supervision application. Hermes.Net keeps track of all Agent states. All the information is stored and maintained by Hermes.Net in a SQL database table with a unique record per voice communication (inbound or outbound) as well as all dispositions handled by the agents. With the built in Hermes.Net reporting tool the information is stored and presented from the Hermes.Net reporting module. Reporting and statistical metrics are kept on standard call information (calls received, abandoned, wait time, etc.) as well as enhanced call dispositions entered by the agents (complaints, information requests, call-backs, etc.).

2. General Test Approach and Test Results

The interoperability compliance testing included feature and serviceability test cases.

2.1. Interoperability Compliance Testing

The overall objective of the interoperability compliance test was to verify proper operation of the Vocalcom Hermes.Net solution with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager.

The general test approach was to verify the CTI feature functionality that Hermes.Net utilizes, which falls into the areas of routing, call control, event notification, value query, request feature, and set value. Additionally the SMS functionality that Hermes.Net utilizes was verified.

Serviceability testing focused on verifying the ability of the Hermes.Net to recover from adverse conditions, such as server restarts, power failures, and disconnecting cables from the IP network.

2.2. Test Results

All test cases passed with the following exception noted:

- If there was a Hermes.Net server failure (e.g. as the result of a power failure/reboot), the Agent's desktop interface was notified with an "Off" message being displayed on their screen. However, the desktop interface did not automatically reconnect to the server when the server was back up. The desktop interface needed to be manually restarted once the server was back online. Vocalcom recommends this behavior (i.e. not

automatically reconnecting) for security and operational purposes. This prevents any accidental “ready state” connections, where the desktop interface automatically reconnects at a time when there is no physical agent there to take a call. Vocalcom recommends that Agents manually reconnect after being notified via the CTI toolbar (Proxy) that the system is ready. Vocalcom stated that an automatic reconnect feature can be activated or deactivated based on a customer needs; however, that feature has not been tested or verified by Avaya.

2.3. Support

To obtain technical support for Hermes.Net, contact Vocalcom by web, email or phone:

- **Web:** <http://www.vocalcom.com/>
- **Email:** support@vocalcom.ca
- **Phone:** (888) 622-5266 or (514) 733-6444

3. Reference Configuration

Figure 1 illustrates the configuration used to verify the Vocalcom Hermes.Net solution with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager. The Hermes.Net Application Server was deployed on a dedicated server running Windows Server 2008 R2. The Agent and Supervisor desktop interfaces were accessed from Internet Explorer running on PCs with Windows XP Service Pack 3.

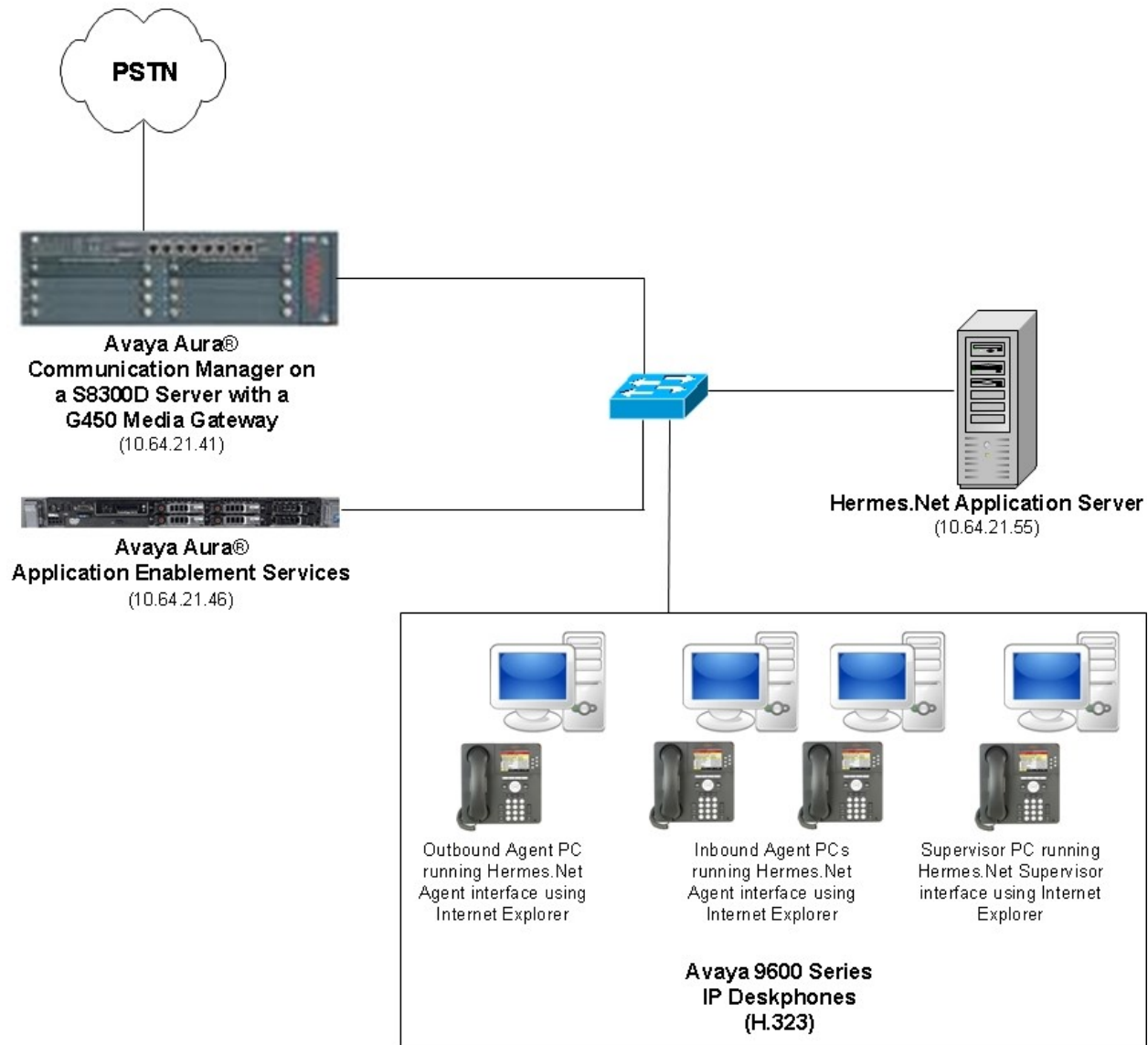


Figure 1: Configuration with Hermes.Net, Avaya Aura® Application Enablement Services, and Avaya Aura® Communication Manager

4. Equipment and Software Validated

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

Equipment	Software
Avaya S8300D Server with an Avaya G450 Media Gateway	Avaya Aura® Communication Manager 6.0.1, R016x.00.1.510.1, Service Pack 4 - Patch 19100 (Avaya Aura® System Platform: 6.0.3.3.3)
Dell™ PowerEdge™ R610 Server	Avaya Aura® Application Enablement Services 6.1.1 (Avaya Aura® System Platform: 6.0.3.3.3)
Avaya Ethernet Routing Switch 5520-48T-PWR	FW: 6.0.0.13 SW: v6.2.2.024
Avaya 9600 Series IP Deskphones	3.1 Service Pack 2 (H.323)
Windows Server 2008 Standard	Vocalcom HERMES.NET V4.1.0 Build 011111 (Application Server)
Windows XP Service Pack 3 PCs	Vocalcom HERMES.NET V4.1.0 Build 01102 (Agent and Supervisor interface)

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Communication Manager. The procedures include the following areas:

- Verify Communication Manager License and Features
- Configure CTI link
- Configure Hunt Groups, VDNs, and Vectors (for inbound and outbound calls)
- Configure Stations
- Configure Agents
- Configure Administrator Account for AES System Management Service

Note - The initial installation, configuration, and provisioning of the Avaya servers for Communication Manager, Avaya Media Gateways and their associated boards, as well as Avaya telephones, are presumed to have been previously completed and are not discussed in these Application Notes. Likewise, it is presumed that the basic configuration for connectivity between Communication Manager and AES has already been completed and is not discussed in these Application Notes.

The Communication Manager commands described in these Application Notes were administered using the System Access Terminal (SAT).

5.1. Verify Communication Manager License and Features

Verify that the Communication Manager license enables the features illustrated in these Application Notes. Contact an authorized Avaya representative for assistance if a required feature needs to be enabled.

Use the *display system-parameters customer-options* command to verify that **Computer Telephony Adjunct Links** is enabled (i.e. set to “y”) on **Page 3**.

```
display system-parameters customer-options                               Page 3 of 11
                                OPTIONAL FEATURES

Abbreviated Dialing Enhanced List? y      Audible Message Waiting? y
Access Security Gateway (ASG)? n           Authorization Codes? y
Analog Trunk Incoming Call ID? y           CAS Branch? n
A/D Grp/Sys List Dialing Start at 01? y    CAS Main? n
Answer Supervision by Call Classifier? y    Change COR by FAC? n
ARS? y                                     Computer Telephony Adjunct Links? y
ARS/AAR Partitioning? y                   Cvg Of Calls Redirected Off-net? y
ARS/AAR Dialing without FAC? y             DCS (Basic)? y
ASAI Link Core Capabilities? n             DCS Call Coverage? y
ASAI Link Plus Capabilities? n             DCS with Rerouting? y
Async. Transfer Mode (ATM) PNC? n          Digital Loss Plan Modification? y
Async. Transfer Mode (ATM) Trunking? n     DS1 MSP? y
ATM WAN Spare Processor? n                DS1 Echo Cancellation? y
ATMS? y
Attendant Vectoring? y
```

On **Page 6**, verify **ACD**, **Expert Agent Selection (EAS)**, **Reason Codes** and **Vectoring (Basic)** are enabled. The screen below shows the settings used during compliance testing.

```

display system-parameters customer-options                               Page 6 of 11
                                CALL CENTER OPTIONAL FEATURES

                                Call Center Release: 6.0

                                ACD? y                                Reason Codes? y
                                BCMS (Basic)? y                      Service Level Maximizer? n
                                BCMS/VuStats Service Level? y        Service Observing (Basic)? y
                                BSR Local Treatment for IP & ISDN? y    Service Observing (Remote/By FAC)? y
                                Business Advocate? n                  Service Observing (VDNs)? y
                                Call Work Codes? y                     Timed ACW? y
                                DTMF Feedback Signals For VRU? y
                                Dynamic Advocate? n
                                Expert Agent Selection (EAS)? y
                                EAS-PHD? y
                                Forced ACD Calls? n
                                Least Occupied Agent? y
                                Lookahead Interflow (LAI)? y
                                Multiple Call Handling (On Request)? y
                                Multiple Call Handling (Forced)? y
                                PASTE (Display PBX Data on Phone)? y
                                (NOTE: You must logoff & login to effect the permission changes.)

                                Vectoring (Basic)? y
                                Vectoring (Prompting)? y
                                Vectoring (G3V4 Enhanced)? y
                                Vectoring (3.0 Enhanced)? y
                                Vectoring (ANI/II-Digits Routing)? y
                                Vectoring (G3V4 Advanced Routing)? y
                                Vectoring (CINFO)? y
                                Vectoring (Best Service Routing)? y
                                Vectoring (Holidays)? y
                                Vectoring (Variables)? y

```

Use the *display system-parameters features* command to verify **Create Universal Call ID (UCID)** is enabled on **Page 5**.

```

display system-parameters features                                       Page 5 of 19
                                FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS
Endpoint:                      Lines Per Page: 60

SYSTEM-WIDE PARAMETERS
                                Switch Name:
                                Emergency Extension Forwarding (min): 10
                                Enable Inter-Gateway Alternate Routing? n
                                Enable Dial Plan Transparency in Survivable Mode? n
                                COR to Use for DPT: station

MALICIOUS CALL TRACE PARAMETERS
                                Apply MCT Warning Tone? n
                                Delay Sending RElease (seconds): 0
                                MCT Voice Recorder Trunk Group:
SEND ALL CALLS OPTIONS
                                Send All Calls Applies to: station
                                Auto Inspect on Send All Calls? n
                                Preserve previous AUX Work button states after deactivation? n
UNIVERSAL CALL ID
                                Create Universal Call ID (UCID)? y
                                UCID Network Node ID: 27

```

On **Page 13**, verify the following three parameters are enabled in the **ASAI** section:

- **Copy ASAI UI During Conference/Transfer**
- **Call Classification After Answer Supervision**
- **Send UCID to ASAI**

```
display system-parameters features                                     Page 13 of 19
                                FEATURE-RELATED SYSTEM PARAMETERS
CALL CENTER MISCELLANEOUS
    Callr-info Display Timer (sec): 10
        Clear Callr-info: next-call
    Allow Ringer-off with Auto-Answer? n

    Reporting for PC Non-Predictive Calls? n

        Agent/Caller Disconnect Tones? n
    Interruptible Aux Notification Timer (sec): 3
        Zip Tone Burst for Callmaster Endpoints: double

ASAI
    Copy ASAI UI During Conference/Transfer? y
    Call Classification After Answer Supervision? y
        Send UCID to ASAI? y
    For ASAI Send DTMF Tone to Call Originator? y
```

Use the *display system-parameters special-application* command to verify **(SA8481) – Replace Calling Party Number with ASAI ANI** is enabled on **Page 4**.

```
display system-parameters special-applications                       Page 4 of 9
                                SPECIAL APPLICATIONS

    (SA8481) - Replace Calling Party Number with ASAI ANI? n
        (SA8500) - Expanded UI Display Information? n
        (SA8506) - Altura Interoperability (FIPN)? n
        (SA8507) - H245 Support With Other Vendors? n
        (SA8508) - Multiple Emergency Access Codes? n
    (SA8510) - NTT Mapping of ISDN Called-Party Subaddress IE? n
        (SA8517) - Authorization Code By COR? n

        (SA8520) - Hoteling Application for IP Terminals? n
    (SA8558) - Increase Automatic MWI & VuStats (S8700 only)? n
        (SA8567) - PHS X-Station Mobility over IP? n
    (SA8569) - No Service Observing Tone Heard by Agent? n
        (SA8573) - Call xfer via ASAI on CAS Main? n
    (SA8582) - PSA Location and Display Enhancements? n
        (SA8587) - Networked PSA via QSIG Diversion? n
            (SA8589) - Background BSR Polling? n
    (SA8608) - Increase Crisis Alert Buttons (S8700 only)? n
        (SA8621) - SCH Feature Enhancements? n
```


5.2. Configure CTI Link

Use the *add cti-link* command to add a CTI link. The CTI link shown below, via the *display cti-link* command, was the link used by Hermes.Net during compliance testing. When adding a CTI link, enter an available extension number in the **Extension** field. Enter “ADJ-IP” in the **Type** field, and a descriptive name in the **Name** field. Default values may be used in the remaining fields.

```
display cti-link 1                                     Page 1 of 3
CTI LINK
CTI Link: 1
Extension: 58001
Type: ADJ-IP
Name: TSAPI Link 1 - AES_21_46
COR: 1
```

5.3. Configure Hunt Groups, VDNs and Vectors

5.3.1. Inbound Calls

Configure a set of Hunt Groups, Vector Directory Numbers (VDNs) and Vectors to handle inbound calls to the call center. During compliance testing, two sets of inbound Hunt Groups, VDNs, and Vectors were configured. The values used in the configuration will vary from call center to call center. The screens below show the values used for one of the inbound Hunt Groups, VDNs, and Vectors that were used during compliance testing.

Use the *display hunt-group* command to view an existing hunt group. Note the values in bold.

```
display hunt-group 504                                Page 1 of 4
HUNT GROUP
Group Number: 504
Group Name: HERMES INBOUND 1
Group Extension: 50504
Group Type: ucd-mia
TN: 1
COR: 1
Security Code:
ISDN/SIP Caller Display:
Queue Limit: unlimited
Calls Warning Threshold:
Time Warning Threshold:
ACD? y
Queue? y
Vector? y
MM Early Answer? n
Local Agent Preference? n
Port:
```

On **Page 2**, verify **Skill** is enabled.

```
display hunt-group 504                                     Page 2 of 4
HUNT GROUP
Skill? y Expected Call Handling Time (sec): 180
AAS? n
Measured: none
Supervisor Extension:
Controlling Adjunct: none
Multiple Call Handling: none
Timed ACW Interval (sec): After Xfer or Held Call Drops? n
```

Use the ***display vdn*** command to view an existing VDN. Note the values in bold. VDN 55504 routes calls to vector 504.

```
display vdn 55504                                         Page 1 of 3
VECTOR DIRECTORY NUMBER
Extension: 55504
Name*: HERMES INBOUND 1
Destination: Vector Number 504
Attendant Vectoring? n
Meet-me Conferencing? n
Allow VDN Override? n
COR: 1
TN*: 1
Measured: none
VDN of Origin Annc. Extension*:
1st Skill*:
2nd Skill*:
3rd Skill*:
* Follows VDN Override Rules
```

Use the ***display vector*** command to view an existing vector. Note the values in bold. Vector 504 queues calls to skill 504 (i.e. hunt-group 504).

```
display vector 504                                       Page 1 of 6
CALL VECTOR
Number: 504 Name: HERMES INBOUND1
Multimedia? n Attendant Vectoring? n Meet-me Conf? n Lock? n
Basic? y EAS? y G3V4 Enhanced? y ANI/II-Digits? y ASAI Routing? y
Prompting? y LAI? y G3V4 Adv Route? y CINFO? y BSR? y Holidays? y
Variables? y 3.0 Enhanced? y
01 queue-to skill 504 pri h
02 wait-time 60 secs hearing ringback
03 stop
04
05
06
07
```

5.3.2. Outbound Calls

Configure a set of Hunt Groups, Vector Directory Numbers (VDNs) and Vectors to handle outbound calls from the call center. Call classification is used to determine if an outbound call is answered by a live person (rather than being answered by an answering machine or receiving a busy signal, for example). If the call is answered by a live person, the call is routed to an Agent. If the call is not answered by a live person, Hermes.Net decides how to route the call (for example, the call may be routed to an announcement asking the customer to call a specific number). During compliance testing, one outbound Hunt Group, VDN, and Vector set was created. The values used will vary from call center to call center. The screens below show the values used for the outbound Hunt Group, VDN, and Vector that was used during compliance testing.

Use the ***display hunt-group*** command to view an existing hunt group. Note the values in bold.

display hunt-group 503	Page 1 of 4
HUNT GROUP	
Group Number: 503	ACD? y
Group Name: HERMES OUTBOUND	Queue? y
Group Extension: 50503	Vector? y
Group Type: ucd-mia	
TN: 1	
COR: 1	MM Early Answer? n
Security Code:	Local Agent Preference? n
ISDN/SIP Caller Display:	
Queue Limit: unlimited	
Calls Warning Threshold:	Port:
Time Warning Threshold:	Port:

On **Page 2**, verify **Skill** is enabled.

display hunt-group 503	Page 2 of 4
HUNT GROUP	
Skill? y	Expected Call Handling Time (sec): 180
AAS? n	
Measured: none	
Supervisor Extension:	
Controlling Adjunct: none	
Multiple Call Handling: none	
Timed ACW Interval (sec):	After Xfer or Held Call Drops? n

Use the ***display vdn*** command to view an existing VDN. Note the values in bold. VDN 55503 routes calls to vector 503. Enter the outbound hunt-group number in the **1st Skill*** field.

```

display vdn 55503                                     Page 1 of 3
                                VECTOR DIRECTORY NUMBER

                                Extension: 55503
                                Name*: HERMES OUTBOUND
                                Destination: Vector Number 503
Attendant Vectoring? n
Meet-me Conferencing? n
Allow VDN Override? n
COR: 1
TN*: 1
Measured: none

VDN of Origin Annc. Extension*:
1st Skill*: 503
2nd Skill*:
3rd Skill*:

* Follows VDN Override Rules

```

Use the ***display vector*** command to view an existing vector. Note the values in bold. Vector 503 queues calls to skill 503 (i.e. hunt-group 503). The **adjunct routing** step routes the call to Hermes.Net over the CTI link defined in **Section 5.2**.

```

display vector 503                                     Page 1 of 6
                                CALL VECTOR

                                Number: 503           Name: HERMES OUTBOUND
Multimedia? n      Attendant Vectoring? n      Meet-me Conf? n      Lock? n
Basic? y           EAS? y      G3V4 Enhanced? y  ANI/II-Digits? y    ASAI Routing? y
Prompting? y       LAI? y      G3V4 Adv Route? y CINFO? y      BSR? y    Holidays? y
Variables? y       3.0 Enhanced? y
01 adjunct         routing link 1
02 wait-time       2 secs hearing silence
03 queue-to        skill 1st pri t
04 wait-time       3 secs hearing silence
05 disconnect      after announcement none
06 stop
07
08
09
10
11
12

```

5.4. Configure Stations

Use the **add station** command to add stations to be used by Agents and Supervisors in the call center. The screens below show one of the stations used during compliance testing. Note the values in bold.

display station 53004		Page 1 of 5
STATION		
Extension: 53004	Lock Messages? n	BCC: 0
Type: 9630	Security Code: 123456	TN: 1
Port: S00002	Coverage Path 1:	COR: 1
Name: Agent1, Inbound1	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
Loss Group: 19	Time of Day Lock Table:	
	Personalized Ringing Pattern: 1	
Speakerphone: 2-way	Message Lamp Ext: 53004	
Display Language: english	Mute Button Enabled? y	
Survivable GK Node Name:	Button Modules: 0	
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone? y	
	IP Video Softphone? n	
	Short/Prefixed Registration Allowed: default	
	Customizable Labels? y	

Auto Answer should be set to “all” for each Agent station.

display station 53004		Page 2 of 5
STATION		
FEATURE OPTIONS		
LWC Reception: spe	Auto Select Any Idle Appearance? n	
LWC Activation? y	Coverage Msg Retrieval? y	
LWC Log External Calls? n	Auto Answer: all	
CDR Privacy? n	Data Restriction? n	
Redirect Notification? y	Idle Appearance Preference? n	
Per Button Ring Control? n	Bridged Idle Line Preference? n	
Bridged Call Alerting? n	Restrict Last Appearance? y	
Active Station Ringing: single	EMU Login Allowed? n	
H.320 Conversion? n	Per Station CPN - Send Calling Number?	
Service Link Mode: as-needed	EC500 State: enabled	
Multimedia Mode: enhanced	Audible Message Waiting? n	
MWI Served User Type:	Display Client Redirection? n	
AUDIX Name:	Select Last Used Appearance? n	
	Coverage After Forwarding? s	
	Multimedia Early Answer? n	
Remote Softphone Emergency Calls: as-on-local	Direct IP-IP Audio Connections? y	
Emergency Location Ext: 55555	Always Use? n IP Audio Hairpinning? n	

Add the following button assignments for each station that will be used by an Agent:

- aux-work
- auto-in
- manual-in
- after-call
- release

display station 53004		Page 4 of 5	
STATION			
SITE DATA			
Room: D4-H29	Headset? n		
Jack: 8A	Speaker? n		
Cable:	Mounting: d		
Floor: 4	Cord Length: 0		
Building: D	Set Color:		
ABBREVIATED DIALING			
List1:	List2:	List3:	
BUTTON ASSIGNMENTS			
1: call-appr	5: aux-work	RC:	Grp:
2: call-appr	6: auto-in		Grp:
3: call-appr	7: manual-in		Grp:
4:	8: after-call		Grp:
voice-mail			

display station 53004		Page 5 of 5	
STATION			
BUTTON ASSIGNMENTS			
9: release			
10:			
11:			

5.5. Configure Agents

Use the *add agent-loginID* command to add Agent login IDs. The screens below show one of Agent login IDs used during compliance testing. Note the values in bold. **Auto Answer** should be set to “all” for each Agent login ID.

```
display agent-loginID 53504                                     Page 1 of 3
                        AGENT LOGINID

Login ID: 53504                                           AAS? n
Name: HERMES Agent 1                                   AUDIX? n
TN: 1                                                    LWC Reception: spe
COR: 1                                                    LWC Log External Calls? n
Coverage Path:                                           AUDIX Name for Messaging:
Security Code:

LoginID for ISDN/SIP Display? n
Password: 123456
Password (enter again): 123456
Auto Answer: all
MIA Across Skills: system
ACW Agent Considered Idle: system
Aux Work Reason Code Type: system
Logout Reason Code Type: system
Maximum time agent in ACW before logout (sec): system
Forced Agent Logout Time: :

WARNING: Agent must log in again before changes take effect
```

On **Page 2**, set the Skill Number (SN) and Skill Level (SL) for each Agent login ID. The screen below shows the Skill Number 504 (from **Section 5.3.1**) being assigned to the agent-login ID for the Agent to handle inbound calls. When creating an agent-login ID for an Agent to handle outbound calls, the outbound skill number (i.e. 503 from **Section 5.3.2**) should be assigned here.

```
display agent-loginID 53504                                     Page 2 of 3
                        AGENT LOGINID

Direct Agent Skill:                                     Service Objective? n
Call Handling Preference: skill-level                    Local Call Preference? n

SN  RL  SL      SN  RL  SL      SN  RL  SL      SN  RL  SL
1:  504  1    16:      31:      46:
2:      17:      32:      47:
3:      18:      33:      48:
4:      19:      34:      49:
5:      20:      35:      50:
6:      21:      36:      51:
7:      22:      37:      52:
8:      23:      38:      53:
9:      24:      39:      54:
10:     25:      40:      55:
11:     26:      41:      56:
12:     27:      42:      57:
13:     28:      43:      58:
14:     29:      44:      59:
15:     30:      45:      60:
```

5.6. Configure Administrator Account for AES System Management Service

An Administrator account must be created on Communication Manager to be utilized by the System Management Services. An account can be created by logging into the Communication Manager System Management Interface and navigating to **Administration → Server (Maintenance) → Security → Administrator Accounts**. During compliance testing, a Privileged Administrator account with the login name **Hermes** was created.

The screenshot displays the Avaya Aura™ Communication Manager (CM) System Management Interface (SMI). The top navigation bar includes 'Help', 'Log Off', 'Administration', and 'Upgrade'. The left sidebar shows a tree view with categories like 'Server Role', 'Server Upgrades', 'Data Backup/Restore', and 'Security'. The 'Security' category is expanded, showing 'Administrator Accounts' as the selected option. The main content area is titled 'Administrator Accounts' and contains the following text: 'The Administrator Accounts web pages allow you to add, delete, or change administrator logins and Linux groups.' Below this, there is a 'Select Action:' section with several radio button options: 'Add Login' (selected), 'Privileged Administrator', 'Unprivileged Administrator', 'SAT Access Only', 'Web Access Only', 'Modem Access Only', 'CDR Access Only', 'Business Partner Login (dadmin)', 'Business Partner Craft Login', and 'Custom Login'. There are also three radio button options for 'Change Login', 'Remove Login', and 'Lock/Unlock Login', each followed by a 'Select Login' dropdown menu. At the bottom, there are two radio button options for 'Add Group' and 'Remove Group', each followed by a 'Select Group' dropdown menu. The footer of the interface shows the copyright notice: '© 2001-2010 Avaya Inc. All Rights Reserved.'

6. Configure Avaya Aura® Application Enablement Services

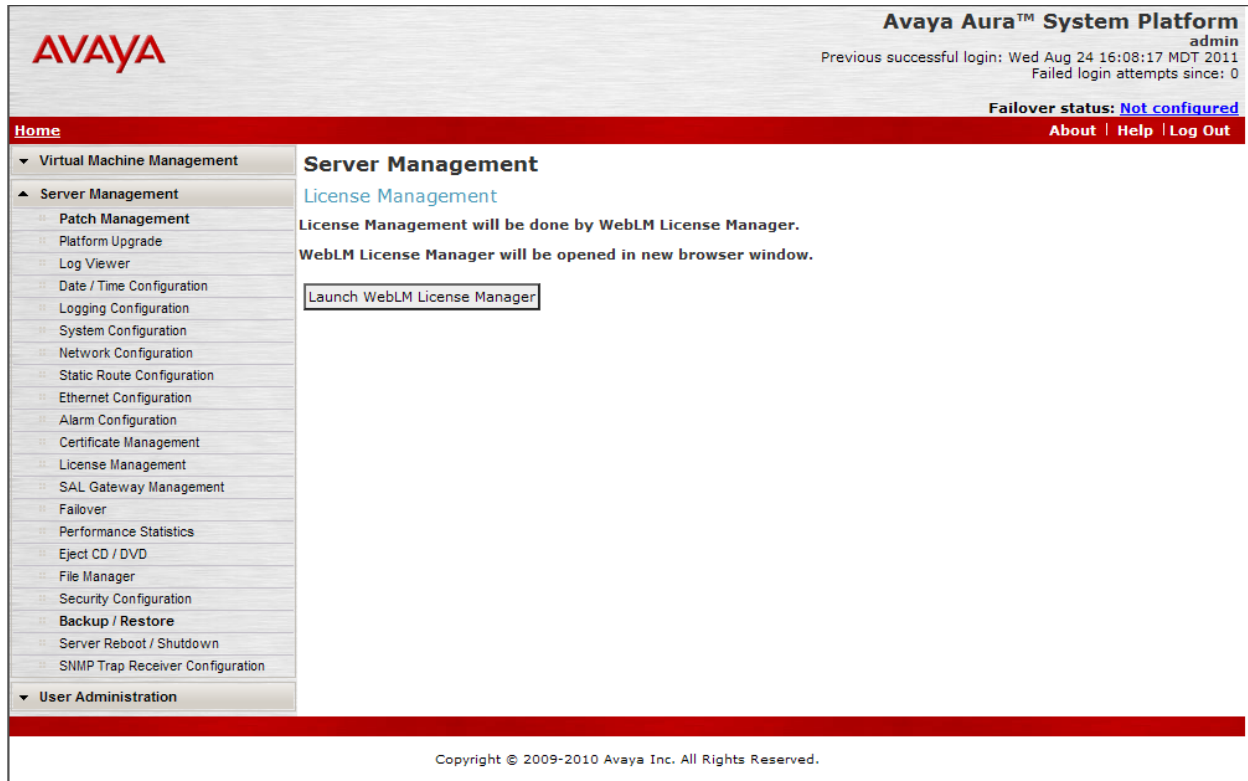
This section provides the procedures for configuring Application Enablement Services. The procedures include the following areas:

- Verify License
- Launch AES Management Console
- Administer TSAPI link
- Add CT User
- Enable Security Database
- Configure Security Database
- Obtain Tlink Name

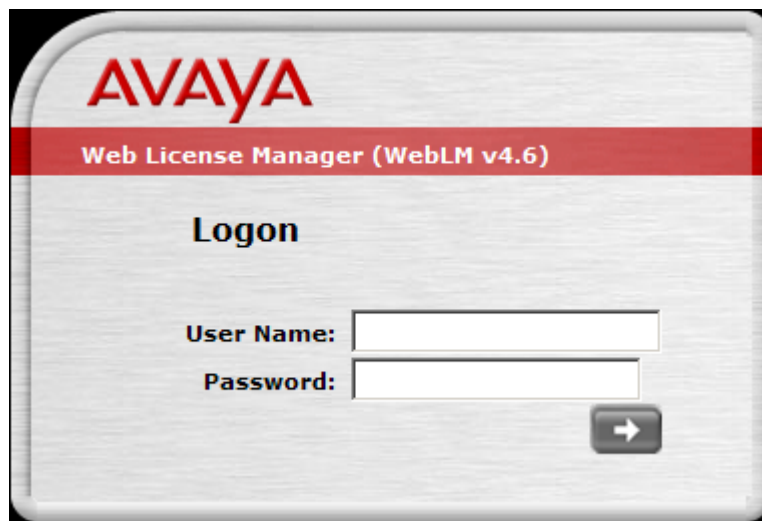
Note - The initial installation, configuration, and provisioning of the Application Enablement Services, including connectivity between Communication Manager and AES, are presumed to have been previously completed and are not discussed in these Application Notes.

6.1. Verify License

Enter the URL `https://ipaddress`, where *ipaddress* is the IP address of the Console Domain that was configured during installation of System Platform. Log in using appropriate credentials. Navigate to **Server Management** → **License Management** on the left and click **Launch WebLM License Manager** on the right.

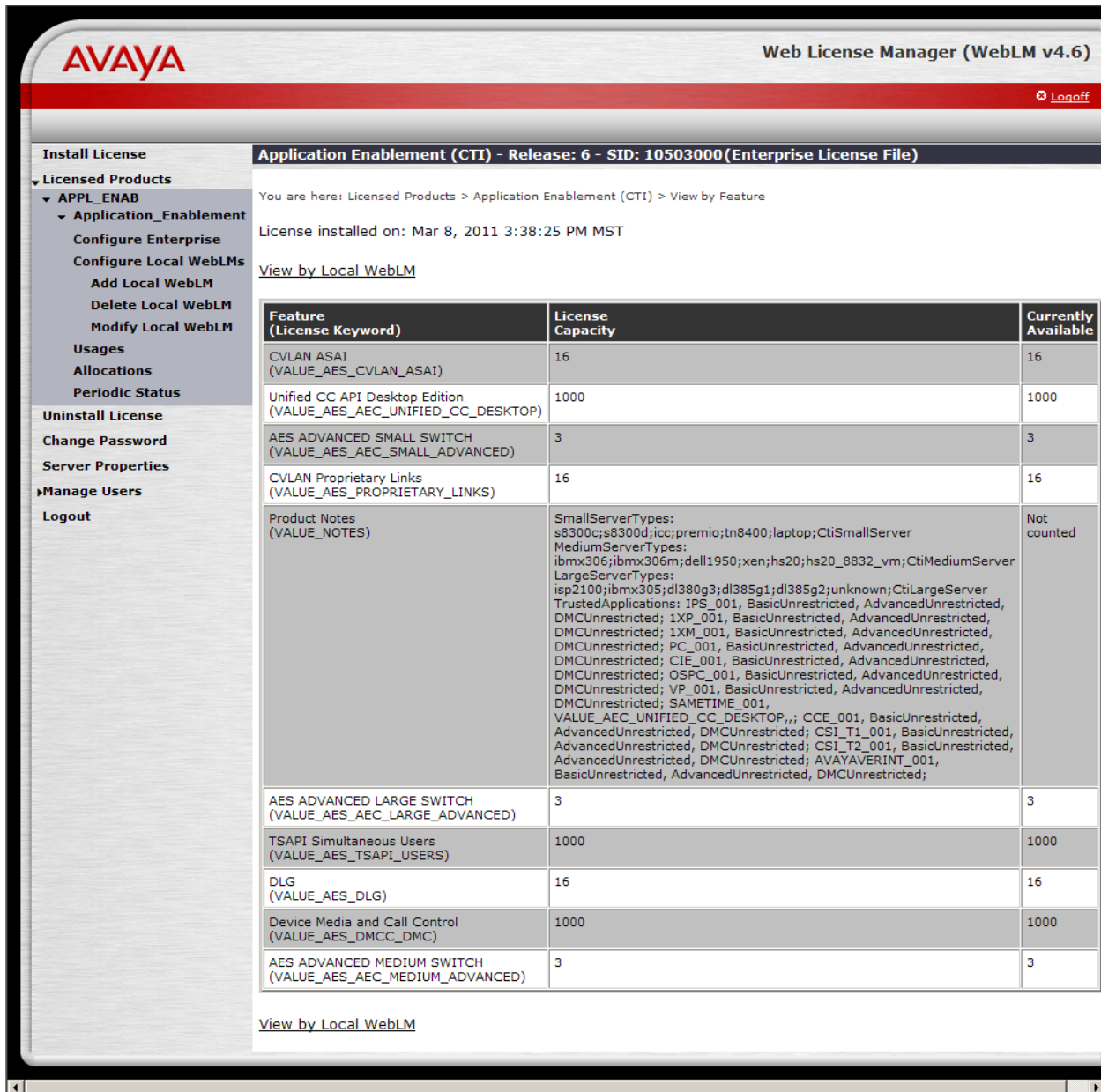


The Web License Manager Logon screen is displayed. Log in using appropriate credentials.



The **Web License Manager** screen below is displayed. Navigate to **Licensed Products → APPL_ENAB → Application_Enablement** on the left.

Verify that there are sufficient licenses for **AES Advanced** (Small, Medium, and/or Large Switch) and **TSAPI Simultaneous Users**.



AVAYA Web License Manager (WebLM v4.6) [Logoff](#)

Install License

- Licensed Products**
 - APPL_ENAB**
 - Application_Enablement**
 - Configure Enterprise
 - Configure Local WebLMs
 - Add Local WebLM
 - Delete Local WebLM
 - Modify Local WebLM
 - Usages
 - Allocations
 - Periodic Status
 - Uninstall License
 - Change Password
 - Server Properties
 - Manage Users
 - Logout

Application Enablement (CTI) - Release: 6 - SID: 10503000(Enterprise License File)

You are here: Licensed Products > Application Enablement (CTI) > View by Feature

License installed on: Mar 8, 2011 3:38:25 PM MST

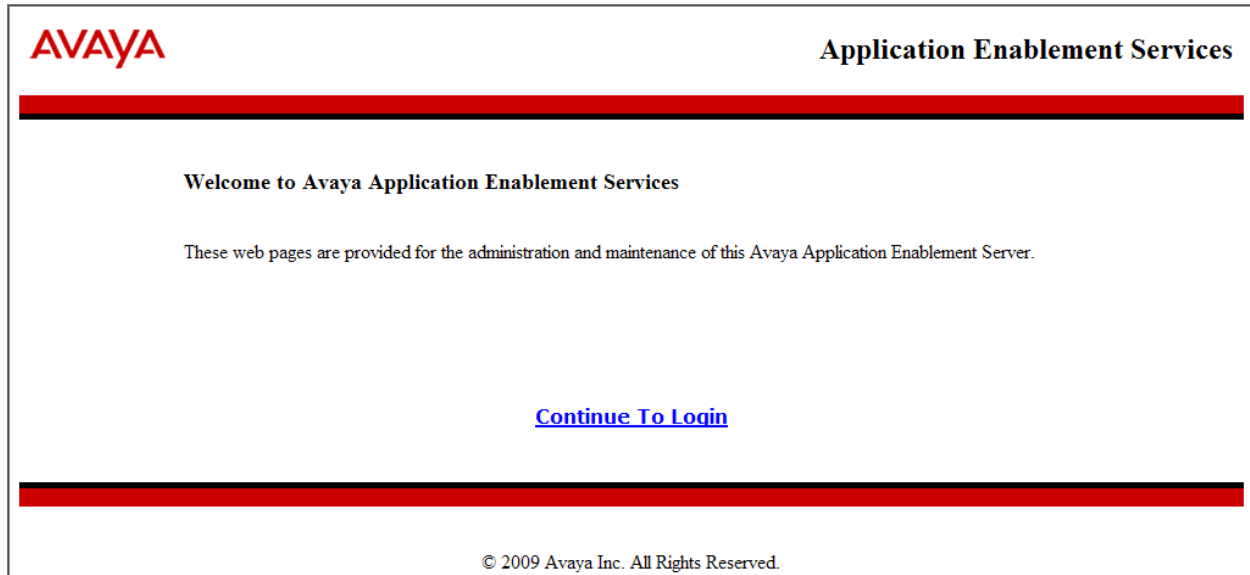
[View by Local WebLM](#)

Feature (License Keyword)	License Capacity	Currently Available
CVLAN ASAI (VALUE_AES_CVLAN_ASAI)	16	16
Unified CC API Desktop Edition (VALUE_AES_AEC_UNIFIED_CC_DESKTOP)	1000	1000
AES ADVANCED SMALL SWITCH (VALUE_AES_AEC_SMALL_ADVANCED)	3	3
CVLAN Proprietary Links (VALUE_AES_PROPRIETARY_LINKS)	16	16
Product Notes (VALUE_NOTES)	SmallServerTypes: s8300c;s8300d;icc;premio;tn8400;laptop;CtiSmallServer MediumServerTypes: ibmx306;ibmx306m;del1950;xen;hs20;hs20_8832_vm;CtiMediumServer LargeServerTypes: isp2100;ibmx305;dl380g3;dl385g1;dl385g2;unknown;CtiLargeServer TrustedApplications: IPS_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; IXP_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; IXM_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; PC_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; CIE_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; OSPC_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; VP_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; SAMETIME_001, VALUE_AES_UNIFIED_CC_DESKTOP,,, CCE_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; CSI_T1_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; CSI_T2_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted; AVAYAVERINT_001, BasicUnrestricted, AdvancedUnrestricted, DMCUnrestricted;	Not counted
AES ADVANCED LARGE SWITCH (VALUE_AES_AEC_LARGE_ADVANCED)	3	3
TSAPI Simultaneous Users (VALUE_AES_TSAPI_USERS)	1000	1000
DLG (VALUE_AES_DLG)	16	16
Device Media and Call Control (VALUE_AES_DMCC_DMC)	1000	1000
AES ADVANCED MEDIUM SWITCH (VALUE_AES_AEC_MEDIUM_ADVANCED)	3	3

[View by Local WebLM](#)

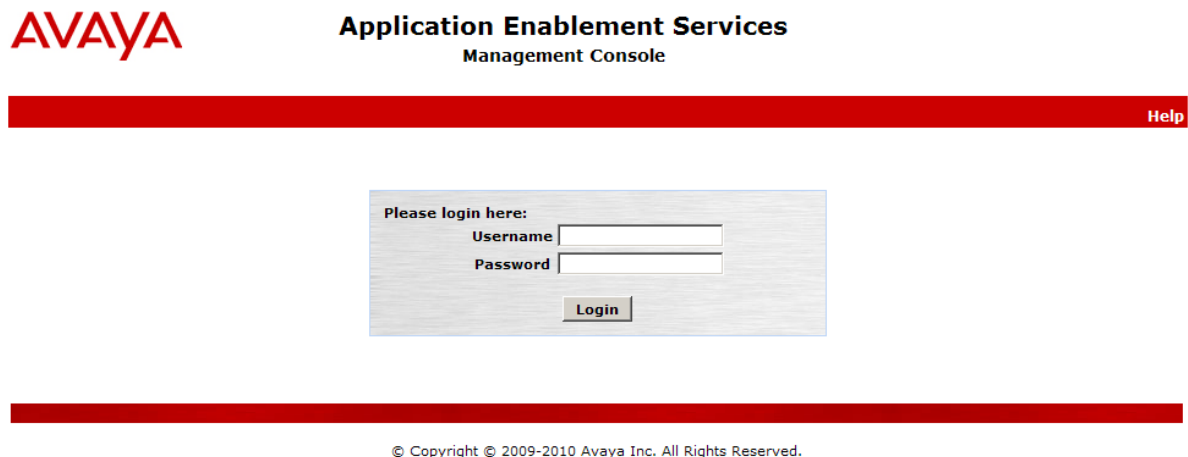
6.2. Launch AES Management Console

Access the Application Enablement Services Management Console by entering the URL `https://ipaddress`, where *ipaddress* is the IP address of the Application Enablement Services server. Click the **Continue to Login** link.



The screenshot shows the Avaya Application Enablement Services welcome page. At the top left is the Avaya logo, and at the top right is the text "Application Enablement Services". Below this is a red horizontal bar. The main content area contains the text "Welcome to Avaya Application Enablement Services" followed by "These web pages are provided for the administration and maintenance of this Avaya Application Enablement Server." Below this text is a blue underlined link that says "Continue To Login". At the bottom of the page is a red horizontal bar and the copyright notice "© 2009 Avaya Inc. All Rights Reserved."

The screen shown below is displayed. Log in using appropriate credentials.



The screenshot shows the Avaya Application Enablement Services Management Console login page. At the top left is the Avaya logo, and at the top right is the text "Application Enablement Services Management Console". Below this is a red horizontal bar with a "Help" link on the right. The main content area contains a login form with the text "Please login here:" followed by "Username" and "Password" labels, each with a corresponding text input field. Below the input fields is a "Login" button. At the bottom of the page is a red horizontal bar and the copyright notice "© Copyright © 2009-2010 Avaya Inc. All Rights Reserved."

The **Welcome to OAM** screen is displayed.

AVAYA **Application Enablement Services**
Management Console

Welcome: User craft
Last login: Thu Sep 15 18:58:11 2011 from 10.64.125.103
HostName/IP: AES_21_46/10.64.21.46
Server Offer Type: VIRTUAL_APPLIANCE
SW Version: r6-1-1-30-0

Home Home | Help | Logout

- ▶ AE Services
- ▶ Communication Manager Interface
- ▶ Licensing
- ▶ Maintenance
- ▶ Networking
- ▶ Security
- ▶ Status
- ▶ User Management
- ▶ Utilities
- ▶ Help

Welcome to OAM

The AE Services Operations, Administration, and Management (OAM) Web provides you with tools for managing the AE Server. OAM spans the following administrative domains:

- AE Services - Use AE Services to manage all AE Services that you are licensed to use on the AE Server.
- Communication Manager Interface - Use Communication Manager Interface to manage switch connection and dialplan.
- Licensing - Use Licensing to manage the license server.
- Maintenance - Use Maintenance to manage the routine maintenance tasks.
- Networking - Use Networking to manage the network interfaces and ports.
- Security - Use Security to manage Linux user accounts, certificate, host authentication and authorization, configure Linux-PAM (Pluggable Authentication Modules for Linux) and so on.
- Status - Use Status to obtain server status infomations.
- User Management - Use User Management to manage AE Services users and AE Services user-related resources.
- Utilities - Use Utilities to carry out basic connectivity tests.
- Help - Use Help to obtain a few tips for using the OAM Help system

Depending on your business requirements, these administrative domains can be served by one administrator for both domains, or a separate administrator for each domain.

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6.3. Administer TSAPI Link

Navigate to **AE Services → TSAPI → TSAPI Links** on the left. The **TSAPI Links** screen is displayed, as shown below. Click **Add Link** (or **Edit Link** to edit an existing link).

AVAYA **Application Enablement Services**
Management Console

Welcome: User craft
Last login: Thu Sep 15 18:58:11 2011 from 10.64.125.103
HostName/IP: AES_21_46/10.64.21.46
Server Offer Type: VIRTUAL_APPLIANCE
SW Version: r6-1-1-30-0

AE Services | TSAPI | TSAPI Links Home | Help | Logout

- ▼ AE Services
 - ▶ CVLAN
 - ▶ DLG
 - ▶ DMCC
 - ▶ SMS
 - ▼ TSAPI
 - TSAPI Links
 - TSAPI Properties
 - ▶ TWS
 - ▶ Communication Manager Interface

TSAPI Links

Link	Switch Connection	Switch CTI Link #	ASAI Link Version	Security
1	CM2141	1	4	Both

Add Link Edit Link Delete Link

Enter an available TSAPI **Link** number. For **Switch Connection**, select the relevant switch connection from the drop-down list. In this case, the existing switch connection “CM2141” is selected. For **Switch CTI Link Number**, select the CTI link number from **Section 5.2**. The default value of “4” may be used for the **ASAI Link Version**. Security was set to “Both” to allow encrypted and unencrypted connections; however, only unencrypted connections were tested. Click **Apply Changes**.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title 'Application Enablement Services Management Console', and a welcome message for user 'craft' with login details. A red navigation bar contains 'AE Services | TSAPI | TSAPI Links' and 'Home | Help | Logout'. The left sidebar lists navigation options: 'AE Services' (expanded), 'CVLAN', 'DLG', 'DMCC', 'SMS', 'TSAPI' (expanded), 'TSAPI Links' (selected), 'TSAPI Properties', 'TWS', and 'Communication Manager Interface'. The main content area is titled 'Edit TSAPI Links' and contains the following configuration fields:

- Link: 1
- Switch Connection: CM2141 (dropdown)
- Switch CTI Link Number: 1 (dropdown)
- ASAI Link Version: 4 (dropdown)
- Security: Both (dropdown)

At the bottom of the configuration area are three buttons: 'Apply Changes', 'Cancel Changes', and 'Advanced Settings'.

6.4. Add CT User

Navigate to **User Management** → **User Admin** → **Add User** on the left, to display the **Add User** screen.

Enter desired values for **User Id**, **Common Name**, **Surname**, **User Password**, and **Confirm Password**. For **CT User**, select “Yes” from the drop-down list. Retain the default values in the remaining fields. Click **Apply** (not shown).

AVAYA

Application Enablement Services
Management Console

Welcome: User craft
Last login: Thu Sep 15 18:58:11 2011 from 10.64.125.103
HostName/IP: AES_21_46/10.64.21.46
Server Offer Type: VIRTUAL_APPLIANCE
SW Version: r6-1-1-30-0

User Management | User Admin | Add UserHome | Help | Logout

AE Services

Communication Manager Interface

Licensing

Maintenance

Networking

Security

Status

User Management

Service Admin

User Admin

Add User

Change User Password

List All Users

Modify Default Users

Search Users

Utilities

Help

Add User

Fields marked with * can not be empty.

* User IdHermes

* Common NameHermes

* SurnameHermes

* User Password.....

* Confirm Password.....

Admin Note

Avaya RoleNone

Business Category

Car License

CM Home

Css Home

CT UserYes

Department Number

Display Name

Employee Number

Employee Type

Enterprise Handle

Given Name

Home Phone

Home Postal Address

Initials

Labeled URI

Mail

MM Home

Mobile

Organization

Pager

Preferred LanguageEnglish

Room Number

Telephone Number

ApplyCancel

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6.5. Enable Security Database

Navigate to **Security** → **Security Database** → **Control** on the left. Check the box for **Enable SDB for TSAPI Service, JTAPI and Telephony Web Services**. Click **Apply Changes**.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title "Application Enablement Services Management Console", and a welcome message for user "craft" with login details. A red navigation bar contains "Security | Security Database | Control" and links for "Home | Help | Logout". The left sidebar shows a tree view with categories like AE Services, Communication Manager Interface, Licensing, Maintenance, Networking, Security, and Security Database. Under Security Database, the "Control" option is selected. The main content area, titled "SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services", contains two checkboxes: "Enable SDB for DMCC Service" (unchecked) and "Enable SDB for TSAPI Service, JTAPI and Telephony Web Services" (checked). An "Apply Changes" button is located below the checkboxes.

6.6. Configure Security Database

6.6.1. Configure Devices

Navigate to **Security** → **Security Database** → **Devices** on the left. For each Hunt Group, VDN, Station, and Agent Login ID added in **Section 5.3** through **Section 5.5**, enter the Device ID (i.e. hunt group number, VDN extension, station extension, or Agent login ID) in the text box and click the **Add Device** button.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title 'Application Enablement Services Management Console', and user information: 'Welcome: User craft', 'Last login: Thu Sep 15 18:58:11 2011 from 10.64.125.103', 'HostName/IP: AES_21_46/10.64.21.46', 'Server Offer Type: VIRTUAL_APPLIANCE', and 'SW Version: r6-1-1-30-0'. A red navigation bar contains 'Security | Security Database | Devices' and links for 'Home | Help | Logout'.

The left sidebar shows a tree view with categories: AE Services, Communication Manager Interface, Licensing, Maintenance, Networking, and Security. Under Security, the 'Security Database' is expanded, showing sub-items: Control, CTI Users, **Devices** (highlighted), Device Groups, Tlinks, and Tlink Groups.

The main content area is titled 'Devices'. It features an 'Upload devices from file' section with a text input, a 'Browse...' button, and an 'Upload' button. Below this is a text input containing '53004' and an 'Add Device' button.

A table lists the configured devices with the following columns: Device ID, Tlink Group, Device Type, and Location.

Device ID	Tlink Group	Device Type	Location
<input checked="" type="radio"/> 50000	None	PHONE	
<input type="radio"/> 503	None	ACD	
<input type="radio"/> 504	None	ACD	
<input type="radio"/> 505	None	ACD	
<input type="radio"/> 50503	None	ACD	
<input type="radio"/> 50504	None	ACD	
<input type="radio"/> 50505	None	ACD	
<input type="radio"/> 53001	None	PHONE	
<input type="radio"/> 53002	None	PHONE	

Select the appropriate **Device Type** for each **Device ID** and click the **Apply Changes** button.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title 'Application Enablement Services Management Console', and a welcome message for user 'craft' along with system information. A red navigation bar contains links for 'Security | Security Database | Devices', 'Home', 'Help', and 'Logout'. On the left, a sidebar menu lists various services, with 'Security' expanded to show 'Security Database' and its sub-items, including 'Devices' which is highlighted. The main content area features an 'Add Device' form with fields for 'Device ID' (containing '53004'), 'Location', 'Device Type' (a dropdown menu currently showing 'PHONE'), and 'Tlink Group' (a dropdown menu currently showing 'None'). At the bottom of the form are 'Apply Changes' and 'Cancel Changes' buttons.

AVAYA Application Enablement Services Management Console

Welcome: User craft
Last login: Thu Sep 15 18:58:11 2011 from 10.64.125.103
HostName/IP: AES_21_46/10.64.21.46
Server Offer Type: VIRTUAL_APPLIANCE
SW Version: r6-1-1-30-0

Security | Security Database | Devices Home | Help | Logout

Add Device

Device ID: 53004
Location:
Device Type: PHONE
Tlink Group: None
Apply Changes Cancel Changes

6.6.2. Configure Device Groups

Navigate to **Security** → **Security Database** → **Device Groups** on the left. Create a Device Group for Hermes.Net by entering descriptive text in the text box and clicking the **Add Device Group** button.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title "Application Enablement Services Management Console", and a welcome message for user "craft" with login details. A red navigation bar shows the path "Security | Security Database | Device Groups" and links for "Home | Help | Logout".

On the left, a sidebar menu lists various services, with "Security Database" expanded to show "Device Groups" as the selected option. The main content area, titled "Device Groups", contains a text input field with "Hermes Net", an "Add Device Group" button, and a table with two columns: "Device Group" and "Exception Group?". Below the table are "Edit Device Group" and "Delete Device Group" buttons.

Device Group	Exception Group?
--------------	------------------

Select all the Devices added in **Section 6.6.1** and click the **Apply Changes** button.

AVAYA

Application Enablement Services
Management Console

Welcome: User craft
Last login: Thu Sep 15 18:58:11 2011 from 10.64.125.103
HostName/IP: AES_21_46/10.64.21.46
Server Offer Type: VIRTUAL_APPLIANCE
SW Version: r6-1-1-30-0

Security | Security Database | Device GroupsHome | Help | Logout

▶ AE Services

▶ Communication Manager Interface

▶ Licensing

▶ Maintenance

▶ Networking

▼ Security

▶ Account Management

▶ Audit

▶ Certificate Management

Enterprise Directory

▶ Host AA

▶ PAM

▼ Security Database

▪ Control

▣ CTI Users

▪ Devices

▪ **Device Groups**

▪ Tlinks

▪ Tlink Groups

▪ Worktops

Standard Reserved Ports

Tripwire Properties

▶ Status

▶ User Management

▶ Utilities

▶ Help

Add Device Group

Device Group

Exception Group ☐

Devices

☒ 50000

☒ 503

☒ 504

☒ 505

☒ 50503

☒ 50504

☒ 50505

☒ 53001

☒ 53002

☒ 53003

☒ 53004

☒ 53005

☒ 53006

☒ 53101

☒ 53102

☒ 53503

☒ 53504

☒ 53505

☒ 55503

☒ 55504

☒ 55505

Apply Changes

Select All

Deselect All

Cancel Changes

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6.6.3. Configure User

Navigate to **Security** → **Security Database** → **CTI Users** → **List All Users** on the left. Click the radio button next to user added in **Section 6.4** and then click the **Edit** button.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title "Application Enablement Services Management Console", and a welcome message for "User craft" with login details. A red navigation bar shows the path "Security | Security Database | CTI Users | List All Users" and links for "Home | Help | Logout".

On the left, a sidebar menu lists various services, with "Security" expanded to show "Security Database" and "CTI Users". The "List All Users" option is selected.

The main content area, titled "CTI Users", contains a table with the following data:

User ID	Common Name	Worktop Name	Device ID
<input type="radio"/> acr	acr	NONE	NONE
<input type="radio"/> acr1	acr1	NONE	NONE
<input type="radio"/> aesp4	pc4	NONE	NONE
<input checked="" type="radio"/> Hermes	Hermes	NONE	NONE
<input type="radio"/> Sentry	Sentry	NONE	NONE

Below the table are "Edit" and "List All" buttons.

Configure the CTI User as shown below, selecting the **Device Group** added in **Section 6.6.2** where applicable.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title 'Application Enablement Services Management Console', and a welcome message for 'User craft' with login details. A red navigation bar contains links for 'Security | Security Database | CTI Users | List All Users' and 'Home | Help | Logout'. On the left, a sidebar menu lists various services, with 'Security Database' and 'CTI Users' expanded. The main content area is titled 'Edit CTI User' and contains several configuration sections: 'User Profile' with fields for User ID, Common Name, Worktop Name, and Unrestricted Access; 'Call and Device Control' with a dropdown for 'Call Origination/Termination and Device Status'; 'Call and Device Monitoring' with dropdowns for 'Device Monitoring' and 'Calls On A Device Monitoring', and a checked checkbox for 'Call Monitoring'; and 'Routing Control' with a dropdown for 'Allow Routing on Listed Devices'. At the bottom of the form are 'Apply Changes' and 'Cancel Changes' buttons.

AVAYA Application Enablement Services Management Console

Welcome: User craft
Last login: Thu Sep 15 18:58:11 2011 from 10.64.125.103
HostName/IP: AES_21_46/10.64.21.46
Server Offer Type: VIRTUAL_APPLIANCE
SW Version: r6-1-1-30-0

Security | Security Database | CTI Users | List All Users Home | Help | Logout

Edit CTI User

User Profile:

User ID	Hermes
Common Name	Hermes
Worktop Name	NONE
Unrestricted Access	<input type="checkbox"/>

Call and Device Control:

Call Origination/Termination and Device Status	Hermes Net
--	------------

Call and Device Monitoring:

Device Monitoring	Hermes Net
Calls On A Device Monitoring	Hermes Net
Call Monitoring	<input checked="" type="checkbox"/>

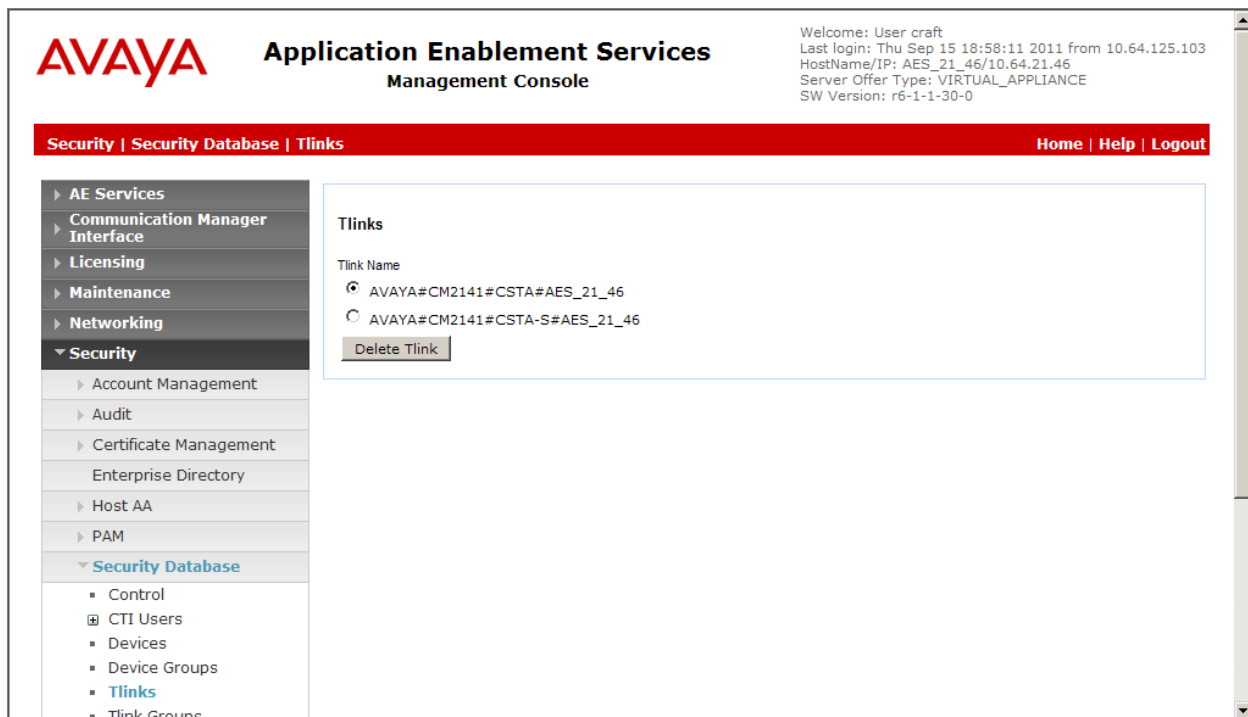
Routing Control:

Allow Routing on Listed Devices	Hermes Net
---------------------------------	------------

Apply Changes Cancel Changes

6.7. Obtain Tlink Name

Navigate to **Security** → **Security Database** → **Tlinks** on the left. The **Tlinks** screen shows a listing of the Tlink names which are automatically generated by the TSAPI service. Locate the Tlink name associated with the relevant switch connection and make a note of it (i.e. AVAYA#CM2141#CSTA#AES_21_46). The Tlink name will be used later for configuring Hermes.Net Application Server.



7. Configure Vocalcom Hermes.Net

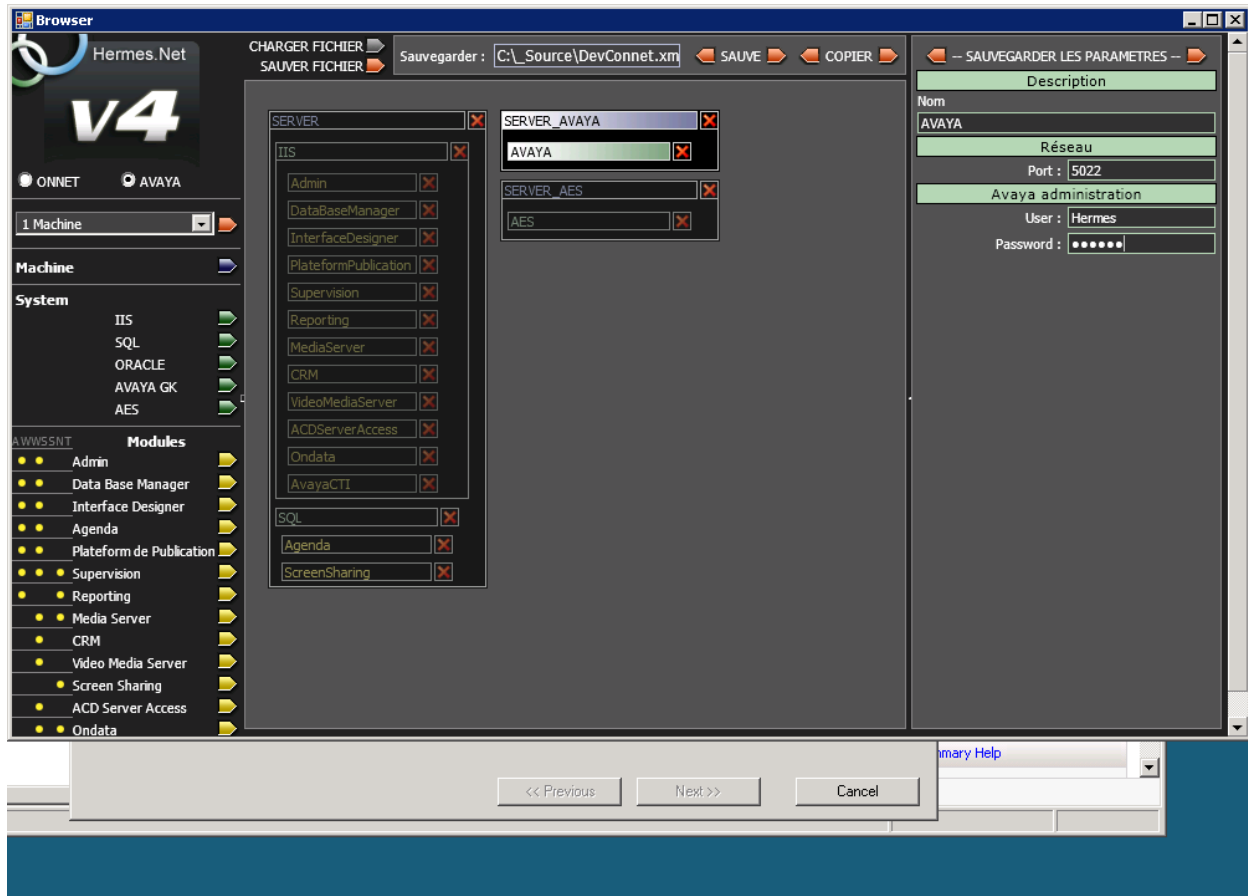
This section covers the procedure for configuring Hermes.Net. The procedure includes the following areas:

- Configure SMS Credentials
- Configure CTI Link
- Access Hermes.Net Administration
- Configure Ranges
- Synchronize Data
- Configure Agent Passwords
- Configure Proxy

Note - The initial installation, configuration, and provisioning of Hermes.Net are presumed to have been previously completed and are not discussed in these Application Notes.

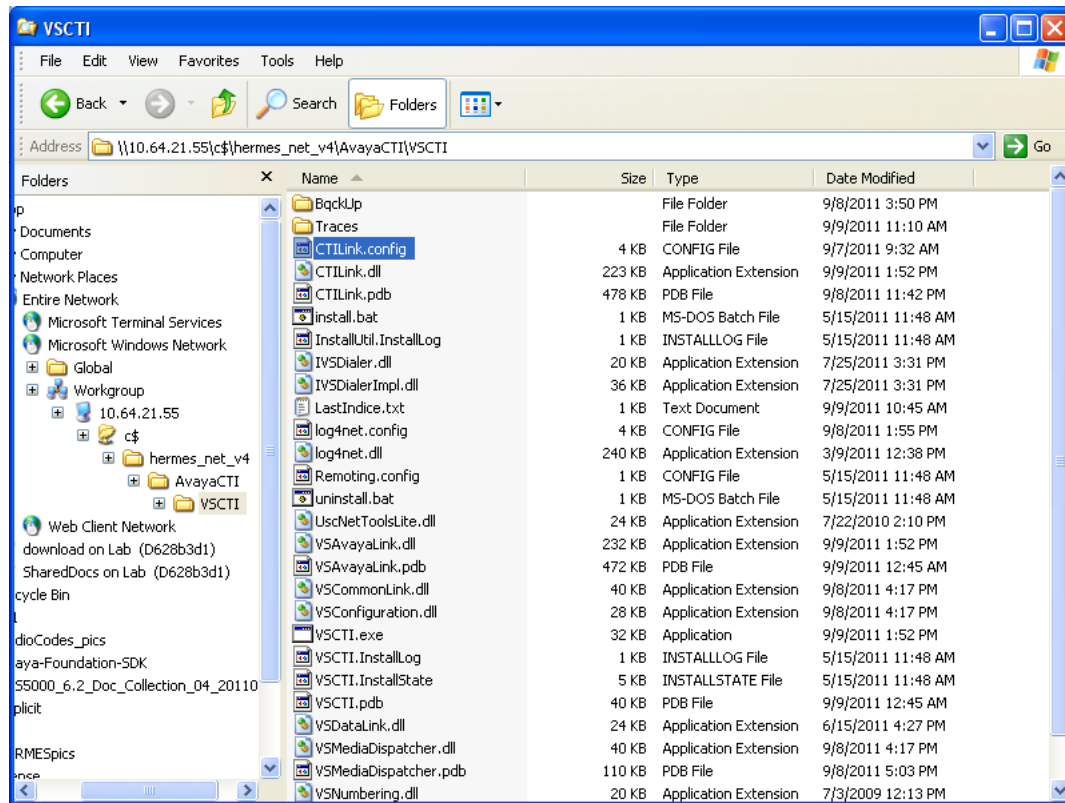
7.1. Configure SMS Credentials

During the installation of the Hermes.Net Application Server, the port and credentials used to access Communication Manager via SMS must be entered. Note, the installation of the Hermes.Net Application Server is performed by Vocalcom. On the right of the installation screen shown below, Vocalcom enters the appropriate **Port**, **User**, and **Password**. The **User** and **Password** must match the Administrator account credentials configured in **Section 5.6**. Refer to the Vocalcom documentation, or contact Vocalcom, to change these values.

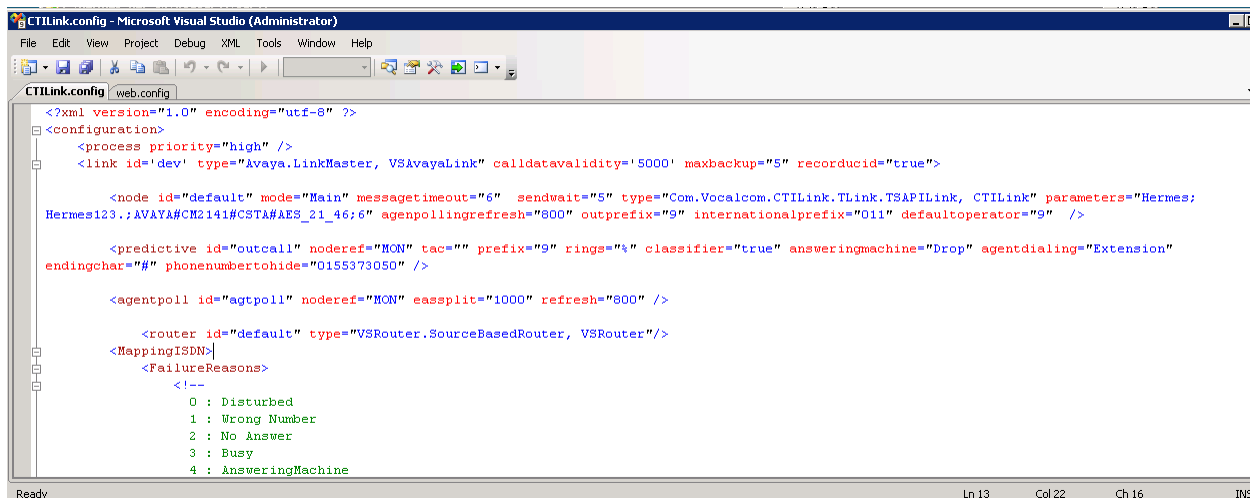


7.2. Configure CTI Link

After installation of the Hermes.Net Application Server is complete, navigate to the **CTILink.config** file as shown on the screen below.

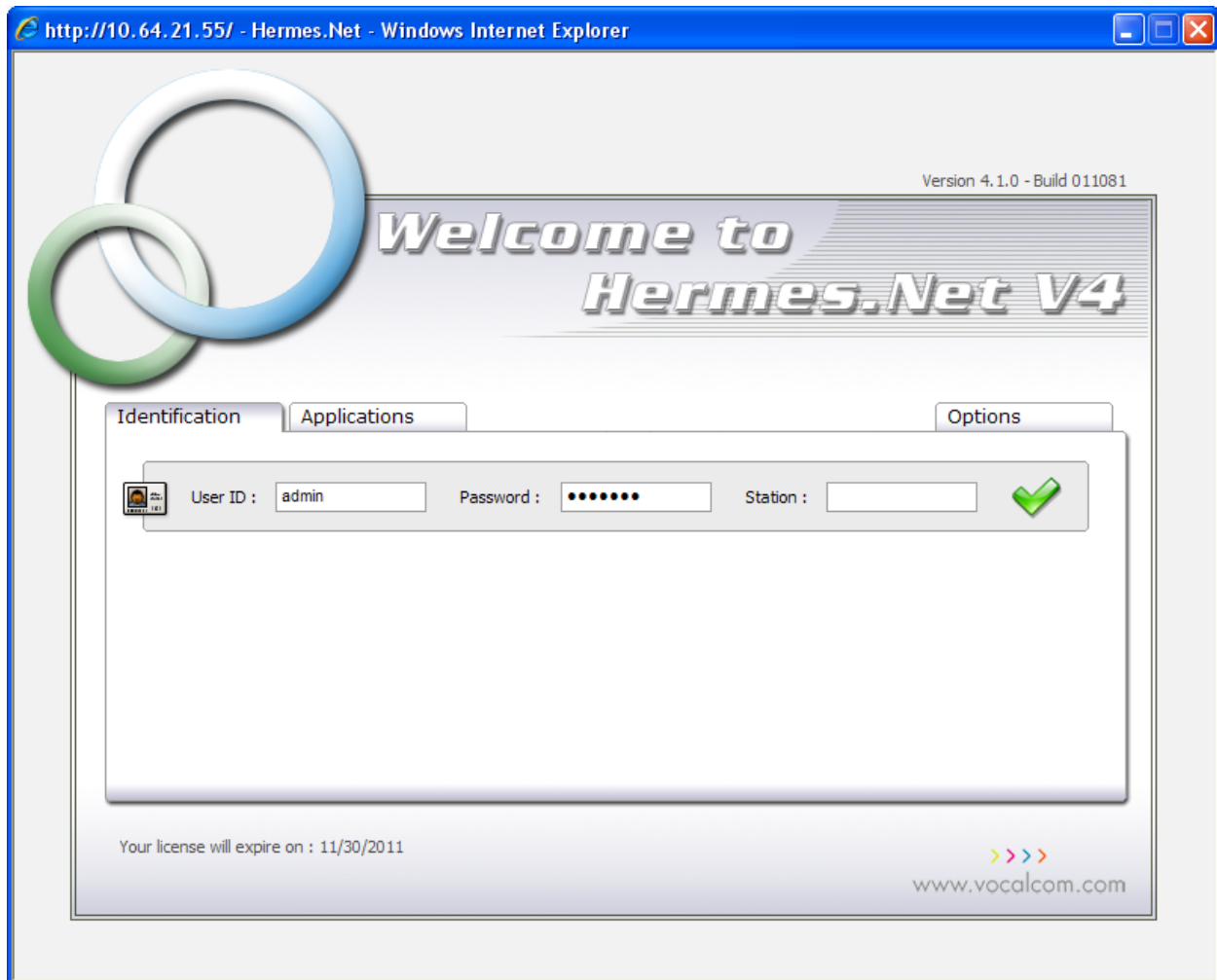


Edit the file to include the CT User credentials from **Section 6.4** and the Tlink string obtained in **Section 6.7** in the **parameters** field as shown below.

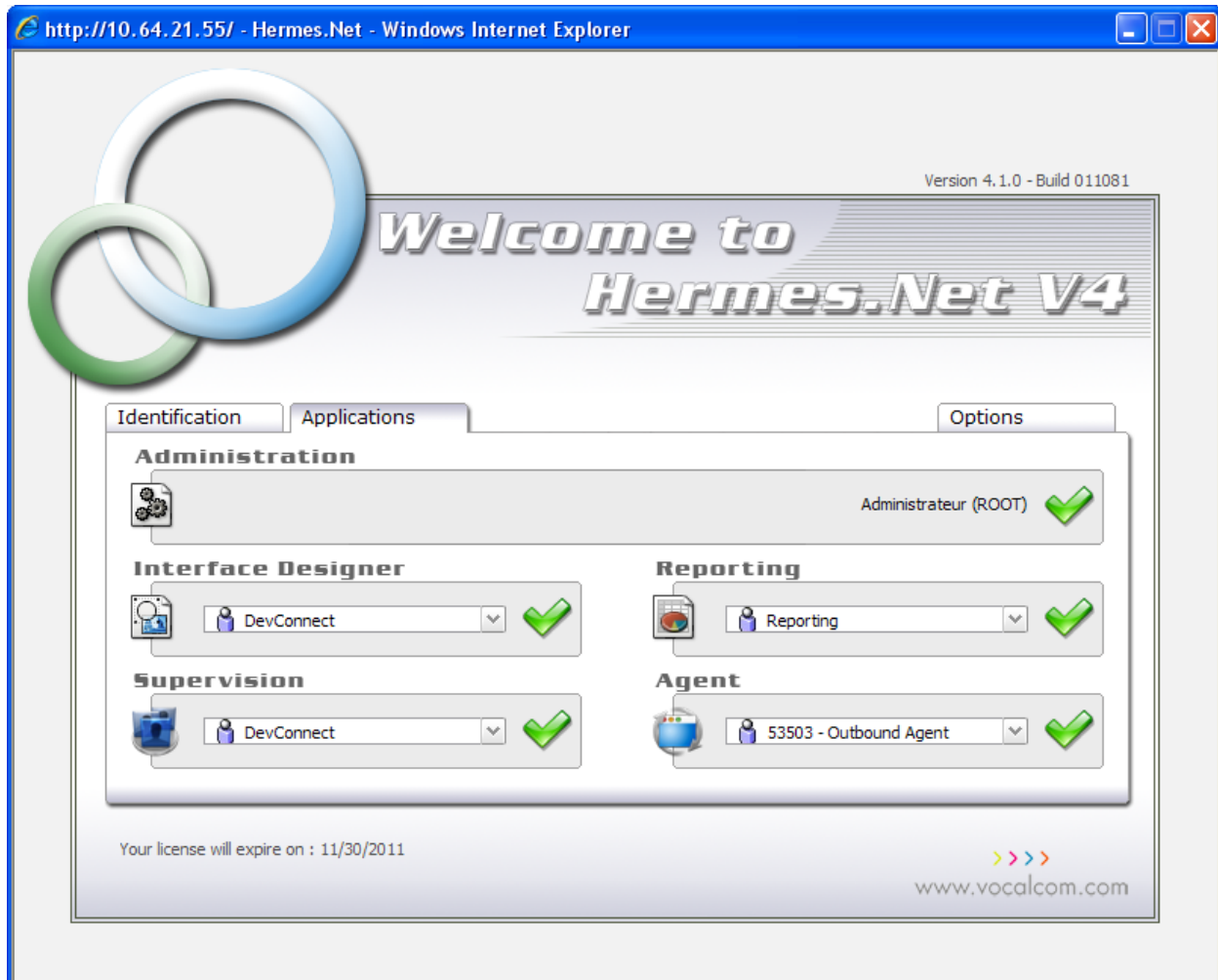


7.3. Access Hermes.Net Administration

Access the Hermes.Net Administration by entering the URL `http://ipaddress`, where *ipaddress* is the IP address of the Hermes.Net server. Log in using appropriate credentials.



Click the **Applications** tab and then click the Administration green checkmark (i.e. next to Administrateur (ROOT)).



The screen shown below is displayed.

Hermes.Net Administration Copyright © 2001-2011 Vocalcom Software, Inc.

Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / site choice

ROOT DevConnect

Companies and sites list

Id	Type	Designation
1	Site	DevConnect

General * Components Database Telephony Recording Backup

Informations

Designation: DevConnect Manager phonenumber: Manager name: Manager email:

Parameters

Maximum lines for calls robots: 10 Min : 0 / Max : 10
Maximum connected agents: 5 5 agents licenses allocated on 5 available

VDNs range : From 0 To 0
Queues range : From 0 To 0
Agents range : From 0 To 0
Stations range : From 0 To 0

Start synchronization

Status : OK Company / Site : ROOT (0) User : Administrateur

7.4. Configure Ranges

Under the **General** tab and within the **Parameters** section, enter ranges for VDNs, Queues, Agents, and Stations to include all the Device IDs added in **Section 6.6.1**. Click the disk icon to save the data.

The screenshot shows the Hermes.Net Administration web interface. The top navigation bar includes links for Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. The main content area is divided into two sections: 'Company / site choice' on the left and 'Companies and sites list' on the right. The 'Companies and sites list' section contains a table with the following data:

Id	Type	Designation
1	Site	DevConnect

Below the table, there are buttons for adding, deleting, and refreshing the list. The 'General' tab is selected, and the 'Parameters' section is active. The 'Parameters' section contains the following fields and controls:

- Information:** Designation (DevConnect), Manager name, Manager phonenumber, and Manager email.
- Parameters:** Maximum lines for calls robots (10), Maximum connected agents (5), VDNs range (From 55503 To 55505), Queues range (From 503 To 505), Agents range (From 53503 To 53506), and Stations range (From 53002 To 53006).

At the bottom of the Parameters section, there is a 'Start synchronization' button. The status bar at the bottom indicates 'Status: OK' and 'Company / Site: ROOT (0) User: Administrateur'.

7.5. Synchronize Data

Synchronize data with Communication Manager by clicking the **Start synchronisation** button.

The screenshot displays the 'Hermes.Net Administration' web interface. At the top, there is a navigation bar with tabs: Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. The main content area is divided into two sections. On the left, 'Company / site choice' shows a tree view with 'ROOT' and 'DevConnect'. On the right, 'Companies and sites list' contains a table with one entry: '1 Site DevConnect'. Below this, there are tabs for 'General', 'Components', 'Database', 'Telephony', 'Recording', and 'Backup'. The 'General' tab is active, showing 'Informations' and 'Parameters' sections. The 'Informations' section has fields for 'Designation' (DevConnect), 'Manager name', 'Manager phonenummer', and 'Manager email'. The 'Parameters' section includes sliders for 'Maximum lines for calls robots' (set to 10), 'Maximum connected agents' (set to 5), and ranges for 'VDNs range', 'Queues range', 'Agents range', and 'Stations range'. A 'Start synchronisation' button is located at the bottom of the 'Parameters' section. The status bar at the bottom indicates 'Status : OK' and 'Company / Site : ROOT (0) User : Administrateur'.

Hermes.Net Administration Copyright © 2001-2011 Vocalcom Software, Inc.

Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / site choice

ROOT
DevConnect

Companies and sites list

Id	Type	Designation
1	Site	DevConnect

General Components Database Telephony Recording Backup

Informations

Designation: DevConnect
Manager name:
Manager phonenummer:
Manager email:

Parameters

Maximum lines for calls robots: Min : 0 / Max : 10
Maximum connected agents: 5 agents licenses allocated on 5 available

VDNs range : From To

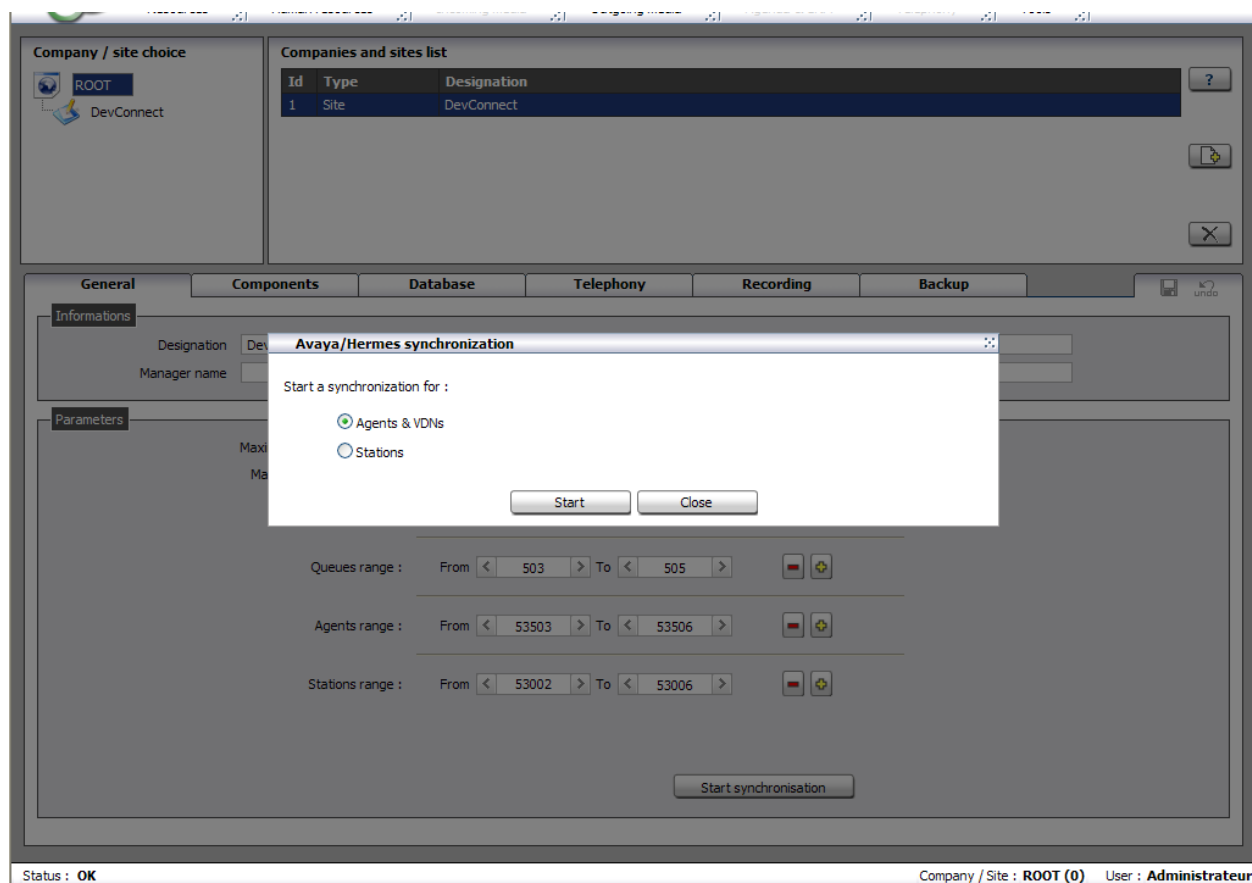
Queues range : From To

Agents range : From To

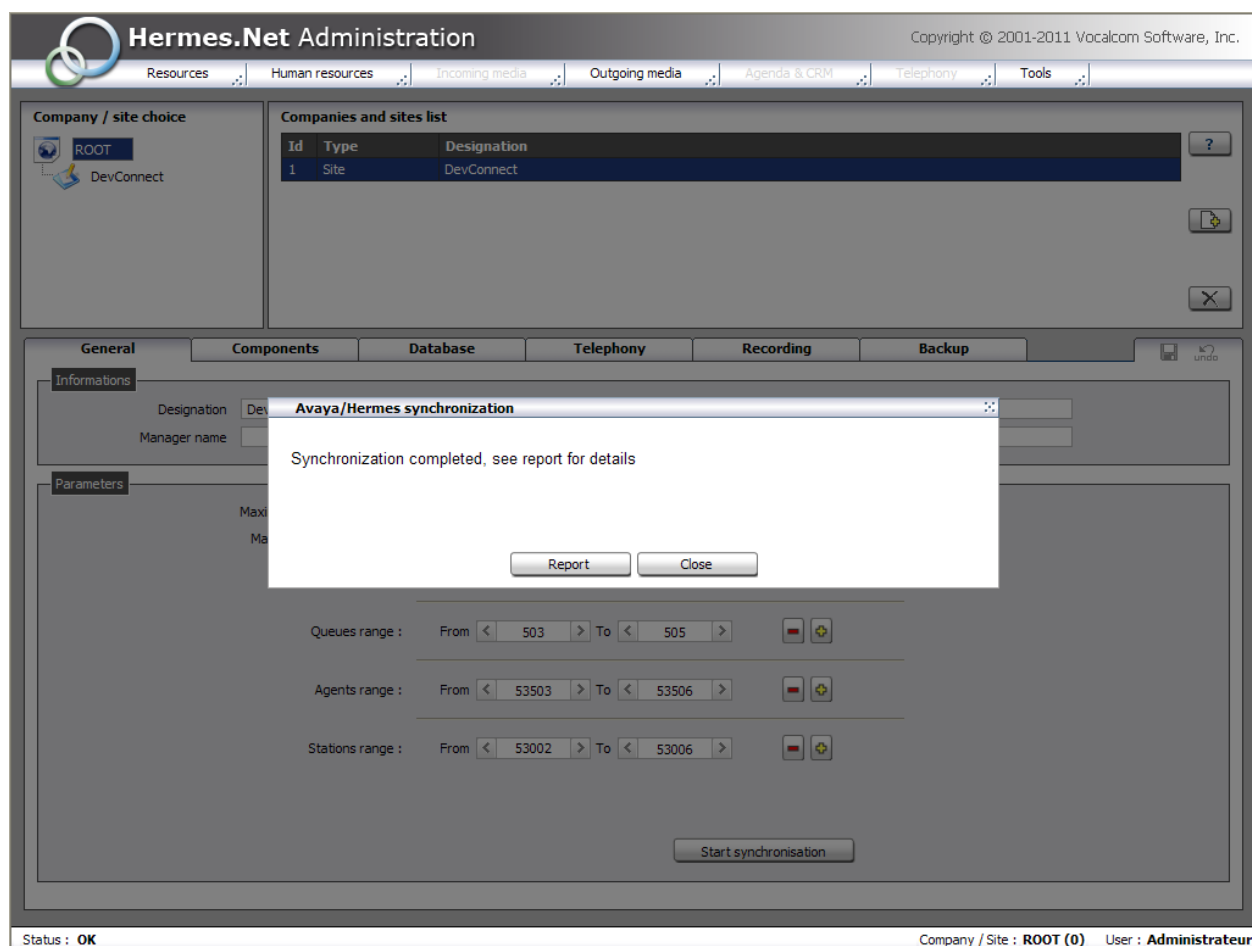
Stations range : From To

Status : OK Company / Site : ROOT (0) User : Administrateur

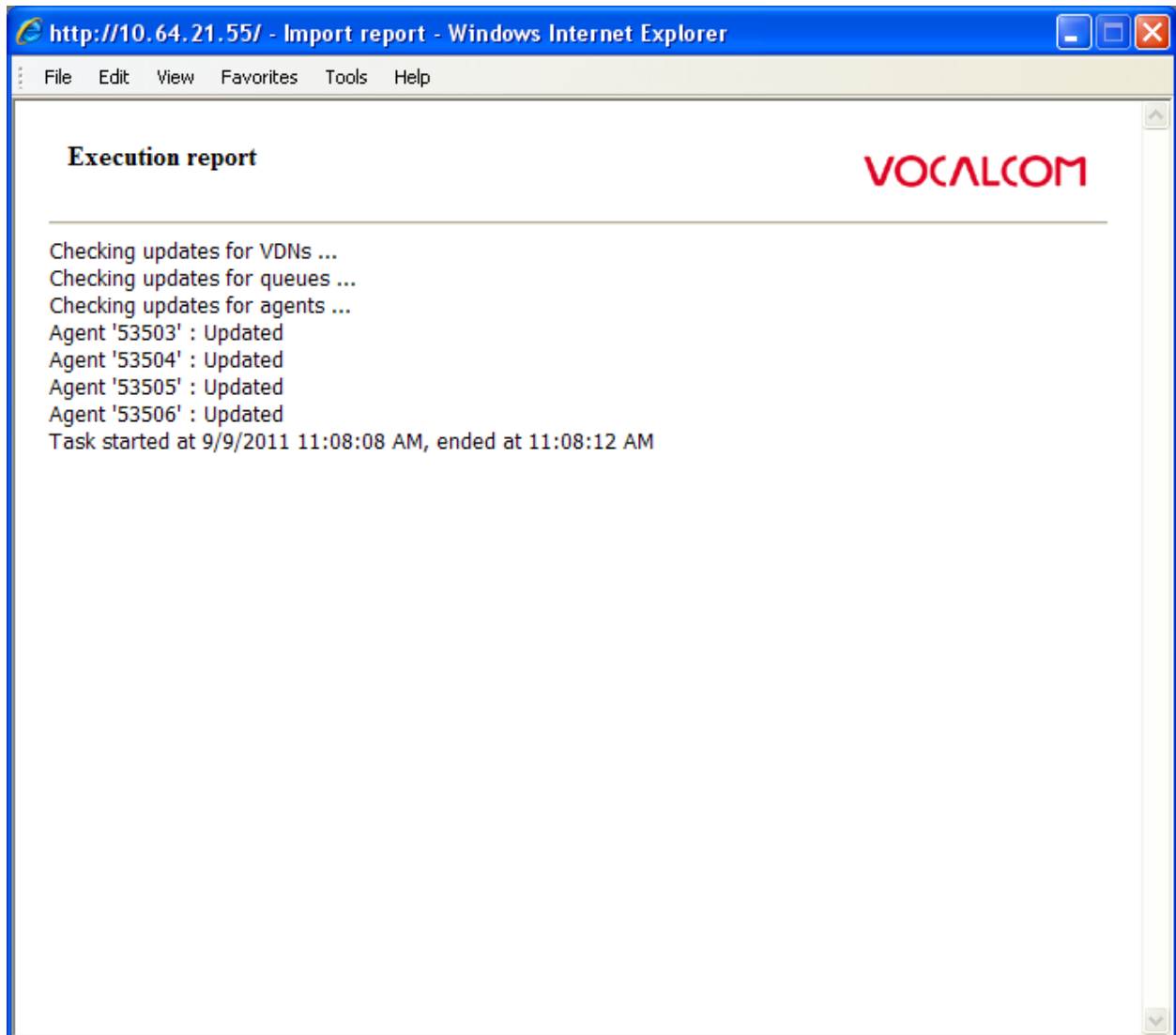
The following screen is displayed. Click the **Agents & VDNs** radio button and then click **Start**.



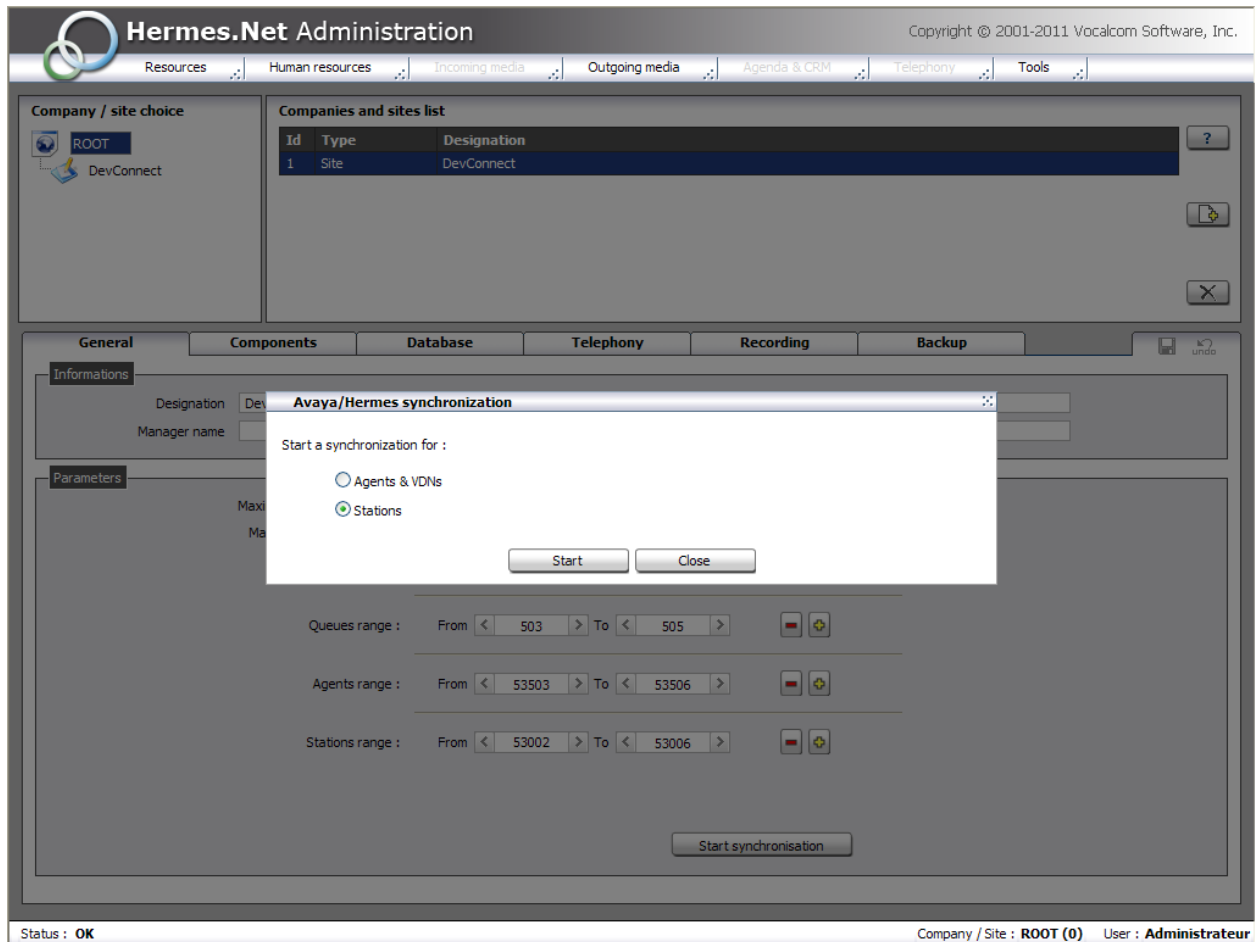
After the synchronization is complete, the following screen is displayed. Click the **Report** button to see the report details.



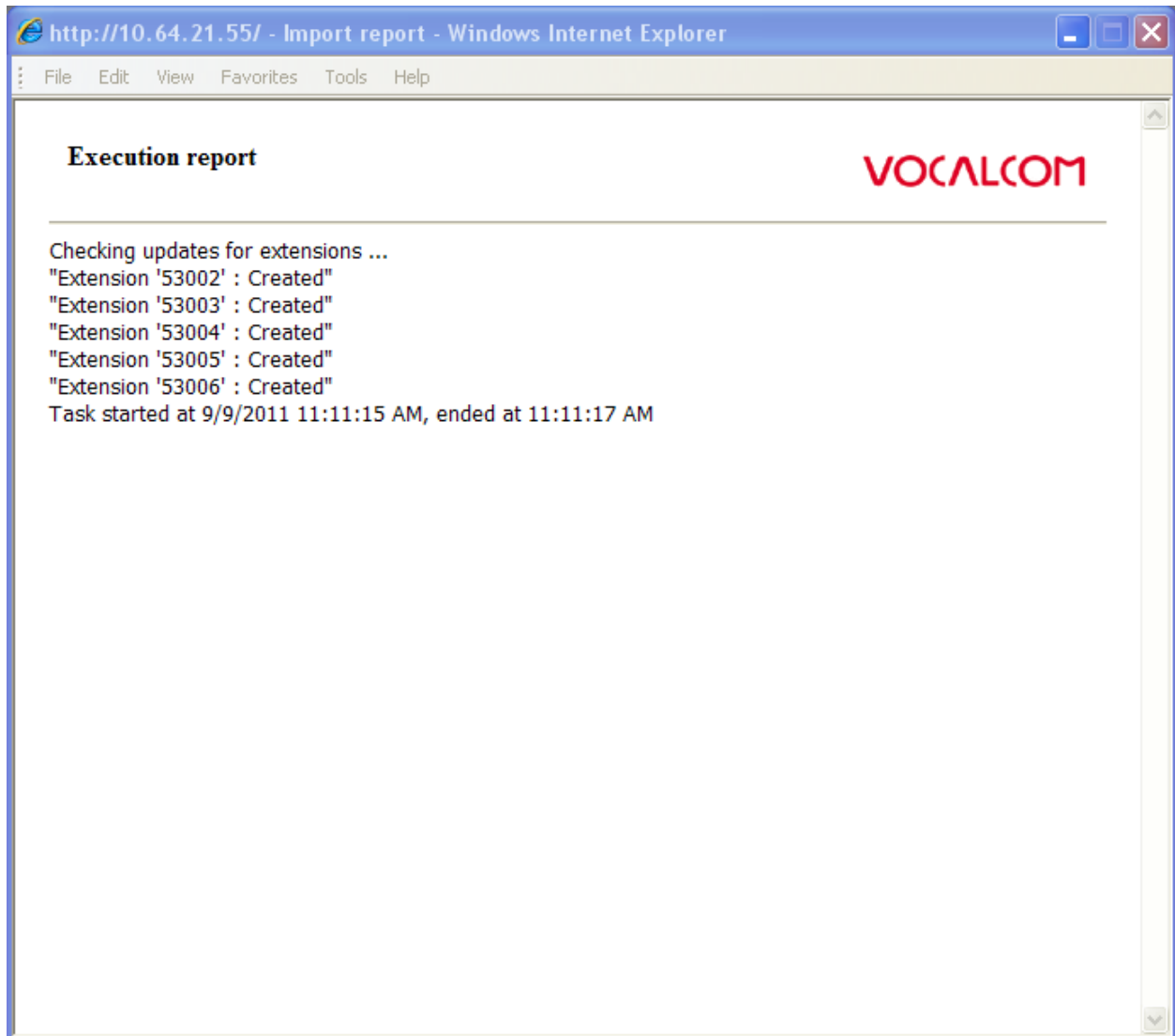
An example Agents & VDNs report screen is shown below.



Repeat the same synchronization procedure above, but now select the **Stations** radio button.



An example reports screen for the Stations synchronization is shown below.



7.6. Configure Agent Passwords

To configure each Agent's password, click the **DevConnect** site under ROOT in the top left of the screen below.

The screenshot shows the Hermes.Net Administration web interface. At the top, there's a navigation bar with tabs: Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. The main content area is divided into two sections. On the left, under 'Company / site choice', there's a tree view showing 'ROOT' and 'DevConnect'. On the right, 'Companies and sites list' shows a table with one entry: '1 Site DevConnect'. Below this, there's a tabbed interface with 'General', 'Components', 'Database', 'Telephony', 'Recording', and 'Backup'. The 'General' tab is active, showing 'Informations' and 'Parameters' sections. The 'Informations' section has fields for 'Designation' (set to 'DevConnect'), 'Manager name', 'Manager phonenummer', and 'Manager email'. The 'Parameters' section has several configuration options: 'Maximum lines for calls robots' (set to 10), 'Maximum connected agents' (set to 5), 'VDNs range' (From 55503 to 55505), 'Queues range' (From 503 to 505), 'Agents range' (From 53503 to 53506), and 'Stations range' (From 53002 to 53006). Each range has a 'Start' and 'End' field with a 'Reset' button. A 'Start synchronisation' button is at the bottom of the parameters section. The status bar at the bottom shows 'Status : OK' and 'Company / Site : ROOT (0) User : Administrateur'.

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Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / site choice

ROOT
DevConnect

Companies and sites list

Id	Type	Designation
1	Site	DevConnect

General Components Database Telephony Recording Backup

Informations

Designation: DevConnect
Manager name:
Manager phonenummer:
Manager email:

Parameters

Maximum lines for calls robots: Min : 0 / Max : 10
Maximum connected agents: 5 agents licenses allocated on 5 available

VDNs range : From To

Queues range : From To

Agents range : From To

Stations range : From To

Status : OK Company / Site : ROOT (0) User : Administrateur

The following screen is displayed.

The screenshot displays the 'Hermes.Net Administration' web interface. The top navigation bar includes links for Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. The main content area is divided into two sections. The left section, titled 'Company / site choice', shows a tree view with 'ROOT' and 'DevConnect'. The right section, titled 'Inbound campaigns list', contains a table with two rows: '55504 HERMES INBOUND 1' and '55505 HERMES INBOUND 2'. Below the table are icons for help, add, delete, and print. The bottom section, titled 'General', has a tab for 'Customer management' and a sub-tab for 'Informations'. The 'Informations' sub-tab shows configuration fields: 'Description' (HERMES INBOUND 1), 'Queue' (504 - HERMES INBOUND 1), 'Auto records' (No recording), and 'Display to prospect' (The real phonenumber). The status bar at the bottom indicates 'Status : OK' and 'Company / Site : DevConnect (1) User : Administrateur'.

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Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / site choice

ROOT
DevConnect

Inbound campaigns list

VDN	Description
55504	HERMES INBOUND 1
55505	HERMES INBOUND 2

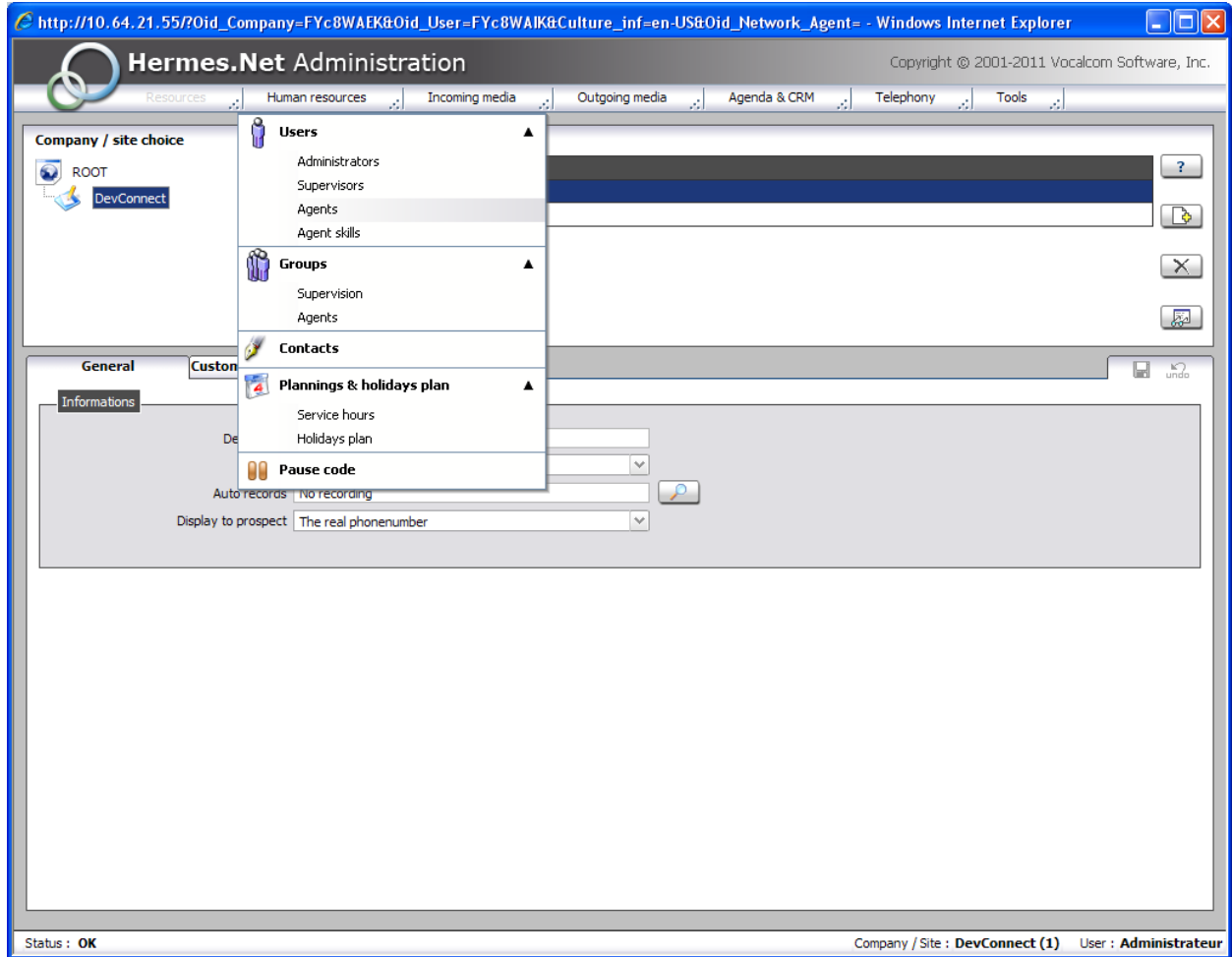
General **Customer management**

Informations

Description: HERMES INBOUND 1
Queue: 504 - HERMES INBOUND 1
Auto records: No recording
Display to prospect: The real phonenumber

Status : OK Company / Site : DevConnect (1) User : Administrateur

Navigate to **Human Resources** → **Agents** as shown below.



Select an Agent from the **Agents list** on the top of the screen. Click the **General** tab, and within the **Personal data** section, enter the Agents **Password**. The password entered here should match the password entered in **Section 5.5**. Click the disk icon to save the data.

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Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / site choice

ROOT
DevConnect

Agents list

Agent code	Full name
53503	Outbound Agent,
53504	HERMES Agent 1,
53505	HERMES Agent 2,
53506	Agent 53506,

General Assignment Skills Programs Rights

Personal data

Agent code: 53504 Password:

Last name: HERMES Agent 1 First name:

External Login: Member of: -- none --

Telephony options

☐ Automatically ready

☐ Auto. answer

Media blending options

☐ Right to manage a call and a chat simultaneously

☐ Right to manage an email during a call or a chat

Simultaneous max chat sessions: < 1 >

Status : OK Company / Site : DevConnect (1) User : Administrateur

Next, navigate to **Resources → Proxy CTI** as shown on the screen below.

The screenshot displays the Hermes.Net Administration web interface. At the top, the title bar reads "Hermes.Net Administration" with a copyright notice "Copyright © 2001-2011 Vocalcom Software, Inc." The navigation menu includes "Resources", "Human resources", "Incoming media", "Outgoing media", "Agenda & CRM", "Telephony", and "Tools". A sidebar on the left shows a tree structure with "Company / sites" expanded, containing "ROOT", "Components", "Proxy CTI" (highlighted), "Connections", and "Create, delete VDN". The main content area has a tabbed interface with "General", "Components", "Database", "Telephony", "Recording", and "Backup". The "General" tab is active, showing "Informations" and "Parameters" sections. The "Informations" section contains fields for "Designation" (set to "DevConnect"), "Manager name", "Manager phonenumber", and "Manager email". The "Parameters" section includes several range settings: "Maximum lines for calls robots" (set to 10), "Maximum connected agents" (set to 5), "VDNs range" (From 55503 to 55505), "Queues range" (From 503 to 505), "Agents range" (From 53503 to 53506), and "Stations range" (From 53002 to 53006). Each range has a "Start synchronisation" button. The status bar at the bottom indicates "Status : OK" and "Company / Site : ROOT (0) User : Administrateur".

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Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / sites
ROOT
DevConnect
Components
Proxy CTI
Connections
Create, delete VDN

Designation DevConnect
Manager name
Manager phonenumber
Manager email

Parameters

Maximum lines for calls robots < 10 > Min : 0 / Max : 10
Maximum connected agents < 5 > 5 agents licenses allocated on 5 available

VDNs range : From < 55503 > To < 55505 > [] [+]
Queues range : From < 503 > To < 505 > [] [+]
Agents range : From < 53503 > To < 53506 > [] [+]
Stations range : From < 53002 > To < 53006 > [] [+]

Start synchronisation

Status : OK Company / Site : ROOT (0) User : Administrateur

Select the **Parameters** tab. Within the **Parameters list** section, check the **Send agents passwords to Avaya server** checkbox. Click the disk icon to save the data.

The screenshot shows the Hermes.Net Administration web interface. At the top, there is a navigation bar with tabs: Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. The main content area is divided into two sections. The left section, titled 'Company / site choice', shows a tree view with 'ROOT' and 'DevConnect'. The right section, titled 'Proxy CTI instances list', contains a table with the following data:

Name	Private IP address	Public IP address	Site
DevConnect	10.64.21.55:9992	-	DevConnect

Below the table are icons for help, add, and delete. The main area below these sections has two tabs: 'General' and 'Parameters'. The 'Parameters' tab is active, showing a 'Parameters list' section. This section contains the following settings:

- Notify supervisor listening: ☐
- Send agents passwords to Avaya server: ☒
- Avaya pause code for state "preview":
- Avaya pause code for state "generic pause":
- Avaya pause code for state "entering phonenumber":
- Recording plugin:

At the bottom of the interface, there is a status bar showing 'Status : OK' and 'Company / Site : ROOT (0) User : Administrateur'.

7.7. Configure Proxy

Navigate to **Resources** → **Proxy CTI** as shown on the screen below.

The screenshot displays the Hermes.Net Administration web interface. At the top, the title bar reads "Hermes.Net Administration" with a copyright notice "Copyright © 2001-2011 Vocalcom Software, Inc." Below the title bar is a navigation menu with tabs: Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. A left-hand sidebar shows a tree view with "Company / sites" expanded, revealing "ROOT" and "DevConnect". A context menu is open over "DevConnect", listing "Companies / sites", "Components", "Proxy CTI" (highlighted), "Connections", and "Create, delete VDN". The main content area shows the "Proxy CTI" configuration for "DevConnect". It includes tabs for "General", "Components", "Database", "Telephony", "Recording", and "Backup". The "General" tab is active, showing "Informations" and "Parameters" sections. The "Informations" section contains fields for "Designation" (DevConnect), "Manager name", "Manager phonenumber", and "Manager email". The "Parameters" section contains several ranges with spinners and buttons: "Maximum lines for calls robots" (10), "Maximum connected agents" (5), "VDNs range" (From 55503 To 55505), "Queues range" (From 503 To 505), "Agents range" (From 53503 To 53506), and "Stations range" (From 53002 To 53006). A "Start synchronisation" button is at the bottom. The status bar at the bottom shows "Status : OK" and "Company / Site : ROOT (0) User : Administrateur".

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Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / sites

- ROOT
- DevConnect

Companies / sites
Components
Proxy CTI
Connections
Create, delete VDN

Designation: DevConnect
Manager name:
Manager phonenumber:
Manager email:

Parameters

Maximum lines for calls robots: Min : 0 / Max : 10
Maximum connected agents: 5 agents licenses allocated on 5 available

VDNs range : From To

Queues range : From To

Agents range : From To

Stations range : From To

Status : OK Company / Site : ROOT (0) User : Administrateur

Click the “+” icon on the right to add an entry to the **Proxy CTI instances list**.

The screenshot shows the Hermes.Net Administration web interface. At the top, there is a navigation bar with tabs: Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. The main content area is divided into two sections. The top section, titled "Company / site choice", shows a tree view with "ROOT" and "DevConnect". The bottom section, titled "Proxy CTI instances list", contains a table with the following data:

Name	Private IP address	Public IP address	Site
DevConnect	10.64.21.55:9992	-	DevConnect

Below the table, there is a "+" icon to add a new entry and an "X" icon to delete an entry. The bottom section of the interface is a form titled "Parameters" with a tab labeled "Information". The form contains the following fields:

- Name: DevConnect
- Site: DevConnect (dropdown menu)
- Private IP address: 10.64.21.55
- Public IP address: (empty field)
- Port: 9992 (spinners)
- Port: 9992 (spinners)

A note at the bottom of the form states: "* Proxy must be stopped to update this fields". The status bar at the bottom shows "Status : OK" and "Company / Site : ROOT (0) User : Administrateur".

Enter a **Name**, set the **Private IP address** to the IP address of the Hermes.Net Application Server, and set the **Port** to the desired value. Click the **OK** button and then click the disk icon to save the data.

The screenshot displays the 'Hermes.Net Administration' web application. The top navigation bar includes links for Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. The main content area is divided into two sections: 'Company / site choice' on the left, showing a tree view with 'ROOT' and 'DevConnect', and 'Proxy CTI instances list' on the right, which contains a table with one entry: 'DevConnect' with a private IP of '10.64.21.55:9992' and site 'DevConnect'. Below this, there are tabs for 'General' and 'Parameters', with 'Parameters' currently selected. A modal dialog box titled 'Add new proxy instance' is open in the center, allowing the user to add a new proxy instance. The dialog fields are: Name (DevConnect), proxy module (---), Private IP address (10.64.21.55), and Port (9992). The dialog has 'OK' and 'Cancel' buttons. The status bar at the bottom shows 'Status : OK' and 'Company / Site : ROOT (0) User : Administrateur'.

Name	Private IP address	Public IP address	Site
DevConnect	10.64.21.55:9992	-	DevConnect

Add new proxy instance

Name:

proxy module:

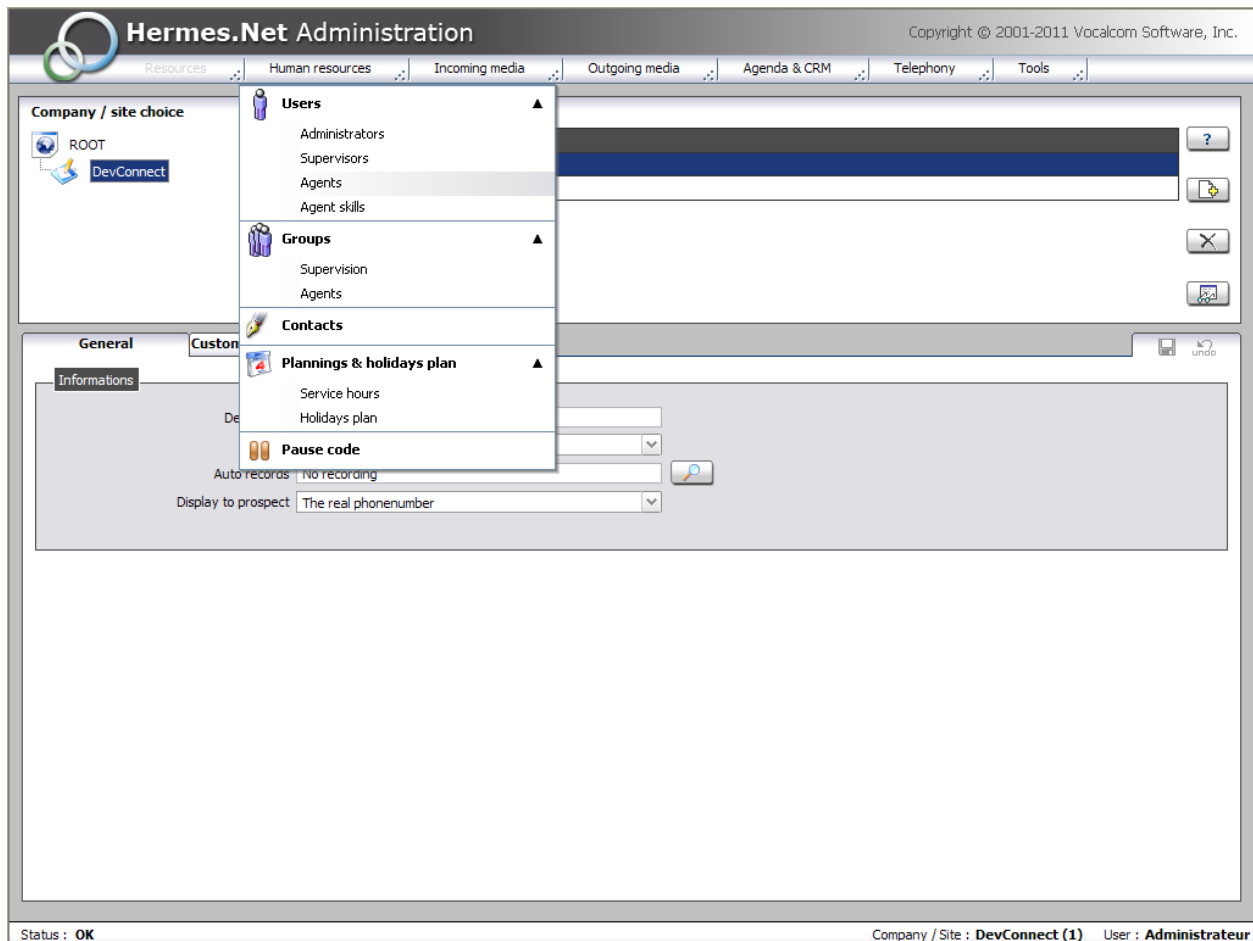
Private IP address:

Port:

Status : OK Company / Site : ROOT (0) User : Administrateur

7.8. Configure Agent Skills

To use SMS to configure an Agent's skills, navigate to **Human Resources → Agents**.



Select an Agent from the **Agents list**.

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Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / site choice

ROOT
DevConnect

Agents list

Agent code	Full name
53503	Outbound Agent,
53504	HERMES Agent 1,
53505	HERMES Agent 2,
53506	Agent 53506,

General Assignment Skills Programs Rights

Personal data

Agent code: 53504 Password: ●●●●●●

Last name: HERMES Agent 1 First name:

External Login: Member of: 1 - Inbound

Telephony options

☐ Automatically ready

☐ Auto. answer

Media blending options

☐ Right to manage a call and a chat simultaneously

☐ Right to manage an email during a call or a chat

Simultaneous max chat sessions: < 1 >

Status: OK Company / Site: DevConnect (1) User: Administrateur

Click the **Assignment** tab, and then click the “+” icon within the **Inbound** or **Outbound** section of the screen to configure a skill for the Agent in an inbound or outbound campaign.

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Resources Human resources Incoming media Outgoing media Agenda & CRM Telephony Tools

Company / site choice

ROOT DevConnect

Agents list

Agent code	Full name
53503	Outbound Agent,
53504	HERMES Agent 1,
53505	HERMES Agent 2,
53506	Agent 53506,

General Assignment Skills Programs Rights

Inbound

Queue	Level	Delay
504 HERMES INBOUND 1	1	0

Outbound

Outbound campaign	Type
-------------------	------

Status : OK Company / Site : DevConnect (1) User : Administrateur

The following screen is displayed. Select a **Queue**, **Level**, and **Delay** for the Agent. Click the **OK** button, and then click the disk icon to save the data.

The screenshot displays the Hermes.Net Administration web application. The top navigation bar includes links for Resources, Human resources, Incoming media, Outgoing media, Agenda & CRM, Telephony, and Tools. The main content area is divided into several sections:

- Company / site choice:** Shows a tree view with 'ROOT' and 'DevConnect'.
- Agents list:** A table with columns 'Agent code' and 'Full name'. It lists agents 53503 through 53506.
- Add/edit queue dialog:** A modal window with the following fields:
 - Queue:** A dropdown menu showing '505 - HERMES INBOUND 2'.
 - Level:** A numeric input field with the value '6'.
 - Delay:** A numeric input field with the value '0'.
 - Buttons:** 'OK' and 'Cancel' buttons at the bottom.
- Inbound:** A table with columns 'Queue', 'Level', and 'Delay'. It contains one entry: '504 HERMES INBOUND 1' with Level '1' and Delay '0'.
- Outbound campaign:** A table with columns 'Outbound campaign' and 'Type', currently empty.

The status bar at the bottom indicates 'Status : OK' and 'Company / Site : DevConnect (1) User : Administrateur'.

8. Verification Steps

This section provides tests that can be performed to verify proper configuration of Avaya Aura® Communication Manager, Avaya Aura® Application Enablement Services, and Hermes.Net.

8.1. Verify Avaya Aura® Communication Manager

On Communication Manager, verify the status of the administered CTI link by using the *status aesvcscti-link* command. Verify that the **Service State** is “established” for the CTI link number administered in **Section 5.2**, as shown below.

status aesvcs cti-link						
AE SERVICES CTI LINK STATUS						
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd
1	4	no	AES_21_46	established	15	15

8.2. Verify Avaya Aura® Application Enablement Services

On Application Enablement Services, verify the status of the TSAPI link by selecting **Status** → **Status and Control** → **TSAPI Service Summary** from the left pane. The **TSAPI Link Details** screen is displayed. Verify the **Status** is “Talking” for the TSAPI link administered in **Section 6.3**, as shown below.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title "Application Enablement Services Management Console", and a welcome message for "User craft" with login details. A red navigation bar contains "Status | Status and Control | TSAPI Service Summary" and links for "Home | Help | Logout".

The left sidebar shows a tree view with categories like AE Services, Communication Manager Interface, Licensing, Maintenance, Networking, Security, Status, Status and Control, User Management, Utilities, and Help. The "Status and Control" section is expanded, showing sub-items: CVLAN Service Summary, DLG Services Summary, DMCC Service Summary, Switch Conn Summary, and TSAPI Service Summary (which is selected).

The main content area is titled "TSAPI Link Details". It includes a checkbox for "Enable page refresh every 60 seconds" and a table with the following data:

	Link	Switch Name	Switch CTI Link ID	Status	Since	State	Switch Version	Associations	Msgs to Switch	Msgs from Switch	Msgs Period
⊙	1	CM2141	1	Talking	Sun Sep 11 16:31:45 2011	Online	16	12	15	15	30

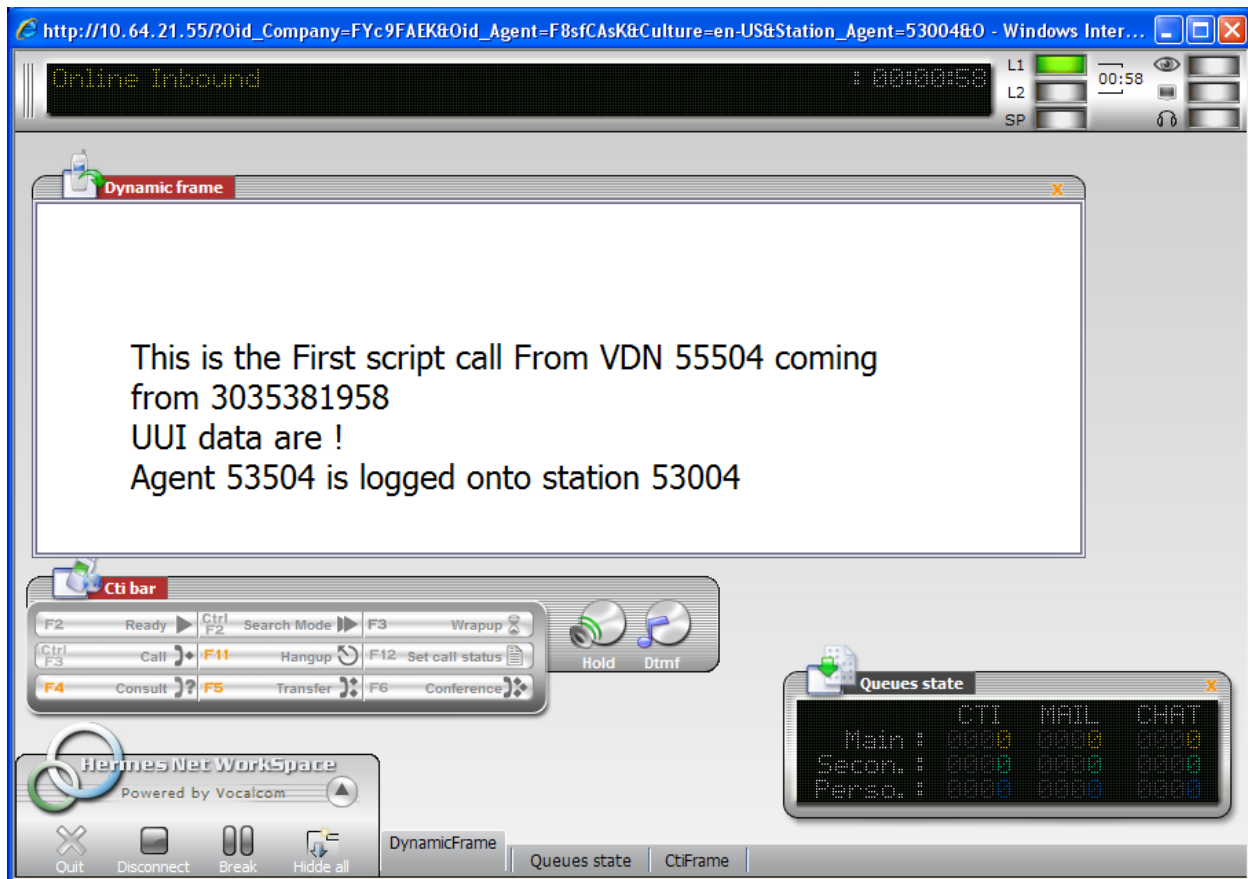
Below the table are "Online" and "Offline" buttons. A section titled "For service-wide information, choose one of the following:" contains three buttons: "TSAPI Service Status", "TLink Status", and "User Status".

8.3. Verify Hermes.Net

Access an inbound Agent's desktop interface by entering the following URL in a web browser: https://ipaddress/hermes_net_v4/admin, where *ipaddress* is the IP address of the Hermes.Net Application Server. Log in using the appropriate Agent credentials. Verify the Agent is available to handle an inbound call, as indicated by the **Waiting for inbound** message displayed on the screen.



Place an inbound call to the Agent. Verify the call arrives at the Agent's desktop with the proper data.



Verify the Agents **Cti bar** can be used to control the call (i.e. to place the call on hold, resume the call, transfer the call, etc.)



9. Conclusion

These Application Notes describe the configuration steps required to integrate Vocalcom Hermes.Net with Avaya Aura® Application Enablement Services (AES) and Avaya Aura® Communication Manager. All feature and serviceability test cases were completed successfully except for the observations noted in **Section 2.2**.

10. Additional References

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

- [1] *Administering Avaya Aura® Communication Manager*, August 2010, Document Number 03-300509.
- [2] *Avaya Aura® Application Enablement Services Administration and Maintenance*, April 2011.

Vocalcom Hermes.Net documentation is available by contacting Vocalcom, using the details in **Section 2.3**.

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