



Avaya Solution & Interoperability Test Lab

Application Notes for Pridis BV Connecsy R6.1 with Avaya Aura® Communication Manager R6.3 - Issue 1.0

Abstract

These Application Notes describe the compliance testing performed between Pridis BV Connecsy and Avaya Aura® Communication Manager. Connecsy is a PC-Based IP attendant console application which allows an operator to receive, make and redirect calls via a graphical user interface as well as monitor telephone activity within the enterprise.

Readers should pay attention to Section 2, in particular the scope of testing as outlined in Section 2.1 as well as any observations noted in Section 2.2, to ensure that their own use cases are adequately covered by this scope and results.

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

Pridis Connecsy is a software application that serves as an attendant console. Pridis Connecsy can be used with an Avaya IP telephone in Telecommuter mode or alternatively using the PC resources in Roadwarrior mode. Pridis Connecsy allows an operator to receive and redirect incoming calls. Pridis Connecsy allows the operator to monitor the state of telephones controlled by Avaya Aura® Communication Manager, providing the ability to determine which telephones are engaged in a call. Pridis Connecsy also provides the ability to see which telephones have been forwarded to voicemail, thus allowing the operator to intelligently redirect calls to telephones that are not busy and have not been forwarded. In telecommuter mode, Pridis Connecsy has its own telephone extension, but uses a second Avaya IP telephone that serves as a conduit for bidirectional speech. Since this second telephone is dedicated to this purpose, it is unavailable for other uses while Connecsy is in use. In road-warrior mode, Pridis Connecsy registers to Avaya Aura® Communication Manager directly in the manner of an IP Softphone and no dedicated deskphone is required. Speech and call control all travels through the attendant PC and USB headset.

2. General Test Approach and Test Results

The general test approach was to validate the ability of Connecsy to correctly and successfully handle calls in a variety of call handling scenarios.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

Interoperability compliance testing consisted of successful handling of a variety of call scenarios as follows

- Answer Inbound Internal/External Calls.
- Make Internal/External Calls.
- Attended Transfer.
- Blind Transfer.
- Hold/Retrieve.
- Call Queued display.
- Dial from Telephone directory.
- Go Busy.
- Night Service activation.
- Send DTMF tones.
- Call Split.
- Redial.
- BLF Verification.
- Conference.
- Priority Calling.

2.2. Test Results

All test cases were executed successfully.

2.3. Support

Support for Pridis Connecsy is available as follows:

Pridis B.V.

Berencamperweg 6B

3861 MC Nijkerk

The Netherlands

Phone: +31 (0)33 2475700

e-mail: info@pridis.com

web: www.pridis.com

3. Reference Configuration

The configuration used in testing was made up of Avaya Aura® Communication Manager running on a VMware virtual machine with an Avaya G430 Media Gateway. Pridis Connecsy was hosted on a Windows PC and testing was carried out using both Telecommuter and Roadwarrior modes.

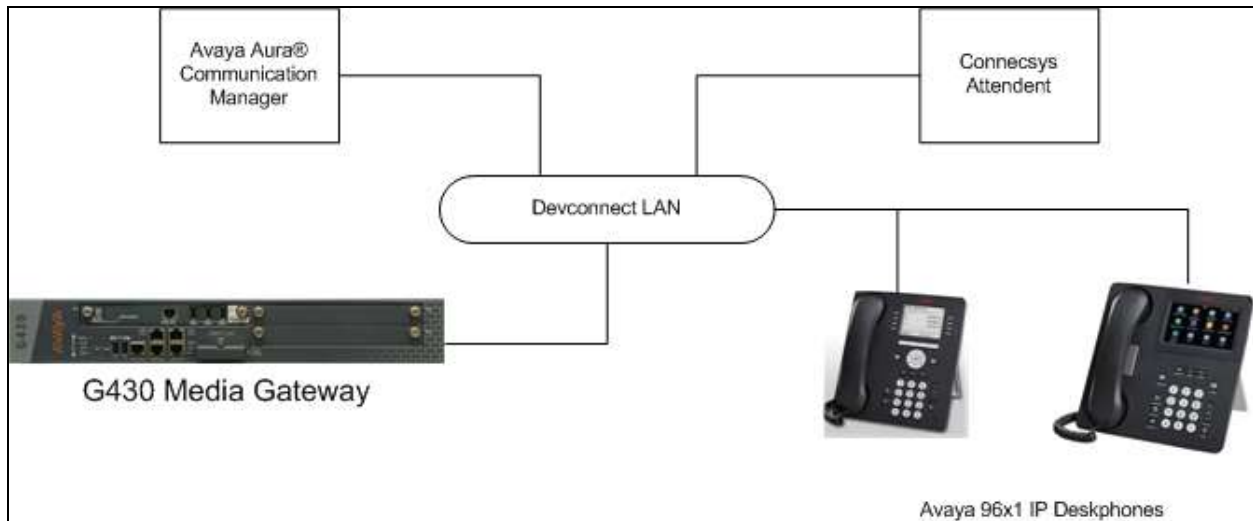


Figure 1: Avaya Aura® Communication Manager with Pridis Connecsy

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on a VMware Virtual Machine	CM 6.03.0.124.0-22899
Avaya G430 Media Gateway	37.21.0
Avaya 9611G SIP	2.6.14.5
Avaya 9611G H.323	6.6029
Pridis Connecsy	6.1

5. Configure Avaya Aura® Communication Manager

The configuration and verification operations illustrated in this section were all performed using the Communication Manager System Administration Terminal (SAT). It is assumed that the relevant dialplan, hunt groups, stations, trunks and call routing have been configured.

The information provided in this section describes the configuration of Communication Manager for this solution. For all other provisioning information such as installation and configuration please refer to the product documentation in **Section 9**.

5.1. Configure Dialplan

From the SAT command line use **change dialplan analysis** and configure the **Call Type** for **Total Length 1** and **Dialed String 0** as **fac**.

change dialplan analysis			DIAL PLAN ANALYSIS TABLE			Page 1 of 12		
			Location: all			Percent Full: 2		
Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type
0	1	fac						
1	4	ext						
2	7	udp						

5.2. Configure Attendant Feature Access Code

From the SAT command line use **change feature-access-codes** and configure the **Attendant Access Code** as **0**

change feature-access-codes		Page	1 of 10
FEATURE ACCESS CODE (FAC)			
Abbreviated Dialing List1 Access Code:			
Abbreviated Dialing List2 Access Code:			
Abbreviated Dialing List3 Access Code:			
Abbreviated Dial - Prgm Group List Access Code:			
Announcement Access Code: *10			
Answer Back Access Code: *24			
Attendant Access Code: 0			

5.3. Configure Main Incoming Number

To route external calls to the Attendant use **change inc-call-handling-trmt** for the trunk group calls come in on. In this example calls come in over **trunk-group 11**. Enter the **Number Len** expected and the **Number Digits**. **Del all** and Insert the Attendant Feature access code administered.

change inc-call-handling-trmt trunk-group 11					Page 1 of 3	
INCOMING CALL HANDLING TREATMENT						
Service/	Number	Number	Del	Insert	Per Call	Night
Feature	Len	Digits			CPN/BN	Serv
tie	11	0131827	all	0		

5.4. Configure Attendant

Use the **add attendant #** command where # is the attendant number. In this test attendant 1 was configured. For IP Attendant consoles the **Type** must be **302**. Enter a descriptive **Name**, enter a valid **Extension** you want to use, **Console Type** as **principal** and a security code that will be used by Connecsys to log in.

change attendant 1		Page 1 of 4	
ATTENDANT CONSOLE 1			
Type: 302		Name: ConnecsysAtt	
Extension: 827-6000		Group: 1	Auto Answer: none
Console Type: principal		TN: 1	Data Module? n
Port: S00065		COR: 1	Disp Client Redir? n
Security Code: 123456		COS: 1	Display Language: english
		H.320 Conversion? n	
DIRECT TRUNK GROUP SELECT BUTTON ASSIGNMENTS (Trunk Access Codes)			
Local Remote		Local Remote	
1: 701	701	5:	9:
2: 711	711	6:	10:
3: 776	776	7:	11:
4: 766	766	8:	12:
HUNDREDS SELECT BUTTON ASSIGNMENTS			
1:	5:	9:	13:
2:	6:	10:	14:
3:	7:	11:	15:
4:	8:	12:	16:
			17:
			18:
			19:
			20:

On Page 3 configure the Feature buttons as shown below

change attendant 1	ATTENDANT CONSOLE	Page 3 of 4
FEATURE BUTTON ASSIGNMENTS		
1: split	13: class-rstr	
2: dont-split	14: intrusion	
3: goto-cover	15:	
4: override	16:	
5: priority	17: serial-cal	
6: hold	18: em-acc-att	
7: trk-id	19: forced-rel	
8: cdr1-alm	20: cw-ringoff	
9: atd-qcalls	21: in-ringoff	
10: last-numb	22: re-ringoff	
11:	23: night-serv	
12:	24: pos-busy	

5.5. Configure Console Parameters

Use **change console-parameters** to allow the Attendant to show if an extension has Send All Calls (SAC) activated. On Page 2 set **SAC Notification** to **y**

change console-parameters	CONSOLE PARAMETERS	Page 2 of 4
TIMING		
Time Reminder on Hold (sec): 30	Return Call Timeout (sec): 30	
Time in Queue Warning (sec):	Overflow Timer to Group Queue (sec):	
INCOMING CALL REMINDERS		
No Answer Timeout (sec):	Alerting (sec):	
	Secondary Alert on Held Reminder Calls? y	
ABBREVIATED DIALING		
List1:	List2:	List3:
SAC Notification? y		
COMMON SHARED EXTENSIONS		
Starting Extension:	Count:	
Busy Indicator for Call Parked on Analog Station Without Hardware? n		

5.6. Configure System Parameters

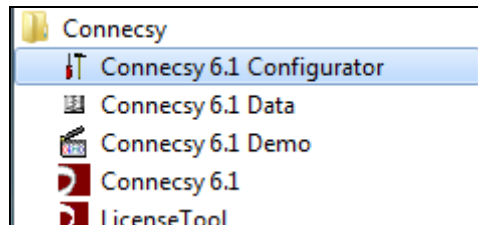
The Connecsy Attendant requires that transfers are completed on hang up so use **change system-parameters features** to configure this. On **Page 7** set **Transfer Upon Hang-Up** to **y**

change system-parameters features	FEATURE-RELATED SYSTEM PARAMETERS	Page 7 of 19
CONFERENCE/TRANSFER		
Abort Transfer? n	No Dial Tone Conferencing? n	
Transfer Upon Hang-Up? y	Select Line Appearance Conferencing? n	

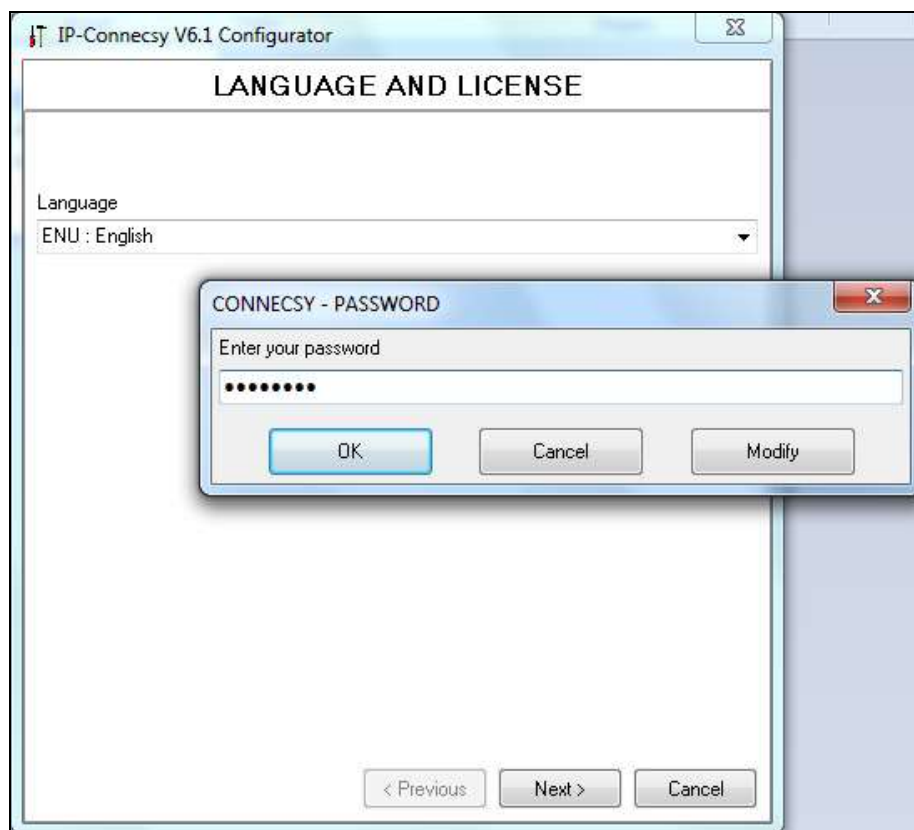
6. Configure Pridis Connecsy

This section describes the configuration steps required within the Connecsy 6.1 configurator to allow it to operate as an Attendant console for Communication Manager.

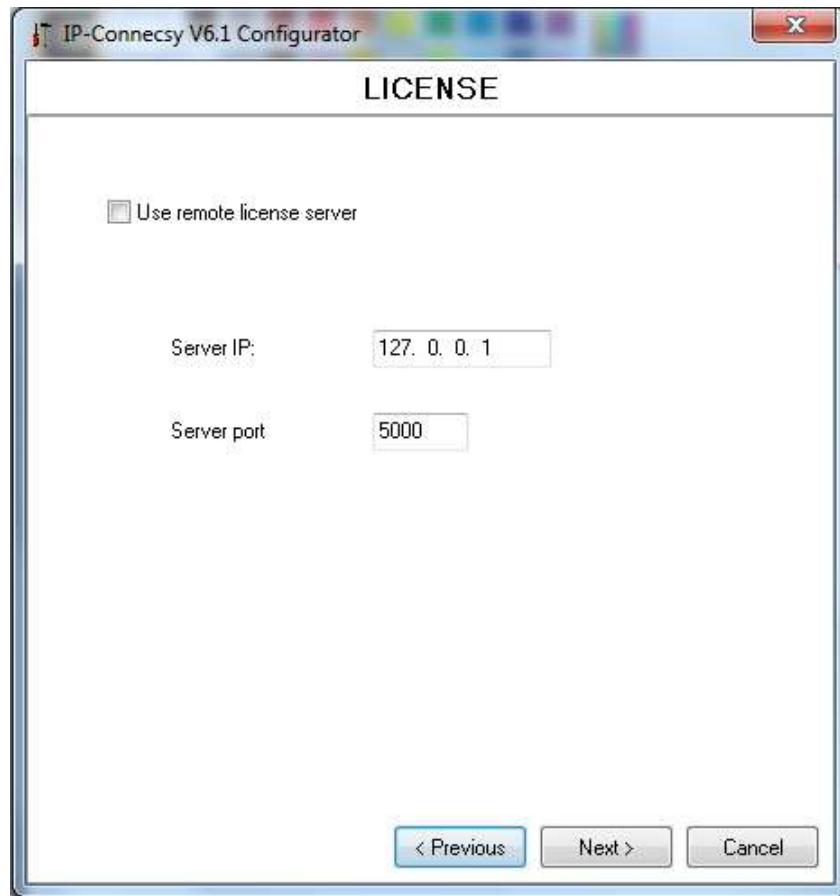
Open the Configurator from the Windows Start menu.



Enter the password provided to allow configuration steps to be carried out. The default Language is **ENU: English** and the language can be selected when the password has been entered. Click on **Next** to continue.



Enter the location of the Connecsy license server and port. The **Server IP 127.0.0.1** and **Server port 5000** are default. Click on **Next** to continue



The image shows a Windows-style dialog box titled "IP-Connecsy V6.1 Configurator" with a close button (X) in the top right corner. The main heading inside the dialog is "LICENSE". Below the heading, there is a checkbox labeled "Use remote license server" which is currently unchecked. Underneath this, there are two text input fields. The first is labeled "Server IP:" and contains the text "127. 0. 0. 1". The second is labeled "Server port" and contains the text "5000". At the bottom of the dialog, there are three buttons: "< Previous" (highlighted in blue), "Next >" (disabled), and "Cancel" (disabled).

The fields of the **COMMON** configuration dialog should be set as follows. After setting the parameters, click **Next**.

- **Title** - Enter the title to be used by the Connecsy application.
- **Automatic clear** – set to **TRUE**, this option provides an automatic clear of the search fields. After CANCEL and RELEASE the escape button will be automatically pressed. The search fields and the datasheet will be cleared. The cursor jumps into its start position set at the cursor position.
- **Cursor position** – Set to **Ext** when the escape button is pressed, the edit fields are automatically cleared and the cursor position is located in the field selected with this option.
- **Automatic sort** – set to **1:Ext** this parameter enables automatic sorting after searching the database; the number is indicating the column that should be sorted.
- **Display alphanumeric keyboard** - set to **FALSE**. In case a touch-screen monitor is installed it could be useful to enable the following parameter (value TRUE or FALSE). When indicating TRUE the buttons next to the edit fields on the Connecsy main screen will cause the alphanumeric display to appear, otherwise the buttons will start a search action on the search-string present in the particular edit field.
- **DXS Simulation** - set to **press DSX/BLF hundred group button of selected row and change from (also on click)**

The screenshot shows a Windows-style dialog box titled "IP-Connecsy V6.1 Configurator". Inside the dialog, the "COMMON" tab is selected. The dialog contains several configuration options, each with a label and a dropdown menu:

- Title (added to the program title)**: An empty text input field.
- Automatic clear (after pressing escape and release)**: A dropdown menu set to "TRUE".
- Cursor position (after pressing escape)**: A dropdown menu set to "Ext".
- Automatic sort (after search results are displayed)**: A dropdown menu set to "1 : Ext".
- Display alphanumeric keyboard (after pressing edit buttons)**: A dropdown menu set to "FALSE".
- DXS Simulation (after search)**: A dropdown menu set to "press DSX/BLF hundred group button of selected row and change from (also on click)".

At the bottom of the dialog, there are three buttons: "< Previous" (disabled), "Next >" (active/highlighted), and "Cancel".

The fields of the **CLIP INFORMATION** configuration dialog should be set as follows. After setting the parameters, click **Next**.

- **First field to search for clip information** – set to **Data1**. In case clip information is found, the datafield is copied into the clipinfo (line button); the datafield that should be used can be specified here (value between 0-11).
- **Second field to search for clip information**– set to **<not used>**
- **Third to search for clip information** - **<not used>**.
- **Field to use to for clip information** – set to **Data2**
- **Record lookup on internal/returning call** – leave unchecked
- **Area prefix** – set as appropriate to the installation, in this case **0**. The clip info received from Communication Manager does not always contain the prefix strings. These three strings can be specified to assist in resolving the target of clip info, thereby increasing the chance of resolving a fully qualified telephone number.
- **Country prefix** – set as appropriate, in this case **00**
- **Dial prefix** – set as appropriate, in this case **0**

IP-Connecsy V6.1 Configurator

CLIP INFORMATION

First field to search for clip information
Data1

Second field to search for clip information
<not used>

Third field to search for clip information
<not used>

Field to use to for clip information
Data2

☐ Record lookup on internal/returning call

Call from identifier CALL FROM

Area prefix
0

Country prefix
00

Dial prefix
0

< Previous Next > Cancel

The **PRESENCE CONFIGURATION** dialog box will appear. Click on **Next** (not shown).

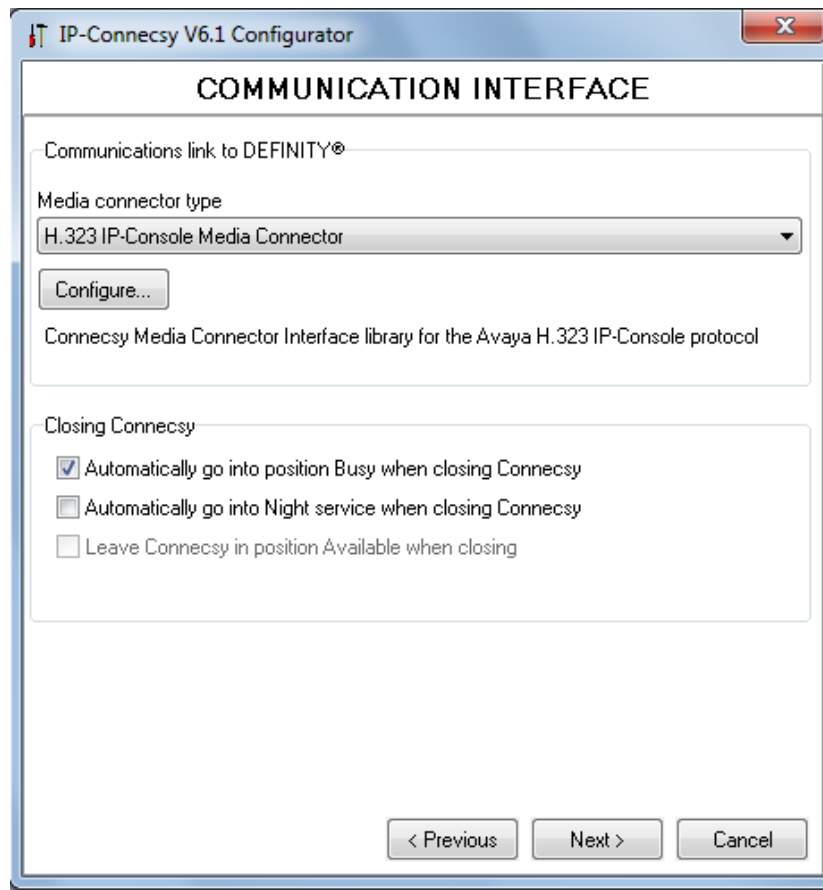
The fields of the **COMMUNICATION INTERFACE** configuration dialog should be set as follows. Note that the serial interface referred to by the “Port” and “Baudrate” parameters was not used for compliance testing.

Media connector type - set to **H.323 IP-Console Media Connector**

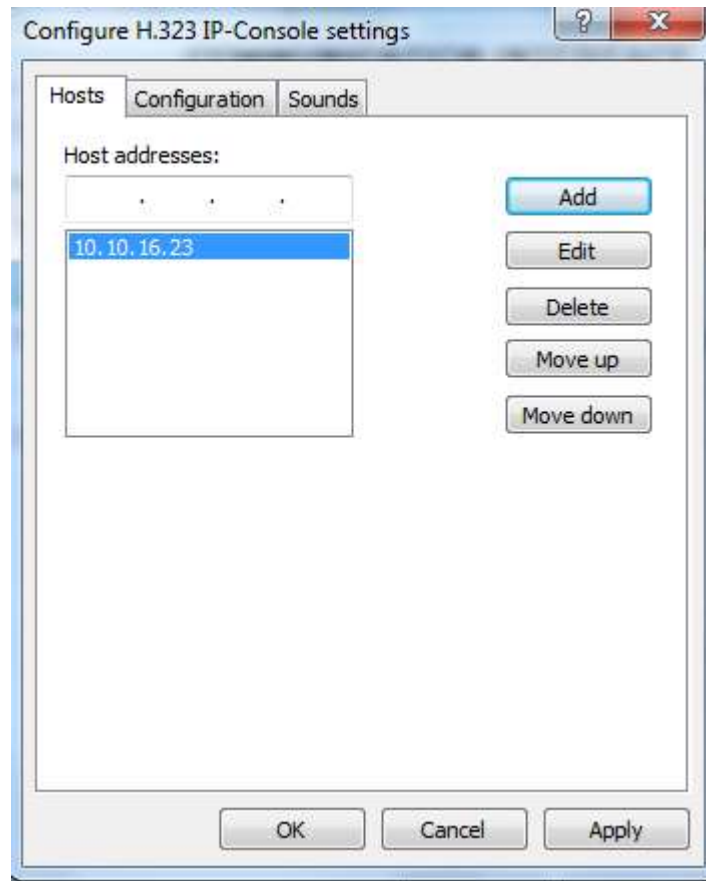
Automatically go into position Busy when closing Connecsy – place a check in the box

Automatically go into Night service when closing Connecsy– leave unchecked

Click **Configure** when done.



On the Configuration page enter the IP Address of Communication Manager, in this case the procr IP address, and click **Add**.



On the Configuration tab in the **Attendant extension** and **Password** fields enter the extension number and password assigned to the attendant in **Section 5.4**. Where the console is used in telecommuter mode, select the **Telecommuter** radio button, enter the extension number used for the attendant speech path in the **Telecommuter Callback extension** field. In this case the preconfigured extension 8230001 is used. Click **Apply** and then **OK** to go back to the COMMUNICATION INTERFACE screen. Click **Next** to continue (not shown).

The screenshot shows a Windows-style dialog box titled "Configure H.323 IP-Console settings". It has three tabs: "Hosts", "Configuration" (which is selected), and "Sounds". The "Configuration" tab contains the following fields and controls:

- Attendant extension:** A text box containing the value "8236000".
- Password:** A text box filled with ten dots.
- Connecsy mode:** A section with two radio buttons:
 - ☒ **RoadWarrior**: This mode is selected. Below it are three dropdown menus:
 - Codec:** Set to "G.711-ALaw".
 - Voice playback device:** Set to "Default".
 - Voice recording device:** Set to "Default".
 - ☐ **Telecommuter**: This mode is not selected. Below it is a text box for **Callback extension:** containing the value "8230001".

At the bottom of the dialog box are three buttons: "OK", "Cancel", and "Apply".

For the purposes of the compliance testing a preconfigured Microsoft SQL 2008 instance was used to provide database services. The fields of the **DATABASE** configuration dialog should be set as described as follows. After setting the parameters, click **Next**.

- **Table** – enter the table name configured in SQL 2008
- **Username** and **Password** – enter a username and password used to access the SQL database
- **Connecsy DB engine type** and **Connecsy-Log DB engine type** – in this example set to Microsoft SQL Server

The screenshot shows a Windows-style dialog box titled "IP-Connecsy V6.1 Configurator" with a standard close button (X) in the top right corner. The main content area is titled "DATABASE". It contains several input fields and checkboxes:

- Table:** A text box containing the value "connecsy".
- Username:** A text box containing the value "CONNECSY".
- Password:** A text box filled with ten black dots, indicating a masked password.
- Logging options:** Two checkboxes, both of which are checked:
 - ☒ Don't log logins to database
 - ☒ Don't log calls to database
- Connecsy DB engine type:** A dropdown menu currently showing "Microsoft SQL Server".
- Connecsy-Log DB engine type:** A dropdown menu currently showing "Microsoft SQL Server".

At the bottom of the dialog, there are three buttons: "< Previous" (disabled), "Next >" (active/highlighted in blue), and "Cancel" (disabled).

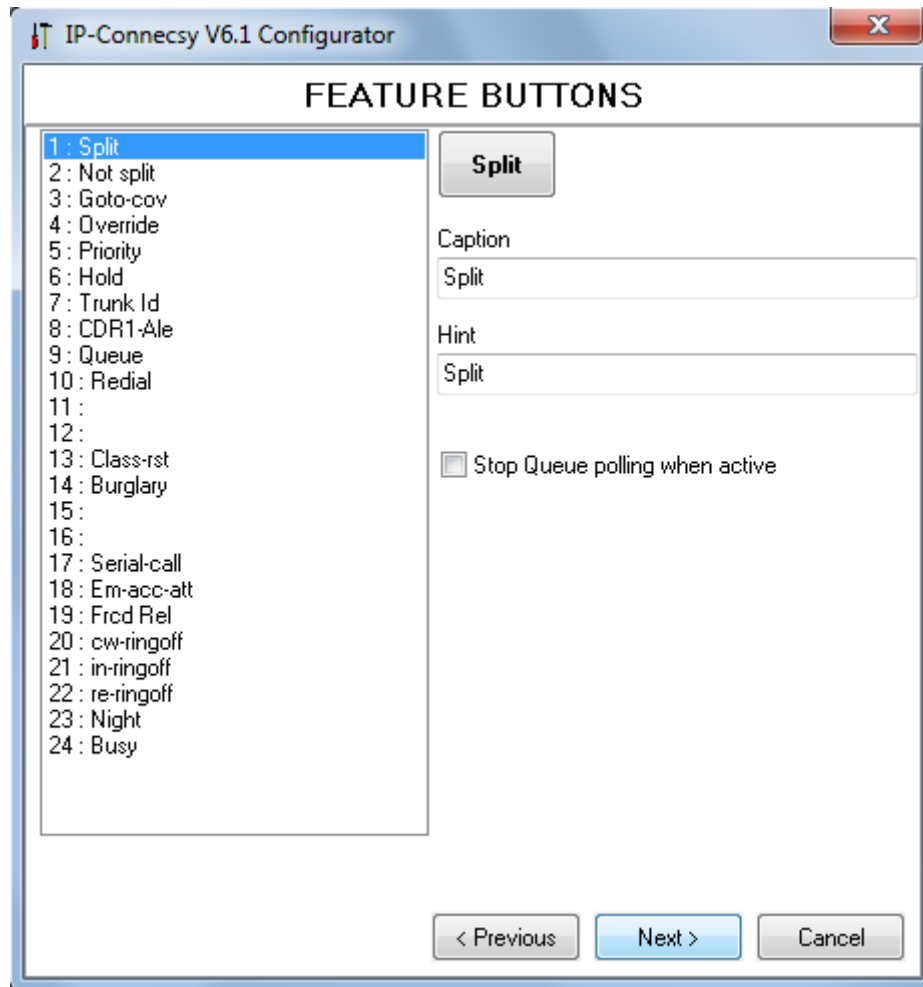
The **DXS/BLF INFORMATION** screen is used to configure which busy lamp fields should be displayed to the agent. In this case extensions in the 6000 range are configured as follows:

- **Name** – enter an identifying name.
- **Offset** – enter the starting number of the number range to be displayed.
- **Rows** and **Columns** – enter the format in which the BLF will be displayed.

Click **Add** and **Next** when done.

The screenshot shows the 'IP-Connesy V6.1 Configurator' window with the 'DXS/BLF INFORMATION' tab selected. On the left, a list box contains '1 : DXS/BLF 500 group'. To the right of the list are 'Add' and 'Delete' buttons. Below these are input fields for 'Name' (containing 'DXS/BLF 500 group'), 'Offset' (containing '500'), 'Rows' (containing '25'), and 'Columns' (containing '4'). At the bottom left, under 'DXS Behaviour:', there are three radio buttons: 'Dial' (selected), 'Search', and 'Search and Dial'. To the right of these is a checkbox labeled 'Show only last' followed by a text box containing '3' and the word 'digits'. At the bottom right are three buttons: '< Previous', 'Next >' (highlighted in blue), and 'Cancel'.

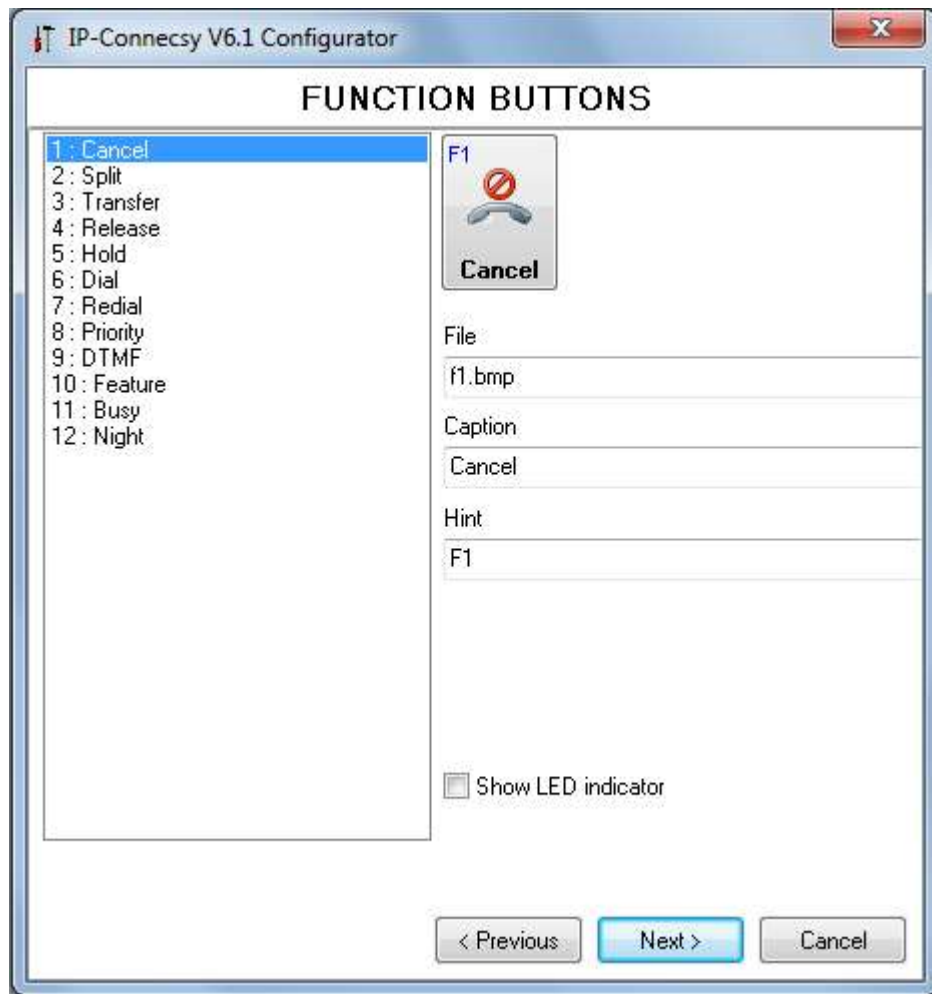
Configure the **FEATURE BUTTONS** as shown and click **Next**. These settings correspond to the feature button assignments configured in **Section 5.4**.



The image shows a screenshot of the 'IP-Connesy V6.1 Configurator' window, specifically the 'FEATURE BUTTONS' tab. The window has a title bar with a red 'X' button. The main area is divided into two sections. On the left, there is a list of 24 feature buttons, each with a number and a label. The first button, '1: Split', is highlighted in blue. On the right, there is a configuration area for the selected button. It includes a 'Split' button, a 'Caption' text box containing 'Split', a 'Hint' text box containing 'Split', and a checkbox labeled 'Stop Queue polling when active' which is currently unchecked. At the bottom of the window, there are three buttons: '< Previous', 'Next >', and 'Cancel'.

Feature Button	Configuration
1: Split	Split button, Caption: Split, Hint: Split, Stop Queue polling when active: <input type="checkbox"/>
2: Not split	
3: Goto-cov	
4: Override	
5: Priority	
6: Hold	
7: Trunk Id	
8: CDR1-Ale	
9: Queue	
10: Redial	
11:	
12:	
13: Class-rst	
14: Burglary	
15:	
16:	
17: Serial-call	
18: Em-acc-att	
19: Fred Rel	
20: cw-ringoff	
21: in-ringoff	
22: re-ringoff	
23: Night	
24: Busy	

The **FUNCTION BUTTONS** screen is configured according to the default attendant settings, as shown below. Click **Next** when done.



The **QUEUE INFORMATION** screen is shown, configure as follows:

- **Queue 1** – choose the **9: Queue** option from the drop down list.
- **Avaya CM® queue name** – enter **OPERATOR**.
- **CONNECSY queue name** – enter **Queue 1**.
- **Auto unannounced (cold) transfer on numeric plus (+) key** –uncheck the box.

Click **Next** when done.

The screenshot shows the 'IP-Connesy V6.1 Configurator' window with the 'QUEUE INFORMATION' tab selected. The window contains several input fields and checkboxes for configuring queue settings.

Queue	VuSt	Avaya CM® queue name	CONNECSY queue name
Queue 1	<input type="checkbox"/>	OPERATOR	Queue 1
Queue 2	<input type="checkbox"/>		Queue 2
Queue 3	<input type="checkbox"/>		Queue 3

'Normal' feature button: ☐ Disabled

CONNECSY total name: Total

Avaya CM® queue identifier: calls

VuStats queue identifier:

Queue poll rate: 5000

☐ Put line on hold before transfer dial

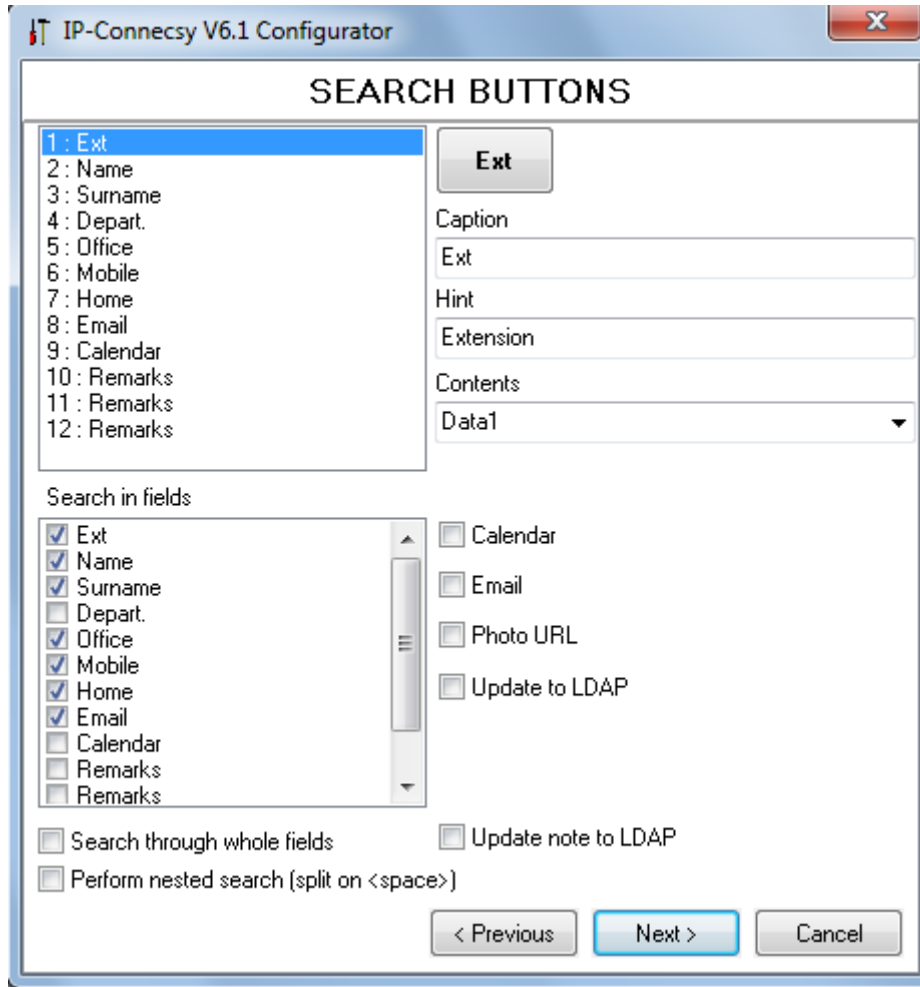
☐ Disable Dialpad popup

☐ Auto unannounced (cold) transfer on numeric plus (+) key

☒ Avaya CM® uses Attendant vectoring

Navigation buttons: < Previous, Next >, Cancel

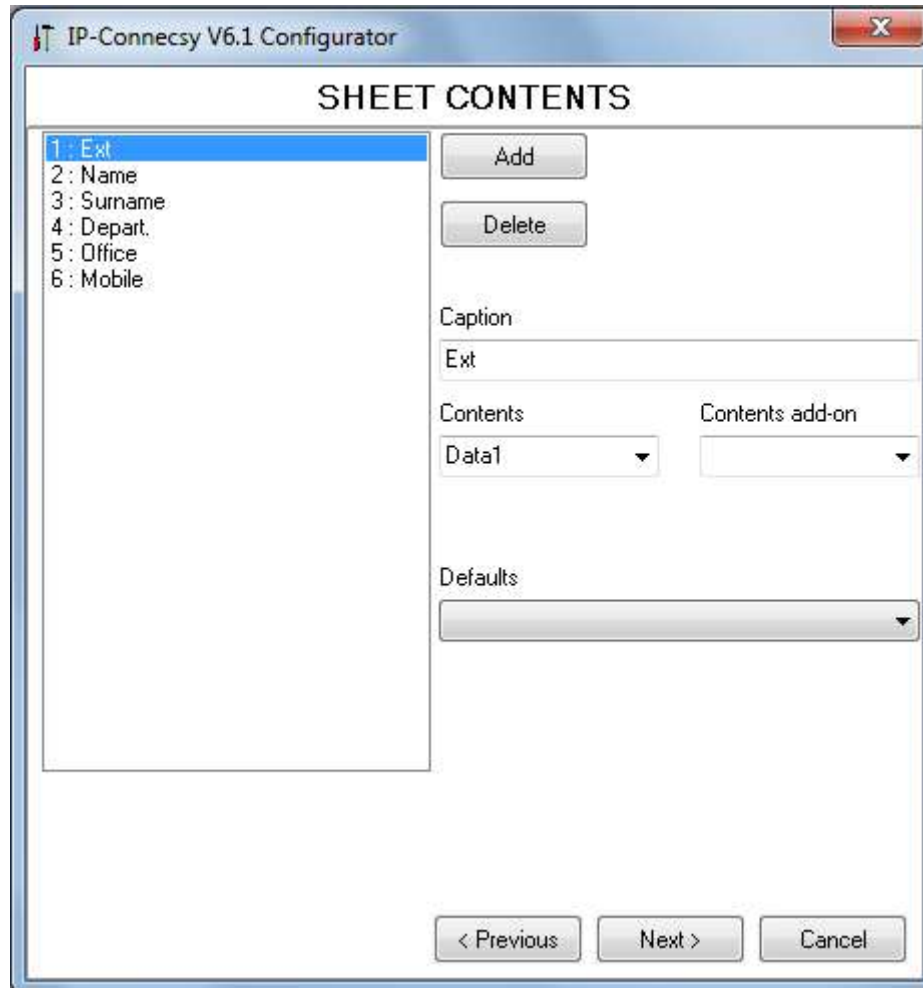
In the **SEARCH BUTTONS** configure as shown below to configure the search options and click **Next**.



The image shows a screenshot of the "IP-Connesy V6.1 Configurator" window, specifically the "SEARCH BUTTONS" tab. The window has a title bar with the application name and a close button. The main area is divided into several sections:

- Field List:** A list of fields with indices 1 through 12. Field 1, "Ext", is selected and highlighted in blue.
- Field Details:** To the right of the list, there are input fields for "Caption" (containing "Ext"), "Hint" (containing "Extension"), and "Contents" (a dropdown menu showing "Data1").
- Search in fields:** A section with a list of fields and checkboxes. The fields are: Ext, Name, Surname, Depart., Office, Mobile, Home, Email, Calendar, Remarks, and Remarks. The checkboxes for Ext, Name, Surname, Office, Mobile, Home, and Email are checked.
- Search Options:** Below the "Search in fields" list, there are three checkboxes: "Search through whole fields" (unchecked), "Perform nested search (split on <space>)" (unchecked), and "Update note to LDAP" (unchecked).
- Buttons:** At the bottom right, there are three buttons: "< Previous", "Next >" (highlighted in blue), and "Cancel".

Configure the **SHEET CONTENTS** as shown below and click **Next**.



The image shows a screenshot of the 'IP-Connecsy V6.1 Configurator' window, specifically the 'SHEET CONTENTS' tab. The window has a title bar with a red 'X' button. The main area is divided into two sections. On the left, there is a list of items: '1: Ext', '2: Name', '3: Surname', '4: Depart.', '5: Office', and '6: Mobile'. The first item, '1: Ext', is selected and highlighted in blue. To the right of this list are two buttons: 'Add' and 'Delete'. Below these buttons, there is a 'Caption' field with the text 'Ext'. Underneath the caption field, there are two dropdown menus: 'Contents' (which currently shows 'Data1') and 'Contents add-on' (which is currently empty). Below these dropdowns is a 'Defaults' section with a single dropdown menu that is currently empty. At the bottom of the window, there are three buttons: '< Previous', 'Next >', and 'Cancel'.

The **FINISH** screen will appear, click **Finish** to commit the configuration settings.

7. Verification Steps

The following steps may be used to verify the configuration.

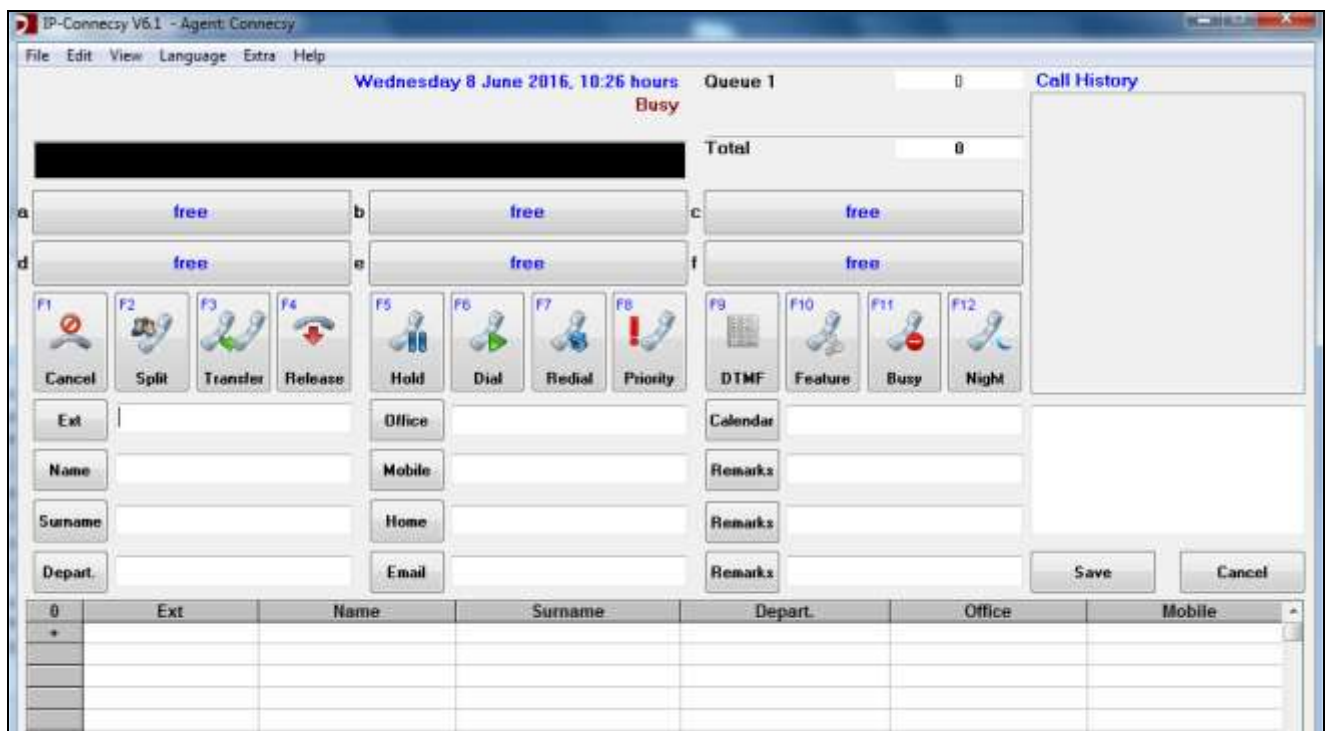
7.1. Verify Pridis Connecsy

Start Connecsy configured in either roadwarrior or telecommuter mode, verify that the console is displayed, can be taken out of busy and is able to handle incoming and place outgoing calls.

Launch Connecsy



The main screen shows with the Attendant busy on startup. Clicking on the Busy button or pressing F11 changes the state to Free and calls can be received.



7.2. Verify Avaya Aura® Communication Manager

Answer a call using the Connecsy console and using SAT enter the command **status attendant 1** and verify the service state of the attendant is **in-service/active**.

```
status attendant 1
                        ATTENDANT STATUS

Console Number: 1      Service State: out-of-service
      Port: S00065      Download Status: pending

Connected Ports:
```

8. Conclusion

These Application Notes describe the required configuration steps for configuring Avaya Aura® Communication Manager to interoperate with Pridis Connecsy and provide attendant console functionality. All test cases completed successfully with any observations and exceptions noted in **Section 2.2**.

9. Additional References

This section references the product documentations that are relevant to these Application Notes. Avaya product documentation can be found at <http://support.avaya.com>.

[1]. *Administering Avaya Aura® Communication Manager, Release 6.3, 03-300509, Issue 10 June 2015.*

All Pridis BV support documentation can be obtained using the support contact information in **Section 2.3**.

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