



Avaya Solution & Interoperability Test Lab

Application Notes for IniSoft synTelate Web Agent 1.0 with Avaya Proactive Contact 4.1 using Computer Telephony Interface - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for IniSoft synTelate Web Agent 1.0 to successfully interoperate with Avaya Proactive Contact 4.1 using Computer Telephony Interface. IniSoft synTelate Web Agent provides secure integration with Avaya Proactive Contact 4.1 from the web browser and it consist of Web Server, Web Agent Connection Service, Web Agent License Service, Desktop Component, synTelate Designer, Campaign Compiler and Database. IniSoft synTelate Web Agent 1.0 was compliance tested against Avaya Proactive Contact 4.1 using Computer Telephony Interface.

Information in these Application Notes has been obtained through interoperability compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe a compliance tested configuration comprised of Avaya Proactive Contact 4.1 using Computer Telephony Interface (SoftDialer) and IniSoft synTelate Web Agent 1.0. SoftDialer uses Telephony Server Application Programming Interface (TSAPI) link with Avaya Aura™ Application Enablement Services server (AES) to provide Computer Telephony Interface (CTI).

synTelate Web Agent provides secure integration with Proactive Contact from the web browser. It consists of a number of major architectural components as listed below:

- Desktop Component
- Web Server
- Web Agent Connection Service
- Web Agent License Service
- Designer
- Campaign Compiler
- Database

Desktop Component

synTelate Web Agent uses a Desktop Component to provide a communication channel between Proactive Contact and the agent's browser. The Desktop Component opens a socket on the agent's PC and listens for any incoming data from Proactive Contact via the Web Agent Connection Service. The installation file for the Desktop Component is hosted on the Web Server and agents will be prompted to download and install it the first time they log in.

Web Server

The Web Server requires installation of the .NET Framework 3.5 SP1 to be performed before the installation of the synTelate Web Agent. The recommended hardware configuration for synTelate Web Agent is to host the Web Server, the Web Agent Connection Service and the Database server on separate machines. In this sample test all components were installed on one machine.

Web Agent Connection Service

The Web Agent Connection Service is a Windows Service that handles all communication with Proactive Contact using SSL. When an agent logs in, the Web Agent Connection Service establishes an SSL connection with Proactive Contact and maintains this connection on behalf of the agent for as long as it is required. Each request from the agent's browser is marked with the agent's login details so the correct connection is used to send commands to Proactive Contact.

Web Agent License Service

The Web Agent License Service is lightweight windows services that checks and monitors license usage for agents logging in to synTelate Web Agent.

Designer

The synTelate Designer is a graphical tool that is used for the definition of the call flow and agent screens.

Campaign Compiler

The Campaign Compiler is used to generate all web pages and programming logic required for synTelate campaigns to run.

Database

The synTelate Database consists of client records that are used during inbound and outbound campaigns which are imported from the Avaya SoftDialer.

1.1. Interoperability Compliance Testing

The compliance testing examined the synTelate Web Agent application interoperability with Avaya SoftDialer to handle Outbound and Managed campaigns. Outbound campaign focuses only on outbound calls initiated by the dialer. Managed campaign is a special type of outbound campaign where the agent releases the call to be dialed after reviewing the customer information. The following features on the synTelate Web Agent were tested:

- Login / Logout
- Ready / Not Ready
- Join Job / Leave Job
- Finish Call
- Release Call
- Call Back
- Agent Owned Recall
- Release Line with Message
- Preview Call
- Job Linking
- Job Transfer
- Job End
- Send Message

Note: When agent logs into synTelate Web Agent application, it is initially authenticated against Microsoft Active Directory and subsequently it is authenticated against Proactive Contact.

1.2. Support

Technical support for the synTelate Web Agent is available as follows:

- Telephone Help Desk - +44 (0)141 552 8800 or 0800 052 1015
- Web - <http://inisoft.co.uk/support.html>.

2. Reference Configuration

Figure 1 shows the setup used for the compliance test.

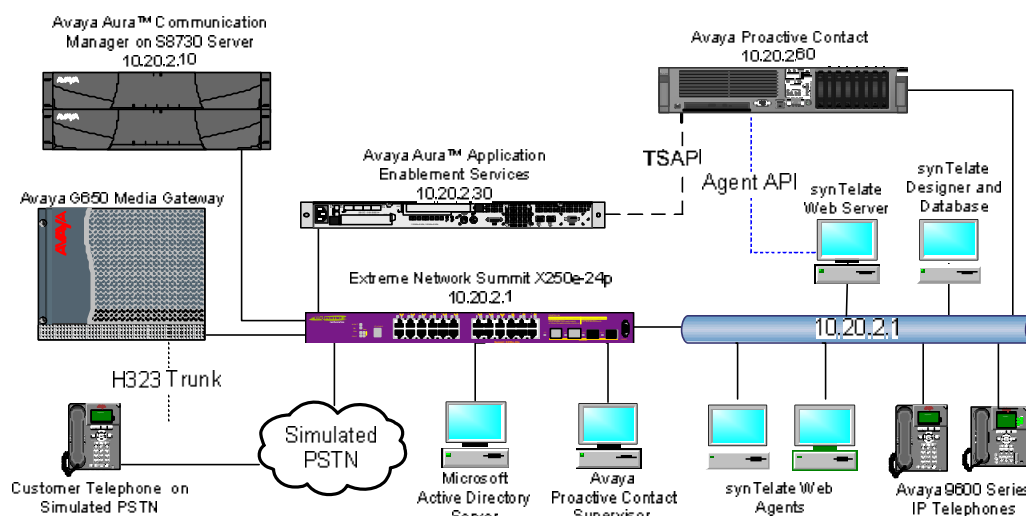


Figure 1 Avaya Proactive Contact 4.1 using CTI and synTelate Web Agent Configuration

3. Equipment and Software Validated

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

Equipment/Software	Software Version
Avaya Proactive Contact Server on HP Proliant DL385G2 using CTI Dialer	Avaya Proactive Contact 4.1
Avaya Proactive Contact Agent API	4.1 (Moagent32.dll)
Avaya Aura™ Application Enablement Services server	4.2.2
Avaya G650 Media Gateway with Avaya S8730 Server	Avaya Aura™ Communication Manager 5.2 Service Pack 02.0.947.3-17294
Avaya 9620 and 9630 IP Telephones	3.0
Extreme Network Summit X250e-24p Switch	12.0.3.16
Microsoft Active Directory and DNS Server	Microsoft Windows Server 2003 R2 Enterprise Edition Service Pack 2
Web Browser	Internet Explorer 7.0
synTelate Web Agent	1.0 on Windows XP SP2 and .NET Framework 3.5 SP1
synTelate Database	Microsoft SQL 2005 on Windows XP SP2

4. Configure Avaya Aura™ Communication Manager

The basic configuration of Avaya Aura™ Communication Manager is beyond the scope of these Application Notes. Following steps provide an overview of the contact center functionality configuration required on Communication Manager to support Proactive Contact with CTI. Configuration in the following steps is only for the fields where a value needs to be entered or modified. These steps are performed from the Communication Manager System Access Terminal (SAT) interface and all changes are saved. Default values are used for all other fields. For all other provisioning information, please refer to Avaya Documentation [1] for configuration instructions. The following was configured on Communication Manager for Proactive Contact:

- Computer Telephony Integration (CTI) Link
- Agent Stations
- Vector with adjunct routing and Vector Directory Number(VDN)
- Announcements

4.1. Configure Communication Manager for Proactive Contact

Use the **display system-parameters customer-options** command. On **Page 3**, verify that the **Computer Telephony Adjunct Links** option is set to **y**. If it is not set to **y**, contact the Avaya sales team or business partner.

display system-parameters customer-options		Page	3 of 11
OPTIONAL FEATURES			
Abbreviated Dialing Enhanced List?	n	Audible Message Waiting?	n
Access Security Gateway (ASG)?	n	Authorization Codes?	y
Analog Trunk Incoming Call ID?	n	CAS Branch?	n
A/D Grp/Sys List Dialing Start at 01?	n	CAS Main?	n
Answer Supervision by Call Classifier?	n	Change COR by FAC?	n
ARS?	y	Computer Telephony Adjunct Links?	y
ARS/AAR Partitioning?	y	Cvg Of Calls Redirected Off-net?	n
ARS/AAR Dialing without FAC?	y	DCS (Basic)?	n
ASAI Link Core Capabilities?	n	DCS Call Coverage?	n
ASAI Link Plus Capabilities?	n	DCS with Rerouting?	n
Async. Transfer Mode (ATM) PNC?	n	Digital Loss Plan Modification?	n
Async. Transfer Mode (ATM) Trunking?	n	DS1 MSP?	n
ATM WAN Spare Processor?	n	DS1 Echo Cancellation?	n
ATMS?	n		
Attendant Vectoring?	n		
(NOTE: You must logoff & login to effect the permission changes.)			

Navigate to **Page 4** and verify that **Global Call Classification** is set to **y**.

```
display system-parameters customer-options                                Page 4 of 11
                                OPTIONAL FEATURES

Emergency Access to Attendant? y                                         IP Stations? y
  Enable 'dadmin' Login? y
  Enhanced Conferencing? y                                             ISDN Feature Plus? n
    Enhanced EC500? n                                         ISDN/SIP Network Call Redirection? n
Enterprise Survivable Server? n                                         ISDN-BRI Trunks? n
  Enterprise Wide Licensing? n                                         ISDN-PRI? y
    ESS Administration? n                                         Local Survivable Processor? n
    Extended Cvg/Fwd Admin? n                                         Malicious Call Trace? n
    External Device Alarm Admin? n                                         Media Encryption Over IP? n
  Five Port Networks Max Per MCC? n                                         Mode Code for Centralized Voice Mail? n
    Flexible Billing? n
  Forced Entry of Account Codes? n                                         Multifrequency Signaling? y
    Global Call Classification? y                                         Multimedia Call Handling (Basic)? n
    Hospitality (Basic)? y                                         Multimedia Call Handling (Enhanced)? n
  Hospitality (G3V3 Enhancements)? n                                         Multimedia IP SIP Trunking? n
    IP Trunks? y

IP Attendant Consoles? n
```

Navigate to **Page 5** and verify that **Processor Ethernet** is set to **y**.

```
display system-parameters customer-options                                Page 5 of 11
                                OPTIONAL FEATURES

Multinational Locations? n                                         Station and Trunk MSP? n
Multiple Level Precedence & Preemption? n                                         Station as Virtual Extension? n
  Multiple Locations? n                                         System Management Data Transfer? n
  Personal Station Access (PSA)? n                                         Tenant Partitioning? n
    PNC Duplication? y                                         Terminal Trans. Init. (TTI)? n
    Port Network Support? y                                         Time of Day Routing? n
    Posted Messages? n                                         TN2501 VAL Maximum Capacity? y
                                         Uniform Dialing Plan? y
    Private Networking? y                                         Usage Allocation Enhancements? y
    Processor and System MSP? n                                         Wideband Switching? n
    Processor Ethernet? y                                         Wireless? n
    Remote Office? n
  Restrict Call Forward Off Net? y
  Secondary Data Module? y

(NOTE: You must logoff & login to effect the permission changes.)
```

On **Page 6**, verify that the **Expert Agent Selection (EAS)** field is set to **y**.

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

                                Call Center Release: 5.0

                                ACD? y                                Reason Codes? n
                                BCMS (Basic)? n                      Service Level Maximizer? n
                                BCMS/VuStats Service Level? n        Service Observing (Basic)? y
                                BSR Local Treatment for IP & ISDN? n    Service Observing (Remote/By FAC)? n
                                Business Advocate? n                  Service Observing (VDNs)? n
                                Call Work Codes? n                    Timed ACW? n
                                DTMF Feedback Signals For VRU? n      Vectoring (Basic)? y
                                Dynamic Advocate? n                  Vectoring (Prompting)? n
                                Expert Agent Selection (EAS)? y        Vectoring (G3V4 Enhanced)? n
                                EAS-PHD? n                          Vectoring (3.0 Enhanced)? n
                                Forced ACD Calls? n                  Vectoring (ANI/II-Digits Routing)? n
                                Least Occupied Agent? n              Vectoring (G3V4 Advanced Routing)? n
                                Lookahead Interflow (LAI)? n          Vectoring (CINFO)? n
                                Multiple Call Handling (On Request)? n  Vectoring (Best Service Routing)? n
                                Multiple Call Handling (Forced)? n      Vectoring (Holidays)? n
                                PASTE (Display PBX Data on Phone)? n    Vectoring (Variables)? n
                                (NOTE: You must logoff & login to effect the permission changes.)
```

On **Page 9**, verify that the **Agent States** field is set to **y**.

```
display system-parameters customer-options                               Page 9 of 11
                                ASAI ENHANCED FEATURES

                                Increased Adjunct Route Capacity? n

                                ASAI PROPRIETARY FEATURES

                                Agent States? y

                                (NOTE: You must logoff & login to effect the permission changes.)
```

Enter the **change system-parameters features** command and press **Enter**. Navigate to **Page 5** and verify that the **Create Universal Call ID (UCID)** field is set to **y**.

```
change system-parameters features                               Page 5 of 18
                        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   MCT Voice Recorder Trunk Group:

SEND ALL CALLS OPTIONS
  Send All Calls Applies to: station   Auto Inspect on Send All Calls? n

UNIVERSAL CALL ID
  Create Universal Call ID (UCID)? y   UCID Network Node ID: 1
```

Navigate to **Page 11** and verify that the **Expert Agent Selection (EAS) Enabled** field is set to **y**.

```
change system-parameters features                               Page 11 of 18
                        FEATURE-RELATED SYSTEM PARAMETERS

CALL CENTER SYSTEM PARAMETERS
  EAS
    Expert Agent Selection (EAS) Enabled? y
    Minimum Agent-LoginID Password Length:
    Direct Agent Announcement Extension:           Delay:
    Message Waiting Lamp Indicates Status For: station

  VECTORING
    Converse First Data Delay: 0           Second Data Delay: 2
    Converse Signaling Tone (msec): 100    Pause (msec): 70

    Reverse Star/Pound Digit For Collect Step? n

    Store VDN Name in Station's Local Call Log? n

  SERVICE OBSERVING
    Service Observing: Warning Tone? y   or Conference Tone? n
    Service Observing Allowed with Exclusion? n
    Allow Two Observers in Same Call? N
```


Navigate to **Page 13** and verify that the following fields are set to **y**.

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

```
change system-parameters features                                     Page 13 of 18
                                FEATURE-RELATED SYSTEM PARAMETERS

CALL CENTER MISCELLANEOUS
                                Clear Callr-info: next-call
                                Allow Ringer-off with Auto-Answer? n

                                Reporting for PC Non-Predictive Calls? n

                                Interruptible Aux Notification Timer (sec): 3
                                Interruptible Aux Deactivation Threshold (%): 95

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

4.2. Computer Telephony Integration (CTI) Link

These Application Notes assume that the CTI link between Application Enablement Services and Communication Manager has been configured and is operational. To verify configured CTI link, enter **change cti-link n** command; where **n** is configured CTI link number. In this sample application that was CTI link **11**. Verify that following details are correctly configured:

- **Extension** – Set to any extension as per the dial plan
- **Type** – Set to **ADJ-IP**
- **Name** – Set to any descriptive name

```
change cti-link 11                                                  Page 1 of 3
                                CTI LINK

CTI Link: 11
Extension: 720
Type: ADJ-IP
Name: aes aerver
                                COR: 1
```

4.3. Agent Stations

Enter the **change station n** command, where **n** is the extension of a Communication Manager station (IP telephone) used by synTelate Web Agent. On the **Page 2** of the **STATION** form, set **Auto Answer** to **all**.

change station 302		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: disabled		
Multimedia Mode: enhanced			
MWI Served User Type:	Display Client Redirection? n		
AUDIX Name:	Select Last Used Appearance? n		
	Coverage After Forwarding? s		
	Direct IP-IP Audio Connections? y		
Emergency Location Ext: 202	Always Use? n IP Audio Hairpinning? N		

Below is the list of all stations (IP telephones) that were configured on Communication Manager to be used by synTelate Web Agents.

list station									
STATIONS									
Ext/ Hunt-to	Port/ Type	Name/ Surv GK NN	Move	Room/ Data Ext	Cv1/ Cv2	COR/ COS	Cable/ Jack		
302	S00004	Ext 302			1				
	9620		no			1			
303	S00005	Ext 303			1				
	9630		no			1			
304	S00006	Ext 304			1				
	9620		no			1			

4.4. Vector with adjunct routing and Vector Directory Number (VDN)

Enter the **change vector n** command, where **n** is an unused vector number. Configure **Name** with any descriptive name. Configure **adjunct routing link** step, for the CTI link **11** configured in **Section 4.2**. This vector is used by Proactive Contact to make outbound calls.

```
change vector 50                                     Page 1 of 6
                                           CALL VECTOR

      Number: 50                      Name: Dialer Adjunct
                                Meet-me Conf? n          Lock? n
      Basic? y    EAS? y    G3V4 Enhanced? n    ANI/II-Digits? n    ASAI Routing? y
      Prompting? n    LAI? n    G3V4 Adv Route? n    CINFO? n    BSR? n    Holidays? n
      Variables? n    3.0 Enhanced? n
01 adjunct      routing link 11
02 wait-time    2    secs hearing silence
03
04
```

Enter **add vdn n** command, where **n** is an unused VDN and configure as follows:

- **Name** – Set to any descriptive name
- **Vector Number** – Set the vector configured in previous step

```
add vdn 750                                           Page 1 of 2
                                           VECTOR DIRECTORY NUMBER

                                Extension: 750
                                Name*: Dialer Adjunct Route
                                Destination: Vector Number      50

      Meet-me Conferencing? n
      Allow VDN Override? n
                                COR: 1
                                TN*: 1
                                Measured: none

                                1st Skill*:
                                2nd Skill*:
                                3rd Skill*:

* Follows VDN Override Rules
```

4.5. Announcements

Enter **change announcement n** command, where **n** is an announcement extension. Configure four announcements for the messages that will be used by Proactive Contact to play on the agent's telephone. In the sample configuration, announcement extensions 771, 772, 773 and 774 were configured. The following four messages in the table below were administered and recorded. Refer to [5] for Proactive Contact configuration.

Announcement Extension	Message Type	Recorded Message
771	Greeting	"Welcome to Proactive Contact"
772	Inbound	"You are now in inbound mode"
773	Outbound	"You are now in outbound mode"
774	Not Logged In	"You are not logged in"

list announcement				
ANNOUNCEMENTS/AUDIO SOURCES				
Announcement Extension	Type	Name	Source Pt/Bd/Grp	Num of Files
771	integrated	Welcome_to_PC	01A08	1
772	integrated	You_are_now_in_inbound_mode	01A08	1
773	integrated	You_are_now_in_outbound	01A08	1
774	integrated	You_are_not_logged_in	01A08	1

5. Configure Avaya Aura™ Application Enablement Services

This section provides the procedures for configuring Application Enablement Services. Basic configuration related to the switch connection between Communication Manager and Application Enablement Services is assumed. Configuration in the following steps is only for the fields where a value needs to be entered or modified. Default values are used for all other fields. Refer to [4] for additional details.

Launch a web browser, enter <https://<IP address of AE Services>/MVAP/index.jsp> in the URL, and log in with the appropriate credentials for accessing the Application Enablement Services CTI OAM pages. From the **OAM Home** page, select **CTI OAM Admin** (not shown). On the **CTI OAM** screen that appears verify that the **TSAPI Service** is licensed as shown below.

AVAYA Application Enablement Services
Operations Administration and Maintenance

[OAM Home](#) [Help](#) [Logout](#)

You are here: > [CTI OAM Home](#)

Welcome to CTI OAM Screens

[craft] Last login: Wed Jul 29 14:12:39 2009 from 10.20.2.245

IMPORTANT: AE Services must be restarted for administrative changes to fully take effect.
Changes to the Security Database do not require a restart.

Service	Status	State	Licenses Purchased
ASAI Link Manager	Running	N/A	N/A
DMCC Service	Running	ONLINE	Yes
CVLAN Service	Running	ONLINE	Yes
DLG Service	Running	OFFLINE	Yes
Transport Layer Service	Running	N/A	N/A
TSAPI Service	Running	ONLINE	Yes
SMS	N/A	N/A	Yes

For status on actual services, please use [Status and Control](#).

License Information

You are licensed to run Application Enablement (CTI) version 4.2.

From the **CTI OAM Home** menu, select **Administration** → **CTI Link Admin** → **TSAPI Links** and click on **Add Link** (not shown). At the **Add/ Edit TSAPI Links** screen configure as follows:

- **Link:** Choose a link number between 1 and 16 that is available.
- **Switch Connection:** Select the appropriate previously configured switch connection to be used, from the drop down list.
- **Switch CTI Link Number:** Corresponding CTI link number configured in **Section 4.2**
- **ASAI Link Version:** Choose value **4** from the drop down list.
- **Security:** Choose **Encrypted** from the drop down list.
- Click **Apply Changes**.

AVAYA Application Enablement Service
Operations Administration and Maintenance

You are here: > Administration > CTI Link Admin > TSAPI Links

Add / Edit TSAPI Links

Link: 2

Switch Connection: ACMG650

Switch CTI Link Number: 11

ASAI Link Version: 4

Security: Encrypted

Navigate to the **Tlinks** screen by selecting **Administration** → **Security Database** → **Tlinks**. Avaya AE Services server automatically creates the Tlink Name **AVAYA#ACMG650#CSTA-S#AESSERVER** as shown in the screen below.

AVAYA Application Enablement Service
Operations Administration and Maintenance

You are here: > Administration > Security Database > Tlinks

Tlinks

Tlink Name

☐ AVAYA#ACM#CSTA#AESSERVER

☒ AVAYA#ACMG650#CSTA-S#AESSERVER

A user ID and password must be configured for the Proactive Contact to communicate as a TSAPI Client with the AE Services. Navigate to **OAM Home → User Management → Add User** and configure as follows:

- **User Id:** Enter a login name to be used by Proactive Contact.
- **Common Name:** Enter any descriptive string.
- **Surname:** Enter any descriptive string.
- **User Password:** Enter a password to be used by Proactive Contact.
- **Confirm Password:** Re-enter the password.
- **CT User:** Select **Yes** from the drop down list.

AVAYA Application Enablement Service
Operations Administration and Maintenance

[OAM Home](#) [Help](#)

User Management Home You are here: > [User Management](#) > [Add User](#)

Add User

Fields marked with * can not be empty.

* User Id

* Common Name

* Surname

* User Password

* Confirm Password

Admin Note

Avaya Role

Business Category

Car License

CM Home

Css Home

CT User

Department Number

Display Name

The User configured for Proactive Contact should have Unrestricted Access. Navigate to **OAM Home → CTI OAM Administration → Administration → Security Database → CTI Users → List All Users**. Select the **User ID** created in previous step, and click on **Edit** (not shown). On the **Edit CTI User** screen click on the **Enable** button for the **Unrestricted Access** option.

AVAYA Application Enablement Service
Operations Administration and Maintenance

You are here: > Administration > Security Database > CTI Users > List All Users

Edit CTI User

User ID: pc41
Common Name: pc41
Worktop Name: NONE
Unrestricted Access:
Call Origination and Termination: None
Device / Device: None
Call / Device: None
Call / Call: ☐
Allow Routing on Listed Device: None

Click **Apply** button on the next page that appears.

AVAYA Application Enablement Service
Operations Administration and Maintenance

You are here: > Administration > Security Database > CTI Users > List All Users

Apply Changes to CTI User Properties

Warning! Are you sure you want to apply the changes?

6. Configure Avaya Proactive Contact

These Application Notes assume that the interface between Proactive Contact, Application Enablement Services and Communication Manager has been configured and is operational. Refer to Avaya Documentation [2] for configuration instructions.

The following campaign types were configured on Proactive Contact:

- Outbound Calls
- Managed Calls

The following features were configured on Proactive Contact [2] & [3]:

- Completion Codes
- Recall (Callback)
- Agent Owned Recall using Shadow Jobs
- Auto wrap
- Job Linking
- Message playback to customers

6.1. Proactive Contact Configuration Files

Log in to the Proactive Contact server with an administrative login. At the telnet command prompt, enter **cti_passwd -s** and press **Enter**. At the **Enter the password for the CTI Server** prompt, enter the Application Enablement Password for the CTI user, administered in **Section 5**. Re-enter the password and press **Enter**. The system creates the **cti_passwd.cfg** file located in the **/opt/avaya/pds/config** directory.

Configure the following parameters in the **swif_ct.cfg** file located in the **opt/avaya/pds/config** directory.

- **SERVER** – set to the name of the TSAPI link created in **Section 5**
- **LOGIN** – set to the CTI user name created in **Section 5**

```
# AGENTANSWER directs the dialer to either answer or not answer predictive
#   calls delivered to the agent. On older Avaya PBXs, there is no way to stop
#   the phone from ringing when calls are delivered to the agent in auto
answer#   mode. Note that there will not be any zip tone when the call is
answered by#   the dialer and the agent will need to watch for visual cues on
the screen.
#   Set YES to have the dialer answer the calls or NO to not answer the calls.
#
# Example of entries
#
SERVER:AVAYA#ACMG650#CSTA-S#AESSERVER
LOGIN:pc41
REASONCODE:9
PHANTOMNUMBERS:
WORKMODE:
AGENTANSWER:NO
PRIORITYCALL:NO
```

Navigate to the /opt/avaya/pds/config directory. Make a copy of the **tslibrc** file, and name it **.tslibrc**. Add the **AES server hostname** and **AES server IP address**, as shown below.

```
[Telephony Servers]
; This is a list of the servers offering Telephony Services via TCP/IP.
; Either domain name or IP address may be used; default port number is 450
; The form is: host_name=port_number   For example:
;
; tserver.mydomain.com=450
; 127.0.0.1=450
;
aesserver
10.20.2.30

; This file should be copied to CONFIG directory as .tslibrc.
; See master.cfg for the directory name.

; This entry overrides the [Telephony Servers] section, if any.
```

Configure the **dgswitch.cfg** file located in the /opt/avaya/pds/config directory to have the same number of **Headset Ports** rows as the number of outbound agents administered in Proactive Contact. Also configure **Normal Inbound/Outbound Trunk**. In the test configuration, there were 5 outbound agents and 5 outbound trunks.

```
# Headset Ports
H:1:96:0::#1-1-4-1
H:2:97:0::#1-1-4-2
H:3:98:0::#1-1-4-3
H:4:99:0::#1-1-4-4
H:5:100:0::#1-1-4-5

# Normal Inbound/Outbound Trunks
N:1:168:0::#1-1-11-1
N:2:169:0::#1-1-11-2
N:3:170:0::#1-1-11-3
N:4:171:0::#1-1-11-4
N:5:172:0::#1-1-11-5

# Transfer-thru Trunks
T:1:300:0::#1-1-18-1
```

The **master.cfg** file sets the basic parameters for the operation of Proactive Contact. Configure the following parameters in the **master.cfg** file located in the opt/avaya/pds/etc directory.

- **DBSERVERIP** – set to the IP address of the Oracle Database Server
- **DIALERID** – set to **1**
- **IICB_HOST** – set to the hostname of the Proactive Contact server
- **LINEASSIGN** – set to the number of outgoing trunks. This is the number of outbound ports configured in dgswitch.cfg
- **NAMESERVICEHOST** – set to the hostname of the Proactive Contact server
- **OPERATORS** – set to the number of outbound agents. This is the number of headset ports configured in dgswitch.cfg
- **OPLIMIT** - set to the number of outbound agents. This is the number of headset ports configured in dgswitch.cfg

- **PORTS** – set to the total number of trunks configured in LINEASSIGN
- **PRIMARY** – set to **YES**
- **SWITCHTYPE** – set to **SOFTDIALER**

```
DBSERVERIP:10.20.2.60
DIALERID:1
IICB_HOST:devpc41
LINEASSIGN:REG,O=1-5
NAMESERVICEHOST: devpc41
OPERATORS:5
OPLIMIT:O=5,M=5
PORTS:5
PRIMARY:YES
SWITCHTYPE:SOFTDIALER
```

The **opmon.cfg** file configures the agent headset line handling for establishing the audio link to agents. Configure the following parameter in the **opmon.cfg** file located in the /opt/avaya/pds/config directory.

- **SOFTDIAL** – set to the number of active headsets. This is the number of outbound agents that are administered in Proactive Contact

```
CFGTIME:15
SOFTDIAL:1-5
```

Configure the following parameters in the **voicemsg.cfg** file located in the opt/avaya/pds/config directory. This file is used to link a message number, type and extension to an announcement extension on the Communication Manager that will be used to play messages. Configure the last 4 rows on this file with the **extension** number of the announcements from Communication Manager that were administered in **Section 4.5**.

```
13:innwait1:1013:Male:Folder2:Voice:Message13
14:innwait2:1014:Male:Folder2:Voice:Message14
15:innwait3:1015:Male:Folder2:Voice:Message15
16:innwait4:1016:Male:Folder2:Voice:Message16
17:fvirt1:1017:Female:Folder3:Voice:Message17
18:mvirt1:1018:Female:Folder3:Voice:Message18
19:pf_msg_1:771::Folder4:Music:Message19
20:pf_msg_2:1020::Folder4:Music:Message20
21:pf_msg_3:1021:Female:Folder4:Voice:Message21
22:pf_msg_4:1022:Female:Folder4:Voice:Message22
23:pf_msg_5:1023:Female:Folder4:Voice:Message23
24:pf_msg_6:1024:Female:Folder4:Voice:Message24
25:pf_msg_7:1025:Female:Folder4:Voice:Message25
26:pf_msg_8:1026:Female:Folder4:Voice:Message26
250:greeting:771:Female:Folder4:Voice:Message27
251:inbound:772:Female:Folder4:Voice:Message28
252:outbound:773:Female:Folder4:Voice:Message29
253:notLoggedIn:774:Female:Folder4:Voice:Message30
```

7. Configure synTelate Web Agent

This section describes the steps for configuring synTelate Web Agent. Configuration in the following sections is only for the fields where a value needs to be entered or modified. Default values are used for all other fields. The following synTelate Web Agent configuration is described below:

- Configure hosts file
- Configure moagent32.ini file
- Configure Campaign
- Use synTelate Web Agent

7.1. Configure hosts file

synTelate Web Agent checks the hosts file to obtain the IP address of the Proactive Contact. Configure the **hosts** file located in C:\WINDOWS\system32\drivers\etc directory and specify IP address and hostname for the Proactive Contact as shown below:

```
127.0.0.1    localhost
```

```
10.20.2.60  PC4
```

7.2. Configure moagent32.ini file

synTelate Designer checks the moagent32.ini file to obtain the IP address of Proactive Contact. Edit the **moagent32.ini** file located in C:\WINDOWS directory and configure **servername** parameter with **IP address** of the Proactive Contact in, and set **UseDIIDbs** to **0** as shown below:

```
[logon]
```

```
servername = 10.20.2.60
```

```
servicename = agent
```

```
portnumber = 22700
```

```
headset =
```

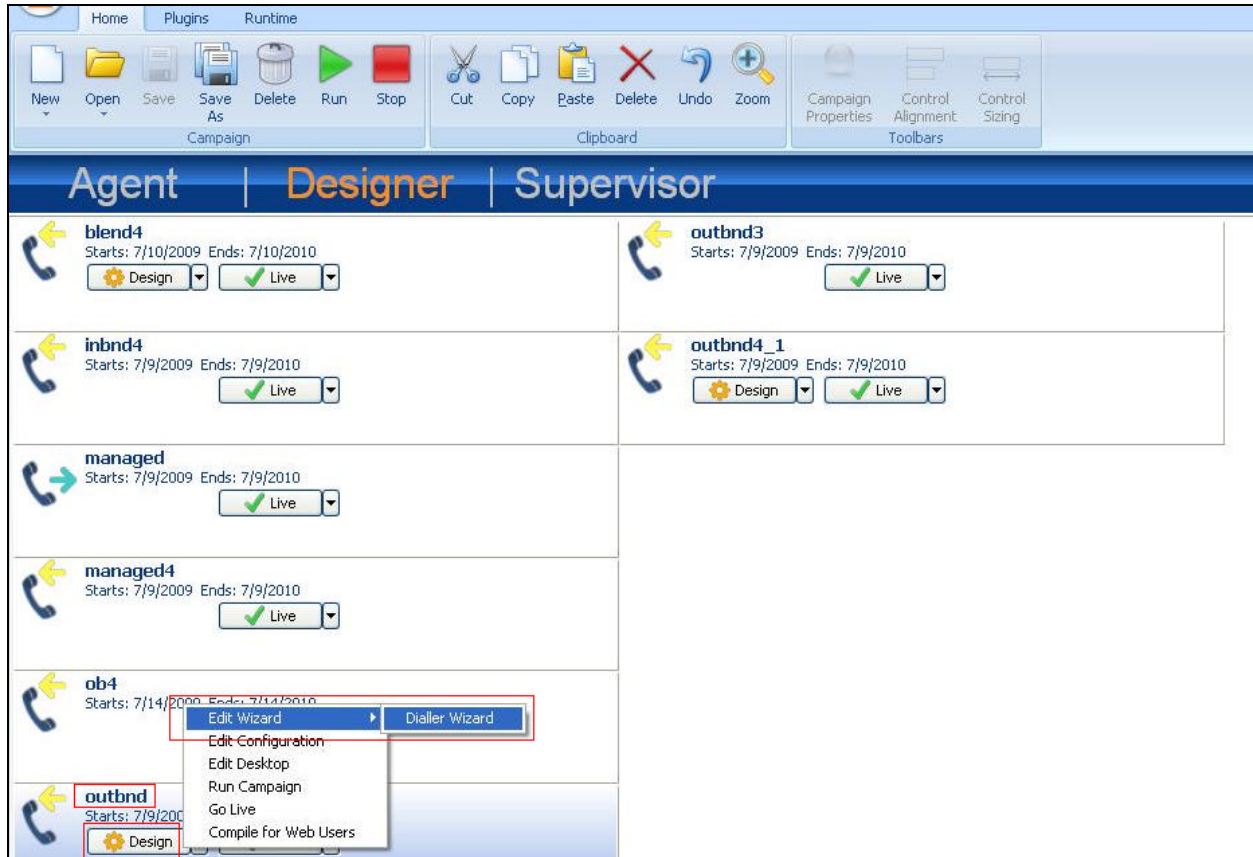
```
[ConfigSettings]
```


```
UseDIIDbs = 0
```

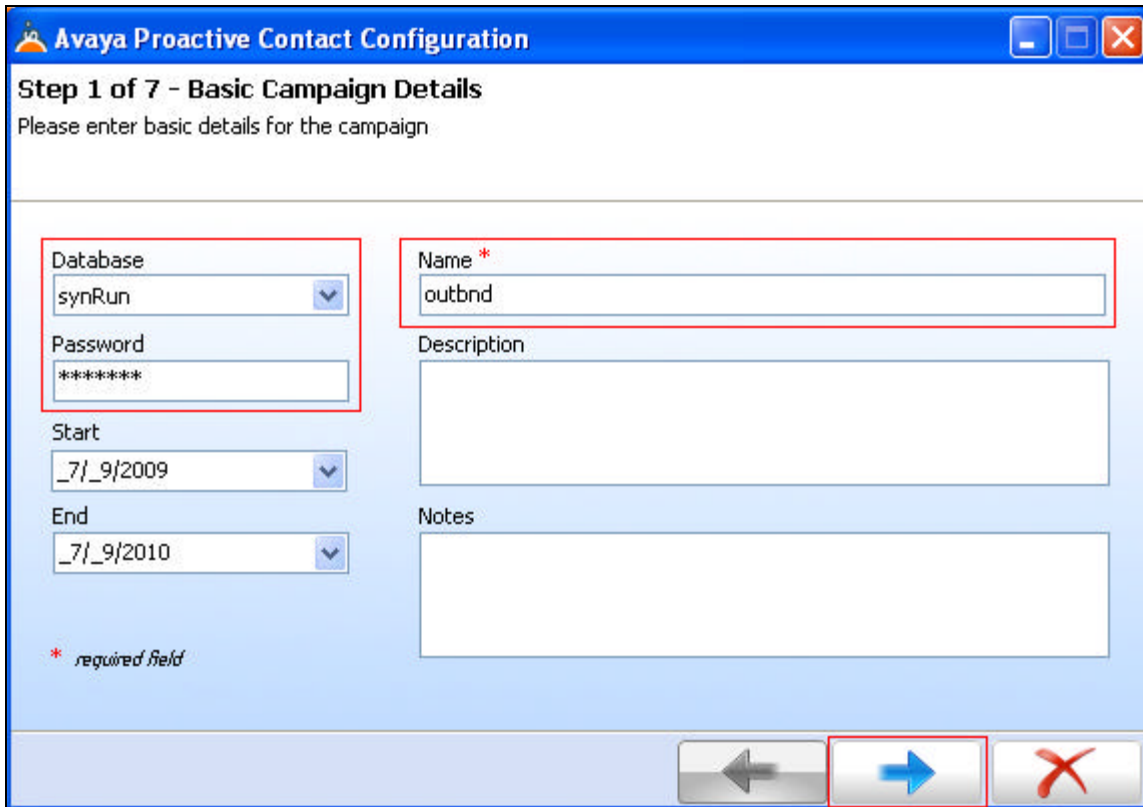
7.3. Configure Campaign

From the synTelate Designer workstation, navigate to **Start Menu** → **Programs** → **synTelate** → **synTelate Designer** and select the **Designer** tab. To configure an existing campaign right click on the **Design** button of the **outbnd** campaign that is being configured, and select **Edit Wizard** → **Dialer Wizard**.

Note: The **outbnd** campaign was pre-configured for compliance testing. Refer to [6] for synTelate documentation to configure campaigns.




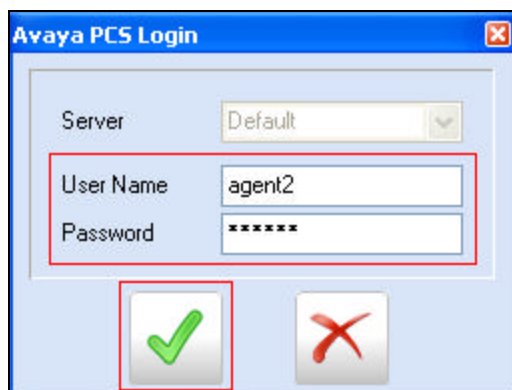
At the **Step 1** of **Avaya Proactive Contact Configuration** wizard that is opened, enter **Database** and **Password** as provided by IniSoft, specify **Name** of the campaign that is being configured as **outbnd**, and click  button.




The screenshot shows the 'Avaya Proactive Contact Configuration' wizard, Step 1 of 7: Basic Campaign Details. The window title is 'Avaya Proactive Contact Configuration'. The subtitle is 'Step 1 of 7 - Basic Campaign Details'. Below the subtitle is the instruction 'Please enter basic details for the campaign'. The form contains several fields: 'Database' (a dropdown menu with 'synRun' selected), 'Password' (a text box with '*****'), 'Start' (a date dropdown with '_7/_9/2009' selected), 'End' (a date dropdown with '_7/_9/2010' selected), 'Name*' (a text box with 'outbnd'), 'Description' (a large text area), and 'Notes' (a large text area). A red asterisk indicates a required field. At the bottom right, there are three buttons: a back arrow, a next blue arrow (highlighted with a red box), and a red 'X' button. A red box also highlights the 'Database', 'Password', and 'Name*' fields.

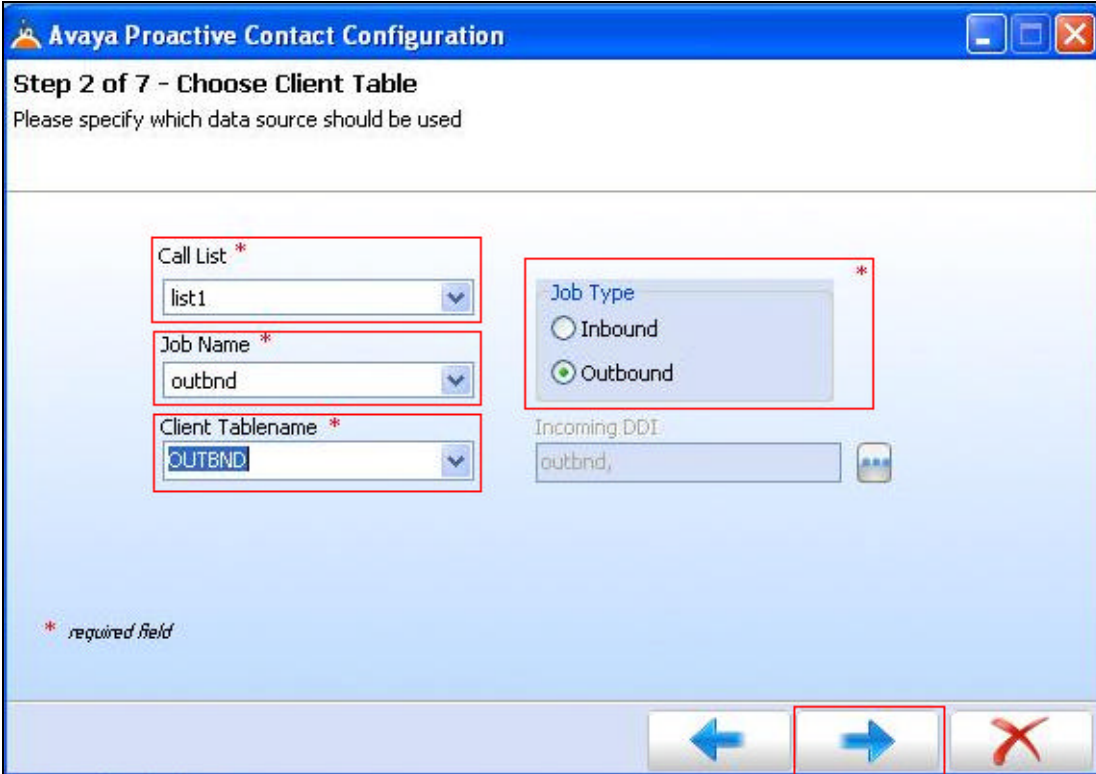
In **Avaya PCS Login** dialog box that appears, enter the following:

- **User Name** – Enter the agent name configured on Proactive Contact
- **Password** – Enter the password for the agent name configured on Proactive Contact
- Click  button.



The screenshot shows the 'Avaya PCS Login' dialog box. The window title is 'Avaya PCS Login'. It contains a 'Server' dropdown menu with 'Default' selected. Below it are 'User Name' and 'Password' text boxes. The 'User Name' box contains 'agent2' and the 'Password' box contains '*****'. At the bottom, there are two buttons: a green checkmark button (highlighted with a red box) and a red 'X' button.

At the **Step 2** of **Avaya Proactive Contact Configuration** wizard, all Call Lists and Jobs retrieved from Proactive Contact are listed in drop-down lists. Choose **Call List**, **Job Name** and **Client Tablename** that are relevant for the outbound campaign. Select **Outbound** radio button for the **Job Type**, and click  button.



The screenshot shows the 'Avaya Proactive Contact Configuration' window at 'Step 2 of 7 - Choose Client Table'. The window has a blue title bar and standard Windows window controls. The main area is light blue with a white header section containing the step title and a prompt: 'Please specify which data source should be used'. Below this, there are three required fields on the left, each in a white box with a red border: 'Call List *' with a dropdown menu showing 'list1', 'Job Name *' with a dropdown menu showing 'outbnd', and 'Client Tablename *' with a dropdown menu showing 'OUTBND'. To the right of these is the 'Job Type' section, also in a white box with a red border, containing two radio buttons: 'Inbound' (unselected) and 'Outbound' (selected). Below the radio buttons is a text field labeled 'Incoming DDI' containing 'outbnd,' with a small icon to its right. A legend at the bottom left indicates that an asterisk (*) denotes a 'required field'. At the bottom of the window, there are three buttons: a blue left arrow, a blue right arrow (highlighted with a red border), and a red 'X' button.

Avaya Proactive Contact Configuration

Step 2 of 7 - Choose Client Table

Please specify which data source should be used

Call List *

list1

Job Name *

outbnd

Client Tablename *

OUTBND

Job Type *

☐ Inbound




☒ Outbound

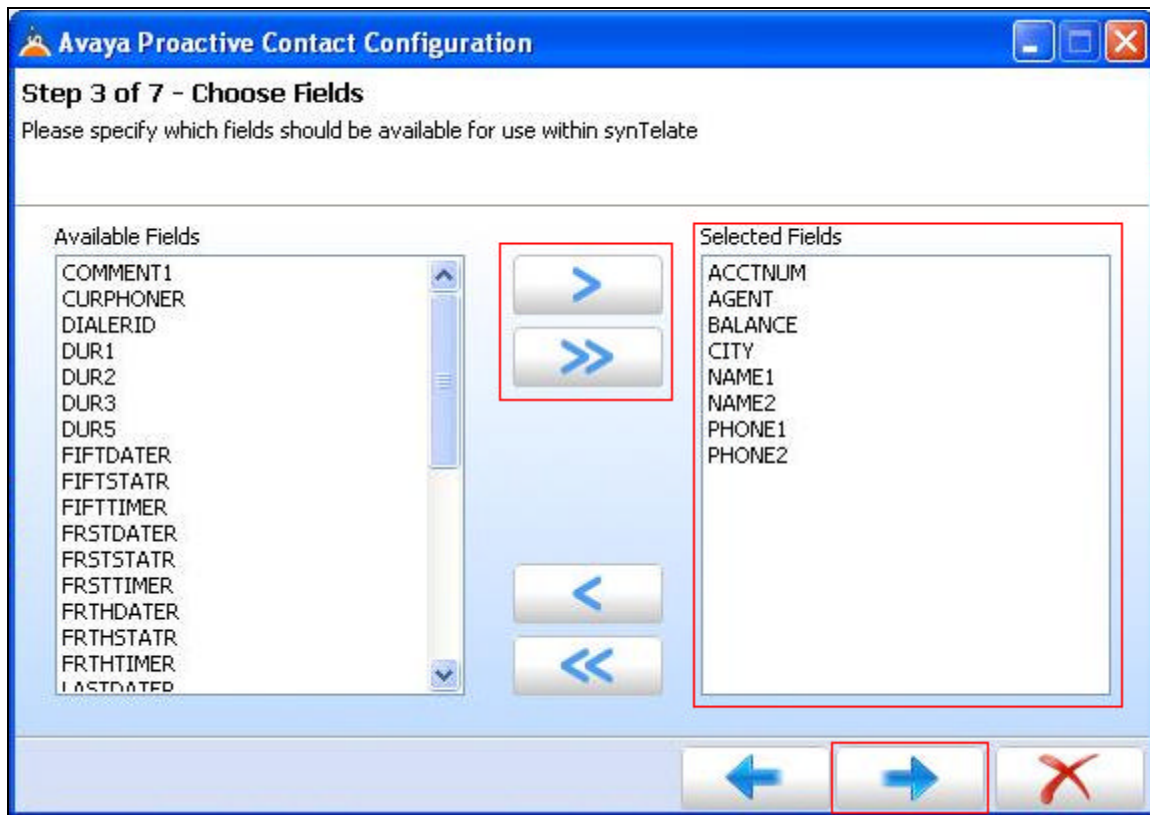
Incoming DDI

outbnd,

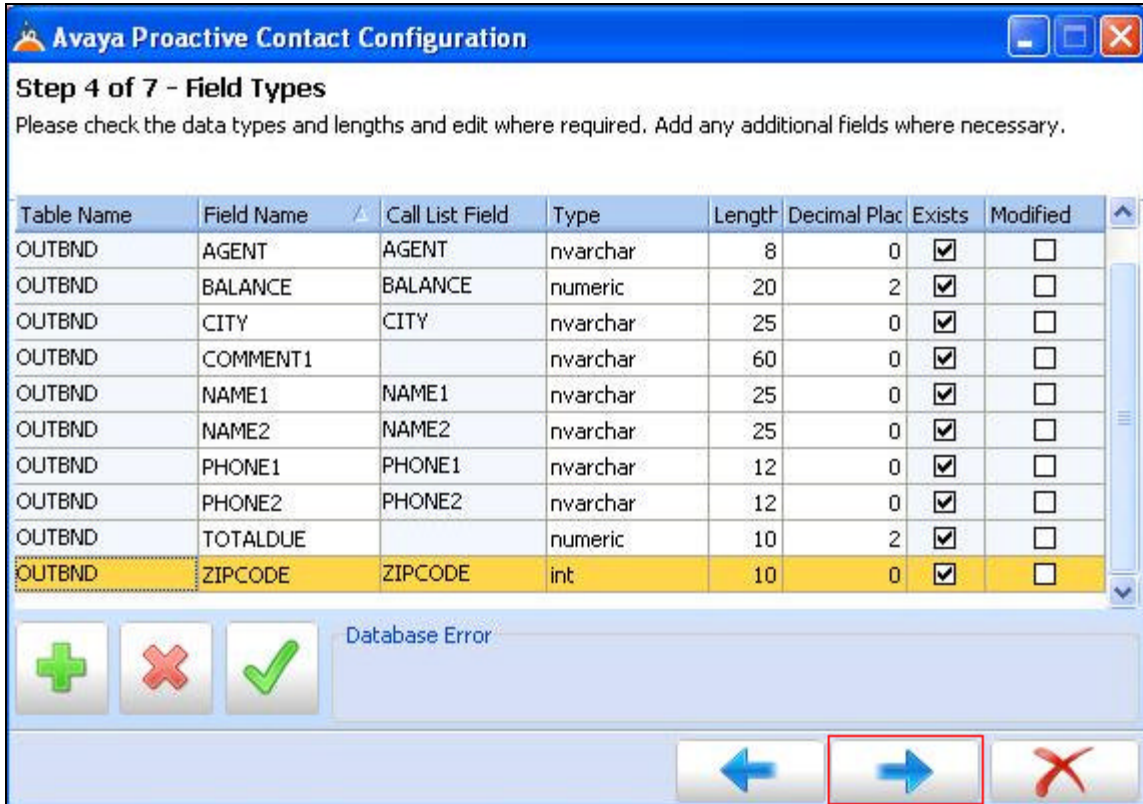
* required field

← → ✕

At the **Step 3 of Avaya Proactive Contact Configuration** wizard, use arrows  or  to select the fields that will be displayed on the synTelate Web Agent. Verify on the right hand side that all required fields are selected and click  button.









At the **Step 4** of **Avaya Proactive Contact Configuration** wizard, review selected data fields and edit where required. Click  button.



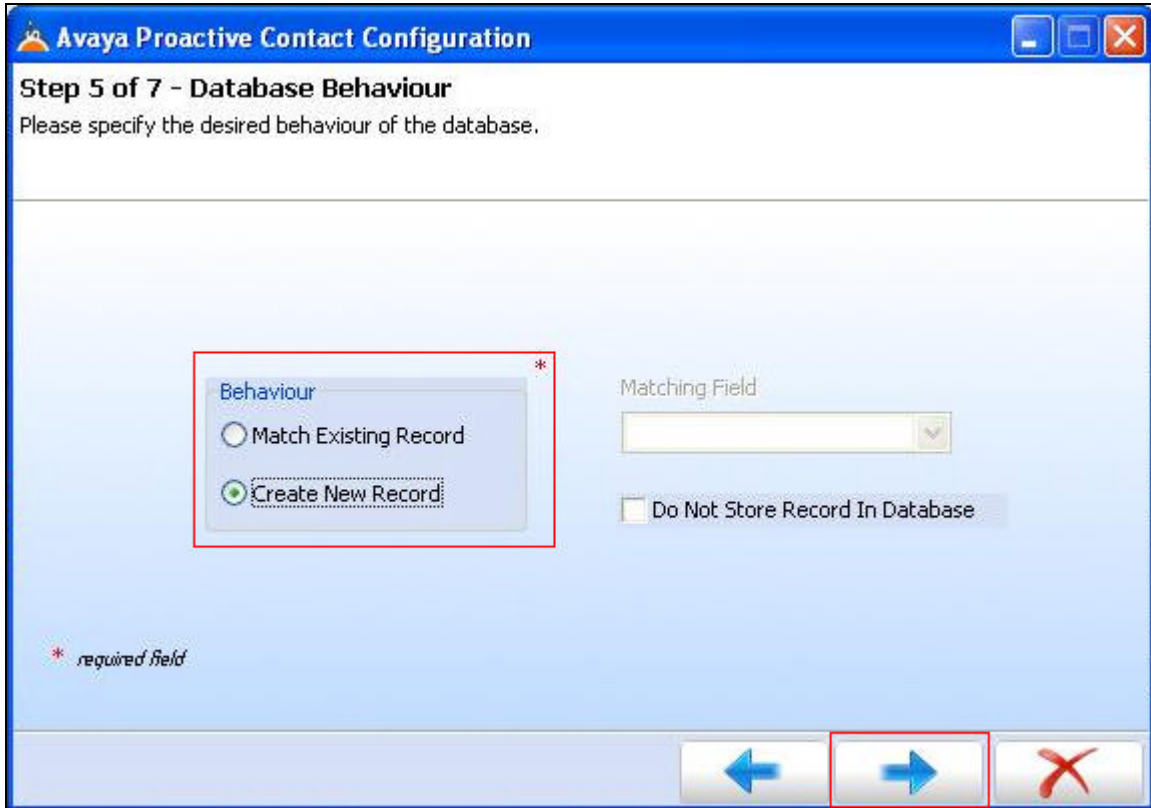
Step 4 of 7 - Field Types
Please check the data types and lengths and edit where required. Add any additional fields where necessary.

Table Name	Field Name	Call List Field	Type	Length	Decimal Plac	Exists	Modified
OUTBND	AGENT	AGENT	nvarchar	8	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	BALANCE	BALANCE	numeric	20	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	CITY	CITY	nvarchar	25	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	COMMENT1		nvarchar	60	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	NAME1	NAME1	nvarchar	25	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	NAME2	NAME2	nvarchar	25	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	PHONE1	PHONE1	nvarchar	12	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	PHONE2	PHONE2	nvarchar	12	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	TOTALDUE		numeric	10	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OUTBND	ZIPCODE	ZIPCODE	int	10	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>




 Database Error

At the **Step 5** of **Avaya Proactive Contact Configuration** wizard, specify desired **Database Behaviour**. In the sample configuration **Create New Record** was selected. Click  button.



The screenshot shows the 'Avaya Proactive Contact Configuration' window at 'Step 5 of 7 - Database Behaviour'. The title bar includes the Avaya logo and standard window controls. The main area has a light blue background with the instruction 'Please specify the desired behaviour of the database.' Below this, there is a 'Behaviour' section with two radio buttons: 'Match Existing Record' and 'Create New Record'. The 'Create New Record' option is selected and highlighted with a red rectangle. To the right of the radio buttons is a 'Matching Field' dropdown menu, which is currently empty. Below the dropdown is a checkbox labeled 'Do Not Store Record In Database', which is unchecked. A red asterisk and the text '* required field' are located at the bottom left of the main area. At the bottom right, there are three buttons: a back arrow, a forward arrow (highlighted with a red rectangle), and a cancel 'X' button.

Avaya Proactive Contact Configuration

Step 5 of 7 - Database Behaviour

Please specify the desired behaviour of the database.

Behaviour *

☐ Match Existing Record



☒ Create New Record

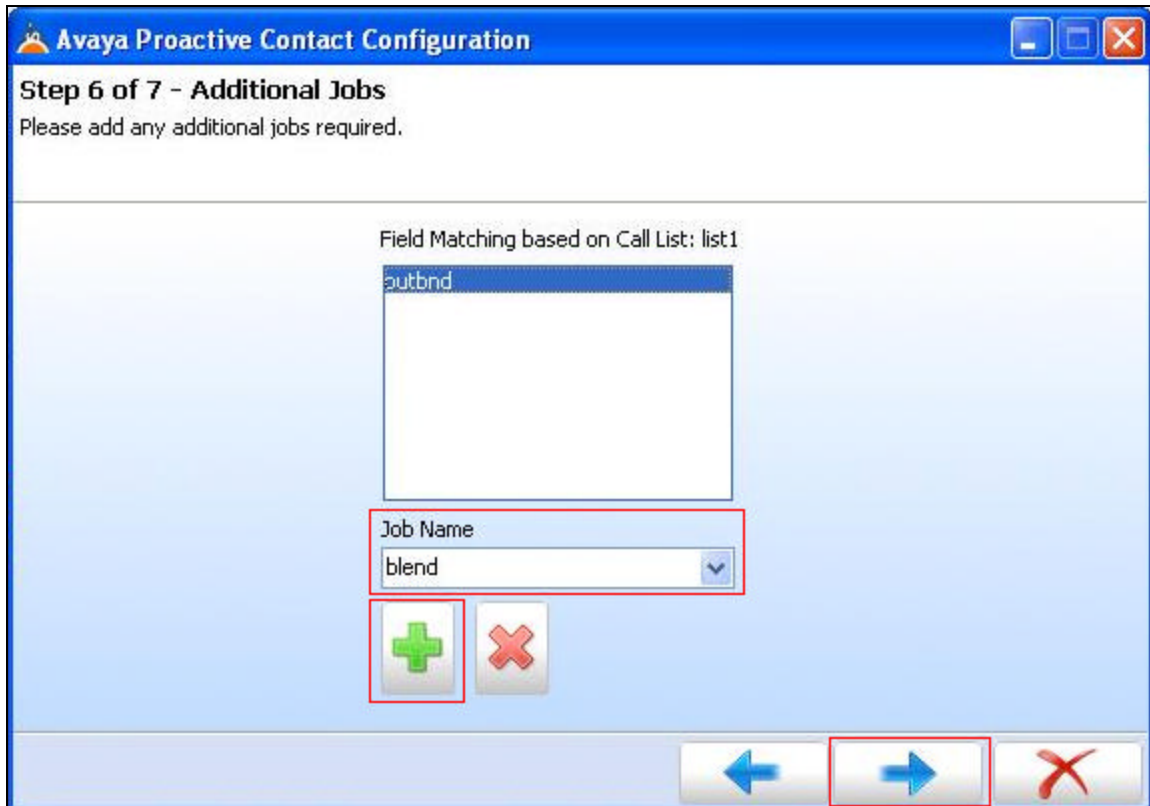
Matching Field

☐ Do Not Store Record In Database

* required field

Navigation buttons: Back, Forward (highlighted), Cancel

At the **Step 6** of **Avaya Proactive Contact Configuration** wizard, select **Job Name** from the drop down list and use  button to add any additional jobs if required. Click  button.



Avaya Proactive Contact Configuration

Step 6 of 7 - Additional Jobs



Please add any additional jobs required.




Field Matching based on Call List: list1


outbnd


Job Name

blend


Step 7 of Avaya Proactive Contact Configuration wizard, is the Summary screen. Review configured details and click  button to save and exit.



Step 7 of 7 - Summary

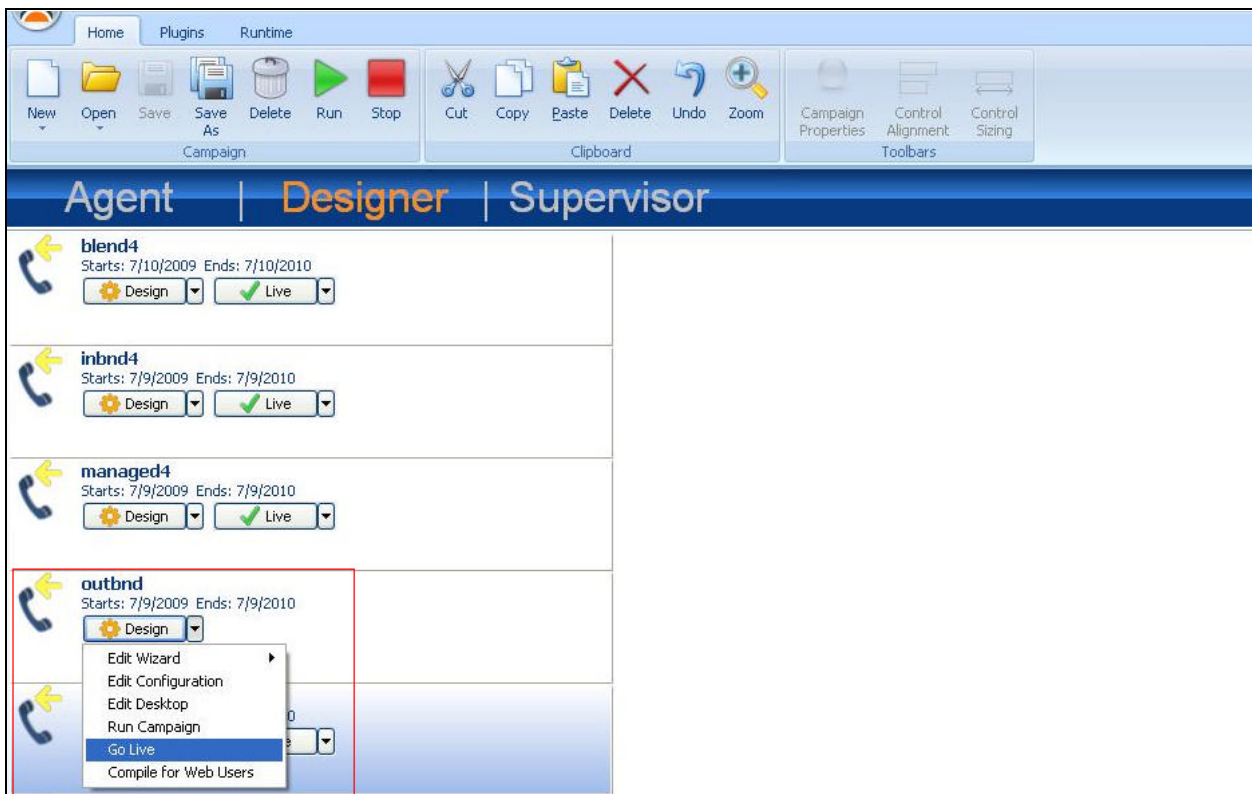
Please ensure all the details are correct before creating the table. To alter any details, please navigate to the respective page.

Database	synRun
Name	outbnd
Description	
Start	7/13/2009
End	7/13/2010
Notes	
Inbound Campaign	Yes
Outbound Campaign	No
Client TableName	OUTBND
Incoming DDI	outbnd,
Call List	list1
Job Name	outbnd,

 The Call Center Desktop

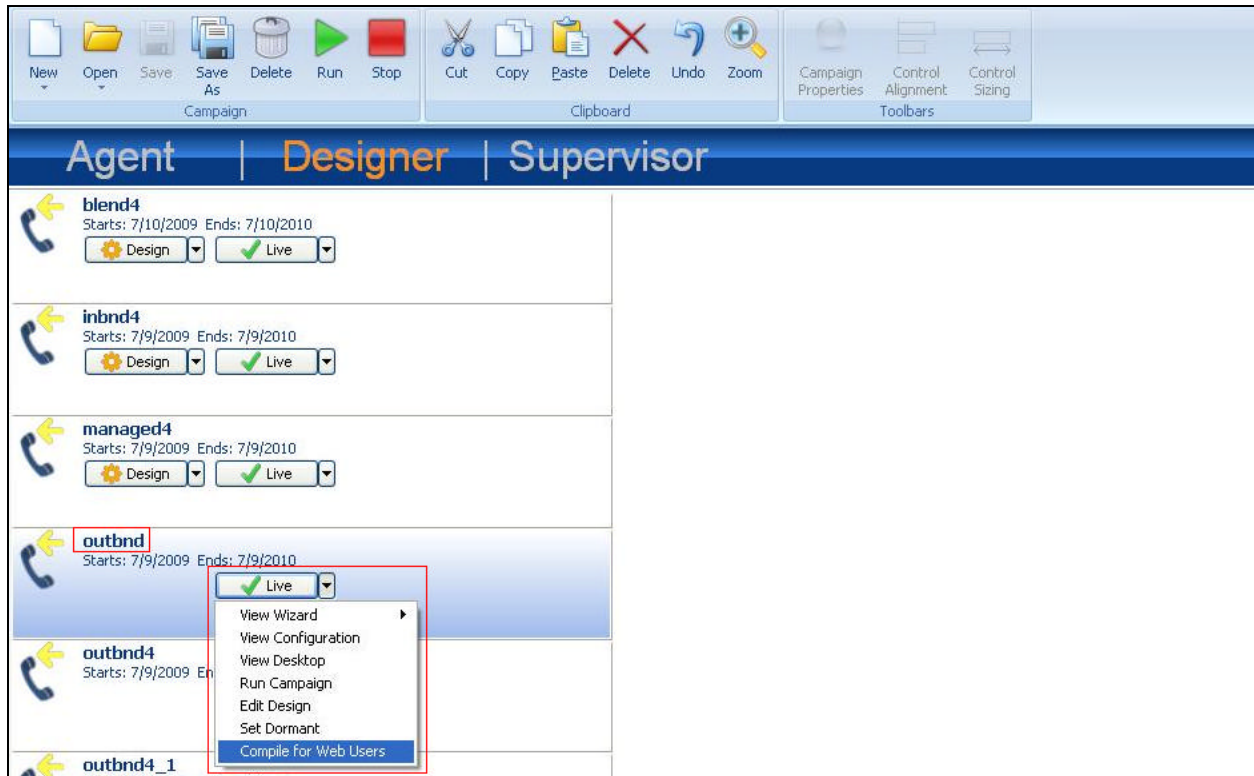
After wizard configuration is complete, updated **outbnd** campaign is displayed in Designer tab of the synTelate Designer. To make this campaign live, right click on the **Design** button of the **outbnd** campaign and select **Go Live** option.



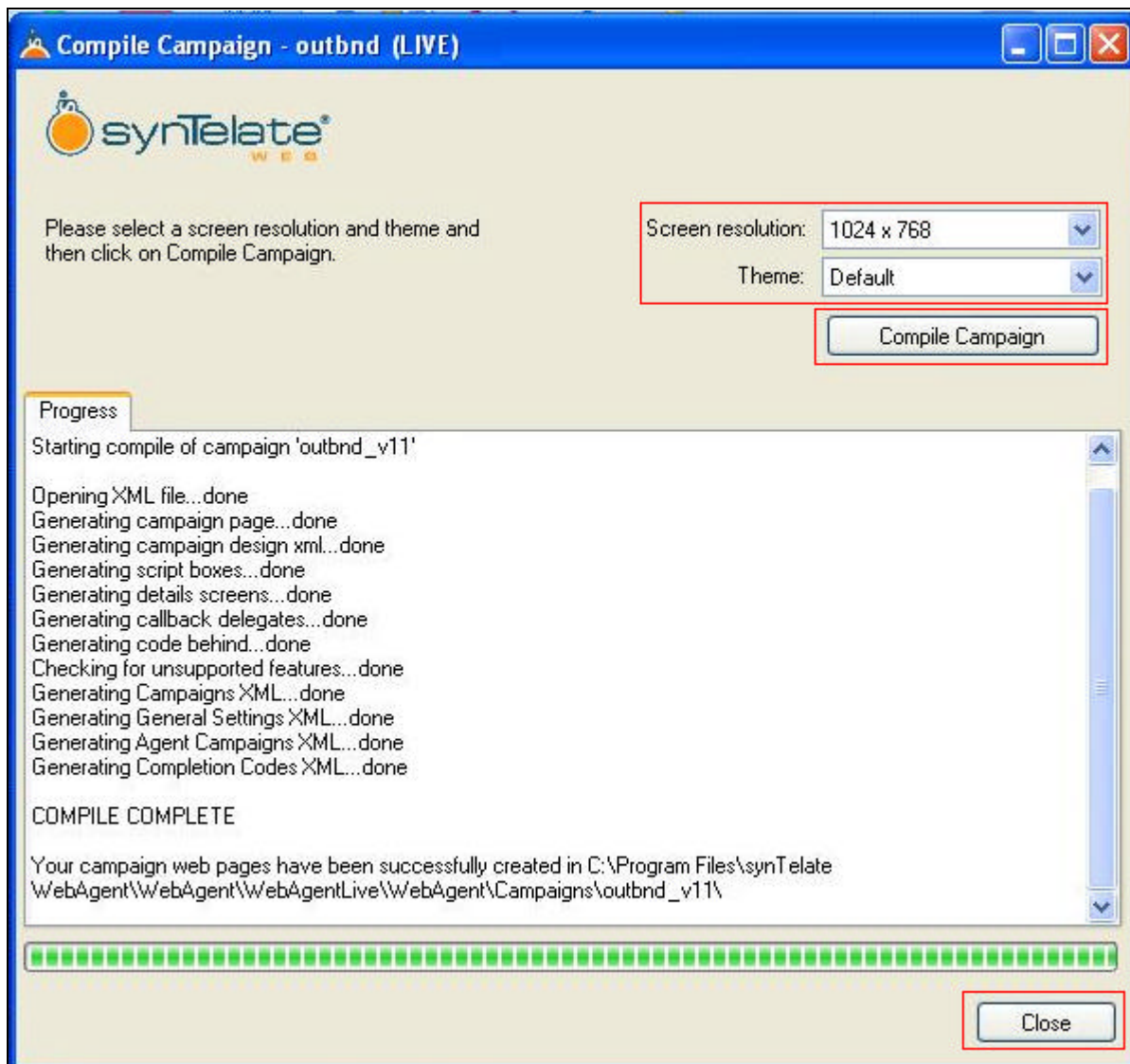
After the **outbnd** campaign is made live, only **Live** button is available for it.



To compile the campaign for web users, right click on **Live** button of the **outbnd** campaign, and select **Compile for Web Users** option.



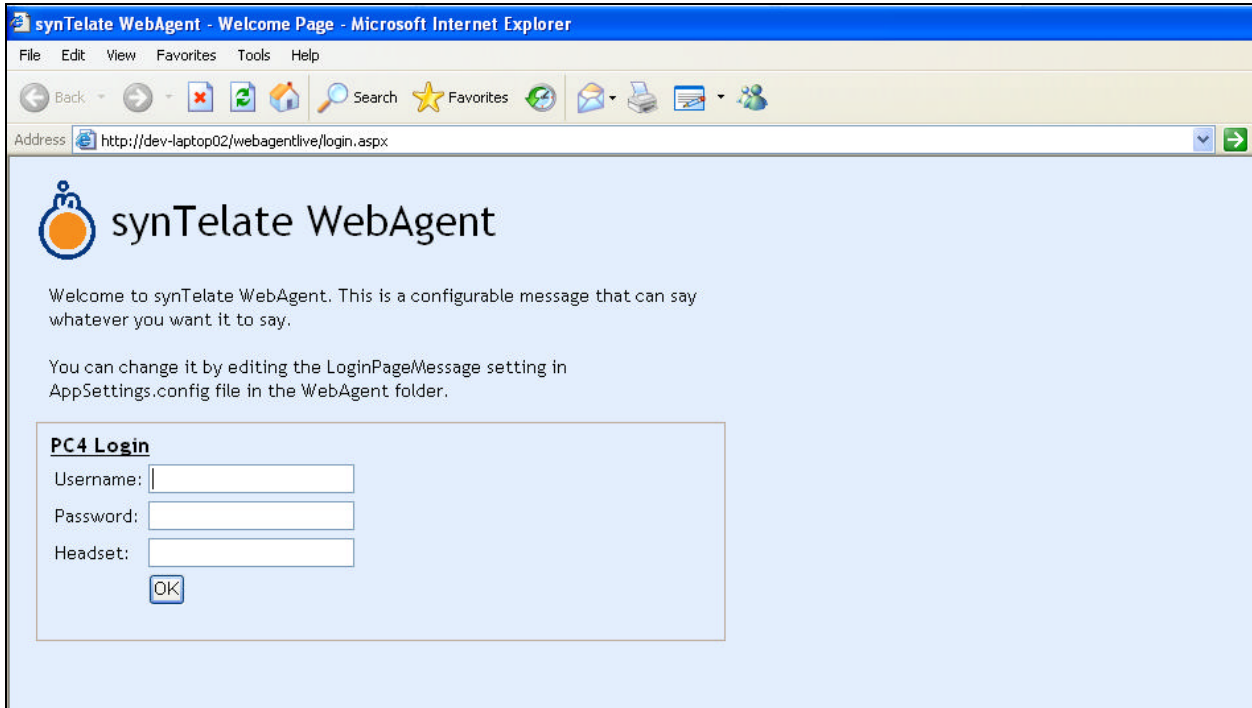
To complete compilation for web users, select **Screen Resolution**, **Theme** from the offered drop down lists and click **Compile Campaign** button. When the compile is complete click **Close** button.



Repeat the above steps to configure managed campaign.

7.4. Use synTelate Web Agent

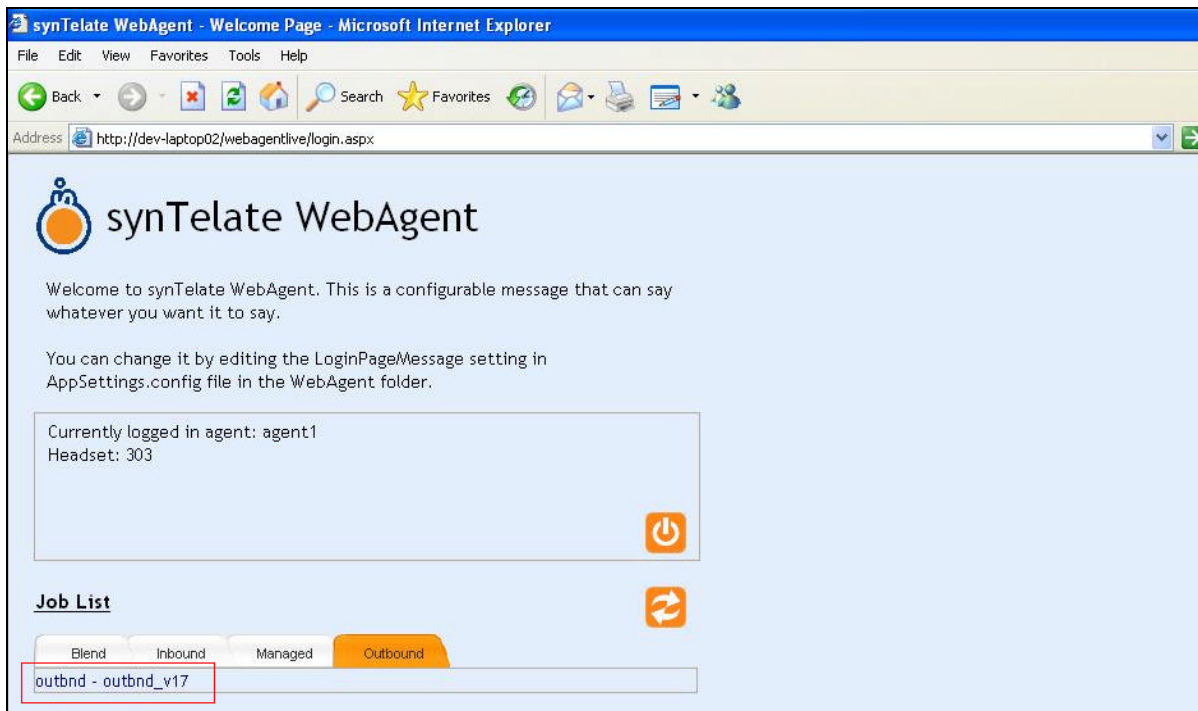
To access synTelate Web Agent Login Page, start web browser and enter following URL address: **http://<ip address of web server>/webagentlive/login.aspx**.



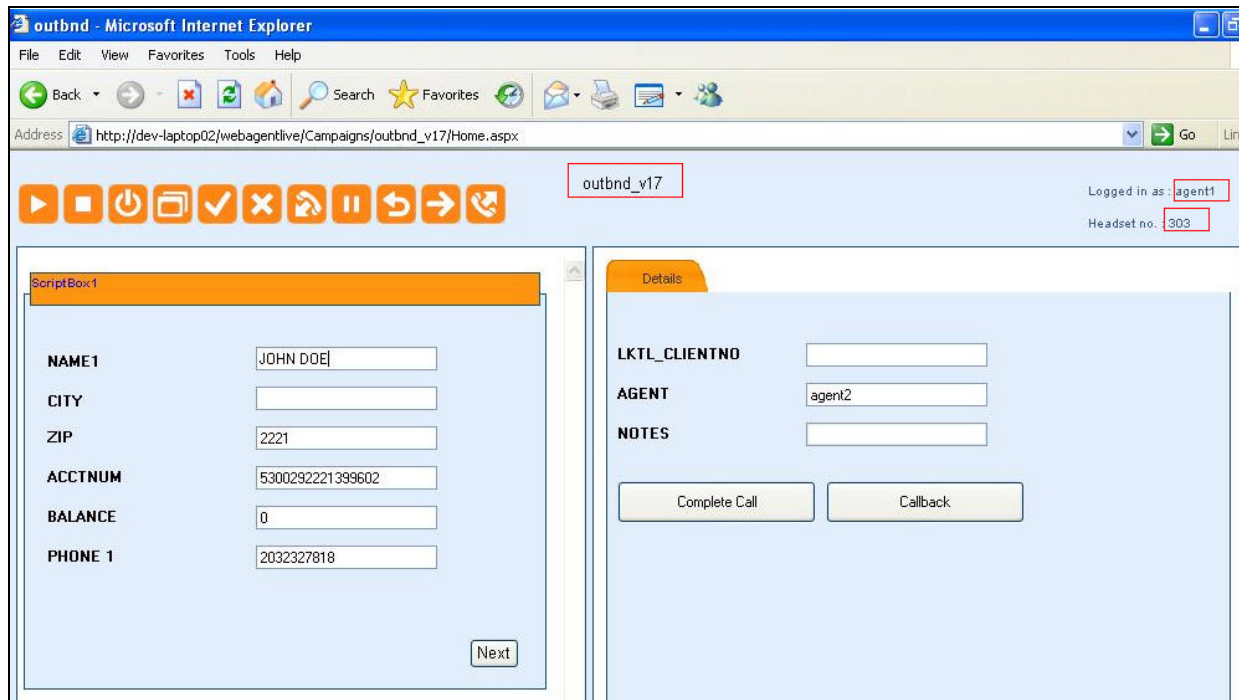
On the login page enter agent **Username** and **Password** as configured on Proactive Contact, and **Headset** as configured on Communication Manager, Section 4.3. Click **OK** button to login.

A close-up view of the "PC4 Login" form. The form is titled "PC4 Login" in bold. It contains three input fields: "Username:" with the value "agent1", "Password:" with a masked password represented by seven black dots, and "Headset:" with the value "303". Below the input fields is an "OK" button.

After login, agent is presented with a list of configured campaigns from which he can select a campaign to join. Campaigns are organized in four tabs depending on the call type: Blend, Inbound, Managed and Outbound. To join previously configured campaign, click on the **outbnd** – **outbnd_V17** campaign, listed on the outbound tab.



The following screen is an example of the customer record screen pop for the agent logged in as **agent1** on the headset **303**, which joined the **outbnd_V17** job.



8. General Test Approach and Test Results

The feature test cases were performed manually. Agents logged in using web login page and during logon specified headsets were reserved for the agents. Upon initialisation of the jobs using Avaya Supervisor, the jobs appeared in the agent's job list. Once the agent joins the job, they were connected to the headset.

The following campaign types were tested:

- Outbound
- Managed

The following features on the synTelate Web Agent were tested:

- Login / Logout
- Ready / Not Ready
- Join Job / Leave Job
- Finish Call
- Release Call
- Call Back
- Agent Owned Recall
- Release Line with Message
- Preview Call
- Job Linking
- Job Transfer
- Job End
- Send Message

The verification of tests included checking of proper states on the synTelate Web Agent and on the telephones that were used as the headsets. Also verification of the events in the agent_API.trans log files was performed.

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cables on the agent machine, by restarting the browser, agent desktop machine or the dialer. In all cases the Agent received message that it has an existing session and is asked logout and log-in again. The agent was always able to successfully reconnect to the dialer.

9. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, Application Enablement Services and synTelate Web Agent.

9.1. Verify TSAPI CTI Link

The following steps can ensure that the communication between Communication Manager and Application Enablement Services server is working.

From the System Access Terminal (SAT) interface on Communication Manager, verify that the **Service State** of the **CTI link 11** is **established**.

status aesvcs cti-link						
AE SERVICES CTI LINK STATUS						
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd
11	4	no	aesserver	established	14	14

9.2. Verify synTelate Web Agent

Follow the steps described in **Section 6.4**, in order to access the customer record screen pop for the outbound campaign. Verify that configured customer fields are correctly displayed on the synTelate Web Agent.

The screenshot shows a web browser window titled "outbnd - Microsoft Internet Explorer". The address bar displays "http://dev-laptop02/webagentlive/Campaigns/outbnd_v17/Home.aspx". The page header includes "outbnd_v17" and "Logged in as : agent1". Below the header is a toolbar with various icons. The main content area is divided into two panels. The left panel, titled "ScriptBox1", contains a form with the following fields: NAME1 (JOHN DOE), CITY, ZIP (2221), ACCTNUM (5300292221399602), BALANCE (0), and PHONE 1 (2032327818). A "Next" button is at the bottom right of this panel. The right panel, titled "Details", contains the following fields: LKTL_CLIENTNO, AGENT (agent2), and NOTES. Below these fields are two buttons: "Complete Call" and "Callback".

10. Conclusion

These Application Notes describe the required configuration steps for the synTelate Web Agent 1.0 application to successfully interoperate with Avaya Proactive Contact 4.1 using Computer Telephony Interface. All test cases were completed successfully and the configuration described in these Application Notes was successfully compliance tested.

11. Additional References

This section references Avaya and IniSoft product documentation that are relevant to these Application Notes.

Avaya product documentation can be found at <http://support.avaya.com>

- [1] *Administering Avaya Aura™ Communication Manager*, Doc ID 03-300509, May 2009
- [2] *Implementing Avaya Proactive Contact 4.1*, March, 2009
- [3] *Avaya Proactive Contact 4.1, Administering Avaya Proactive Contact* (Linux-based Interface), March 2009
- [4] *Avaya MultiVantage® Application Enablement Services, Administration and Maintenance Guide Release 4.2*, Doc ID 02-300357, Issue 10, May 2008
- [5] *Sample Avaya Proactive Contact 3.0 with CTI Installation and Configuration*, Issue 1.0, Avaya Solution and Interoperability Test Lab

Company and product information available from IniSoft at www.syntelate.com or www.inisoft.co.uk

- [6] *synTelate Web Agent - Installation and Configuration Guide*

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