Interoperability Guide

Integrating NetVanta ECS with Vocalcom Hermes Call Center

This interoperability guide provides instructions for integrating NetVanta Enterprise Communications Server (ECS) with Vocalcom Hermes to provide call center support. It provides an overview and instructions for the integration, lists of the required equipment and equipment connections for the integration, the features supported by the integration, and the verified functionality of the integration.

This guide consists of the following sections:

Vocalcom Hermes Call Center Integration Overview

This solution is for small- to medium-sized businesses that require call center functionality beyond that provided by Advanced Call Queuing on NetVanta ECS. It expands the functionality of NetVanta ECS to provide desktop clients for call center agents and supervisors, skills-based routing, cradle-to-grave call center reports, and other call center features.

In this solution, NetVanta ECS provides unified communications, centralized voicemail, fax server, unified messaging, and personal call control services. Vocalcom Hermes provides all contact center functions from within a standard web browser.

Deployment Overview

This solution employs a typical NetVanta ECS configuration in which all phones are registered and controlled by NetVanta ECS. A SIP trunk connects NetVanta ECS and Hermes. Incoming public switched telephone network (PSTN) calls for an automatic call distributor (ACD) queue are routed through NetVanta ECS over the SIP trunk to Hermes. Outgoing calls from Hermes are routed over the SIP trunk to NetVanta ECS and out to the PSTN.

Agent and supervisor phones are installed and configured as NetVanta ECS phones. Phones that are to be used by agents and supervisors are also added to the Hermes configuration so that the call center is aware that they will be used by the call center.

It is expected that agents and supervisors will use headsets and use the Hermes client for call control and call information. Although this is standard practice for cell centers, it is required that agents and supervisors use the Hermes client only for call control in this solution because the phones are registered to and controlled by NetVanta ECS. Were an agent to dial directly from their phone, Hermes would be unaware of the activity and might improperly route the call. Agent activity is also tracked in Hermes using a number of metrics, and using the phone directly will interfere with that tracking.

Architecturally, the default operational mode of Hermes is to immediately make a call to each agent's phone and keep the connection sustained with a media path until the agent has finished their shift. When a call from the PSTN is directed to Hermes, it will answer the call from a SIP perspective and then internally join the media path from the PSTN to the agent's media path. This means that interaction between NetVanta ECS and Hermes consists of a sequence of call initiation and terminations without any transfers required through NetVanta ECS. A transfer of an established call between the PSTN and an agent to another agent is handled by Hermes managing the three connected media paths internally.

Similarly, features such as silent monitoring, barge in, etc. are implemented by Hermes internally.
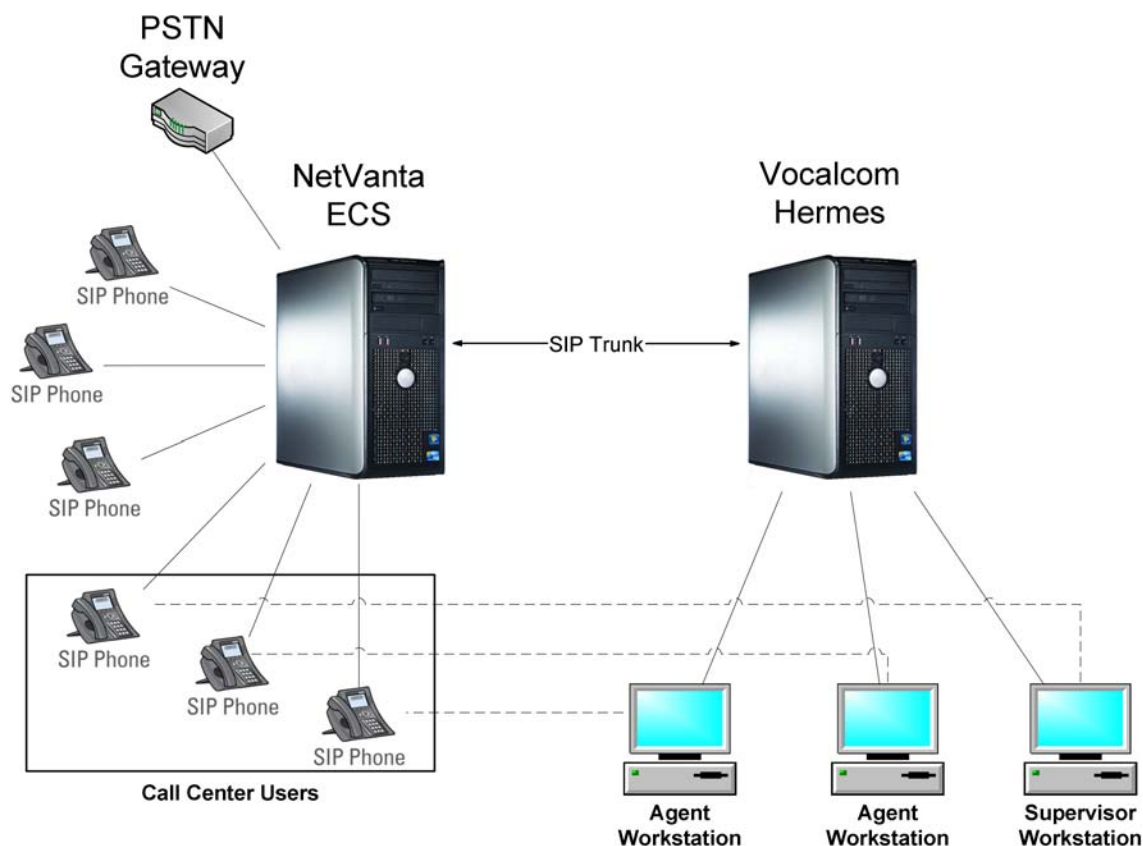
Figure 1. Network Topology Used for Interoperability Verification

Hardware and Software Requirements and Limitations

Hermes agents and supervisors must treat their phones as dumb terminals that only provide an audio path for the call. All call information should be provided and call control performed through the Hermes software.

Only Polycom phones were used for testing. However, because of Hermes' approach of sustaining the media path, it is expected that any SIP phone will operate correctly as an agent or supervisor phone.

This document presents only the basic configuration for Vocalcom Hermes required for integration with NetVanta ECS. It is expected that customer installation and configuration will be performed by Vocalcom.

Equipment and Versions

The following table outlines the equipment and firmware versions used during verification testing.

Table 1. Verification Test Equipment and Firmware Versions

Equipment	Software/Firmware Version
Vocalcom Hermes	4.2.0 Build 012091
ADTRAN NetVanta ECS	5.1.0.7931
ADTRAN Total Access 908e	R10.6.0.E
Polycom IP 650	4.0.2.11307
Polycom IP 430	3.2.5.0508

Verified Functionality and Exceptions

The following sections provide information on the supported features and exceptions of the NetVanta ECS and Vocalcom Hermes integration. The features listed in the *Verified Functionality* section below are the interoperability features you can expect to function with the configuration provided in this guide.

Verified Functionality

The following functions were verified during interoperability testing:

- Routing incoming queued call from the PSTN through NetVanta ECS to Vocalcom Hermes.
- Displaying caller ID on the Hermes agent client.
- Supervisor silently monitoring an agent's calls.
- Supervisor barging in on an agent's call resulting in a three-way conference with the customer and agent.
- Supervisor assisting an agent on a call by whispering to the agent. In this case, the agent can hear the supervisor but the customer cannot.
- Agents and supervisors making PSTN calls through NetVanta ECS.
- Agents and supervisors making calls to each other directly.

Exceptions

The NetVanta ECS and Vocalcom Hermes integration has the following exceptions:

- All call center features must be controlled through the Hermes web-based graphical user interface (GUI). For example, calls cannot be initiated through the telephone user interface (TUI) because Hermes will not be aware of the call. If an agent wants to use the TUI for a personal phone call, as opposed to the Hermes GUI, they must flag themselves as on break before making the personal call.

Integrating Vocalcom Hermes with NetVanta ECS

After Vocalcom Hermes and NetVanta ECS are set up, only a few additional configuration steps are required to integrate Vocalcom Hermes with NetVanta ECS for call center functionality. Specifically, a SIP trunk must be established between the NetVanta Unified Communications (UC) Server computer and Vocalcom Hermes, and an appropriate dial plan must be configured in NetVanta ECS to route SIP traffic between the units. On Vocalcom Hermes, a direct inward dialing (DID) number, and ACD extensions for agents and supervisors must be created. Additionally, a queue must be created on Vocalcom Hermes, and the call center agents assigned to the queue.

Additional Configurations for NetVanta ECS

To configure NetVanta ECS for integration with Vocalcom Hermes, follow these steps:

Step 1: Log in to the NetVanta UC Client Software as an Administrator

To log in to the NetVanta UC Client software as an administrator, follow these steps:

1. Navigate to **Start > Programs > ADTRAN > NetVanta UC Server > NetVanta UC Client** to open the NetVanta UC Client program.

2. Log in to NetVanta UC Client using the administrator **User name** and **Password**. The NetVanta UC Client program will appear.

Step 2: Add Vocalcom Hermes as a SIP Peer Gateway in NetVanta UC Server

To route calls between the NetVanta ECS and Vocalcom Hermes, Vocalcom Hermes must be added as a SIP peer gateway using the NetVanta UC Client software. To do this, follow these steps:

1. On the **Admin** tab, select the **Administration** navigation bar, then select the **Gateways** topic from the navigation pane.
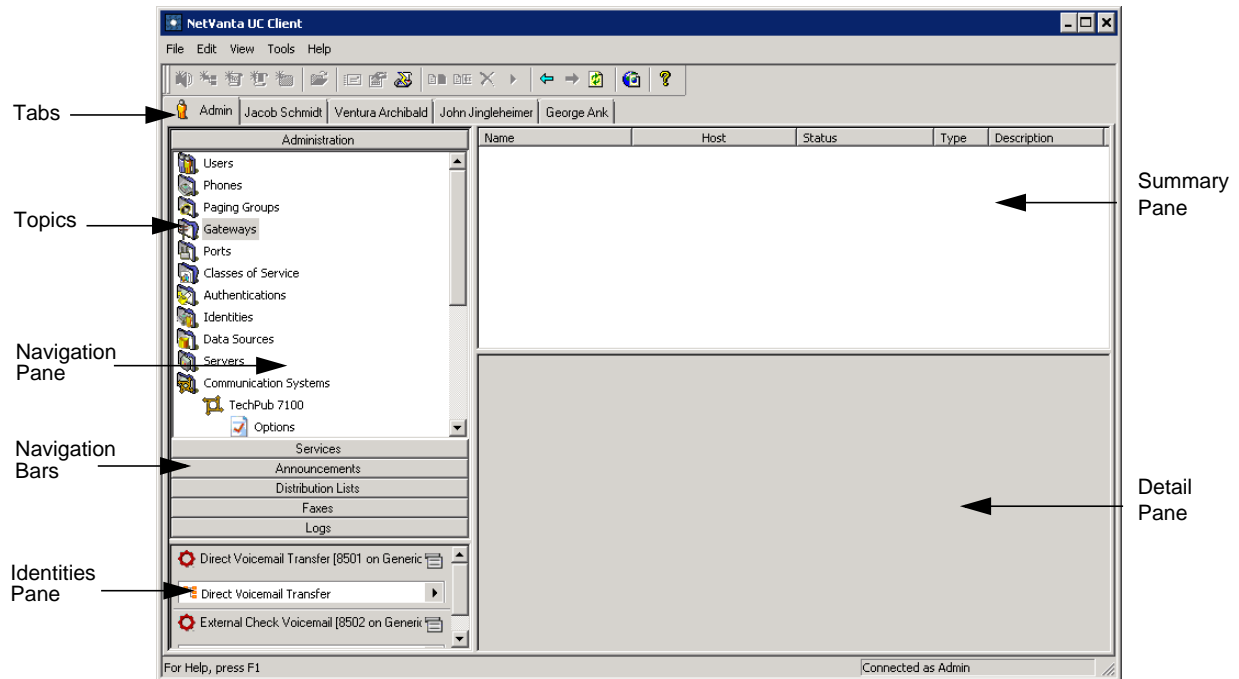
2. Right click in the **Gateways** summary pane, and select **New Gateway** from the drop-down menu that appears. The **Add Gateway** wizard welcome window appears.

3. Select **Next**. The **Select Gateway Type** window appears.
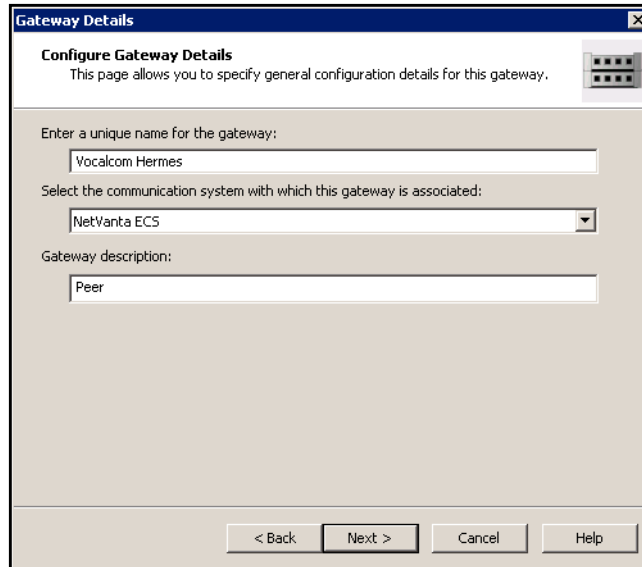
4. In the **Select Gateway Type** window, select the **SIP Peer** radio button, and select **Next**. The **Change Peer Gateway Settings** window appears.
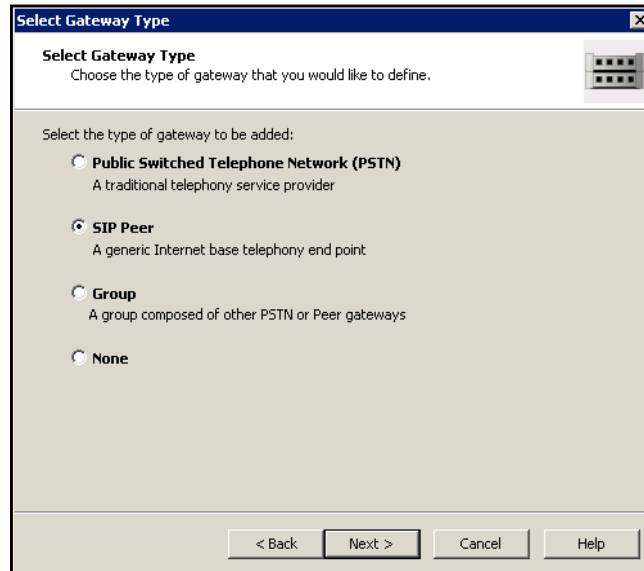
5. In the **Change Peer Gateway Settings** window, enter the IP address of the Vocalcom Hermes server in the **Host name** field, and select **Next**. The **Gateway Details** window appears.
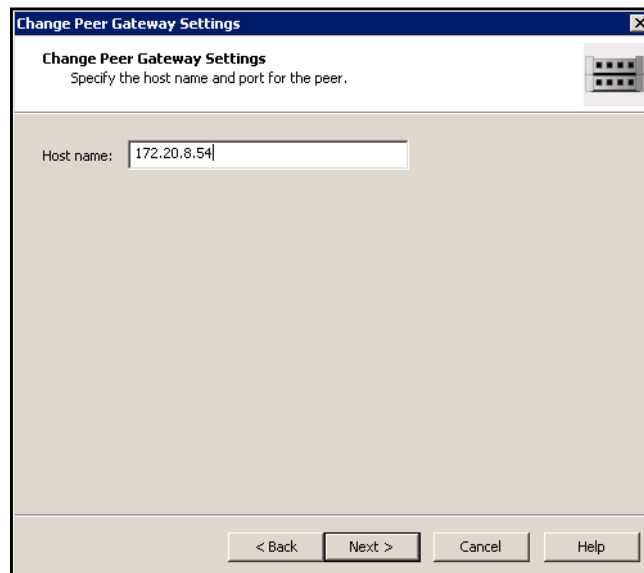
6. In the **Gateway Details** window, use the provided field to enter a name for the gateway. This name is used to identify the gateway and differentiate it from other gateways configured on the system. To associate Vocalcom Hermes with the NetVanta ECS communication system, use the drop-down menu to select the **NetVanta ECS**. If desired, enter an optional gateway description in the **Gateway description** field. Then, select **Next**. The **Summary** window will appear.

7. In the **Summary** window, ensure that the gateway properties are correct and select **Submit**. The wizard will create the Vocalcom Hermes gateway instance with the configured properties.

8. Once the gateway has been created, select **Next** to exit the **Add Gateway** wizard.

Step 3: Add a Dial Plan Entry for Vocalcom Hermes Call Center

To successfully route calls from NetVanta ECS to Vocalcom Hermes call center agents, a dial plan entry must be added to the NetVanta ECS communication system for the DID number used for the Vocalcom Hermes call center. This dial plan entry will modify incoming calls to the call center DID number to match the extension of the DID or queue numberused on Vocalcom Hermes. To configure this entry on the NetVanta ECS dial plan, follow these steps:

1.   On the **Admin** tab of the NetVanta UC Client, select the **Administration** navigation bar, then select the **NetVanta ECS** topic under the **Communication Systems** topic in the navigation pane.
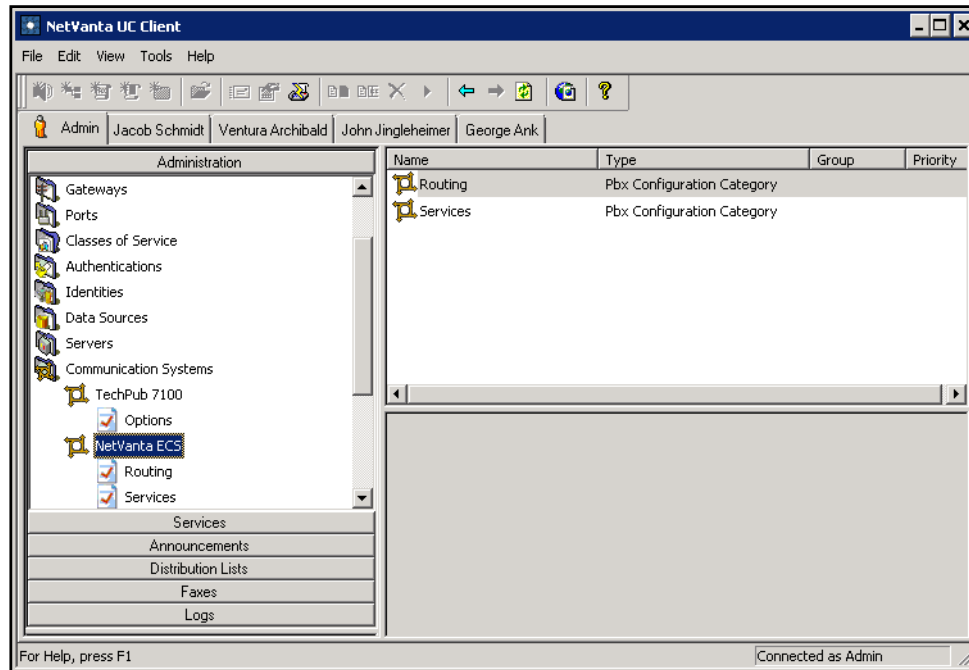
2.   In the summary pane, double-click **Routing**. The existing **Dial Plan** and **Toll Restrictions** will appear.

3.   In the **Dial Plan** menu, select the ➕ button to add a new entry in the dial plan. The **Dial Plan Entry** window appears.
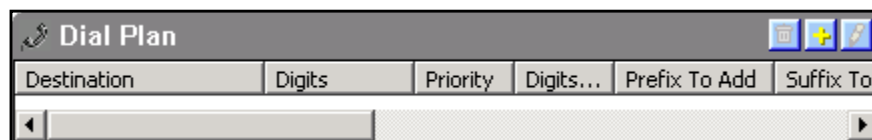
4.   In the **Dial Plan Entry** menu under the **Routing rule** section, enter the DID number used for the Vocalcom Hermes call center in the **Original digits** field (for example, **9698**). In the **Destination** section, select the **Gateway** radio button, and use the **Gateway** drop-down menu to select the Vocalcom Hermes gateway configured in *Add Vocalcom Hermes as a SIP Peer Gateway in NetVanta UC Server on page 6*. This configures all calls to the DID number entered in the **Original digits** field to be forwarded to the Vocalcom Hermes server. In the **Digit Manipulation** section, enter **4** in the **Digits to**

skip field, and enter the desired extension of the Vocalcom Hermes agent call queue in the **Suffix to add** field. Then, select **OK** to create the dial plan entry.

Step 4: Configure Agent and Supervisor User Profiles, Identities, and Phones

A user profile on the NetVanta UC Server must be created for each Vocalcom Hermes agent and supervisor. The user profile must have an identity associated with the NetVanta ECS communication system. Additionally, the phone of each agent and supervisor must be added to the NetVanta UC Server system and associated with their respective NetVanta ECS identity. For more information on configuring users, identities, and phones in NetVanta UC Server, refer to the *NetVanta Enterprise Communications and Business Application Server Administrator Manual Version 5.2* available from the ADTRAN Support Community (https://supportforums.adtran.com).

Additional Configurations for Vocalcom Hermes

Initial installation of Hermes is done by Vocalcom, not by ADTRAN. The system will be installed as a Windows Server and have its own IP address. For background maintenance it may be necessary to access the server from Windows, however all call center administrative, agent, and supervisor access is accomplished through the Hermes GUI.

> **NOTE**
> *This section presents only the basic configuration for Vocalcom Hermes required for integration with NetVanta ECS. It is expected that customer installation and configuration will be performed by Vocalcom.*

To configure Vocalcom Hermes for integration with NetVanta ECS, follow these steps:

Step 1: Log in to Vocalcom Hermes as an Administrator

To log in to Vocalcom Hermes as an administrator, follow these steps:

1. Using an Internet browser, navigate to the following URL:

   http://<*Vocalcom Hermes IP Address*>/hermes_net_v4/admin/launcher/launcher.aspx

   The <*Vocalcom Hermes IP Address*> variable is the IP address of the Vocalcom Hermes server.

2. In the login window that appears, enter the administrator login in the **User ID** field and the administrator password in the **Password** field. The default administrator User ID is **admin** and the default administrator password is **vocalcom**.

3.   Select the **Applications** tab, the select **Administrator (ROOT)**.

4.   The **Hermes.net Administration** menu will appear.

Step 2: Add a DID Number for the Inbound Campaign

A DID number matching the one configured in the NetVanta ECS dial plan must be added to the Hermes **DID** list. To do this, follow these steps:

1.   In the **Company/site choice** section of the **Hermes.Net Administration** menu, select **ROOT**.
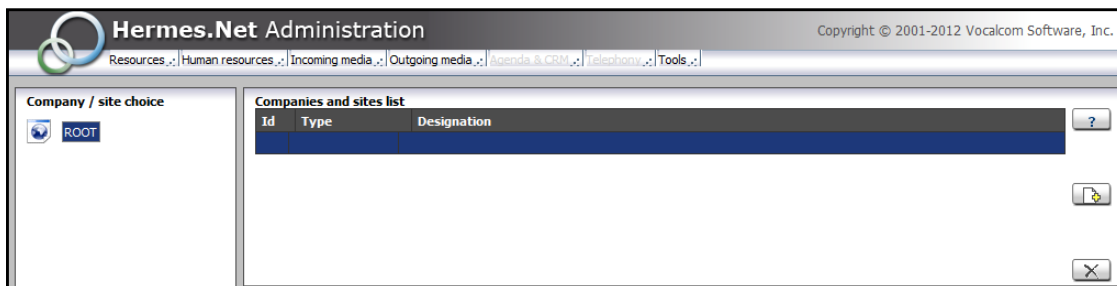
2. In the **Incoming media** drop-down menu, select **DID configuration** under the **Inbound calls** heading to display the DID list.
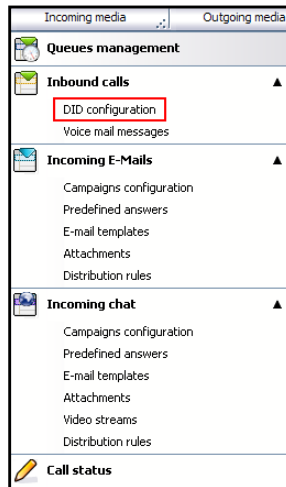
3. In the **DID list** section, select the [button] button to add a DID. The **Add one or range DID** menu will appear.
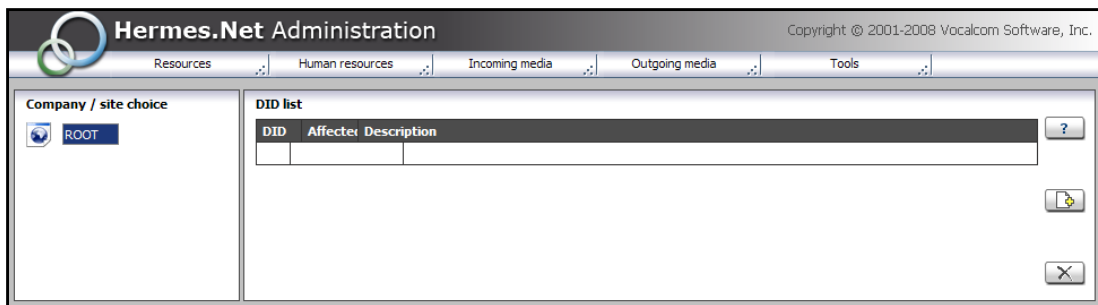
4. In the **Start Range of DID** and **End range of DID** fields of the **Add one or range DID** menu, enter the modified DID number sent to Hermes from NetVanta ECS that was configured in *Add a Dial Plan Entry for Vocalcom Hermes Call Center on page 9*. Then, select the **OK** button to create the DID number entry.
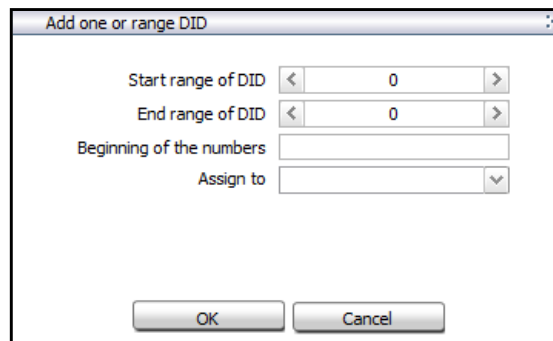
Step 3: Create a Site

A site must be created in order to create an agent queue and ACD extensions on Hermes. To create a site, follow these steps:

1. In the **Resources** drop-down menu of the **Hermes.Net Administration** menu, select **Companies/Sites.**
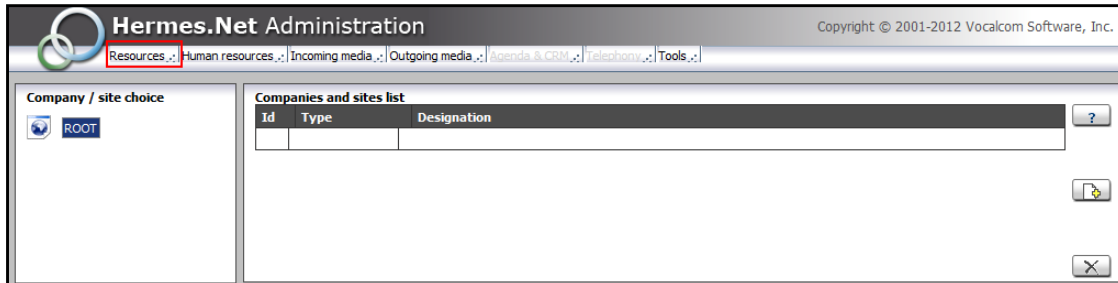
2. In the **Companies and sites list** section, select the ⬚ button to create a new site.
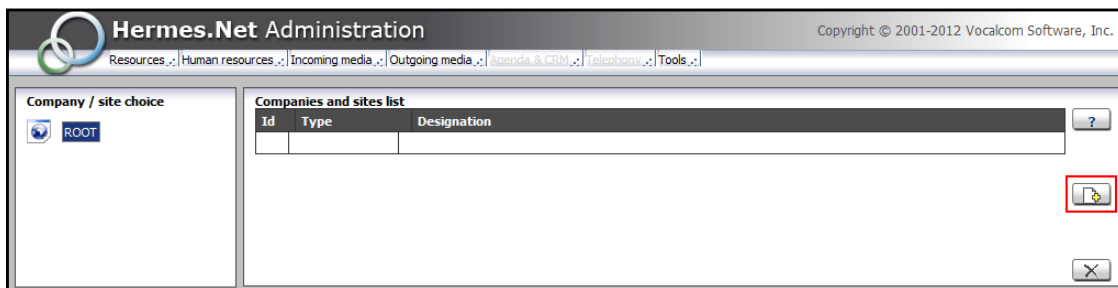
3. On the **General** tab, enter the desired name for the site in the **Designation** field.
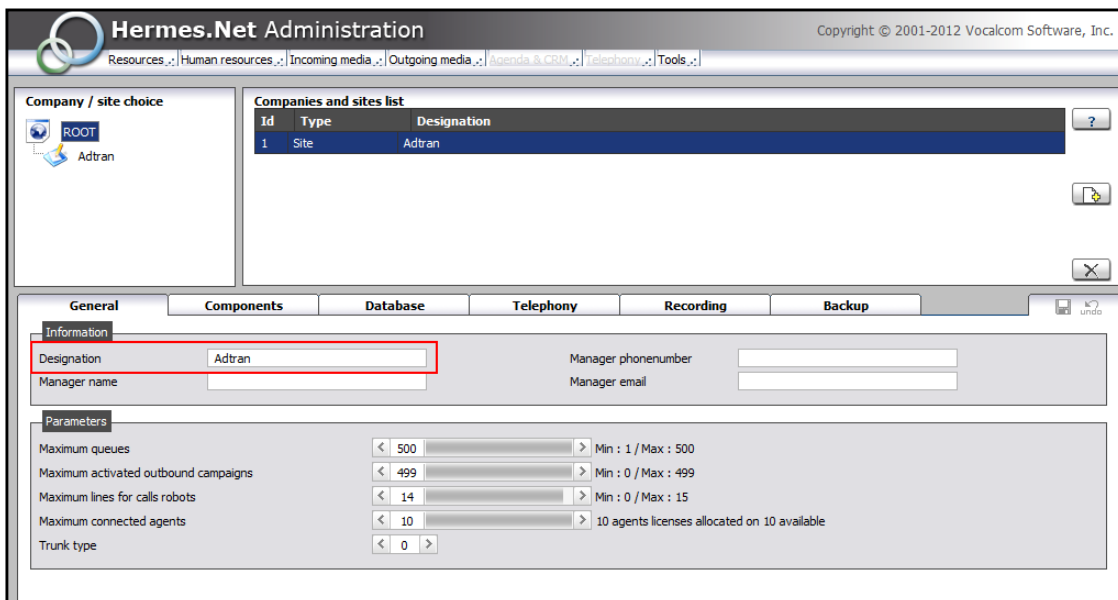
Step 4: Assign an Inbound Campaign to the Site

An inbound campaign is a phone number to which customers call in order to speak with a call center agent. The inbound campaign is linked to a queue that directs the inbound call to an available agent. In this integration, the DID for the inbound campaign should be the DID number created in *Add a DID Number for the Inbound Campaign on page 12*. The existing inbound campaign can be assigned the DID number or a new inbound campaign can be created.

> *NOTE*   *An inbound campaign is composed of many different components, including interactive voice recognition, welcome messages, campaign hours, and overflow procedures. The configuration of these features is beyond the scope of this document.*

To create a new campaign and assign the DID number to it, follow these steps:

1. In the **Company/site choice** section of the **Hermes.Net Administration** menu, select the site you created in *Create a Site on page 14*.
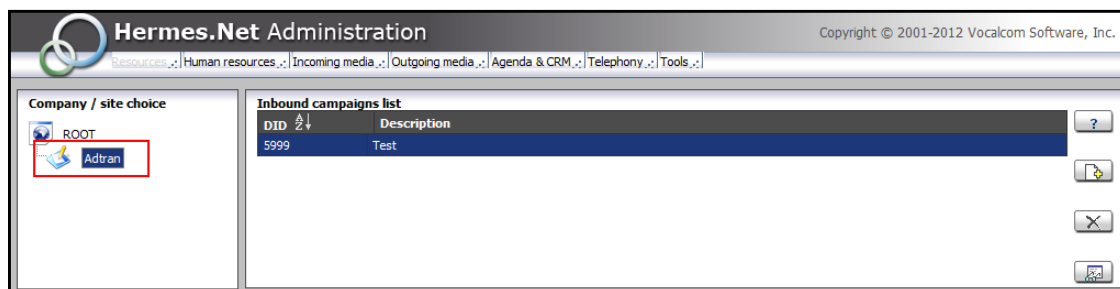
2. In the **Incoming media** drop-down menu, select **Campaigns configuration** under the **Inbound calls** heading to display the Inbound campaigns list.

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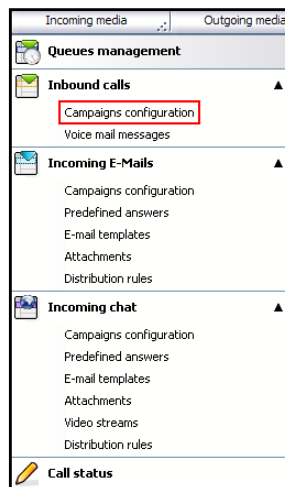
3. In the **Inbound campaigns list** section, select the [ ] button to create a new inbound campaign.
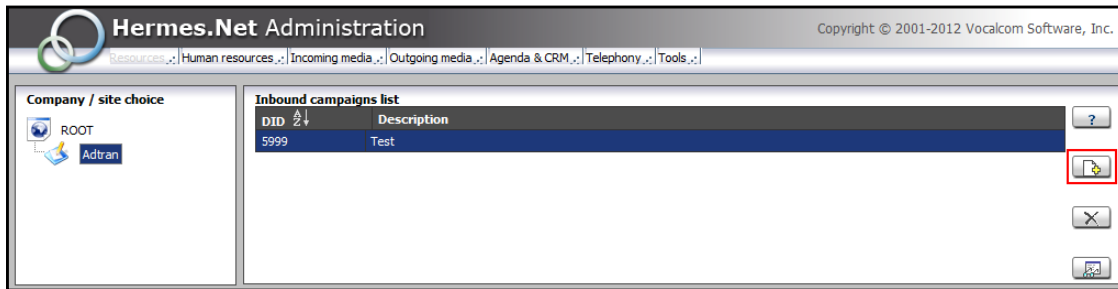

4. In the **Add a new campaign menu** that appears, use the **DID** drop-down menu to select the DID number created in *Add a DID Number for the Inbound Campaign on page 12*. Enter an optional description in the **Description** field, and select **OK**.
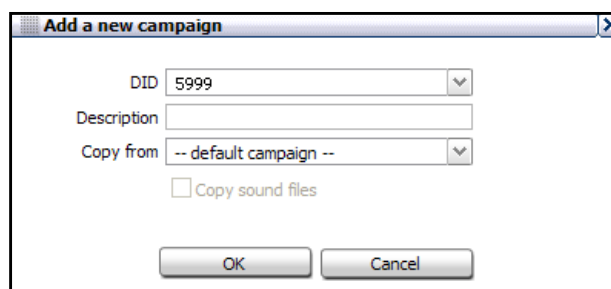
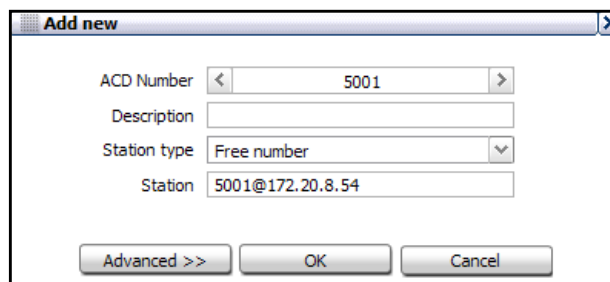## Step 5: Configure ACD Extensions for Agents and Supervisors

For each agent and supervisor, an ACD extension must be created on the system. The station of each ACD extension must also be configured with the NetVanta ECS SIP identity of the agent and the IP address of the NetVanta UC Server computer. To configure an ACD extension for an agent or supervisor, follow these steps:

1. In the **Company/site choice** section of the **Hermes.Net Administration** menu, select the site you created in *Create a Site on page 14*.
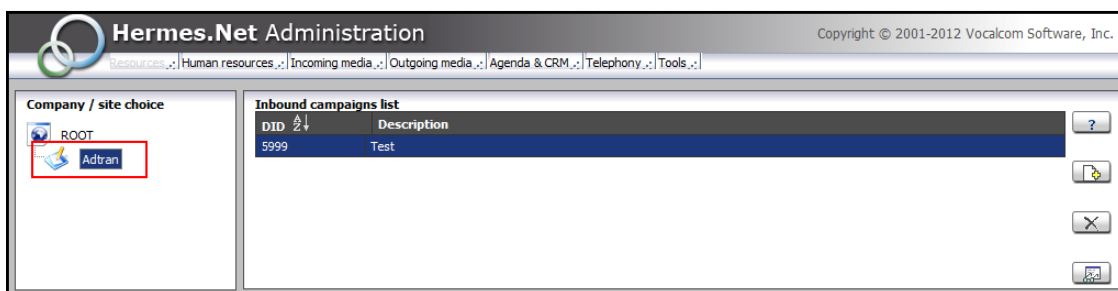
2. In the **Telephony** drop-down menu, select **ACD Extensions** to display the **ACD Extensions list**.

3. In the **ACD Extensions list** section, select the [button] button to create a new ACD extension. The **Add new** menu appears.
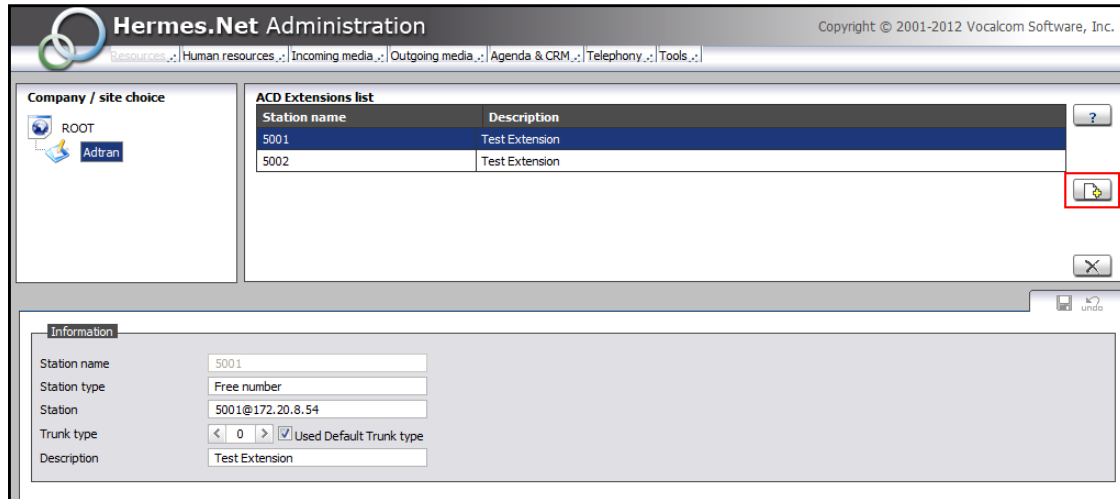
4. In the **ACD Number** field of the **Add new** menu, enter the NetVanta ECS SIP identity for the agent or supervisor. Enter a description for the ACD extension in the **Description** field. Use the **Station** type drop-down menu to select **Free number**. In the **Station** field, enter the NetVanta ECS SIP identity for the agent or supervisor and IP address of the NetVanta UC Server computer in the format *<SIP identity>@<IP address>* (for example, **5001@172.20.8.54**). Then, select **OK**.

Step 6: Associate a Queue to the DID Number

Queues direct call flow to incoming campaigns to available agents. To link incoming calls to the DID number to agents, a queue must be created. To create a queue, follow these steps:
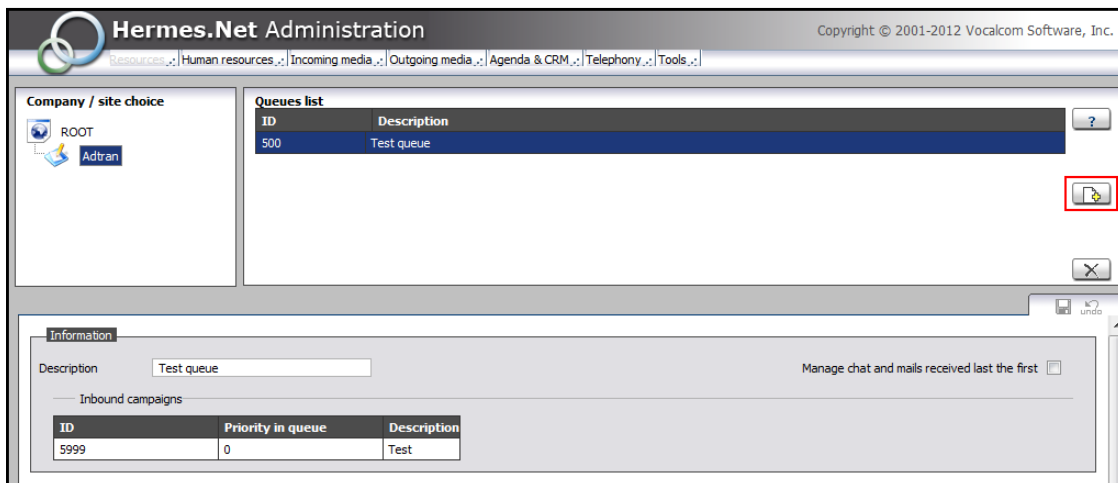
1. In the **Company/site choice** section of the **Hermes.Net Administration** menu, select the site you created in .
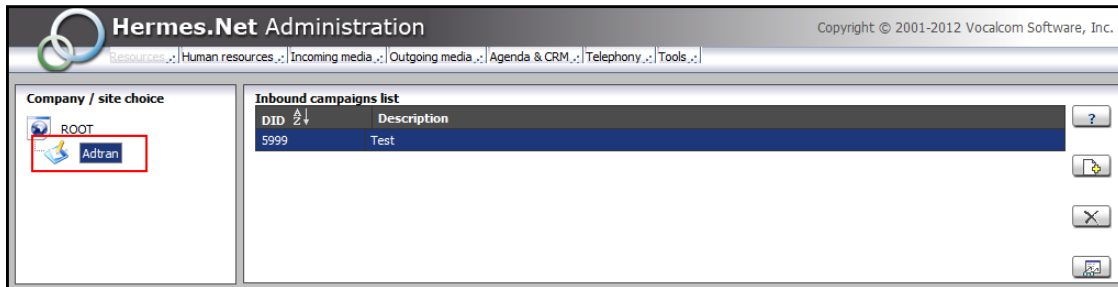
2. Select **Queues management** in the **Incoming media** drop-down menu to display the queues list.
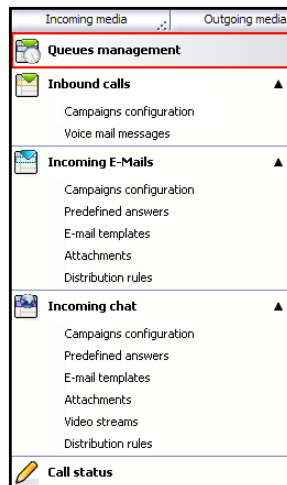
3. In the **Queues list** section, select the ⬜ button to add a new queue.

4. Associate the queue with the inbound campaign created in *Assign an Inbound Campaign to the Site on page 15*. This inbound campaign should use the DID number for incoming calls from NetVanta ECS (refer to *Add a DID Number for the Inbound Campaign on page 12*). Also, enter a description for the queue in the **Description** field.

Step 7: Assign Agents to the Queue

After configuring the queue, agents can be assigned to the queue and given rights to perform actions in the queue. To assign agents to the queue, follow these steps:
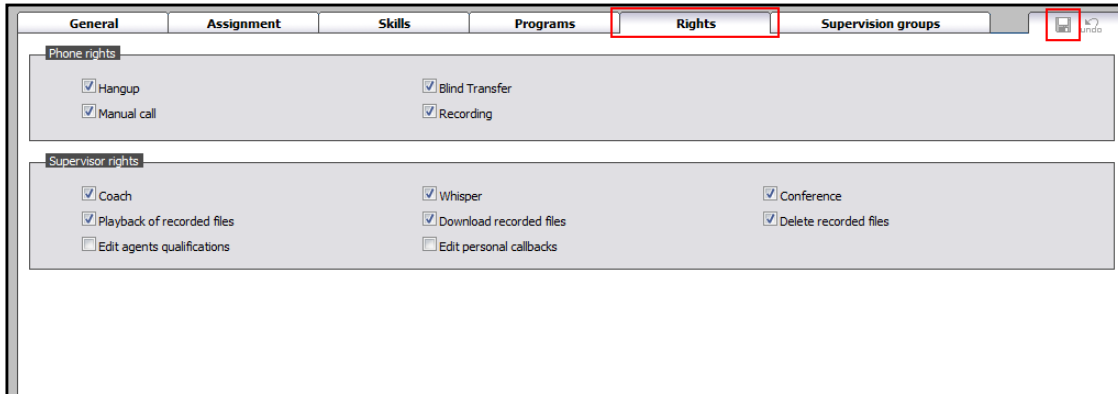
1. In the **Company/site choice** section of the **Hermes.Net Administration** menu, select the site you created in *Create a Site on page 14*.
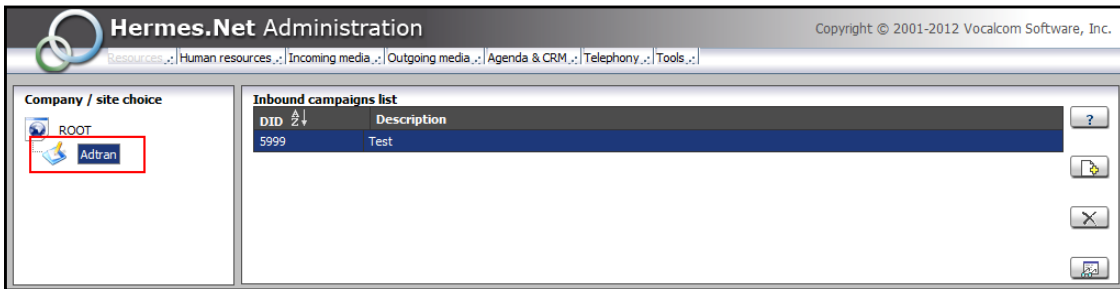
2. In the **Human resources** drop-down menu of the **Hermes.Net Administration** menu, select **Agents**. The **Agents list** menu will appear.

3. In the **Agents list** menu, select an agent, then select the **Assignment** tab.
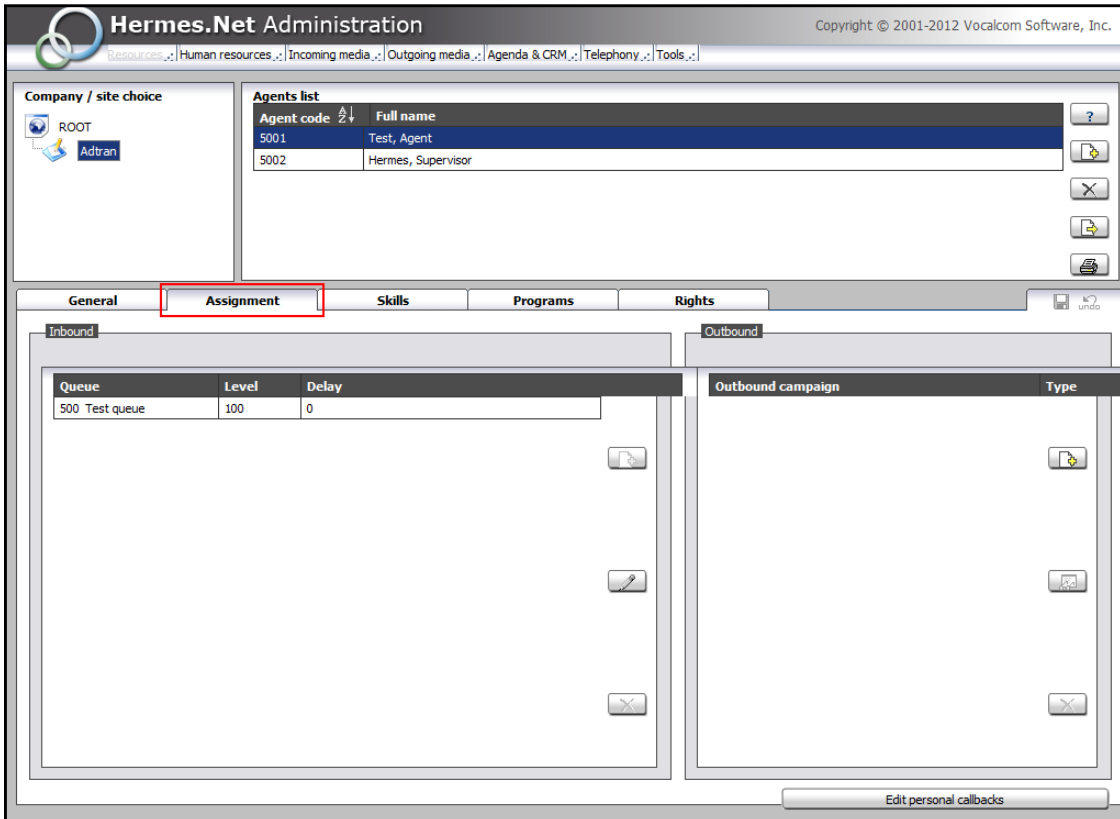
4. In the **Assignment** tab, use the [ ] button in the **Inbound** column to add the agent to the inbound queue defined in *Associate a Queue to the DID Number on page 18*. Then, select the **Rights** tab to define the agent's rights to telephony functions and programs on the queue.

5. In the **Rights** tab, ensure that **Blind Transfer**, **Recording**, **Coach**, **Whisper**, and **Conference** are checked. Then, select the **Save** button to save the configurations.