

Title: Integration Notes for UNIVERGE® SC (Sphericall) Server**Document: IN000038****Date: March 2009**

Overview

DuVoice DV2000 & DV4 software provides the UNIVERGE SC (Sphericall) system guest messaging, staff messaging, wakeup call functionality and a PMS interface. 3rd party hospitality call accounting may also accompany the DuVoice application on the same server.

Theory of Operation

The voice messaging is done by connecting gateway analog station ports to a Dialogic voice card ports on the DuVoice server and an SMDI serial link from the Sphericall PBX PC to serial ports on the DuVoice server (everything may also run on the same server). The PMS room telephone control and guest names are done via IP through the Sphericall Web Services. Windows based call accounting software for hospitality application such as Metropolis Profit Watch may also reside on the same server running the DuVoice software.

Features Supported

Message Lights	Yes
Fwd to a personal greeting RNA	Yes
Fwd to a personal greeting Busy	Yes
Fwd to a personal greeting DND	Yes
Different Busy Greeting	Yes
Auto Login to a mailbox	Yes
Trunk ID Multiple Tenant	
Voice Mail Transfer Button to a mailbox	Yes
Record a call	
DID fax	Yes
Caller ID with message	Yes
Trunk to trunk transfer (unsupervised)	
LS Disconnect	Yes
Tone Disconnect	Yes
Supervised Transfers	
Call Screening	
Caller Queuing	

Hospitality Features Supported

PMS Integration	Yes
Room phone restricted on checkout	Yes
Wakeup Calls	Yes
Guest name change	Yes
Failed Wakeup alerting	Yes
Room Clean-Room Dirty Status	Yes

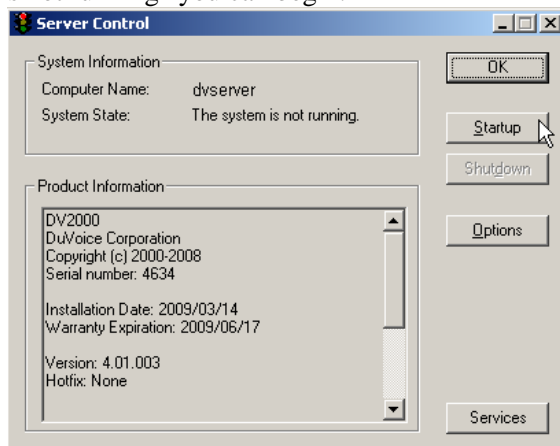
PBX Requirements

The SMDI support PBX is required to have the following parts to integrate with the DuVoice Voice Mail:

- SMDI serial com port
- Serial cable with a DB-9 Null cable to connect to duvoice port.
- One analog extension must be connected to each of the voice mail ports.
- LAN connectivity to the PBX for hospitality features and Internet connection for remote administration and support.
- Static IP address assigned to the DuVoice system when used as the Hospitality interface to PMS systems.

Programming SMDI

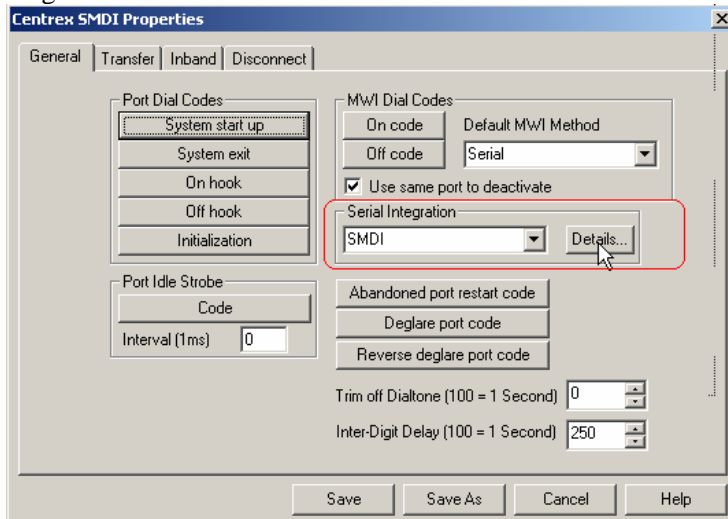
1. **Stop the DuVoice service using DuVoice SERVER CONTROL.** Once the server control says that “the system is not running” you can begin.



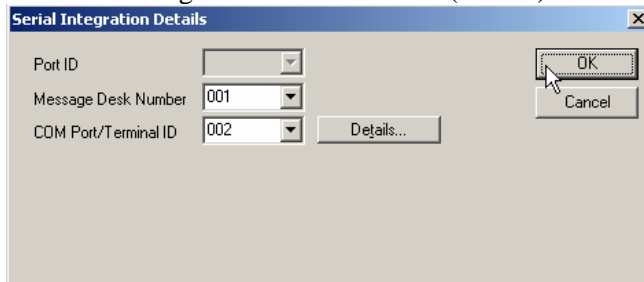
2. **Confirm DuVoice ports are set to one of our SMDI integration types.**
 - a. Open the DuVoice system configuration program by going to **START>PROGRAMS>DUVOICE** and select **SYSTEM CONFIGURATION** (icon of black phone) use password of DuVoice.
 - b. With the DuVoice system configuration program opened you will see your assigned voice ports, in order for this integration to work all ports must be set as **NECUnivergeSC** or **NECSPHERE SMDI**. You will be able to select the pbx integration file at the initial setup wizard or you can change it manually using the online DuVoice manual located at <https://manual.duvoice.com>

3. **Configure DuVoice SMDI com port settings** (baud, parity, stop bit etc)

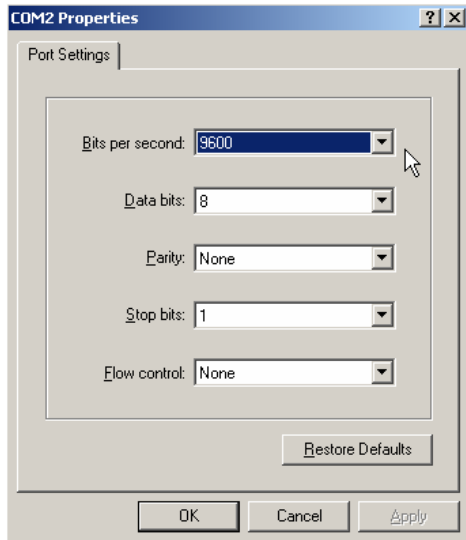
- a. If not already opened, please open the DuVoice SYSTEM CONFIGURATION program and use password of DuVoice.
- b. Click on INTEGRATIONS at the top of the window and select TEMPLATES.
- c. Select the template file you have loaded on your ports and select EDIT to open integration settings. On the General Tab of the integration select the DETAILS button under the serial integrations section



- d. Once opened you will change the computers COM port that you will be connecting to the PBX's SMDI port. You can also set the message desk number at this time, however most systems can be left with message desk number of 001 (default)



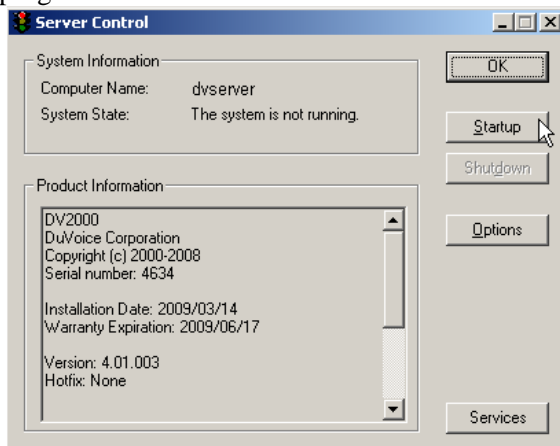
- e. Once you have selected the COM port to be used you will need to set the ports setting to match what the PBX will be sending to include Baud, data bit, parity, stop bit, and flow control. The defaults are 9600, N, 8, 1 with no flow control. To confirm or change the port setting select DETAILS to the right of the com port.



- f. Once open you can review or edit any of the settings. Reminder that the DuVoice COM port is a DB-9 RS232 that typically uses a null adapter or null cable between the PBX and DuVoice for SMDI integrations.
- g. After setting or confirming your port settings save and close the port settings and integration editor and return to the opening window of the SYSTEM config window and close the program.

4. Start DuVoice server to capture SMDI packets

- a. Now that you have confirmed or changed you COM port setting you will need to start the DuVoice services to allow you to capture the SMDI packet.
- b. Make sure all DuVoice programs are closed and open the DuVoice SERVER CONTROL program located START>PROGRAMS>DUVOICE>SERVER CONTROL (stop light icon)

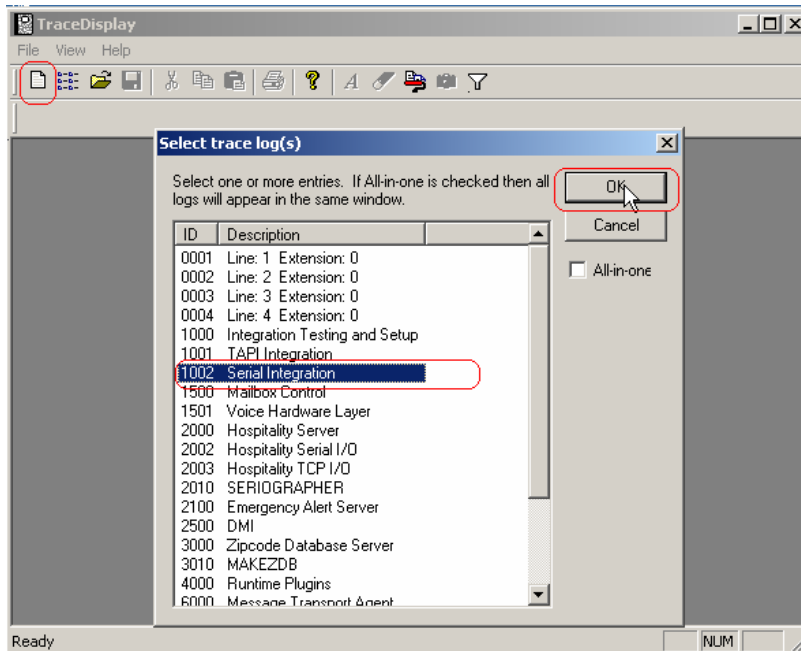


- c. When opened simply select the Startup button to start the services. Once the system status shows “The system is running” (green stop light). You can also use the PORT ACTIUIVITY VIEWER program to validate the system is up and idle as each port will display an IDLE status.

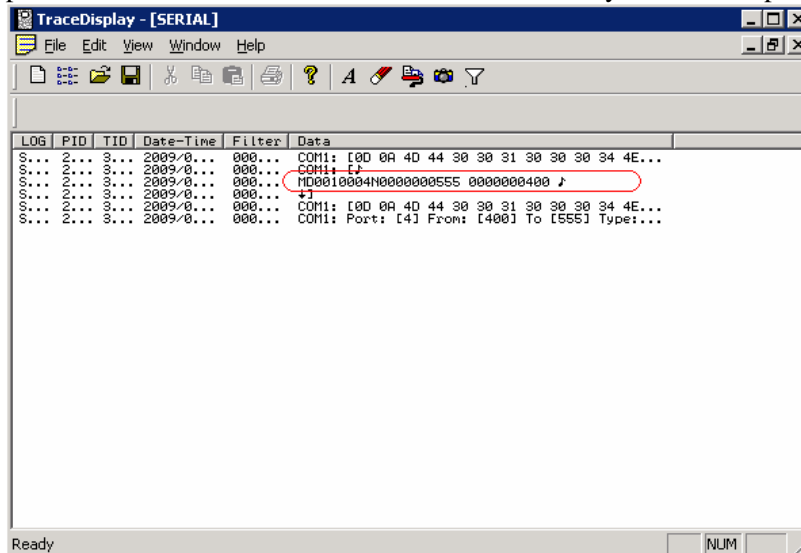
5. Run DuVoice Trace Display program to capture SMDI packets

- a. Open the DuVoice TRACE DISPLAY program located START>PROGRAMS>DUVOICE>SUPPORT>TRACE DISPLAY.

- b. Once opened select the open icon located in the top right of the window and select the serial integration log to open.



- c. Once the trace display is tracking SMDI serial packets you will simply call the DuVoice Hunt group/Voicemail extension group. Many PBX systems only produce SMDI packets when calling the voicemail group and will not produce SMDI packets when ports are called directly.
- d. A second before the PBX rings one of the DuVoice ports the SMDI packet should be see on the beginning or before the first ring. You will need to take note of the Message Desk ID of the packet as well the Port ID in the packet. You will also need to follow the Understanding SMDI packets section at the bottom of this document once you receive a packet.

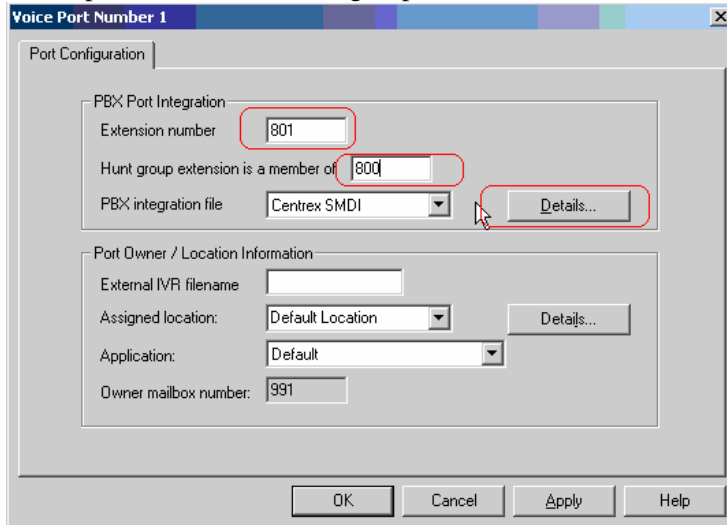


6. Stop DuVoice service once SMDI packet is captured.

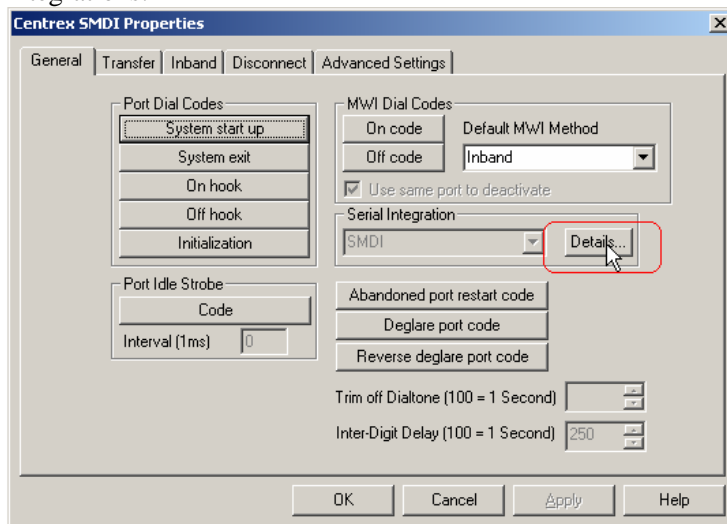
- a. Follow Step 1 in this document.

7. Configure each DuVoice port to match the SMDI MESSAGE DESK ID

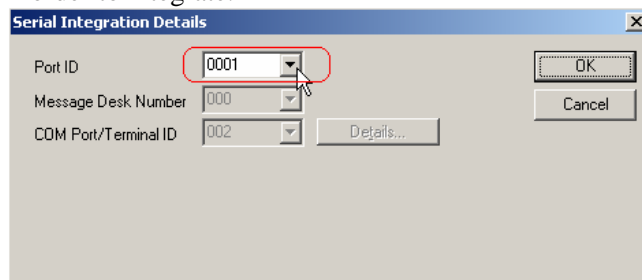
- a. Open the DuVoice SERVER CONTROL program using password of DuVoice.
- b. Once you will double click on port 1 to open its properties
- c. Once the properties are open you will need to label the ports extension (PBX extension connected to that port) and also the hunt group/voice mail extension that the port belongs to.



- d. Now select the upper DETAILS button located in the PBX Port Integrations section to open the integration setting used on that port.
- e. Next click on the DETAILS button located under the Serial Integration section of the General tab. Note: you can not change the serial integration type when accessing the ports specific integrations.



- f. Once opened you can change or confirm the ports ID that the SMDI packet will match to whenever the port received a call and a SMDI packet. Remember that each port will have a different Port ID from the SMDI packet and it must match exactly to the DuVoice ports settings in order to integrate.

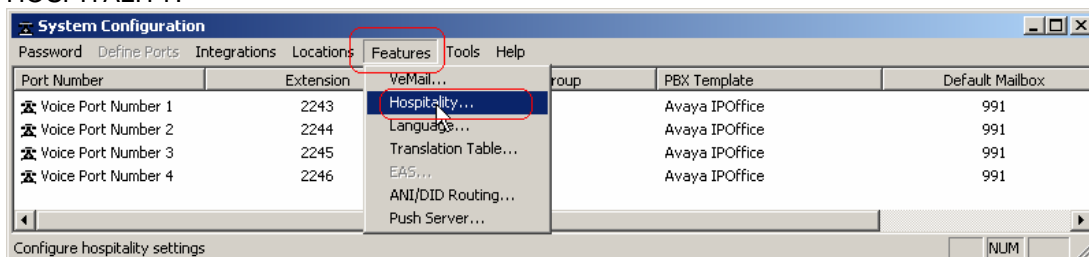


- g. Once the ports ID is configured or confirmed select the OK button to save and close.
- h. You will now be at the integration for that port, select OK to save and close. Again select OK to save and close the voice ports numbering and configuration.
- i. Repeat these steps (step 7) for each and every port. Remember to confirm the SMDI packets received. In most cases the Default Message Desk ID will be 001 and the voice ports SMDI Port ID will be 0001 for port 1 and 0002 for port 2 etc. these are the defaults but may need to be changed and should always be double checked.

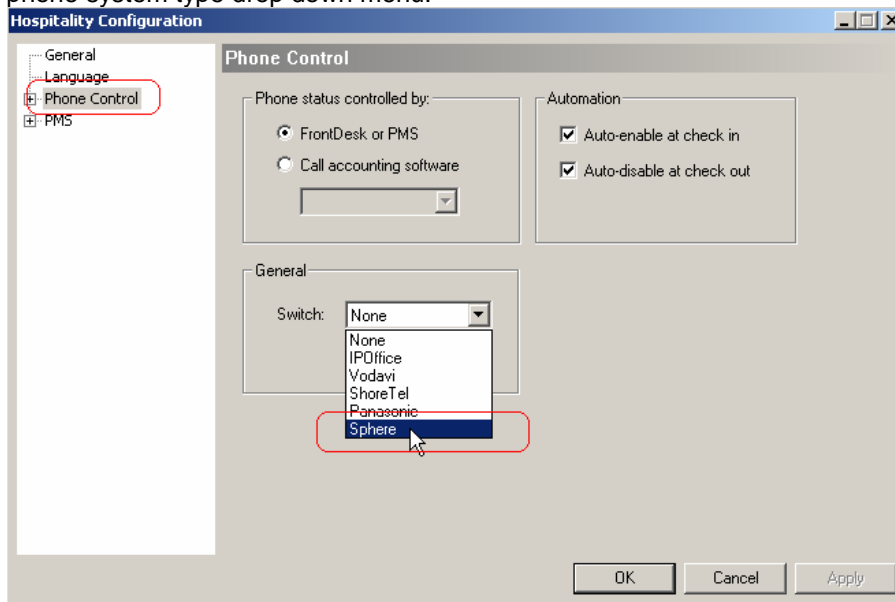
Spherical Phone controls setup for hospitality

The hospitality configuration menu is located in the DuVoice System Configuration program. All information are pertaining to the Spherical hospitality config only, the Property management interface and other hospitality options are available online at <https://manual.DuVoice.com>.

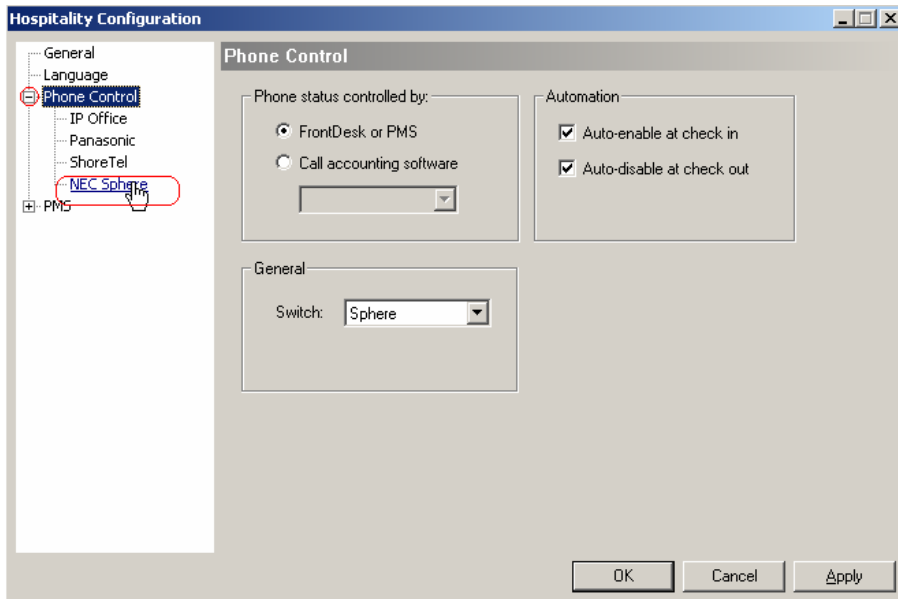
1. After opening the DuVoice System configuration program select Features from the top menu and select HOSPITALITY.



2. With the hospitality menu opened click on the Phone Control section and select NEC Sphere from the phone system type drop down menu.



3. Once you have set the Phone control to Spherically you will need to expand the menu under the phone control options and select the NEC Sphere.



4. Configure the DuVoice for NEC Sphere to allow duvoice to log into the Sphere server and change the names of guests extensions as well change there User groups on a PMS or manual command. If any of the first three settings (IP, Password & username) are left blank, then the interface to the Sphericall will be considered disabled.

REMINDER: The Sphericall Server Must have Microsoft DOT NET 2.0 and the DuVoice ShpereIO.exe installed on the NEC Server or the duvoice system will not be able to change names on guest phones or change there User Groups.

Sphericall Server IP and login info

- o **Sphericall Server name or IP**—server name or IP address of the Sphericall server, and optional port address for the administrative interface.
- o **Password**—password to use during logon.
- o **Username**—username to logon as when performing any administrative actions. This name is configured in the Sphericall system. You must add the domain name in front of the admin ID, for example: necshow/spheresupport, where: spheresupport is the username.

User Group Restrictions

The Sphericall system imposes phone restrictions via user groups; use these settings to specify which user group on the Sphericall to assign the given room extension in each case.

- o **Checked In**—the room mailbox/extension will be assigned to this user group at check-in, if the [Auto-enable at check-in](#) setting is enabled.
- o **Checked Out**—the room mailbox/extension will be assigned to this user group at check-out, if the [Auto-disable at check-out](#) setting is enabled.

These group names are case-sensitive; this means that the name "UNRESTRICTED" and the name "Unrestricted" refer to two different groups, **not** the same group.

If you blank out either group name, it will be reset to the default value. For *Checked in*, the default group name is UNRESTRICTED; for *Checked out*, it is RESTRICTED.

Advanced Settings

Not all PMS integrations will send phone restriction states to the DV2000/DV4. So while it can change phone restriction status at check-in and check-out, it may not be able to specify restrictions at the finer-grained level implied by these advanced settings:

- **Internal**—group that limits the extension to internal station-to-station calls only
- **Local**—group that limits the extension to local or internal calls only
- **Assisted**—group that allows operator-assisted long distance calls only.
- **Unrestricted**—group that places the least restrictions on the types of calls that can be made. Overrides the *Checked In* setting.
- **Restricted**—group that places the most restrictions on the types of calls that can be made. Overrides the *Checked Out* setting.

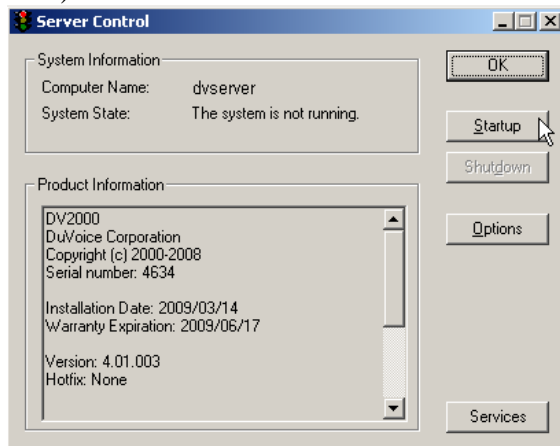
Warning: If the group name specified does not exist on the Spherical, the phone settings *will not* be changed and the Spherical *does not* return an error message that it failed

The screenshot shows a 'Hospitality Configuration' window with a tree view on the left containing 'General', 'Language', 'Phone Control' (with sub-items 'IP Office', 'Panasonic', 'ShoreTel', 'NEC Sphere'), and 'PMS' (with sub-items 'Serial', 'TCP/IP'). The 'NEC Sphere' configuration panel includes:

- Fields for 'NEC Sphere Server name or IP', 'Username', and 'Password'.
- 'User Group Restrictions' section with the note 'All fields are case sensitive.' and fields for 'Checked in' (UNRESTRICTED) and 'Checked out' (RESTRICTED).
- 'Advanced Settings' section with the note 'Not all PMS integrations support these advanced settings.' and fields for 'Internal' (UNRESTRICTED), 'Local' (UNRESTRICTED), and 'Assisted' (UNRESTRICTED). The 'Internal' field has a tooltip: 'Unrestricted - Overrides checked in setting.' The 'Local' field has a tooltip: 'Restricted - Overrides checked out setting.'
- 'OK', 'Cancel', and 'Apply' buttons at the bottom.

5. Start DuVoice server to capture SMDI packets

- a. Now that you have confirmed or changed your Spherical settings you will need to start the DuVoice services to begin testing.
- b. Make sure all DuVoice programs are closed and open the DuVoice SERVER CONTROL program located START>PROGRAMS>DUVOICE>SERVER CONTROL (stop light icon)



Testing:

Integrations:

1. Create one guest mailbox and one standard mailbox matching the test station you will use to call and cover/forward to voicemail and leave a message as well log into your mailbox to retrieve messages.
2. call each port directly to identify correct port extension label
3. call hunt group to validate SMDI packet received
4. create mailbox to match test RNA extension
5. Call test station set to forward to DuVoice hunt group
 - a. let call cover to VM and confirm correct greeting
 - b. Leave message and confirm MWI is turned on
6. From the test extension call the DuVoice hunt group
 - a. Confirm you are asked for password. Default pw=1234
 - b. Log in and review the message just left
 - c. Confirm the message ends without any tones or long silence recorded at tail end of message.
 - d. Confirm MWI light is turned off

Spherical Phone control and name changes

1. Open the DuVoice Front Desk program to allow you to manually check-in/out a room and change the guest's name. Front Desk is located START>PROGRAMS>DUVOICE>HOSPITALITY
2. Log into your Spherical and confirm that the Guest test extension has the correct User group assigned. Should be in the checked out group before beginning.
3. Right click on the Test room's mailbox in the DuVoice Front Desk program and select Check in.
4. You will see a Check mark appear next to the mailbox number, this means that duvoice has completed the check in process.
5. Now right click on the test guest mailbox in the duvoice Front Desk program and select Name change. Set the name to anything other than what was on the extensions prior to this test.

6. Now log into your Spherical admin software and confirm that the test extension has the new name and the user group has changed.

Understanding a SMDI packet received

Call details - These message types give items of information concerning calls which the DuVoice Server receives: Sample: MD0010009A1111 5555

```
MDgggmmmmmxnnnnnnn(SP)yyyyyy(SP)
MDgggmmmmmxnnnnnnn(SP)(SP)
MDgggmmmmmx(SP)YYYYYYY(SP)
```

where:

```
ggg          = message desk number (001-063)
mmm         = message DuVoice Port ID (0001-2047)
nnnnnnnnn  = forwarding from station number
YYYYYYYYYY = calling station number
x          = type of call
            ▪ where D=Direct Calls, A=Forward All Calls, B=Forward Busy
              Calls, N=Forward No Answer Calls
```

For example, Station B (ext 1111) forwards all calls to the Message Desk. Station A (ext 5555) calls Station B and forwards to Message Desk number 001, PORT ID 009. The switch sends the following message to the DuVoice Server:

Message Desk #	Port ID	call type ID	Called station	Space	Caller ID
MD001	0009	A	1111		5555

For Technical assistance please calls our support center at 425-250-2393 we are opened Monday to Friday from 8:00am to 5:00 PM pacific time. You may also research our manual or online training videos at <https://support.duvoice.com>